

Minnesota Attorney General: Administrative Rules Proceedings

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Version 3
August 20, 2018

MINNESOTA public utilities COMMISSION

March 9, 1983

H. H. Humphrey, III
Attorney General
Room 102
Capitol Building
Aurora Ave.
St. Paul, MN 55155

RE: MPUC Docket No. E-999/R-80-560

Dear Mr. Humphrey:

Enclosed for your review under M.S. § 14.16 and 14.17 are the Minnesota Public Utilities Commission's adopted rules on Cogeneration and Small Power Production. The rules as adopted are also being submitted today to the Revisor of Statutes.

The materials required by 1 MCAR § 1.102 are included with the exception of 1 MCAR § 1.202A. That subsection requires submission of the original of the rules as adopted. Due to the length of the text of the rules, the Revisor of Statutes has prepared all the typed versions of the rules, including the version as adopted. That version was prepared by the Revisor on January 19, 1983, but the Commission received only four copies from the Revisor, no originals. Thus, I have enclosed four copies in lieu of an original and three copies.

Please feel free to call me with any questions.

Sincerely,

Christopher K. Sandberg
Legal Research Analyst

CKS:ST

AMERICAN CENTER building • kellogg AND ROBERT STS • SAINT PAUL, MN 55101

STATE OF MINNESOTA

DEPARTMENT REVISOR OF STATUTES

Office Memorandum

AG copy

TO : Chris Sandburg
Public Utilities Commission
7 160 East Kellogg
St. Paul, Minnesota 55101

DATE: 1/19/83

FROM :

Theresa M. Lauterbach
Assistant Deputy Revisor

PHONE: 6-0956

SUBJECT: # AR0172 Cogeneration and Small Power Production

Enclosed are four copies of your rule with the modifications you requested.

On the same day you submit the rules to the Attorney General for adoption, you must also resubmit two copies to our office for final approval.

If you have any questions or need further modifications, please call.

Our File No. 894

RULE REVIEW CHECKLIST

DATE RULE RECEIVED 3-9-83
DATE FOR REVIEW 3-21-83
DATE DUE 3-29-83

Adopted w/a hearing ✓
Adopted w/o hearing
Temporary rule

Approved ____ Disapproved ____ Returned to Agency ____

Resubmitted ____ Due ____
Approved ____ Disapproved ____ Returned to Agency ____

Date filed w/Secretary of State ____ Revisor approved 3.11.83 disapproved ____

✓ Rule as Adopted

✓ Rule as Proposed and see SR 5/29/82 and 7/26/82

✓ Order Adopting 3.7.82 Date incorporated in FofF

✓ Notices of Intent to Solicit Outside Opinion – comments are in file folders marked with SR dates: 5/5/80 – 8/11/80 – 9/29/80 – 7/20/81

Order for rulemaking
various dates of Hearing NOT submitted
1st series – 4.30.82 et seq. 2nd series – 9.7.82 et seq ✓

✓ Certificate of Board's Authorizing Resolution

✓ Notices of rulemaking
✓ Sufficiency

✓ Affidavit of Mailing Notice or rulemaking 2ND Series
7.30.82 At least 30 days prior to hearing/~~adoption~~
✓ Affidavit of Additional Mailing

✓ Mailing list Certificate

✓ Publications in State Register 1st series – 2ND series
3/29 – 7/26/82 At least 30/~~20~~ days prior to hearing/~~adoption~~

✓ Hearing Examiner's Report

✓ Chief Hearing Examiner's Report(s)
✓ 1.3.83 Approving H.E.'s Report BUT NOT QUITE! see attached memo
✓ 3.8.83 Approving agency action BUT NOT QUITE! see attached Memo.

✓ Agency's Findings of Fact

N/A LCRAR Report or agency Affidavit

✓ Certificate of Board's Resolution Adopting Rules

✓ Order Approving Incorporation by Reference

✓ Statement of Need and Reasonableness

N/A Petition for Adoption of a Rule

✓ Record (includes transcript or tape, exhibits, comments received by agency, requests for a hearing, and other relevant materials)

✓ Certificate of Compliance w/Rulemaking Procedures

✓ Affidavit of Mailing Notice of Submission to Attorney General

✓ Notice of Submission to the Attorney General

✓ Comment to the Attorney General

DEPARTMENT ATTORNEY GENERAL

Office Memorandum

TO : RANDALL D. YOUNG, Executive Secretary DATE: 3/30/83

Attn: KARL W. SONNEMAN, Special Assistant Attorney General

FROM : TED A. MARTINEZ TAM PHONE: 296-4692
Special Assistant
Attorney General

SUBJECT: In the Matter of the Proposed Adiption of Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production.

Enclosed herewith are the rules you have submitted for approval. These rules have been approved by this office and filed with the Secretary of State. Please note that they have not been filed with the State Register. This must be done promptly by your agency.

Upon receipt and before transmittal to your agency, however, it is important that you recheck these rules as to:

1. Affixation of stamps of the Attorney General and Secretary of State;

2. Coverage by these stamps of all rules submitted; and

3. Inclusion of all pages to the rules in the approved set.

If you have any questions in this regard, please contact me.

Encs.
TAM/las
cc: Ms. Kathy Burek
Mr. Duane Harves

.0450
.0451

Minnesota Public Utilities Commission

Adopted Rules Governing Cogeneration and Small Power Production

Rules as Adopted

4 MCAR S 3.0450 Scope and purpose. The purpose of 4 MCAR SS 3.0450-3.0463 3.0462 is to implement certain provisions of Minn. Stat. S 216B.164; the Public Utility Regulatory Policies Act of 1978, 16 United States Code, Section 824a-3 (Supplement III, 1979); and the Federal Energy Regulatory Commission regulations, 18 Code of Federal Regulations, Sections 292.101-292.602 (1981). Nothing in 4 MCAR SS 3.0450-3.0463 3.0462 excuses any utility from carrying out its responsibilities under these provisions of state and federal law. Rules 4 MCAR SS 3.0450-3.0463 3.0462 shall at all times be applied in accordance with their intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public.

4 MCAR S 3.0451 Definitions.

A. Applicability. For purposes of 4 MCAR SS 3.0450-3.0463 3.0462, the following terms have the meanings given them.

B. Average annual fuel savings. "Average annual fuel savings" means the annualized difference between the system fuel costs that the utility would have incurred without the additional generation facility and the system fuel costs the utility is expected to incur with the additional generation facility.

C. Backup power. "Backup power" means electric energy or capacity supplied by the utility to replace energy ordinarily generated by a qualifying facility's own generation equipment during an unscheduled outage of the facility.

D. Capacity. "Capacity" means the capability to produce, transmit, or deliver electric energy.

E. Capacity costs. "Capacity costs" means the costs associated with providing the capability to deliver energy.

They consist of the capital costs of facilities used to generate, transmit, and distribute electricity and the fixed operating and maintenance costs of these facilities.

F. Commission. "Commission" means the Minnesota Public Utilities Commission.

G. Energy. "Energy" means electric energy, measured in kilowatt-hours.

H. Energy costs. "Energy costs" means the variable costs associated with the production of electric energy. They consist of fuel costs and variable operating and maintenance expenses.

I. Firm power. "Firm power" means energy delivered by the qualifying facility to the utility with at least a 65 percent on-peak capacity factor in the month. The capacity factor is based upon the qualifying facility's maximum on-peak metered capacity delivered to the utility during the month. HE 30

J. Generating utility. "Generating utility" means a utility which regularly meets all or a portion of its electric load through the scheduled dispatch of its own generating facilities. HE 31

K. Incremental cost of capital. "Incremental cost of capital" means the current weighted cost of the components of a utility's capital structure, each cost weighted by its proportion of the total capitalization. HE 32

L. Interconnection costs. "Interconnection costs" means the reasonable costs of connection, switching, metering, transmission, distribution, safety provisions, and administrative costs incurred by the utility that are directly related to installing and maintaining the physical facilities necessary to permit interconnected operations with a qualifying facility. Costs are considered interconnection costs only to the extent that they exceed the corresponding costs which the utility would have incurred if it had not engaged in interconnected operations, but instead generated from its own facilities or purchased from other sources an equivalent amount of electric energy or capacity. Costs are considered interconnection costs only to the extent that they exceed the costs the utility would incur in selling electricity to the

qualifying facility as a nongenerating customer.

~~J.~~ M. Interruptible power. "Interruptible power" means electric energy or capacity supplied by the utility to a qualifying facility subject to interruption under ~~certain specified conditions~~ the provisions of the utility's tariff applicable to the retail class of customers to which the qualifying facility would belong irrespective of its ability to generate electricity.

HE 25, 26
CHE 1/3

~~K.~~ N. Maintenance power. "Maintenance power" means electric energy or capacity supplied by a utility during scheduled outages of the qualifying facility.

~~L.~~ O. Marginal capital carrying charge rate in the first year of investment. "Marginal capital carrying charge rate in the first year of investment" means the percentage factor by which the amount of a new capital investment in a generating unit would have to be multiplied to obtain an amount equal to the total additional ~~annual~~ first year amounts for the cost of equity and debt capital, income taxes, property and other taxes, tax credits (amortized over the useful life of the generating unit), depreciation, and insurance which would be associated with the new capital investment and would account for the likely inflationary or deflationary changes in the investment cost due to the one-year delay in building the unit.

HE 33

P. Nongenerating utility. "Nongenerating utility" means a utility which has no electric generating facilities, or a utility whose electric generating facilities are used only during emergencies or readiness tests, or a utility whose electric generating facilities are ordinarily dispatched by another entity.

HE 31

~~M.~~ Q. On-peak hours. "On-peak hours" means, for utilities whose rates are regulated by the commission, those hours which are defined as on-peak for retail ratemaking. For any other utility, on-peak hours are either those hours formally designated by the utility as on-peak for ratemaking purposes or those hours for which its typical loads are at least 85 percent of its average maximum monthly loads.

N. R. Purchase. "Purchase" means the purchase of electric energy or capacity or both from a qualifying facility by a utility.

O. S. Qualifying facility. "Qualifying facility" means a cogeneration or small power production facility which satisfies the conditions established in 18 Code of Federal Regulations, Section 292.101 (b) (1) (1981), as applied when interpreted in accordance with the amendments to 18 Code of Federal Regulations, Sections 292.201-292.207 adopted through 46 Federal Register 33025-33027 (1981). The initial operation date or initial installation date of a cogeneration or small power production facility shall not prevent the facility from being considered a qualifying facility for the purposes of 4 MCAR SS 3.0450-3.0463 3.0462 if it otherwise would satisfy all stated conditions.

P. T. Sale. "Sale" means the sale of electric energy or capacity or both by an electric utility to a qualifying facility.

Q. U. Supplementary power. "Supplementary power" means electric energy or capacity supplied by the utility which is regularly used by a qualifying facility in addition to that which the facility generates itself.

R. V. System emergency. "System emergency" means a condition on a utility's system which is imminently likely to result in significant disruption of service to customers or to endanger life or property.

S. W. System incremental energy costs. "System incremental energy costs" means amounts representing the hourly energy costs associated with the utility generating the next kilowatt-hour of load during each hour.

T. X. Utility. "Utility" means any public utility subject to rate regulation by the commission engaged in the generation, transmission, or distribution of electricity in Minnesota. The term includes, and any cooperative electric association and municipally-owned electric utility not subject to rate regulation by the commission which becomes interconnected with a qualifying facility.

HE 29

4 MCAR S 3.0452 Filing requirements.

A. Filing dates. Within 60 days after the effective date of 4 MCAR SS 3.0450-3.0463 3.0462, on January 1, ~~1983~~ 1984, and every 12 months thereafter, each utility shall file with the commission, for its review and approval, a cogeneration and small power production tariff ~~which~~. The tariff for generating utilities shall contain Schedules A through F ~~or, if applicable, Schedules A through D plus Schedules F and G~~, except that generating utilities with less than 500 million kilowatt-hour sales in the calendar year preceeding the filing may substitute their retail rate schedules for Schedules A and B. The tariff for nongenerating utilities shall contain Schedules C, D, F, and G, and may, at the option of the utility, contain Schedules A and B, using data from the utility's wholesale supplier. HE 34-39

B. Filing option. If, after the initial filing, there is no change in the cogeneration and small power production tariff to be filed in a subsequent year, the utility may notify the commission in writing, by the date the tariff would otherwise be due, that there is no change in the tariff. This notification will serve as a substitute for the refiling of the tariff in that year. HE 37

~~B.~~ C. Schedule A. Schedule A shall contain the estimated system average incremental energy costs by seasonal peak and off-peak periods for each of the next five years. For each seasonal period, system incremental energy costs shall be averaged during system daily peak hours, system daily off-peak hours, and all hours in the season. The energy costs shall be increased by a factor equal to 50 percent of the line losses shown in Schedule B. HE 41 Schedule A shall describe in detail the method used to determine the on-peak and off-peak hours and seasonal periods and shall show the resulting on-peak and off-peak and seasonal hours selected.

~~C.~~ D. Schedule B. Schedule B shall contain the information listed in 1.-5.

1. Schedule B shall contain a description of all planned utility generating facility additions anticipated during the

next ten years, including:

a. Name of unit;

b. Nameplate rating;

c. Fuel type;

d. In-service date;

e. Completed cost in dollars per kilowatt in the year in which the plant is expected to be put in service, including allowance for funds used during construction;

f. Anticipated average annual fixed operating and maintenance costs in dollars per kilowatt;

g. Energy costs associated with the unit, including fuel costs and variable operating and maintenance costs;

h. Projected average number of kilowatt-hours per year the plant will generate during its useful life; and

i. Average annual fuel savings resulting from the addition of this generating facility, stated in dollars per kilowatt.

2. Schedule B shall contain a description of all planned firm capacity purchases, other than from qualifying facilities, during the next ten years, including:

a. Year of the purchase;

b. Name of the seller;

c. Number of kilowatts of capacity to be purchased;

d. Capacity cost in dollars per kilowatt; and

e. Associated energy cost in cents per kilowatt-hour.

3. Schedule B shall contain the utility's overall average percentage of line losses due to the distribution, transmission, and transformation of electric energy.

4. Schedule B shall contain the utility's net annual avoided capacity cost stated in dollars per kilowatt-hour averaged over the on-peak hours and the utility's net annual avoided capacity cost stated in dollars per kilowatt-hour averaged over all hours. These figures shall be calculated as follows:

a. The completed cost per kilowatt of the utility's next major generating facility addition, as reported in Schedule

B, shall be multiplied by the utility's marginal capital carrying charge rate in the first year of investment. If the utility is unable to determine this carrying charge rate as specified, the rate of 15 percent shall be used. HE 47

b. The dollar amount resulting from the calculation set forth in a. shall be discounted to present value, as of the midpoint of the reporting year, from the in-service date of the generating unit. The discount rate used shall be the ~~most recent overall rate of return authorized by the commission for the reporting utility. If the reporting utility is not rate regulated by the commission or is regulated but has not yet had an overall rate of return established by the commission, the utility shall use the overall rate of return most recently authorized for the largest electric utility, measured by annual Minnesota revenues, in the commission's jurisdiction~~ incremental cost of capital. HE 48

c. The figure for average annual fuel savings per kilowatt described in 1.i. shall be discounted to present value using the procedure of b.

d. The number resulting from the calculation in c. shall be subtracted from the number resulting from the calculation in b. This is the net annual avoided capacity cost stated in dollars per kilowatt at present value.

e. The net annual avoided capacity cost calculated in d. shall be multiplied by 1.15 to recognize a reserve margin.

f. The figure determined from the calculation of e. shall be increased by the ~~amount~~ present value of the anticipated average annual fixed operating and maintenance costs as reported in 1.f. The present value shall be determined using the procedure of b. HE 52

g. The figure determined from the calculation of f. shall be increased by one-half of the percentage amount of the average system line losses as shown on Schedule B. HE 53

h. The annual dollar per kilowatt figure, as calculated in accordance with g., shall be divided by the annual number of hours in the on-peak period as specified in Schedule

A. The resulting figure is the utility's net annual on-peak avoided capacity cost in dollars per kilowatt-hour.

i. The annual dollar per kilowatt figure resulting from the calculation specified in g. shall be divided by the total number of hours in the year. The resulting figure is the utility's net annual avoided capacity cost in dollars per kilowatt-hour averaged over all hours.

5. If the utility has no planned generating facility additions for the ensuing ten years, but has planned additional capacity purchases, other than from qualifying facilities, during the ensuing ten years, Schedule B shall contain its net annual avoided capacity cost stated in dollars per kilowatt-hour averaged over the on-peak hours and the utility's net annual avoided capacity costs stated in dollars per kilowatt-hour averaged over all hours. These shall be calculated as follows:

a. The annual capacity purchase amount, in dollars per kilowatt, for the utility's next planned capacity purchase, other than from a qualifying facility, shall be discounted to present value as of the midpoint of the reporting year, from the year of the planned capacity purchase. The discount rate used shall be ~~determined in the manner described in 4.b~~ the incremental cost of capital.

b. The net annual avoided capacity cost shall be computed by applying the figure determined in a. to the steps enumerated in 4.d.-4.i., excluding 4.g.

6. If the utility has neither planned generating facility additions nor planned additional capacity purchases, other than from qualifying facilities, during the ensuing ten years, the utility shall be deemed to have no avoidable capacity costs.

~~D.~~ E. Schedule C. Schedule C shall contain all standard contracts to be used with qualifying facilities, containing applicable terms and conditions.

~~E.~~ F. Schedule D. Schedule D shall contain the utility's safety standards, required operating procedures for interconnected operations, and the functions to be performed by any control and protective apparatus. These standards and

procedures shall not be more restrictive than the interconnection guidelines listed in 4 MCAR S 3.0462. The utility may include in Schedule D suggested types of equipment to perform the specified functions. No standard or procedure shall be established to discourage cogeneration or small power production.

~~F.~~ G. Schedule E. Schedule E shall contain procedures for notifying affected qualifying facilities of any periods of time when the utility will not purchase electric energy or capacity because of extraordinary operational circumstances which would make the costs of purchases during those periods greater than the costs of internal generation.

~~G.~~ H. Schedule F. Schedule F shall contain and describe all computations made by the utility in determining Schedules A and B.

~~H.~~ I. Schedule G; special rule for nongenerating utilities. ~~An electric utility which purchases all the power it sells shall obtain the data for Schedule A and Schedule B from its supplying utility. The nongenerating utility shall file this data as Schedule A and Schedule B. In addition, the nongenerating utility shall file Schedules C, D, F, and Schedule G. Schedule G shall list the rates at which the nongenerating utility currently purchases energy and capacity~~ Schedule G shall list the rates at which a nongenerating utility purchases energy and capacity. If the nongenerating utility has more than one wholesale supplier, Schedule G shall list the rates of that supplier from which purchases may first be avoided. If the nongenerating utility with more than one wholesale supplier also chooses to file Schedules A and B, the data on Schedules A and B shall be obtained from that supplier from which purshases may first be avoided.

HE 61

~~I.~~ J. Availability of filings. All filings required by A.-~~H.~~ I. shall be made with the commission and shall be maintained at the utility's general office and any other offices of the utility where rate case filings are kept. These filings shall be available for public inspection at the commission and at the

4 MCAR S 3.0453 Reporting requirements.

A. General requirements. Each utility which is interconnected with a qualifying facility shall provide the commission with the following information on or before November 1, ~~1982, and at any other such times~~ 1983, on January 1, 1986, and every two years thereafter, and in ~~any~~ such form as the commission may require. HE 63

B. Net energy billed qualifying facilities. For qualifying facilities under net energy billing, the utility shall provide the commission with the following information:

1. a summary of the total number of interconnected qualifying facilities, the type of interconnected qualifying facilities by energy source, HE 64 and the name plate ratings of such units;

2. for each qualifying facility type, the total kilowatt-hours delivered per month to the utility by all net energy billed qualifying facilities;

3. for each qualifying facility type, the total kilowatt-hours delivered per month by the utility to all net energy billed qualifying facilities; and

4. for each qualifying facility type, the total net energy delivered per month to the utility by net energy billed qualifying facilities.

C. Other qualifying facilities. For all qualifying facilities not under net energy billing, the utility shall provide the commission with the following information:

1. a summary of the total number of interconnected qualifying facilities, the type of interconnected qualifying facilities, and the nameplate ratings of such units; and

2. for each qualifying facility type, the total kilowatt-hours delivered per month to the utility, reported by on-peak and off-peak periods to the extent that data is available.

D. Wheeling. The utility shall provide a summary of all wheeling activities undertaken with respect to qualifying HE 66

facilities.

HE 67

E. Major impacts. The utility ~~shall~~ may provide a statement of any major impacts that cogeneration or small power production has had on the utility's system.

HE 67

F. Effectiveness. The utility ~~shall~~ may provide a statement of the effectiveness of Minn. Stat. S 216B.164 and 4 MCAR SS 3.0450-~~3.0463~~ 3.0462 in encouraging cogeneration and small power production, as observed by the utility.

4 MCAR S 3.0454 Conditions of service.

A. Requirement to purchase. The utility shall purchase

HE 68

energy ~~or~~ and capacity from any qualifying facility which offers to sell energy to the utility and agrees to the conditions set forth in 4 MCAR SS 3.0450-~~3.0463~~ 3.0462.

B. Written contract. A written contract shall be executed between the qualifying facility and the utility.

C. Compliance with national electrical safety code. The interconnection between the qualifying facility and the utility shall comply with the requirements of the 'National Electrical Safety Code,' 1981 edition, issued by the Institute of Electrical and Electronics Engineers as American National Standards Institute Standard C2 (New York, 1980).

D. Responsibility for apparatus. The qualifying facility, without cost to the utility, shall furnish, install, operate, and maintain in good order and repair any apparatus the qualifying facility needs in order to operate in accordance with Schedule D. ~~At the request of the qualifying facility, the utility shall furnish, install, operate, and maintain all or any portion of the apparatus and bill the qualifying facility for the equipment and service at cost.~~ HE 71

E. Liability insurance. A utility or qualifying facility ~~shall not~~ may require proof of coverage or the procurement of a reasonable amount of liability insurance up to $300,000 as a condition of service. HE 72, and see CHE 1/3 re subs. change.

F. Legal status not affected. Nothing in 4 MCAR SS 3.0450-~~3.0463~~ 3.0462 affects the responsibility, liability, or legal rights of any party under applicable law or statutes. No party

shall require the execution of an indemnity clause or hold harmless clause in the written contract as a condition of service. HE 73

G. Payments for interconnection costs. Payments for interconnection costs may, ~~at the option of the qualifying facility:~~

1. be made at the time the costs are incurred; or

2. ~~be amortized over the life of the contract; or~~ HE 74

3. be made according to any schedule agreed upon by the qualifying facility and the utility.

H. Types of power to be offered. The utility shall offer maintenance, interruptible, supplementary, and back-up power to the qualifying facility upon request.

I. Metering. The utility shall meter the qualifying facility to obtain the data necessary to fulfill its reporting requirements to the commission as specified in 4 MCAR S 3.0453. The qualifying facility shall pay for the requisite metering as an interconnection cost ~~unless the qualifying facility is operating under net energy billing. In that case, the utility shall provide the second meter without cost to the qualifying facility~~. HE 76

J. Discontinuing sales during emergency. The utility may discontinue sales to the qualifying facility during a system emergency, if the discontinuance and recommencement of service HE 77 is not discriminatory.

K. Interconnection plan. The utility may, ~~prior to interconnection,~~ require the qualifying facility to submit an interconnection plan not more than 30 days prior to HE 78 interconnection in order to facilitate interconnection arrangements. If such a plan is required, it shall include no more than: see FofF/Order Adopts p. 50

1. technical specifications of equipment;

2. proposed date of interconnection; and

3. projection of net output or consumption by the qualifying facility when available.

4 MCAR S 3.0455 Rates for sales.

A. Rates to be governed by tariff. Except as otherwise provided in B., rates for sales to a qualifying facility shall be governed by the applicable tariff for the class of electric utility customers to which the qualifying facility would belong were it not a qualifying facility.

B. Petition for specific rates. Any qualifying facility or utility may petition the commission for establishment of specific rates for supplementary, maintenance, back-up, or interruptible power. HE 80

4 MCAR S 3.0456 Standard rates for purchases.

A. General. For qualifying facilities with capacity of 100 kilowatts or less, standard rates apply. Qualifying facilities with capacity of more than 100 kilowatts may negotiate contracts with the utility or may be compensated under standard rates if they make commitments to provide firm ~~electric~~ power. HE 81 The utility shall make available three types of standard rates, described in B., C., and D. The qualifying facility shall choose interconnection under one of these rates, and shall specify its choice in the written contract required in 4 MCAR S 3.0454 B. Any net credit to the qualifying facility shall, at its option, be credited to its account with the utility or returned by check within 15 days of the billing date. The option chosen shall be specified in the written contract required in 4 MCAR S 3.0454 B. Qualifying facilities remain responsible for any monthly service charges and demand charges specified in the tariff under which they consume electricity from the utility.

B. Net energy billing rate.

1. The net energy billing rate is available only to qualifying facilities with capacity of 40 kilowatts or less which choose not to offer electric power for sale on a time-of-day basis.

2. The utility shall bill the qualifying facility for the excess of energy supplied by the utility above energy supplied by the qualifying facility during each billing period according to the utility's applicable retail rate schedule.

3. When the energy generated by the qualifying facility exceeds that supplied by the utility during a billing period, the utility shall compensate the qualifying facility for the excess energy under either a. or b.

a. For a qualifying facility with capacity of 20 kilowatts or less, compensation shall be at the energy rate of the rate schedule applicable to sales to the qualifying facility. If the rate schedule consists of more than one block, the lowest per kilowatt-hour rate shall apply. The compensation shall reflect changes to the energy rate due to the operation of the utility's fuel adjustment clause.

b. For a qualifying facility with capacity of more than 20 kilowatts but not greater than 40 kilowatts, compensation shall be as specified under C.3.

C. Simultaneous purchase and sale billing rate.

1. The simultaneous purchase and sale rate is available only to qualifying facilities with capacity of 40 kilowatts or less which choose not to offer electric power for sale on a time-of-day basis.

2. The qualifying facility shall be billed for all energy and capacity it consumes during a billing period according to the utility's applicable retail rate schedule.

3. The utility shall purchase all energy ~~generated by the qualifying facility~~ and capacity which is made available to it by the qualifying facility. At the option of the qualifying facility, its entire generation shall be deemed to be made available to the utility. Compensation to the qualifying facility shall be the sum of a. and b.

a. The energy component shall be the appropriate system average incremental energy costs shown on Schedule A; or if the ~~purchasing utility is nongenerating, the energy rate shown on Schedule G~~ generating utility has not filed Schedule A, the energy component shall be the energy rate of the retail rate schedule, applicable to the qualifying facility, filed in lieu of Schedules A and B; or if the nongenerating utility has not filed Schedule A, the energy component shall be the energy rate

shown on Schedule G;

b. If the qualifying facility provides firm power to the utility, the capacity component shall be the utility's net annual avoided capacity cost per kilowatt-hour averaged over all hours ~~as-calculated-according-to-4-MCAR-S-3.0452-C.4.-or-C.5.-as appropriate;-or-if-the-purchasing-utility-is-nongenerating,-the capacity-component-shall-be-the-capacity-cost-per-kilowatt-shown on-Schedule-G,-divided-by-the-number-of-hours-in-the-billing period~~ shown on Schedule B; or if the generating utility has not filed Schedule B, the capacity component shall be the demand charge per kilowatt (if any) of the retail rate schedule, applicable to the qualifying facility, filed in lieu of Schedules A and B, divided by the number of hours in the billing period; or if the nongenerating utility has not filed Schedule B, the capacity component shall be the capacity cost per kilowatt shown on Schedule G, divided by the number of hours in the billing period. If the qualifying facility does not provide firm power to the utility, no capacity component shall be included in the compensation paid to the qualifying facility.

D. Time-of-day purchase rates.

1. Time-of-day rates are required for qualifying facilities with capacity greater than 40 kilowatts and less than or equal to 100 kilowatts, and they are optional for qualifying facilities with capacity less than or equal to 40 kilowatts. Time-of-day rates are also optional for qualifying facilities with capacity greater than 100 kilowatts if these qualifying facilities provide firm ~~electric~~ power.

2. The qualifying facility shall be billed for all energy and capacity it consumes during each billing period according to the utility's applicable retail rate schedule. Any utility rate-regulated by the commission may propose time-of-day retail rate tariffs which require qualifying facilities that choose to sell power on a time-of-day basis to also purchase power on a time-of-day basis.

3. The utility shall purchase all energy ~~generated~~ and capacity which is made available to it by the qualifying

facility. Compensation to the qualifying facility shall be the sum of a. and b.

a. The energy component shall be the appropriate on-peak and off-peak system incremental costs shown on Schedule A; or if the ~~purchasing utility is nongenerating, the energy rate shown on Schedule G~~ generating utility has not filed Schedule A, the energy component shall be the energy rate of the retail rate schedule, applicable to the qualifying facility, filed in lieu of Schedules A and B; or if the nongenerating utility has not filed Schedule A, the energy component shall be the energy rate shown on Schedule G.

b. If the qualifying facility provides firm power to the utility, the capacity component shall be the utility's net annual avoided capacity cost per kilowatt-hour averaged over the on-peak hours as ~~calculated according to 4 MCAR S 3.0452 C.4. or C.5. as appropriate~~ shown on Schedule B; or if the ~~purchasing utility is nongenerating, the capacity cost per kilowatt shown on Schedule G, divided by the number of hours in the billing~~ period generating utility has not filed Schedule B, the capacity component shall be the demand charge per kilowatt (if any) of the retail rate schedule, applicable to the qualifying facility, filed in lieu of Schedules A and B, divided by the number of on-peak hours in the billing period; or if the nongenerating utility has not filed Schedule B, the capacity component shall be the capacity cost per kilowatt shown on Schedule G, divided by the number of on-peak hours in the billing period. The capacity component shall apply only to deliveries during on-peak hours. If the qualifying facility does not provide firm power to the utility, no capacity component shall be included in the compensation paid to the qualifying facility.

4 MCAR S 3.0457 Negotiated rate for purchases.

A. Contracts negotiated by customer. ~~For~~ Except as provided in D., a qualifying ~~facilities~~ facility with capacity greater than 100 kilowatts, ~~the customer may~~ shall negotiate a contract with the utility. ~~The contract shall set~~ setting the applicable rates for payments to the customer of avoided capacity and

.0458
.0459

energy costs.

B. Amount of capacity payments; considerations. The qualifying facility shall be entitled to the full avoided capacity costs of the utility. The amount of ~~such~~ capacity payments shall be determined through consideration of:

HE 105

1. The capacity factor of the qualifying facility;

2. The cost of the utility's avoidable capacity;

3. The length of the contract term;

4. Reasonable scheduling of maintenance;

5. The willingness and ability of the qualifying facility to provide firm power during system emergencies;

6. The willingness and ability of the qualifying facility to allow the utility to dispatch its generated energy;

7. The willingness and ability of the qualifying facility to provide firm capacity during system peaks;

8. The sanctions for noncompliance with any contract term; and

9. The smaller capacity increments and the shorter lead times available when capacity is added from qualifying facilities.

C. Full avoided energy costs. The qualifying facility shall be entitled to the full avoided energy costs of the utility. The costs shall be adjusted as appropriate to reflect line losses.

D. Qualifying facilities of greater than 100 kilowatts. Nothing in A.-C. prevents a utility from connecting qualifying facilities of greater than 100 kilowatts under its standard rates.

4 MCAR S 3.0458 Utility treatment of costs. All purchases from qualifying facilities with capacity of 100 kilowatts or less, and purchases of energy from qualifying facilities with capacity of over 100 kilowatts shall be considered an energy cost in calculating an electric utility's fuel adjustment clause.

4 MCAR S 3.0459 Wheeling and exchange agreements. For all qualifying facilities with capacity of 30 kilowatts or greater,

the utility shall, at the qualifying facility's request or with its consent, provide wheeling or exchange agreements whenever practicable to sell the qualifying facility's output to any other Minnesota utility that anticipates or plans generation expansion in the ensuing ten years. The following provisions apply unless the qualifying facility and the utility to which it is interconnected agree otherwise.

A. Inter-utility payment; wheeling. The utility to which the qualifying facility is interconnected shall pay any reasonable wheeling charges from other utilities arising from the sale of the qualifying facility's output.

B. Inter-utility payment; energy and capacity. Within 30 days of receipt, the utility ultimately receiving the qualifying facility's output shall pay its resulting full avoided capacity and energy costs by remittance to the utility with which the qualifying facility is interconnected.

C. Payment to qualifying facility. Within 15 days of receiving payment under B., the utility with which the qualifying facility is interconnected shall send the qualifying facility the payment it has received less the total charges it has incurred under A. and its own reasonable wheeling costs.

4 MCAR S 3.0460 Disputes. In case of a dispute between ~~an electric~~ HE 117 a utility and a qualifying facility or an impasse in the negotiations between them, either party may request the commission to determine the issue. When the commission makes the determination, the burden of proof shall be on the utility.

4 MCAR S 3.0461 Notification to customers.

A. Contents of written notice. Within 60 days following each annual filing required by 4 MCAR S 3.0452, every ~~electric~~ HE 117 utility shall furnish written notice to each of its customers:

1. That the utility is obligated to interconnect with and purchase electricity from cogenerators and small power producers;

2. That the utility is obligated to provide ~~customer~~ HE 121 information to all interested persons free of charge upon request; and

3. That any disputes over interconnection, sales, and purchases are subject to resolution by the commission upon complaint.

The notice shall be in language and form approved by the commission.

B. ~~Customer~~ Availability of information. Each utility shall publish ~~customer~~ information that shall be available to all interested persons free of charge upon request. Such ~~customer~~ information shall include at least the following: HE 121

1. A statement of rates, terms, and conditions of interconnections;

2. A statement of technical requirements;

3. A sample contract containing the applicable terms and conditions;

4. Pertinent rate schedules;

5. The title, address, and telephone number of the department of the utility to which inquiries should be directed; and

6. The statement: "The Minnesota Public Utilities Commission is available to resolve disputes upon written request," and the address and telephone number of the commission.

4 MCAR S 3.0462 Interconnection guidelines.

A. Denial of interconnection application. Except as hereinafter provided, a utility shall interconnect with a qualifying facility that offers to make energy or capacity available to the utility. HE 123 The utility may refuse to interconnect a qualifying facility with its power system until the qualifying facility has properly applied under 4 MCAR S 3.0454 K. and has received approval from the utility. The utility shall withhold approval only for failure to comply with applicable utility rules not prohibited by 4 MCAR SS 3.0480-3.0562, HE 125. or governmental rules or laws. The utility shall be permitted to include in its contract reasonable technical connection and operating specifications for the qualifying facility.

B. Notification of telephone utility and cable television

firm. The electric utility shall notify the appropriate telephone utility and cable television firm when a qualifying facility is to be interconnected with its system. This notification shall be as early as practicable to permit coordinated analysis and testing before interconnection, if considered necessary.

C. Separate distribution transformer; when required. The utility may require a separate distribution transformer for the qualifying facility if necessary either to protect the safety of employees or the public or to keep service to other customers within prescribed limits. ~~Ordinarily, this requirement should not be necessary for an induction type generator with a capacity of five kilowatts or less, or other units with a capacity of ten kilowatts or less that utilize line commutated inverters.~~ HE 127

D. Limiting capacity of single-phase generators; when permitted. If necessary, to avoid the likelihood that a qualifying facility will cause problems with the service of other customers, the utility may limit the capacity and operating characteristics of single-phase generators in a way consistent with the utility limitations for single-phase motors. ~~Ordinarily, single phase generators should be limited to a capacity of ten kilowatts or less.~~ HE 128

E. ~~Automatic~~ Isolation of generator. ~~The utility may require that the qualifying facility have a system for automatically~~ Each qualifying facility shall have a lockable, manual disconnect switch capable of isolating the generator from the utility's system ~~upon loss of the utility's supply~~ readily accessible to the utility. HE 129

F. Discontinuing parallel operation. The utility may require that the qualifying facility discontinue parallel generation operation when necessary for system safety.

G. Permitting entry. The qualifying facility shall make equipment available and permit electric and communication utility personnel to enter the property at reasonable times to test isolation and protective equipment, to evaluate the quality of power delivered to the utility's system, and to test to

determine whether the qualifying facility's generating system is the source of any electric service or communication systems problems.

H. Maintaining power output. The power output of the qualifying facility shall be maintained so that frequency and voltage are compatible with normal utility service and do not cause that service to fall outside the prescribed limits of commission rules and other standard limitations.

I. Varying voltage levels. The qualifying facility shall be operated so that variations from acceptable voltage levels and other service-impairing disturbances do not adversely affect the service or equipment of other customers, and so that the facility does not produce ~~undesirable~~ levels of harmonics ~~in the utility power supply~~ which exceed the prescribed limits of commission rules or other levels customarily accepted. HE 133

J. Safety. The qualifying facility shall be responsible for providing protection for the installed equipment and shall adhere to all applicable national, state, and local codes. ~~The design and configuration of certain cogeneration and small power production equipment might require an isolation transformer as part of the qualifying facility installation for safety and protection of the qualifying facility equipment.~~ HE 134

K. Right of appeal for excessive technical requirements. The qualifying facility has the right of appeal to the commission when it considers individual technical requirements excessive.

~~4 MCAR S 3.0463 Existing contracts. Any interconnection contracts executed between a utility and a qualifying facility before the effective date of 4 MCAR SS 3.0450 3.0463 may, at the option of either party, be canceled and replaced by interconnection contracts under 4 MCAR SS 3.0450 3.0463.~~

APPROVED AS TO LEGALITY

3-29 19 83

HUBERT H. HUMPHREY, III
ATTORNEY GENERAL

BY Ted A. Mathison
SPECIAL ASSISTANT ATTORNEY GENERAL

STATE OF MINNESOTA
DEPARTMENT OF STATE
FILED
MAR 31 1983
Anderson Bro
8:41AM

Minnesota Public Utilities Commission

Proposed Rules Governing Cogeneration and Small Power Production

Notice of and Order for Hearing

Notice is hereby given that public hearings in the above entitled matter will be held by the Minnesota Public Utilities Commission (the commission) pursuant to Minn. Stat. § 15.0412, subd. 4, at the following times and locations:

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

Friday, April 30, 1982, 9:00 a.m., Auditorium, Room 83, State Office Building, 435 Park St., St. Paul, MN 55155

Monday, May 3, 1982, 10:00 a.m., Council Chambers, City Hall, 20 Fourth Avenue South, St. Cloud, MN 56301

Monday, May 3, 1982, 6:00 p.m., County Commissioners Board Room, Annex, Fifth Avenue West and First Street, Duluth, MN 55802

Tuesday, May 4, 1982, 9:30 a.m., Conference Room, City Hall, Grand Rapids, MN 55744

Tuesday, May 4, 1982, 6:00 p.m., Conference Room, Koochiching County Courthouse, International Falls, MN 56649

Wednesday, May 5, 1982, 1:00 p.m., Room to be Assigned, Polk County Courthouse, 617 North Broadway, Crookston, MN 56716

Thursday, May 6, 1982, 9:00 a.m., Basement Meeting Room, Government Services Building, 505 South Court Street, Fergus Falls, MN 56537

Friday, May 7, 1982, 9:00 a.m., Community Room, Pipestone County Courthouse Annex, 119 S.W. Second Ave., Pipestone, MN 56164

Monday, May 10, 1982, 10:00 a.m., Board Room, Olmsted County Courthouse, 515 Second St. S.W., Rochester, MN 55901

Tuesday, May 11, 1982, 10:00 a.m., Auditorium, Minnesota Valley Regional Library, 100 East Main St., Mankato, MN 56001.

The hearings will commence at the designated times and continue until all persons or representatives of associations or other interested groups have had an opportunity to be heard concerning adoption of the proposed rules by submitting either oral or written data, statements or arguments.

This rulemaking proceeding is being held pursuant to Minn. Stat. § 216A.05, subd. 1 and Minn. Stat. § 216B.164, subd. 6 and arises from the need to promulgate rules to implement Minn. Stat. § 216B.164, certain provisions of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. § 2601 *et seq.*) and the Federal Energy Regulatory Commission regulations thereunder (18 CFR § 292.101 *et seq.*).

The purpose of the proceeding is to determine the need for and reasonableness of the proposed rules as well as allowing the commission the opportunity to obtain additional public input on the form and content of the proposed rules.

The hearings will be held before Hearing Examiner Bruce Campbell, Office of Administrative Hearings, 400 Summit Bank Building, 310 South 4th Ave., Minneapolis, Minnesota 55415, telephone (612) 341-7602, a hearing examiner appointed by the chief hearing examiner of the State of Minnesota. All parties have the right to be represented by legal counsel, by themselves, or any other representative of their choice, if not otherwise prohibited as the unauthorized practice of law. The hearings will be conducted in accordance with the applicable laws relating to the commission, the Administrative Procedures Act (Minn. Stat. §§ 15.0411 through 15.0417 and 15.052), the Rules of the Office of Administrative Hearings (9 MCAR §§ 2.101 through 2.113), and the Rules of Practice of the Commission (PSC 500 through 521), to the extent that they have not been superseded by the Rules of the Office of Administrative Hearings.

The above-cited procedural rules are available for inspection at the Office of Administrative Hearings and the Public Utilities Commission or may be purchased from the State Register and Public Documents Division of the Department of Administration, 117 University Ave., St. Paul, Minnesota 55155, telephone (612) 297-3000.

The cited procedural rules provide generally for the procedural rights and obligations including the right to present evidence and cross examine witnesses, the right to purchase a record or transcript, and the obligation to meet certain time limits.

The hearings will address issues pertaining to terms, conditions, rates for purchases, rates for sale, and interconnection specifications and procedures for cogeneration and small power production facilities. A cogeneration facility uses heat of combustion to produce both electricity and useful heat or mechanical energy. A small power plant production facility generates electrical energy from renewable resources (hydro, wind, solar, biomass, etc.) A topical outline of the rules is as follows:

4 MCAR § 3.0450 Scope and Pupose
4 MCAR § 3.0451 Definitions
4 MCAR § 3.0452 Filing Requirements
4 MCAR § 3.0453 Reporting Requirements
4 MCAR § 3.0454 Conditions of Service
4 MCAR § 3.0455 Rates for Sales
4 MCAR § 3.0456 Standard Rates for Purchases
A. Net Energy Billing

B. Simultaneous Purchase and Sale
C Time of Day Purchase Rates
4 MCAR § 3.0457 Negotiated Rates for Purchases
4 MCAR § 3.0458 Utility Treatment of Costs
4 MCAR § 3.0459 Wheeling and Exchange Agreements
4 MCAR § 3.0460 Disputes
4 MCAR § 3.0461 Notification to Customers
4 MCAR § 3.0462 Interconnection Guidelines
4 MCAR § 3.0463 Existing Contracts

Any interested person will be provided with one copy of the proposed rules without charge upon request to Christopher K. Sandberg, telephone number (612) 296-2357. Additional copies will be available at the hearings.

In the interest of efficiency, the commission requests that any person having comments on or objections to any part of the proposed rules submit their comments or objections to the commission (attention Randall D. Young, Executive Secretary, Docket No. E-999/R-80-560) and to Hearing Examiner Campbell as soon as possible and preferably prior to April 30, 1982. Any such comments or objections should:

state concisely and with particularity each portion of the proposed rules that the author supports or objects to;

state the basis for the author's support or objection; and

state any proposed modifications to the proposed rules, the author's reasons for those modifications, and the basis for those modifications.

Failure to submit such comments or objections prior to the hearings will not prohibit any person from submitting written or oral statements on the record at the hearings.

Notice is hereby given that 25 days prior to the hearing, a statement of need and reasonableness will be available for review at the commission offices and at the Office of Administrative Hearings. This statement of need and reasonableness will include a summary of all the evidence and argument which the commission anticipates presenting at the hearing justifying both the need for and the reasonableness of the proposed rules. Copies of the statement of need and reasonableness may be obtained from the Office of Administrative Hearings at a minimal charge.

All persons are advised that no factual information or evidence which is not part of the hearing record shall be considered by the hearing examiner or by the commission in the determination of the above-cited matter. Persons attending the hearings should bring all factual information and evidence bearing on the case which they wish to have included in the record.

At the hearings, the commission will, through its staff's written and oral testimony, explain the proposed rules and the commission's reasons for proposing them. Copies of any written testimony and the statement of need and reasonableness will be available at the hearings.

Upon completion of the commission's presentation, interested persons will be given an opportunity to address questions to the commission's staff and to submit written and oral statements. It is the commission's intent and desire that after its staff has completed its presentation, comments and statements be received from interested persons before proceeding to questioning. An opportunity to question the commission's staff will be afforded all persons upon completion of the exchange of information and comments.

Interested persons who wish to make statements may do so by responding to the commission's presentation or by offering new information. In addition, interested persons may request the commission's staff to provide further explanations of any portion of the proposed rules if the persons are unclear about the commission's reasons. All persons making oral statements are subject to questioning by the commission's staff.

The commission will respond, in so far as possible, at the hearings to objections and questions presented at the hearings by interested persons. Interested persons may respond with oral or written statements to any new information presented by the commission. The commission may respond to objections or comments in writing after the close of the hearings.

Written material may be submitted and recorded in the hearing record for five working days after the conclusion of the public hearings. Such a comment period may be extended for a period not to exceed 20 calendar days if so ordered by the hearing examiner.

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Notice: Any person may request notification of the date on which the Hearing Examiner's Report will be available, after which date the commission may not take any final action on the rules for a period of five working days. Any person may request notification of the date on which the hearing record has been submitted (or resubmitted) to the Attorney General by the commission. If you desire to be so notified, you may so indicate at the hearing. After the hearing, you may request notification by sending a written request to the hearing examiner (in the case of the Hearing Examiner's Report), or the commission (in the case of the commission's submission or resubmission to the Attorney General).

All persons are advised that the proposed rules may be modified as a result of the hearing process.

Questions concerning the content or form of the above-entitled rules should be directed to Stuart Mitchell or Christopher Sandberg, 780 American Center Bldg., 150 East Kellogg Boulevard, St. Paul, Minnesota 55101, telephone (612) 296-8662 or (612) 296-2357. Any questions concerning the conduct of the hearings should be directed to the assigned hearing examiner.

Minn. Stat. ch. 10A requires each lobbyist to register with the State Ethical Practices Board within five days after he or she commences lobbying. A lobbyist is defined in Minn. Stat. § 10A.01, subd. 11 as any individual:

(a) Engaged for pay or other consideration, or authorized by another individual or association to spend money, who spends more than five hours in any month or more than $250, not including *his own* travel expenses and membership dues, in any year, for the purpose of attempting to influence legislative or administrative action by communicating or urging others to communicate with public officials; or

(b) Who spends more than $250, not including *his own* traveling expenses and membership dues, in any year for the purpose of attempting to influence legislative or administrative action by communicating or urging others to communicate with public officials.

The statute provides certain exceptions. Questions should be directed to the Ethical Practices Board, 41 State Office Building, St. Paul, Minnesota 55155, telephone (612) 296-5615.

March 11, 1982

Randall D. Young
Executive Secretary

Rules as Proposed (all new material)

4 MCAR § 3.0450 Scope and purpose. The purpose of 4 MCAR §§ 3.0450-3.0463 is to implement certain provisions of Minn. Stat. § 216B.164; the Public Utility Regulatory Policies Act of 1978, 16 United States Code, Section 824a-3 (Supplement III, 1979); and the Federal Energy Regulatory Commission regulations, 18 Code of Federal Regulations, Sections 292.101-292.602 (1981). Nothing in 4 MCAR §§ 3.0450-3.0463 excuses any utility from carrying out its responsibilities under these provisions of state and federal law. Rules 4 MCAR §§ 3.0450-3.0463 shall at all times be applied in accordance with their intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public.

4 MCAR § 3.0451 Definitions.

A. Applicability. For purposes of 4 MCAR §§ 3.0450-3.0463, the following terms have the meanings given them.

B. Average annual fuel savings. "Average annual fuel savings" means the annualized difference between the system fuel costs that the utility would have incurred without the additional generation facility and the system fuel costs the utility is expected to incur with the additional generation facility.

C. Backup power. "Backup power" means electric energy or capacity supplied by the utility to replace energy ordinarily generated by a qualifying facility's own generation equipment during an unscheduled outage of the facility.

D. Capacity. "Capacity" means the capability to produce, transmit, or deliver electric energy.

E. Capacity costs. "Capacity costs" means the costs associated with providing the capability to deliver energy. They consist of the capital costs of facilities used to generate, transmit, and distribute electricity and the fixed operating and maintenance costs of these facilities.

F. Commission. "Commission" means the Minnesota Public Utilities Commission.

G. Energy. "Energy" means electric energy, measured in kilowatt-hours.

H. Energy costs. "Energy costs" means the variable costs associated with the production of electric energy. They consist of fuel costs and variable operating and maintenance expenses.

I. Interconnection costs. "Interconnection costs" means the reasonable costs of connection, switching, metering, transmission, distribution, safety provisions, and administrative costs incurred by the utiltiy that are directly related to

installing and maintaining the physical facilities necessary to permit interconnected operations with a qualifying facility. Costs are considered interconnection costs only to the extent that they exceed the corresponding costs which the utility would have incurred if it had not engaged in interconnected operations, but instead generated from its own facilities or purchased from other sources an equivalent amount of electric energy or capacity. Costs are considered interconnection costs only to the extent that they exceed the costs the utility would incur in selling electricity to the qualifying facility as a nongenerating customer.

J. Interruptible power. "Interruptible power" means electric energy or capacity supplied by the utility to a qualifying facility subject to interruption under certain specified conditions.

K. Maintenance power. "Maintenance power" means electric energy or capacity supplied by a utility during scheduled outages of the qualifying facility.

L. Marginal capital carrying charge rate. "Marginal capital carrying charge rate" means the percentage factor by which the amount of a new capital investment in a generating unit would have to be multiplied to obtain an amount equal to the total additional annual amounts for the cost of equity and debt capital, income taxes, property and other taxes, tax credits, depreciation, and insurance which would be associated with the new capital investment.

M. On-peak hours. "On-peak hours" means, for utilities whose rates are regulated by the commission, those hours which are defined as on-peak for retail ratemaking. For any other utility, on-peak hours are either those hours formally designated by the utility as on-peak for ratemaking purposes or those hours for which its typical loads are at least 85 percent of its average maximum monthly loads.

N. Purchase. "Purchase" means the purchase of electric energy or capacity or both from a qualifying facility by a utility.

O. Qualifying facility. "Qualifying facility" means a cogeneration or small power production facility which satisfies the conditions established in 18 Code of Federal Regulations, Section 292.101 (b) (1) (1981), as applied when interpreted in accordance with the amendments to 18 Code of Federal Regulations, Sections, 292.201-292.207 adopted through 46 Federal Register 33025-33027 (1981). The initial operation date or initial installation date of a cogeneration or small power production facility shall not prevent the facility from being considered a qualifying facility for the purposes of 4 MCAR §§ 3.0450-3.0463 if it otherwise would satisfy all stated conditions.

P. Sale. "Sale" means the sale of electric energy or capacity or both by an electric utility to a qualifying facility.

Q. Supplementary power. "Supplementary power" means electric energy or capacity supplied by the utility which is regularly used by a qualifying facility in addition to that which the facility generates itself.

R. System emergency. "System emergency" means a condition on a utility's system which is imminently likely to result in significant disruption of service to customers or to endanger life or property.

S. System incremental energy costs. "System incremental energy costs" means amounts representing the hourly energy costs associated with the utility generating the next kilowatt-hour of load during each hour.

T. Utility. "Utility" means any public utility engaged in the generation, transmission, or distribution of electricity in Minnesota. The term includes cooperative electric associations and municipally-owned electric utilities.

4 MCAR § 3.0452 Filing requirements.

A. Filing dates. Within 60 days after the effective date of 4 MCAR §§ 3.0450-3.0463, on January 1, 1983, and every 12 months thereafter, each utility shall file with the commission, for its review and approval, a cogeneration and small power production tariff which shall contain Schedules A through F or, if applicable, schedules A through D plus Schedules F and G.

B. Schedule A. Schedule A shall contain the estimated system average incremental energy costs by seasonal peak and off-peak periods for each of the next five years. For each seasonal period, system incremental energy costs shall be averaged during system daily peak hours, system daily off-peak hours, and all hours in the season. Schefule A shall describe in detail the method used to determine the on-peak and off-peak hours and seasonal periods and shall show the resulting on-peak and off-peak and seasonal hours selected.

C. Schedule B. Schedule B shall contain the information listed in 1.-5.

1. Schedule B shall contain a description of all planned utility generating facility additions anticipated during the next ten years, including:

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a. Name of unit;

b. Nameplate rating,

c. Fuel type;

d. In-service date;

e. Completed cost in dollars per kilowatt in the year in which the plant is expected to be put in service, including allowance for funds used during construction;

f. Anticipated average annual fixed operating and maintenance costs in dollars per kilowatt;

g. Energy costs associated with the unit, including fuel costs and variable operating and maintenance costs;

h. Projected average number of kilowatt-hours per year the plant will generate during its useful life; and

i. Average annual fuel savings resulting from the addition of this generating facility, stated in dollars per kilowatt.

2. Schedule B shall contain a description of all planned firm capacity purchases, other than from qualifying facilities, during the next ten years, including:

a. Year of the purchase;

b. Name of the seller;

c. Number of kilowatts of capacity to be purchased;

d. Capacity cost in dollars per kilowatt; and

e. Associated energy cost in cents per kilowatt-hour.

3. Schedule B shall contain the utility's overall average percentage of line losses due to the distribution, transmission, and transformation of electric energy.

4. Schedule B shall contain the utility's net annual avoided capacity cost stated in dollars per kilowatt-hour averaged over the on-peak hours and the utility's net annual avoided capacity cost stated in dollars per kilowatt-hour averaged over all hours. These figures shall be calculated as follows:

a. The completed cost per kilowatt of the utility's next major generating facility addition, as reported in Schedule B, shall be multiplied by the utility's marginal capital carrying charge rate. If the utility is unable to determine this carrying charge rate as specified, the rate of 15 percent shall be used.

b. The dollar amount resulting from the calculation set forth in a. shall be discounted to present value, as of the midpoint of the reporting year, from the in-service date of the generating unit. The discount rate used shall be the most recent overall rate of return authorized by the commission for the reporting utility. If the reporting utility is not rate regulated by the commission or is regulated but has not yet had an overall rate of return established by the commission, the utility shall use the overall rate of return most recently authorized for the largest electric utility, measured by annual Minnesota revenues, in the commission's jurisdiction.

c. The figure for average annual fuel savings per kilowatt described in 1.i. shall be discounted to present value using the procedure of b.

d. The number resulting from the calculation in c. shall be subtracted from the number resulting from the calculation in b. This is the net annual avoided capacity cost stated in dollars per kilowatt at present value.

e. The net annual avoided capacity cost calculated in d. shall be multiplied by 1.15 to recognize a reserve margin.

f. The figure determined from the calculation of e. shall be increased by the amount of the anticipated average annual fixed operating and maintenance costs as reported in 1.f.

g. The figure determined from the calculation of f. shall be increased by the percentage amount of the average system line losses as shown on Schedule B.

h. The annual dollar per kilowatt figure, as calculated in accordance with g., shall be divided by the annual number of hours in the on-peak period as specified in Schedule A. The resulting figure is the utility's net annual on-peak avoided capacity cost in dollars per kilowatt-hour.

i. The annual dollar per kilowatt figure resulting from the calculation specified in g. shall be divided by the total number of hours in the year. The resulting figure is the utility's net annual avoided capacity cost in dollars per kilowatt-hour averaged over all hours.

5. If the utility has no planned generating facility additions for the ensuing ten years, Schedule B shall contain its net

annual avoided capacity cost stated in dollars per kilowatt-hour averaged over the on-peak hours and the utility's net annual avoided capacity costs stated in dollars per kilowatt-hour averaged over all hours. These shall be calculated as follows:

a. The annual capacity purchase amount, in dollars per kilowatt, for the utility's next planned capacity purchase, other than from a qualifying facility, shall be discounted to present value as of the midpoint of the reporting year, from the year of the planned capacity purchase. The discount rate used shall be determined in the manner described in 4.b.

b. The net annual avoided capacity cost shall be computed by applying the figure determined in a. to the steps enumerated in 4.d.-4.i., excluding 4.g.

D. Schedule C. Schedule C shall contain all standard contracts to be used with qualifying facilities, containing applicable terms and conditions.

E. Schedule D. Schedule D shall contain the utility's safety standards, required operating procedures for interconnected operations, and the functions to be performed by any control and protective apparatus. These standards and procedures shall not be more restrictive than the interconnection guidelines listed in 4 MCAR § 3.0462. The utility may include in Schedule D suggested types of equipment to perform the specified functions. No standard or procedure shall be established to discourage cogeneration or small power production.

F. Schedule E. Schedule E shall contain procedures for notifying affected qualifying facilities of any periods of time when the utility will not purchase electric energy or capacity because of extraordinary operational circumstances which would make the costs of purchases during those periods greater than the costs of internal generation.

G. Schedule F. Schedule F shall contain and describe all computations made by the utility in determining Schedules A and B.

H. Schedule G; special rule for nongenerating utilities. An electric utility which purchases all the power it sells shall obtain the data for Schedule A and Schedule B from its supplying utility. The nongenerating utility shall file this data as Schedule A and Schedule B. In addition, the nongenerating utility shall file Schedules C, D, F, and Schedule G. Schedule G shall list the rates at which the nongenerating utility currently purchases energy and capacity.

I. Availability of filings. All filings required by A.-H. shall be made with the commission and shall be maintained at the utility's general office and any other offices of the utility where rate case filings are kept. These filings shall be available for public inspection at the commission and at the utility offices during normal business hours.

4 MCAR § 3.0453 Reporting requirements.

A. General requirements. Each utility shall provide the commission with the following information on or before November 1, 1982, and at any other such times and in any form as the commission may require.

B. Net energy billed qualifying facilities. For qualifying facilities under net energy billing, the utility shall provide the commission with the following information:

1. A summary of the total number of interconnected qualifying facilities, the type of interconnected qualifying facilities, and the name plate ratings of such units;

2. For each qualifying facility type, the total kilowatt-hours delivered per month to the utility by all net energy billed qualifying facilities;

3. For each qualifying facility type, the total kilowatt-hours delivered per month by the utility to all net energy billed qualifying facilities; and

4. For each qualifying facility type, the total net energy delivered per month to the utility by net energy billed qualifying facilities.

C. Other qualifying facilities. For all qualifying facilities not under net energy billing, the utility shall provide the commission with the following information:

1. A summary of the total number of interconnected qualifying facilities, the type of interconnected qualifying facilities, and the nameplate ratings of such units; and

2. For each qualifying facility type, the total kilowatt-hours delivered per month to the utility, reported by on-peak and off-peak periods to the extent that data is available.

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D. Wheeling. The utility shall provide a summary of all wheeling activities.

E. Major impacts. The utility shall provide a statement of any major impacts that cogeneration or small power production has had on the utility's system.

F. Effectiveness. The utility shall provide a statement of the effectiveness of Minn. Stat. § 216B.164 and 4 MCAR §§ 3.0450-3.0463 in encouraging cogeneration and small power production, as observed by the utility.

4 MCAR § 3.0454 Conditions of service.

A. Requirement to purchase. The utility shall purchase energy or capacity from any qualifying facility which offers to sell energy to the utility and agrees to the conditions set forth in 4 MCAR §§ 3.0450-3.0463.

B. Written contract. A written contract shall be executed between the qualifying facility and the utility.

C. Compliance with national electrical safety code. The interconnection between the qualifying facility and the utility shall comply with the requirements of the 'National Electrical Safety Code,' 1981 edition, issued by the Institute of Electrical and Electronics Engineers as American National Standards Institute Standard C2 (New York, 1980).

D. Responsibility for apparatus. The qualifying facility, without cost to the utility, shall furnish, install, operate, and maintain in good order and repair any apparatus the qualifying facility needs in order to operate in accordance with Schedule D. At the request of the qualifying facility, the utility shall furnish, install, operate, and maintain all or any portion of the apparatus and bill the qualifying facility for the equipment and service at cost.

E. Liability insurance. A utility or qualifying facility shall not require the procurement of liability insurance as a condition of service.

F. Legal status not affected. Nothing in 4 MCAR §§ 3.0450-3.0463 affects the responsibility, liability, or legal rights or any party under applicable law or statutes.

G. Payments for interconnection costs. Payments for interconnection costs may, at the option of the qualifying facility:

1. Be made at the time the costs are incurred;

2. Be amortized over the life of the contract; or

3. Be made according to any schedule agreed upon by the qualifying facility and the utility.

H. Types of power to be offered. The utility shall offer maintenance, interruptible, supplementary, and back-up power to the qualifying facility upon request.

I. Metering. The utility shall meter the qualifying facility to obtain the data necessary to fulfill its reporting requirements to the commission as specified in 4 MCAR § 3.0453. The qualifying facility shall pay for the requisite metering as an interconnection cost unless the qualifying facility is operating under net energy billing. In that case, the utility shall provide the second meter without cost to the qualifying facility.

J. Discontinuing sales during emergency. The utility may discontinue sales to the qualifying facility during a system emergency, if the discontinuance is not discriminatory.

K. Interconnection plan. The utility may, prior to interconnection, require the qualifying facility to submit an interconnection plan in order to facilitate interconnection arrangements. If such a plan is required, it shall include no more than:

1. Technical specifications of equipment;

2. Proposed date of interconnection; and

3. Projection of net output or consumption by the qualifying facility when available.

4 MCAR § 3.0455 Rates for sales.

A. Rates to be governed by tariff. Except as otherwise provided in B., rates for sales to a qualifying facility shall be governed by the applicable tariff for the class of electric utility customers to which the qualifying facility would belong were it not a qualifying facility.

B. Petition for specific rates. Any qualifying facility may petition the commission for establishment of specific rates for supplementary, maintenance, backup, or interruptible power.

4 MCAR § 3.0456 Standard rates for purchases.

A. General. For qualifying facilities with capacity of 100 kilowatts or less, standard rates apply. Qualifying facilities with capacity of more than 100 kilowatts may negotiate contracts with the utility or may be compensated under standard rates if they make commitments to provide firm electric power. The utility shall make available three types of standard rates, described in

B., C., and D. The qualifying facility shall choose interconnection under one of these rates, and shall specify its choice in the written contract required in 4 MCAR § 3.0454 B. Any net credit to the qualifying facility shall, at its option, be credited to its account with the utility or returned by check within 15 days of the billing date. The option chosen shall be specified in the written contract required in 4 MCAR § 3.0454 B. Qualifying facilities remain responsible for any monthly service charges and demand charges specified in the tariff under which they consume electricity from the utility.

B. Net energy billing rate.

1. The net energy billing rate is available only to qualifying facilities with capacity of 40 kilowatts or less which choose not to offer electric power for sale on a time-of-day basis.

2. The utility shall bill the qualifying facility for the excess of energy supplied by the utility above energy supplied by the qualifying facility during each billing period according to the utility's applicable retail rate schedule.

3. When the energy generated by the qualifying facility exceeds that supplied by the utility during a billing period, the utility shall compensate the qualifying facility for the excess energy under either a. or b.

a. For a qualifying facility with capacity of 20 kilowatts or less, compensation shall be at the energy rate of the rate schedule applicable to sales to the qualifying facility. If the rate schedule consists of more than one block, the lowest per kilowatt-hour rate shall apply. The compensation shall reflect changes to the energy rate due to the operation of the utility's fuel adjustment clause.

b. For a qualifying facility with capacity of more than 20 kilowatts but not greater than 40 kilowatts, compensation shall be as specified under C.3.

C. Simultaneous purchase and sale billing rate.

1. The simultaneous purchase and sale rate is available only to qualifying facilities with capacity of 40 kilowatts or less which choose not to offer electric power for sale on a time-of-day basis.

2. The qualifying facility shall be billed for all energy and capacity it consumes during a billing period according to the utility's applicable retail rate schedule.

3. The utility shall purchase all energy generated by the qualifying facility. Compensation to the qualifying facility shall be the sum of a. and b.

a. The energy component shall be the appropriate stystem average incremental energy costs shown on Schedule A; or if the purchasing utility is nongenerating, the energy rate shown on Schedule G;

b. The capacity component shall be the utility's net annual avoided capacity cost per kilowatt-hour averaged over all hours as calculated according to 4 MCAR § 3.0452 C.4. or C.5. as appropriate; or if the purchasing utility is nongenerating, the capacity component shall be the capacity cost per kilowatt shown on Schedule G, divided by the number of hours in the billing period.

D. Time-of-day purchase rates.

1. Time-of-day rates are required for qualifying facilities with capacity greater than 40 kilowatts and less than or equal to 100 kilowatts, and they are optional for qualifying facilities with capacity less than or equal to 40 kilowatts. Time-of-day rates are also optional for qualifying facilities with capacity greater than 100 kilowatts if these qualifying facilities provide firm electric power.

2. The qualifying facility shall be billed for all energy and capacity it consumes during each billing period according to the utility's applicable retail rate schedule. Any utility rate-regulated by the commission may propose time-of-day retail rate tariffs which require qualifying facilities that choose to sell power on a time-of-day basis to also purchase power on a time-of-day basis.

3. The utility shall purchase all energy generated by the qualifying facility. Compensation to the qualifying facility shall be the sum of a. and b.

a. The energy component shall be the appropriate on-peak and off-peak system incremental costs shown on Schedule A; or if the purchasing utility is nongenerating, the energy rate shown on Schedule G.

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b. The capacity component shall be the utility's net annual avoided capacity cost per kilowatt-hour averaged over the on-peak hours as calculated according to 4 MCAR § 3.0452 C.4. or C.5. as appropriate; or if the purchasing utility is nongenerating, the capacity cost per kilowatt shown on Schedule G, divided by the number of hours in the billing period.

4 MCAR § 3.0457 Negotiated rate for purchases.

A. Contracts negotiated by customer. For qualifying facilities with capacity greater than 100 kilowatts, the customer may negotiate a contract with the utility. The contract shall set the applicable rates for payments to the customer of avoided capacity and energy costs.

B. Amount of payments; considerations. The amount of such payments shall be determined through consideration of:

1. The capacity factor of the qualifying facility;
2. The cost of the utility's avoidable capacity;
3. The length of the contract term;
4. Reasonable scheduling of maintenance;
5. The willingness and ability of the qualifying facility to provide firm power during system emergencies;
6. The willingness and ability of the qualifying facility to allow the utility to dispatch its generated energy;
7. The willingness and ability of the qualifying facility to provide firm capacity during system peaks;
8. The sanctions for noncompliance with any contract term; and
9. The smaller capacity increments and the shorter lead times available when capacity is added from qualifying facilities.

C. Full avoided energy costs. The qualifying facility shall be entitled to the full avoided energy costs of the utility. The costs shall be adjusted as appropriate to reflect line losses.

D. Qualifying facilities of greater than 100 kilowatts. Nothing in A.-C. prevents a utility from connecting qualifying facilities of greater than 100 kilowatts under its standard rates.

4 MCAR § 3.0458 Utility treatment of costs. All purchases from qualifying facilities with capacity of 100 kilowatts or less, and purchases of energy from qualifying facilities with capacity of over 100 kilowatts shall be considered an energy cost in calculating an electric utility's fuel adjustment clause.

4 MCAR § 3.0459 Wheeling and exchange agreements. For all qualifying facilities with capacity of 30 kilowatts or greater, the utility shall, at the qualifying facility's request or with its consent, provide wheeling or exchange agreements whenever practicable to sell the qualifying facility's output to any other Minnesota utility that anticipates or plans generation expansion in the ensuing ten years. The following provisions apply unless the qualifying facility and the utility to which it is interconnected agree otherwise.

A. Inter-utility payment; wheeling. The utility to which the qualifying facility is interconnected shall pay any reasonable wheeling charges from other utilities arising from the sale of the qualifying facility's output.

B. Inter-utility payment; energy and capacity. Within 30 days of receipt, the utility ultimately receiving the qualifying facility's output shall pay its resulting full avoided capacity and energy costs by remittance to the utility with which the qualifying facility is interconnected.

C. Payment to qualifying facility. Within 15 days of receiving payment under B., the utility with which the qualifying facility is interconnected shall send the qualifying facility the payment it has received less the total charges it has incurred under A. and its own reasonable wheeling costs.

4 MCAR § 3.0460 Disputes. In case of a dispute between an electric utility and a qualifying facility or an impasse in the negotiations between them, either party may request the commission to determine the issue. When the commission makes the determination, the burden of proof shall be on the utility.

4 MCAR § 3.0461 Notification to customers.

A. Contents of written notice. Within 60 days following each annual filing required by 4 MCAR § 3.0452, every electric utility shall furnish written notice to each of its customers:

1. That the utility is obligated to interconnect with and purchase electricity from cogenerators and small power producers;

2. That the utility is obligated to provide customer information to all interested persons free of charge upon request; and

3. That any disputes over interconnection, sales, and purchases are subject to resolution by the commission upon complaint.

The notice shall be in language and form approved by the commission.

B. Customer information. Each utility shall publish customer information that shall be available to all interested persons free of charge upon request. Such customer information shall include at least the following:

1. A statement of rates, terms, and conditions of interconnections;

2. A statement of technical requirements;

3. A sample contract containing the applicable terms and conditions;

4. Pertinent rate schedules;

5. The title, address, and telephone number of the department of the utility to which inquiries should be directed; and

6. The statement: "The Minnesota Public Utilities Commission is available to resolve disputes upon written request," and the address and telephone number of the commission.

4 MCAR § 3.0462 Interconnection guidelines.

A. Denial of interconnection application. The utility may refuse to interconnect a qualifying facility with its power system until the qualifying facility has properly applied under 4 MCAR § 3.0454 K. and has received approval from the utility. The utility shall withhold approval only for failure to comply with applicable utility or governmental rules or laws. The utility shall be permitted to include in its contract reasonable technical connection and operating specifications for the qualifying facility.

B. Notification of telephone utility and cable television firm. The electric utility shall notify the appropriate telephone utility and cable television firm when a qualifying facility is to be interconnected with its system. This notification shall be as early as practicable to permit coordinated analysis and testing before interconnection, if considered necessary.

C. Separate distribution transformer; when required. The utility may require a separate distribution transformer for the qualifying facility if necessary either to protect the safety of employees or the public or to keep service to other customers within prescribed limits. Ordinarily, this requirement should not be necessary for an induction-type generator with a capacity of five kilowatts or less, or other units with a capacity of ten kilowatts or less that utilize line-commutated inverters.

D. Limiting capacity of single-phase generators; when permitted. If necessary, to avoid the likelihood that a qualifying facility will cause problems with the service of other customers, the utility may limit the capacity and operating characteristics of single-phase generators in a way consistent with the utility limitations for single-phase motors. Ordinarily, single-phase generators should be limited to a capacity of ten kilowatts or less.

E. Automatic isolation of generator. The utility may require that the qualifying facility have a system for automatically isolating the generator from the utility's system upon loss of the utility's supply.

F. Discontinuing parallel operation. The utility may require that the qualifying facility discontinue parallel generation operation when necessary for system safety.

G. Permitting entry. The qualifying facility shall make equipment available and permit electric and communication utility personnel to enter the property at reasonable times to test isolation and protective equipment, to evaluate the quality of power delivered to the utility's system, and to test to determine whether the qualifying facility's generating system is the source of any electric service or communciation systems problems.

H. Maintaining power output. The power output of the qualifying facility shall be maintained so that frequency and voltage are compatible with normal utility service and do not cause that service to fall outside the prescribed limits of commission rules and other standard limitations.

I. Varying voltage levels. The qualifying facility shall be operated so that variations from acceptable voltage levels and other service-impairing disturbances do not adversely affect the service or equipment of other customers, and so that the facility does not produce undesirable levels of harmonics in the utility power supply.

J. Safety. The qualifying facility shall be responsible for providing protection for the installed equipment and shall adhere to all applicable national, state, and local codes. The design and configuration of certain cogeneration and small power production equipment might require an isolation transformer as part of the qualifying facility installation for safety and protection of the qualifying facility equipment.

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K. Right of appeal for excessive technical requirements. The qualifying facility has the right of appeal to the commission when it considers individual technical requirements excessive.

4 MCAR § 3.0463 Existing contracts. Any interconnection contracts executed between a utility and a qualifying facility before the effective date of 4 MCAR §§ 3.0450-3.0463 may, at the option of either party, be canceled and replaced by interconnection contracts under 4 MCAR §§ 3.0450-3.0463.

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Terry Hoffman	Chairman
Leo G. Adams	Commissioner
Roger L. Hanson	Commissioner
Juanita R. Satterlee	Commissioner
Lillian Warren-Lazenberry	Commissioner

In the Matter of the Proposed Adoption of Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production.

ORDER ADOPTING RULES

DOCKET NO. E-999 / R-80-560

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In the Matter of the Proposed Adoption of Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production.	ORDER ADOPTING RULES DOCKET NO. E-999 / R-80-560

PROCEDURAL HISTORY

On March 16, 1982, the Minnesota Public Utilities Commission (the Commission) initiated the public hearing portion of the administrative rulemaking process for the adoption of rules governing cogeneration and small power production by filing with the Chief Hearing Examiner the following documents:

a copy of the proposed rules (referred to throughout this Order as "the rules as initially proposed");
the Order for Hearing;
the Notice of Hearing;
a Statement of the number of persons expected to attend the public hearings and the estimated length of the Commission's presentation.

The Notice of Hearing and the proposed rules were published in the State Register on March 29, 1982, at 6 S.R. 1637.

A Revised Notice of Hearing was published on July 26, 1982, at 7 S.R. 114.

On July 30, 1982, the Commission mailed the Revised Notice of Hearing to all persons and associations who had registered their names with the Commission for the purpose of receiving such notice.

On August 12, 1982, the Commission filed the following documents with Hearing Examiner Bruce Campbell:

the Notice and Order for Hearing as mailed;
the Commission's certification that the mailing lists were accurate and complete;
an Affidavit of Mailing of the Hearing Notice to all persons registered with the Commission for the purpose of receiving such notice;
a Statement of Additional Notice as provided for in M.S. § 15.0412, subd. 4;
the Commission's Statement of Need and Reasonableness;
copies of all materials received by the Commission in response to the solicitations of outside comments made on May 5, 1980, August 11, 1980, September 29, 1980, and July 20, 1981;
the names of the Commission Staff members who would represent the Commission at the hearings, as well as any other witnesses solicited by the Commission to appear on its behalf; and
a copy of the State Register containing the proposed rules.

All materials were available for public inspection at the Office of Administrative Hearings and at the Commission's offices for at least 30 days prior to the first day of hearings.

Examiner Campbell conducted hearings on the following days at the following cities:

September 7, 1982 - St. Paul
September 8, 1982 - Mankato and Rochester
September 13, 1982 - St. Cloud and Duluth
September 14, 1982 - Grand Rapids and International Falls
September 15, 1982 - Crookston
September 16, 1982 - Fergus Falls
September 17, 1982 - Pipestone

Three-hundred-eleven people signed the hearing registers at the various hearings. One-hundred-thirty-four public witnesses appeared and spoke at the hearings. The Commission was represented by Stuart Mitchell, Paul Schweizer, and Howard Swanson, all members of its Staff, and by Karl Sonneman, Special Assistant Attorney General. No witnesses outside the agency were solicited by the Commission to appear on its behalf. The Commision submitted written exhibits numbered Agency Exhibits A through J by the Examiner. One-hundred-nineteen timely filed written exhibits were received from members of the public.

Examiner Campbell extended the period during which the record remained open for 20 calendar days after the date of the final hearing. The Commission submitted revised proposed rules (referred to throughout this Order as "the rules as finally proposed") and Comments to the Examiner on October 7, 1982, and the Examiner closed the record on that date.

The Chief Hearing Examiner extended the time for filing of the Examiner's Report, and Examiner Campbell submitted his Report to the Chief Hearing Examiner on December 30, 1982.

Chief Hearing Examiner Duane Harves issued his Report approving Examiner Campbell's Report in all respects, and specifically as to any finding of substantial change or of failure to comply with M.S. § 15.0412, subd. 4-4f, or of failure to establish the need for or reasonableness of the proposed rules, on January 3, 1983.

The Commission has waited at least five working days following the issuance of the Hearing Examiner's and Chief Hearing Examiner's Reports before taking any final action on the proposed rules, and has made copies of those Reports available to all interested persons upon request.

Now, upon review of all the records herein, and after considered deliberation thereupon, the Commission makes the following Findings, Conclusions, and Order.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

I. PROCEDURAL REQUIREMENTS OF LAW.

The Commission finds that it has wholly and adequately complied with the procedural requirements of the Minnesota Administrative Procedure Act relating to the adoption of controversial administrative rules, M.S. § 14.13-14.20, and concludes that it may now act to adopt the proposed rules.

II. ADOPTED RULES.

4 MCAR § 3.0450. Scope and purpose.

In the Statement of Need and Reasonableness (the Statement) the Commission discussed the need for and reasonableness of this section as follows:

> In the 1981 session, the Minnesota Legislature added a new section to the Public Utilities Act. That section, codified as M.S. § 216B.164, established a statutory framework for the development of cogeneration and small power production in Minnesota. M.S. § 216B.164 sets forth certain specific standards for utility purchases of the output of cogeneration and small power production facilities (subd. 3), for wheeling of that power among small power production facilities (subd. 3), for wheeling of that power among utilities (subd. 4), for resolution of disputes (subd. 5), for reports to the Legislature (subd. 7), and for the treatment of certain costs (subd. 8). In addition, M.S. § 216B.164, subd. 6 states, "the [Public Utilities] Commission shall promulgate rules to implement the provisions of this section." These proposed rules are designed to comply with the directive of M.S. § 216B.164, subd. 6.
>
> The Commission has general rulemaking authority under M.S. § 216A.05, subd. 1. In addition, the Commission is empowered to regulate public utilities generally under M.S. § 216B.08. That regulation extends to setting reasonable rates (M.S. §§ 216B.03 and 216B.16), ensuring that utilities provide safe, adequate, efficient, and reasonable service

(M.S. § 216B.04), prohibiting unreasonable preferences, advantages, prejudices, or disadvantages through utility rates or services (M.S. § 216B.07), and fixing just and reasonable standards, regulations, and practices for public utilities (M.S. § 216B.09). In addition, the Commission has been granted investigatory (M.S. § 216B.14) and complaint authority (M.S. § 216B.17).

As part of the National Energy Act of 1978, the United States Congress passed the Public Utility Regulatory Policies Act (PURPA), Pub. L. 95-617. A portion of PURPA, codified as 16 U.S.C. § 843a-3, amends the Federal Power Act and governs cogeneration and small power production. 16 USC § 843a-3(a) requires the Federal Energy Regulatory Commission (FERC) to promulgate rules as necessary to encourage cogeneration and small power production, which rules are to require electric utilities to offer to sell electric energy to and purchase electric energy from cogeneration and small power production facilities. 16 USC § 824a-3(f) requires state regulatory authorities (including the Commission) to implement the cogeneration and small power production rules which the FERC promulgates under PURPA.

The FERC subsequently put rules into place which implemented the cogeneration provisions of PURPA. 18 CFR § 292.401 requires state regulatory authorities, not later than one year after the FERC rules take effect, to commence implementation of 18 CFR §§ 292.301 and 292.303-.308. The FERC indicated that the state implementation could be by the issuance of regulations, by resolution of disputes between utilities and qualifying facilities, or by any other action reasonably designed to implement the FERC.

The proposed rules are thus generally necessary to comply with the direction of M.S. § 216B.164, subd. 6, as well as to fulfill the Commission's obligations under Federal law and FERC regulations. As will be discussed hereinafter, the provisions of the proposed rules are reasonable to carry out the intent of the state and federal legislation and regulations.

M.S. § 216B.164, subd. 1, states, "This section shall at all times be construed in accordance with its intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public." The Commission has adopted the identical standard as the general intent of the proposed rules. The Commission believes it is necessary to be consistent with state law, and is reasonable to adopt the clear and unambiguous statutory language.

The Commission considers the inclusion of a Scope and Purpose section to be of importance. It is recognized that the proposed rules are complex. This section is intended to act as an introductory section to assist the reader in determining the origin, the general purpose, and intent of the rules, as well as their overall effect.

The Commission further discussed the statutory restatement in its October 7 Comments to the Examiner (the Comments) as follows:

> The scope and purpose section of the proposed rules contains, in its last sentence, a restatement of a portion of M.S. § 216B.164, subd. 1, " . . . intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public."
>
> M.S. § 15.0412, subd. 1, states "No agency shall adopt a rule which duplicates language contained in Minnesota Statutes unless the hearing examiner . . . determines that duplication of the language is crucial to the ability of a person affected by the rule to comprehend its meaning and effect. When presented with a rule for certification pursuant to subdivision 2a, the revisor of statutes should indicate in the certification that the rule duplicates statutory language."
>
> In a letter dated March 15, 1982, the revisor approved the proposed rules for publication in the State Register. The form upon which the revisor indicated approval as to the form of the rules contained a space for notation of any statutory language duplication. None was noted. The Commission concludes that the revisor does not consider the restatement of 22 words found in Minnesota Statutes to be a duplication of statutory language within the meaning of M.S. § 15.0412, subd. 1.

Even if the restatement is a duplication, the Commission recommends that the Examiner find that the duplication is necessary. The Legislature has stated the public policy of the state in regard to cogeneration, but it is unlikely that many persons affected by the proposed rules will read M.S. § 216B.164. To clearly explain the intent of the rules, a corresponding statement of the overall policy of encouragement and protection is crucial to an understanding of the rules.

The Hearing Examiner found that the inclusion of a scope and purpose section in the proposed rules is both necessary and reasonable, and further found that the duplication of the statutory language is critical to the ability of a person affected by the rule to comprehend its meaning and effect.

The Commission has made only a technical change to the text of this section as finally proposed, which is to alter the internal references to rule numbers to recognize the deletion of 4 MCAR § 3.0463.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated.

4 MCAR § 3.0451 Definitions.

A. Applicability.

This subsection has no substantive effect.

B. Average annual fuel savings.

In the Statement, the Commission discussed the need for and reasonableness of this definition as follows:

> This term is defined so it may be used in the calculation of avoided costs. It is applicable to a utility which intends to build new generating capacity.
>
> One reason for building new capacity is to reduce system fuel costs. This can happen, for example, when a baseload unit replaces a peaking unit or purchased power in providing large amounts of electric energy. It can also happen when a new, efficient unit replaces an old, inefficient unit. The definition reasonably calls for a comparison of the system fuel costs to meet the expected annual load with and without the planned new unit. The difference is the average annual fuel savings.

The Hearing Examiner reported that this definition received no comments at the hearings or in the exhibits. He found it was adequately supported by the Statement as to need and reasonableness.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been adequately demonstrated by the Statement.

C. Backup power.

The Commission's discussion of this definition in the Statement was as follows:

> This definition and the definitions for Interruptible power, Maintenance power and Standby power, are necessary because they are used in the rule to indicate which types of power are to be offered by the utility. The definitions are reasonable because they are consistent with standard industry usage of the terms. Furthermore, the four definitions correspond with the four classifications of power to be sold to qualifying facilities as established by the FERC. The rule appropriately distinguishes each type of power from the others. This is necessary because the cost of providing one type may differ from the cost of providing another. For example, a utility supplying interruptible power may curtail sales to the qualifying facility at the time of system peak, and in so doing may

conserve capacity and reduce capacity costs. In contrast, a utility supplying Backup power must allow for the possibility that the qualifying facility will suddenly begin to take power at the time of system peak, and it must incur some of the cost consequences of this contingency even if no power is actually drawn. It may be possible for a qualifying facility to arrange scheduled maintenance to coincide with a time when the utility has excess reserves; if so, the cost of providing it as Maintenance power (and its price to the qualifying facility) may be low. Likewise, Supplementary power, which is routinely provided to the qualifying facility, carries its own distinct cost consequences. The cost differences, therefore, make it necessary to establish these classifications and demonstrate their reasonableness.

The definition of each type of power is reasonable in that it is consistent in meaning and application with the FERC rules. Such consistency will tend to avoid confusion and ambiguity. It will also promote harmony between the State and Federal rules thus alleviating the burdens of interpreting conflicting or inconsistent provisions by interested persons. By reducing confusion and ambiguity, a more favorable climate is established for encouraging cogeneration and small power production.

The Examiner reported that there were no comments on this definition, apart from the Commission's, on the record. He found it was adequately supported by the Statement as to need and reasonableness.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been adequately demonstrated by the Statement.

D. Capacity.

The Commission discussed the need for and reasonableness of this definition in the Statement as follows:

> Capacity is one of two elements (the other is energy) which together make up electric service. It is necessary to define capacity because qualifying facilities may enable a utility to avoid acquiring capacity of its own. If they do, they are eligible for compensation. The definition is reasonable in that it is consistent with general use of the term in the electric utility industry.

The Examiner found no comments on the definition, either at the hearings or in the exhibits, and he found the need for and reasonableness of the rule were adequately supported by the Statement.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been adequately demonstrated by the Statement.

E. Capacity costs.

The Statement contained the following discussion of this definition:

> A definition of capacity costs is needed because qualifying facilities which provide capacity to utilities are entitled to be paid the costs of the capacity avoided by the utilities. The definition is reasonable because it is consistent with the general use of the term in the electric utility industry.

There were no comments on this definition, either at the hearings or within the exhibits. The Examiner found that need and reasonableness were adequately supported by the Statement.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been adequately demonstrated by the Statement.

F. Commission.

The Commission noted in the Statement that this definition was self-explanatory. The Examiner reported that there were no comments on this definition at the hearings or in the exhibits. He found it was adequately supported, as to need and reasonableness, by the Statement.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been adequately demonstrated by the Statement.

G. Energy.

The Statement contained the following discussion of this definition:

> It is necessary to define energy because qualifying facilities are to be compensated for energy supplied to utilities. The definition is reasonable because it includes electric energy and excludes all other forms of energy. The utility is only required to purchase electric energy.

The Examiner reported receiving no comments on this definition at the hearings or in the exhibits. He found it was adequately supported for need and reasonableness by the Statement.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been demonstrated by the Statement.

H. Energy costs.

The Commission included the following discussion of this definition in the Statement.

> Energy costs must be defined because compensation to qualifying facilities for energy they supply is based on the costs utilities would incur if qualifying facilities did not supply them. Those costs are energy costs. The definition is reasonable because it is consistent with the way the term is used generally in the electric utility industry.

The Examiner reported that no comments on this definition were received, either at the hearings or in the exhibits. He found that the Statement adequately supported the need for and reasonableness of this definition.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been demonstrated by the Statement.

I. Firm power.

This definition was proposed by the Commission in response to comments received at the hearings. The Commission discussed the need for and reasonableness of this definition in the Comments, as follows:

> The Commission received several comments that a definition for firm power is needed. The recommended definition is responsive to those comments. It is necessary to define firm power because it is used to determine whether or not a qualifying facility with capacity of more than 100 kilowatts is eligible for standard rates. The proposed definition is essentially the same as the definition recommended by Northern States Power Company. The requirement that energy be provided with at least a 65 percent on-peak capacity factor is reasonable because it specifies a level of capacity that a qualifying facility, with suitable equipment, could reasonably be expected to maintain.

The Examiner's Report contained the following discussion of the definition:

> Section 3.0451 I. defines "Firm power" in terms of a 65% on-peak capacity factor in a given month. The rules, as initially drafted and submitted, contained no definition of Firm power even though the specific term was used in the rules. A definition of Firm power is necessary because the term is used in the rules to determine whether or not a QF with a capacity of more than 100 kilowatts is eligible for standard rates. Although the Commission adduced no independent facts of the reasonableness of the 65% on-peak capacity factor used

in the definition, a number of public witnesses supplied testimony substantiating the reasonableness of the criteria ultimately adopted by the Commission. For example, Interstate Power Company testified that the Company's system capacity factor is about 65% and should likewise be achieved by a QF to rate an avoided capacity cost payment in a billing month. (Pub. Ex. 88, Interstate Power Co., p. 3). Northern States Power Company testified that a 65% capacity factor is a realistic industry standard based primarily on its own experience. (Pub. Ex. 118, NSP Reply Comments, p. 1). Moreover, a 65% capacity factor reflects the expected performance of NSP's next proposed generating unit, Sherburne County Unit 3. (Pub. Ex. 118, NSP Reply Comments, p. 1). The MMUA also suggested the adoption of a definition of Firm power utilizing a 65% capacity factor is comporting with the experience of municipal electric utilities. (Pub. Ex. 117, MMUA Posthearing Statement, p. 8). Finally, the County of Hennepin testified that an appropriate factor would be less than the 70% factor suggested by the Minnesota Energy Agency in respect to hydroelectric facilities. (Pub. Ex. 106, County of Hennepin, p. 3). There is no support in the record for a definition of Firm power other than the 65% capacity factor ultimately accepted by the Commission. Therefore, the definition of Firm power is both necessary and reasonable.

The addition of the definition of Firm power does not constitute a substantial change within the meaning of 9 MCAR § 2.111 so as to require additional notice and hearings. The term "Firm power" was used in the rules as initially proposed. All participants in the hearing were apprised of its presence in the proposed rules and had an opportunity to comment thereon. The addition of the definition, in fact, was in specific reaction to the comments from affected public witnesses. Finally, that portion of the proposed rules relative to the rate for the supplying of Firm power would, in itself, be unreasonable without an appropriate definition of the term.

The Commission adopts the Examiner's findings. It concludes that the need for and reasonableness of this definition have been demonstrated, and that the addition of this definition does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

J. Generating utility.

P. Nongenerating utility.

These definitions were proposed by the Commission as a result of the hearings. The Commission included the following discussion of the need for and reasonableness of these definitions in the Comments:

> The Commission recommends adding the two definitions above to its proposed rules. It is necessary to distinguish generating utilities from non-generating utilities both because the nature of their avoided costs may be different and because the proposed rules require different actions of the two kinds of utilities. Testimony at the public hearings revealed a need for definitions to enable interested persons, particularly utilities, to make that distinction to comply with the rules.
>
> The definitions proposed are reasonable because they make the distinction not on the basis of installed capacity, but on the basis of wnether the utility schedules the use of the capacity to meet its own needs. This focuses the distinction on the crucial matter of avoided costs. If the utility schedules the capacity to meet its own needs, the use of the capacity, and therefore the costs of operating it, can be avoided through the provision of power by qualifying facilities. Under the proposed definitions, this utility would be classified as a generating utility. In contrast, a utility which owns generating facilities but operates them only for emergencies or to maintain them in operational readiness, is unable to avoid those operating costs. Similarly, a utility whose generating facilities are dispatcned by another organization cannot directly avoid these costs. These utilities are, therefore, reasonably classified for the purposes of these rules as non-generating utilities. It should be noted that the recommended definitions are consistent with the interpretations of generating and non-generating utilities made by Commission staff during the hearings. Those interpretations were not criticized.

The Examiner found the addition of these definitions to be appropriate:

> Sections 3.0451 J. and P. are the definitions of the terms "Generating utility" and Non-generating utility". Such definitions were not contained in the rules as initially proposed. Definitions of the terms are necessary to distinguish generating utilities from non-generating utilities because the nature of their avoided costs may be different and the proposed rules require different actions from the two kinds of utilities. (Agency Ex. J, Reply Comments, p. 3). Testimony at the public hearings revealed a need for such definitions to enable interested persons to comply with the provisions of the proposed rules. The definitions ultimately proposed by the Commission are in accordance with the testimony of a number of public witnesses. The definitions proposed are reasonable because they make a distinction not on the basis of installed capacity but on the basis of the ability of the utility to use capacity to meet its own needs. This distinction focuses specifically on the matter of avoided costs, the basis for certain of the rate calculations. No public comments were received suggesting a definition of the two terms materially different than that ultimately proposed by the Commission. Moreover, the Commission Staff's explanation of the terms during the hearings, even though the terms were not then included in the proposed rules, engendered no adverse comments from public witnesses. The Hearing Examiner concludes that the definitions of Generating utility and Non-generating utility are necessary and reasonable.
>
> The addition of definitions of the two terms does not result in a substantial change within the meaning of 9 MCAR § 2.111. Distinctions in the proposed rules were made on the basis of a utility being a non-generating utility. The rules as initially proposed, however, contained no definition of that term and its cognate term "Generating utility". Participants in the public hearings were adequately apprised both by the rules as proposed, and by discussion at the various public hearings that a definition of generating and non-generating utilities would be appropriate. In fact, the definitions have been proposed in response to public comments. Finally, since the terms "Generating utility" and "Non-generating utility" were employed in the rules as initially drafted without definition, the insertion in the rules as finally proposed of appropriate definitions merely avoids what would otherwise be a defect in the proposed rules.

The Commission adopts the Examiner's findings. It concludes that the need for and reasonableness of these definitions have been adequately demonstrated, and that the addition of these definitions does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

K. Incremental cost of capital.

The Commission added this definition as a result of the hearings. The Comments said:

> The Commission recommends adding this definition in conjunction with a proposed change in the present value computations required in Schedule 8 (4 MCAR § 3.0452 C.). In that change, the Commission recommends substituting the incremental cost of capital for the most recently authorized overall rate of return as the discount rate to be used. The incremental cost of capital is the more appropriate value because it is more reflective of costs which would actually be either incurred or avoided. The incremental cost of capital definition reasonably uses the current costs of all kinds of capital employed by the utility to determine the overall cost rate which is then used to discount future values to their present value.

In approving the addition of this definition, the Examiner said:

> Section 3.0451 K. defines "Incremental costs of capital" in terms of the current weighted cost of the components of a utility's capital structure. A definition of the term is necessary because of a proposed change in the present value computations required in

Schedule B as described in § 3452 C. of the proposed rules. The definition is reasonable because it fully complies with the common usage of the term in both the Commission's rate regulation experience and industry practice. The definition reasonably uses the current costs of all kinds of capital employed by the utility to determine the overall cost rate which is then used to discount future values to their present value. Hence, the definition of Incremental costs of capital is both necessary and reasonable.

The addition of the definition of Incremental cost of capital does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of the definition have been adequately demonstrated. In addition, the Commission concludes that the addition of this definition does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

L. Interconnection costs.

The need for and reasonableness of this definition were set forth by the Commission in the Statement as follows:

> It is necessary to define interconnection costs because these costs are explicitly assigned to qualifying facilities by both the FERC rules (18 CFR § 292.101 (b) (7) and Minnesota Law (M.S. § 216B.164, subd. 8). Interconnection costs are costs which would not be incurred if the utility did not engage in interconnected operations with cogenerators and small power producers. The definition above is reasonable. Except for the last sentence, it is substantially the FERC definition, with only minor wording changes. The Commission has added the provision that only costs in excess of the costs of connecting nongenerating customers of the same class be considered interconnection costs. This provision is necessary and reasonable because often part or all of the costs it excludes are recovered by the utility in fixed charges as part of retail rates. Under Minnesota law and these rules, qualifying facilities must pay any fixed charges in the tariff under which they consume electricity. Therefore, without this provision, the qualifying facility could be discriminated against relative to other members of its class. Both the discrimination and the result of paying the utility twice for the same costs would be unreasonable.

The Examiner found this definition to be both necessary and reasonable. He said:

> Section 3.0451 L. defines "Interconnection costs" as the reasonable costs incurred by the utility directly related to the interconnected activities of the QF to the extent that they are extra costs incurred by the utility as a result of the interconnected operations of the QF. A definition of Interconnection costs is necessary since the phrase is used in § 3.0454 G. of the proposed rules. Such interconnection costs are also explicitly assigned to QFs by both the FERC Rules, 18 C.F.R. § 292.101(b)(7), and Minn. Stat. § 216B.164, subd. 8 (1981 Supp.). The proposed definition of Interconnection costs is reasonable since it defines as such a cost the added expense to a utility resulting from interconnected activities with a QF. Moreover, except for the last sentence of the definition, it fully comports with the FERC definition.
>
> The final sentence of the definition, which has no cognate FERC provision, is necessary and reasonable because part or all of the costs excluded as interconnection costs by the last sentence of the definition are recoverable by a utility in fixed charges as part of its retail rates under Minnesota law and the proposed rules. A QF must pay any fixed charges in the utility's tariff under which it consumes electricity. Without the final exclusionary sentence of the definition, the QF could be discriminated against relative to other members of its class. Both the resulting discrimination and double payment for the same costs to the utility would be unreasonable.

Only two public comments on the proposed definition of interconnection costs were received. Northern States Power Company suggests adding the word "existing" prior to the word "non-generating" and the word "retail" prior to the word "customer" in the third sentence of the definition. The proposed language of Northern States Power Company, however, does not clarify the rule and, in fact, introduces ambiguity. If the word "existing" is added to modify the word "customer". arguably the costs associated with providing electric service from the utility to the QF would be an interconnection cost, even though the cost would be one common to any other non-generating customer. Further, any cost associated with the provision of electric service to an new QF would not be a cost that would be incurred by an existing non-generating customer. Jacobs Wind Electric Co. proposes to add additional language to the definition limiting Interconnection costs to those specifically provided for by the proposed rules. (see, Publ Ex. 16, Jacobs Wind Electric Co., p. 4). Since it would be virtually impossible and entirely impractical to detail in these rules each specific cost that may be legitimately occasioned by interconnection, the addition of the language suggested by Jacobs Wind Electric Company is inappropriate.

The Commission adopts the Examiner's findings, and concludes that the definition has been adequately demonstrated to be needed and reasonable.

M. Interruptible power.

This definition has been clarified in response to the Hearing Examiner's concerns.

As initially proposed, the justification for this definition appeared in the Statement along with discussions of "backup power", "maintenance power", and "supplementary power" (see the discussion of 4 MCAR § 3.0451.C., above).

The Examiner found the proposed definition to be needed, but impermissibly vague:

> Section 3.0451 M. defines "Interruptible power" as electric energy or capacity supplied by the utility to a qualifying facility subject to interruption under certain specified conditions. A definition of Interruptible power is necessary because it is used in the proposed rules to indicate which types of power are to be offered by a utility. The Commission in its Statement of Need and Reasonableness asserts that the definition is reasonable because it fully comports with the federal definition of the term in the FERC Rules and is consistent with standard industry usage. (Statement of Need and Reasonableness, p. 3). As Jacobs Wind Electric Company points out, however, it is not clear from the definition whether the phrase "under certain specified conditions" relates to conditions peculiar to a QF or to conditions that would affect retail customers of the same class generally. (See, Pub. Ex. 16, Jacobs Wind Electric Co., p. 4) The phrase "under certain specified conditions" is impermissibly vague. The rules do not define the "specified conditions" under which the power may be interrupted. Further, there is no indication in the rules as proposed of who is to specify the conditions for interruption and in what manner such conditions are to be enumerated.
>
> Since the definition proposed by the Commission is, in fact, a FERC definition, the Hearing Examiner has reviewed Agency Ex. I, the explanation of the FERC Rules, without any clarification of the definition. Several constructions of the proposed definition are possible. The initial construction is that Interruptible power must be made available to a QF on the same conditions that such power is made available to any other retail customer. The second construction of the definition is that power may be interrupted to a QF under conditions specified in the interconnection contract in situations peculiar to a QF. Therefore, since the Hearing Examiner is unable to determine which is the appropriate construction of the proposed definition, the Commission has failed to substantiate the reasonableness of the proposed definition by an affirmative presentation of facts.

The Examiner went on to say that the defect could be corrected by clarifying the language of the definition so that the proper construction was evident.

The Commission has followed the Examiner's recommendation in the rule as adopted. The definition now unambiguously represents his "initial construction" - that is, that the availability and conditions of interruptible power do not permit discrimination between qualifying facilities and non-generating utility customers with similar usage.

The Commission observes that interruptible power is an alternative to firm power which a customer may choose. It offers advantages: to the customer, a reduced price; to the utility, lower costs to provide service. The cost of providing interruptible service might vary by customer class within a utility, but would not vary depending upon whether the customer can generate electricity. Consequently, it would be unreasonable to permit different treatment of qualifying facilities and non-generating customers with similar usage characteristics. For this reason, it has been the Commission's intention since proposing the definition that it be interpreted in conformance with the Examiner's "initial construction."

The Commission finds that the language clarification in the rule as adopted removes the Examiner's objection that the definition was impermissibly vague. The Commission concludes that the need for and reasonableness of the definition have been adequately demonstrated. The Commission also concludes that the addition of language which clarifies the original intent of this definition does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

N. Maintenance power.

The Commission's discussion of the need for and reasonableness of this definition appeared in the Statement under the definition of "Backup power"; it may be found in the same location in this Order.

The Examiner reported that no comments were submitted either at the hearings or within the exhibits with respect to this definition. He found that the definition was both necessary and reasonable on the record.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been adequately demonstrated by the Statement.

O. Marginal capital carrying charge rate in the first year of investment.

In the rules as initially proposed, the marginal capital carrying charge rate was applied to the cost of a new generating plant to determine the capital cost that would be avoided in that year by the utility. This carrying charge rate was designed to include all the costs associated with owning a new generation plant for a one-year period.

This aspect of the proposed rules was criticized by several utilities. Although the calculation of the marginal capital carrying charge rate itself was not attacked, the result of applying this carrying charge rate to the cost of a new generation plant was. These utilities claimed that the resulting capacity rates would exceed avoided costs because the ever-escalating cost of new generating plants would push the capacity cost payments to qualifying facilities higher each year. This is wrong, they argued, because the cost of the plant that would have been built would remain constant for the life of the plant.

The Commission notes that the problem which the utilities have identified is due solely to the phenomenon of inflation. They are assuming that inflation will push the cost of generating plants ever higher.

The utilities proposed that each qualifying facility be locked in to a payment based upon the cost of the plant that would have been built that year. This proposed solution is inappropriate because it would result in discriminatory treatment to qualifying facilities based upon the year that they began selling power to the utility. Such a vintaging of rates would be improper because it would imply that the value of power delivered to the utility system is different for different qualifying facilities, depending upon the year in which each began selling power. In fact, the value of power is the same, assuming it is delivered in like amounts at comparable quality levels at similar hours of the day.

In addition, the Commission believes that due to inflation, it is appropriate that the capacity payments to qualifying facilities escalate each year. Escalation of rates is necessary in order to maintain the purchasing power of the monies paid to qualifying facilities. These escalating payments should match the escalating avoided costs faced by the utility.

In the rules as finally proposed, the Commission appropriately addresses the inflation-related problem uncovered by the utilities. The rules as finally proposed require an explicit adjustment to the marginal carrying cost of capital to reflect the effects of inflation on the utility's carrying cost of capital.

Because inflation is pushing the cost of generation plants ever higher, the utilities benefit from building a plant this year instead of next year. The appropriate solution is to reflect the benefit of cost saved by building a plant one year earlier as a reduction to the carrying charge rate associated with owning this plant. In other words, the marginal capital carrying charge rate must be adjusted to recognize the fact that although the utility incurs costs when it builds and owns a generating plant this year (equal to the levelized marginal capital carrying charge rate), it also saves an amount equal to the difference between the cost of building the plant this year and building the plant next year. Consequently, the marginal capital carrying charge rate must be adjusted for inflation, in order to show the true cost associated with building and owning a plant this year, or conversely, the cost avoided by not having to build and own a generation plant this year. Since the utility would save money by building the plant this year rather than next year, the inflation adjustment is a downward adjustment to the marginal capital carrying charge rate.

The Hearing Examiner agreed with the reasoning of the Commission, found that the record contained no testimony contrary to the definition ultimately proposed by the Commission, and found the definition as finally proposed to be reasonable, and found that the definition as finally proposed did not contain a substantial change.

The Commission adopts the definition as finally proposed and finds that the need for and reasonableness of it has been shown, and that it does not result in a substantial change.

Q. On-peak hours.

The Commission's Statement contained the following discussion of this definition:

> A definition of on-peak hours is needed because utility costs, and utility avoidable costs, vary between on-peak hours and off-peak hours. Since compensation to qualifying facilities is based on costs utilities can avoid, it is essential to have some determination of which hours are on-peak.
>
> The proposed definition accepts determinations of on-peak periods made by the Commission or by the utility when the utility has defined on-peak hours for ratemaking. Since many utilities have already determined on-peak and off-peak periods, this will tend to eliminate duplication of work on the part of the utility and will provide for appropriate time periods because existing rates and rating periods can be presumed to be reasonable. At the same time, a non-regulated utility that has not yet designated on-peak periods may choose to examine its load characteristics and determine which hours will most appropriately be included in the on-peak hours. If such a utility is unable or unwilling to perform a comprehensive and possibly time consuming examination, the rule provides for a simple method to determine on-peak periods which will minimize the amount of analysis required and at the same time will produce on-peak periods which will span the hours during which the utility is most likely to experience its system peak. A rule of thumb such as the 85 percent rule of thumb employed in the rule was used to establish on-peak periods for at least two of the utilities regulated by the Commission (i.e., Minnesota Power and Light Company, Docket No. E-015/GR-80-76 and Interstate Power Company, Docket No. E-001/GR-78-1065).
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> Thus, this general approach has been relied upon for larger utilities and there is no reason to believe that this approach would not be reliable when applied by smaller utilities. Based upon its experience, the Commission has determined that an 85 percent level

would be appropriate because it would provide an additional level of certainty that the peak demand experienced by the utility would fall in the on-peak period. Consequently, the proposed definition is reasonable.

The Examiner reported receiving no comments about this definition. He found that the need for and reasonableness of this definition had been adequately supported by the Statement.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been adequately demonstrated by the Statement.

R. Purchase. See discussion under "T. Sale."

S. Qualifying facility.

The Commission has made one technical revision in this definition between the rules as initially proposed and the rules as adopted. That revision changed the reference to the rules from "4 MCAR §§ 3.0450-3.0463" to "4 MCAR §§ 3.0450 - 3.0462." The revision is necessary because the Commission is not adopting the last of the initially proposed rules.

With respect to the substance of this definition, the Statement contained the followinng discussion:

> A definition of qualifying facilities is necessary because these rules are all about interconnections between qualifying facilities and utilities. Section 201 of PURPA amended Section 3 of the Federal Power Act to add definitions of, among other things, small power production facilities and cogeneration facilities. It also required the FERC to promulgate rules further defining qualifying small power production facilities and qualifying cogeneration facilities. The cites in the proposed definition are to the FERC rules defining qualifying facilities. It is reasonable to use the FERC definitions, since the FERC rules were based on extensive public participation and apply nationally. Furthermore, all persons commenting to the Commission during the solicitations of comment and opinion which underlie these proposed rules assumed the Commission's definition would correspond with the FERC's.
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> There is nevertheless one difference between the two definitions. In promulgating its rules, the FERC reasoned that facilities already in existence did not need the incentive of PURPA and its rules; they were already engaged in cogeneration or small power production. Consequently, the FERC authorized State regulatory authorities to treat such facilities differently (and less favorably) than qualifying facilities coming on line, presumably, because of the incentives of PURPA and the FERC rules. In proposing this definition, the Commission determined it would be unreasonable to take advantage of such authority. As a practical matter, the Commission would have to determine that a rate lower than that applicable to other qualifying facilities was nevertheless sufficient to encourage cogeneration and small power production. Making such a determination would likely be time consuming and not cost beneficial. As a matter of equity, the Commission thinks it would be unreasonable to provide less compensation to one of two facilities, each of which allowed the utility to avoid similar costs, simply because that facility was in operation or had been installed prior to some arbitrary date.
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> The Examiner discussed this definition as follows:
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> Section 3.0451 S. defines "Qualifying facility" in accordance with both the FERC and Minnesota statutory definition. The Commission has added a second sentence to the definition stating that a cogeneration or small power production facility installed prior to the passage of both PURPA and Minn. Stat. § 216B.164 (1981 Supp.), may still be considered a Qualifying facility within the provisions of the proposed rules. In that regard, the definition of Qualifying facility contained in the proposed rules deviates from the FERC definition. Under the FERC Rules, a cogeneration or small power production facility operational prior to the effective date of PURPA is not considered a Qualifying Facility.

A definition of the term "Qualifying facility" is necessary because the term is used specifically throughout the rules and is a condition on the type of facility entitled to the benefit of the rules. The initial sentence of the definition is reasonable since it exactly parallels the statutory definition. (See, Minn. Stat. § 216B.164, subd. 2 (1981 Supp.)). The statute, however, is silent on the question of whether a cogeneration or small power production facility interconnected prior to the adoption of both PURPA and the Minnesota statute may be considered a Qualifying facility for purposes of the proposed rules. The Commission asserts that it would be unreasonable to distinguish between cogeneration and small power production facilities based on their date of interconnection. (Statement of Need and Reasonableness, p. 6). To make such a distinction, the Commission would have to determine in an individual contested case proceeding that a rate lower than that allowed to other QFs would be sufficient nevertheless to encourage cogeneration and small power production. Making such a determination would be time consuming and not cost-beneficial. The Commission further argues that the avoided costs resulting from the interconnection of a QF are the same irrespective of the in-service date of the facility. Hence, it is argued that to distinguish between QFs on the basis of their interconnection date would be inequitable.

A number of witnesses testified that the purpose of both PURPA and the state statute is to encourage cogeneration. Presumably, QFs that were in service prior to the effective date of PURPA and the Minnesota statute would not require enhanced rates because they were interconnected without benefit of such advantages. (See, Pub. Ex. 6, NSP, p. 4; Pub. Ex. 65, Ottertail Power Company; Pub. Ex. 88, Interstate Power Company, p. 2; and Pub. Ex. 118, NSP Reply Comments, p. 3).

A number of witnesses, including existing cogenerators, supported the definition as proposed. (See, e.g., Pub. Ex. 53, Boise-Cascade Company, p. 1; Pub. Ex. 110, Department of Public Service).

The Hearing Examiner accepts the rationale of the Commission regarding the reasonableness of extending the benefits of the rules to all cogeneration and small power production facilities irrespective of their in-service date. The Hearing Examiner believes that, as a matter of practicality and equity, all cogeneration and small power production facilities should obtain the benefits of the proposed rules. Moreover, the argument that the existing cogenerators do not need the stimulus of the rules is not supported adequately by the record. Existing cogenerators and small power producers, irrespective of their in-service dates, could benefit from the proposed rules by maintaining the viability of their facilities, engaging in necessary repair and/or expansion of existing facilities, and the establishment of additional QFs. The definition as proposed by the Commission is both necessary and reasonable.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition has been adequately demonstrated.

T. Sale.

These two definitions were included in the rules to clarify the perspective from which "purchases" and "sales" were to be viewed. Like the definition of Commission, these were described in the Statement as self-explanatory.

The Examiner reported receiving no comments about these definitions. He found that the need for and reasonableness of these definitions had been adequately supported.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of these definitions have been adequately demonstrated by the Statement.

U. Supplementary power.

The need for and reasonableness of this definition were discussed in the Statement; that discussion has been reproduced in this Order in the discussion of the "Backup power" definition.

The Examiner reported receiving no comments relative to this definition. He found that the need for and reasonableness of this definition had been adequately supported by the Statement.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been adequately demonstrated by the Statement.

V. System emergency.

The Commission's Statement contained the following discussion of this definition:

> The proposed rules have specific provisions governing utility treatment of qualifying facilities during system emergencies, as called for in the FERC rules, so it is necessary to define system emergency. The definition used corresponds with the one used by the FERC in 18 CFR § 292.101 (b)(4), and is, therefore, reasonable for use in this application.

The Examiner noted that no comments were received relative to this definition. He found that the Statement adequately supported the need for and reasonableness of this definition.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been adequately demonstrated by the Statement.

W. System incremental energy costs.

The Commission discussed this definition in the Statement as follows:

> This term needs definition because it lies at the heart of the calculation to determine a utility's avoidable energy costs. The proposed definition is reasonable in light of two considerations. First, the definition is consistent with the way the term is used in the electric utility industry, and will, therefore, be easily understood by utilities seeking to follow the procedures established by these rules. Second, the definition may be seen as summing the variable costs of generating an additional kilowatt-hour at any time. The system incremental energy costs thus represent costs which may be saved if the utility does not generate that additional kilowatt-hour. These costs are clearly avoidable costs, and are reasonably used in determinations of avoided costs of utilities.

The Examiner discussed the definition as follows:

> Section 3.0451 W. defines "System incremental energy costs" as amounts representing the hourly energy costs associated with the utility generating the next kilowatt-nour of load during each hour. A definition of the term is necessary because it is used in calculating a utility's avoidable energy costs. The Commission suggests that the definition is reasonable because it is consistent with industry usage of the term and adequately summarizes the variable costs of generating an additional kilowatt-hour at any particular time. (Statement of Need and Reasonableness, p. 7). The only public comment received on the proposed definition was that of NSP which suggested a different definition but only to comport with its specific proposal relative to § 3.0452 B. of the proposed rules. (See, Pub. Ex. 6, NSP. p. 4). Since the Hearing Examiner has not accepted the proposal of NSP relative to § 3.0452 B. of the proposed rules, the different definition suggested by the Company is not appropriate. The definition of System incremental energy costs proposed is both necessary and reasonable.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition have been adequately demonstrated.

X. Utility.

The Commission initially proposed a definition of "utility" that included all public utilities engaged in the generation, transmission, or

distribution of electricity in Minnesota, including cooperative electric associations and municipal electric utilities. The Commission explained this choice in the Statement:

> These proposed rules place many demands on utilities, so it is necessary to define utility to know which entities are required to act. The definition includes only electric utilities, which is reasonable because qualifying facilities will not be interconnecting with any utilities other than electric utilities. The definition includes cooperative and municipal utilities which, in general, are not subject to rate regulation by the Commission. This inclusion is reasonable in that the Minnesota Legislature specifically determined in M.S. § 216B.164, subd. 2, that the Commission's rules on this matter were to apply to all Minnesota electric utilities, including cooperative electric associations and municipal electric utilities.

The Commission further stated its reasons for including cooperatives and municipals in the Comments:

> M.S. § 216B.164 expressly states that the cogeneration and small power production act and rules "shall apply to all Minnesota electric utilities, including cooperative electric associations and municipal electric utilities, that become interconnected with any qualifying facility as defined in 18 C.F.R. 292.101(b) (1)." The question has arisen whether under this section these proposed rules may be applied to all electric utilities or only to an electric utility that has already interconnected with at least one cogeneration or small power production facility. The sounder interpretation based upon the principles of statutory construction appears to support the broader reading that the act and these rules apply to all Minnesota electric utilities.
>
> The "Applicability" subdivision in M.S. § 216B.164 is necessary because Chapter 216B as a whole does not typically apply to cooperatives and municipal electric utilities. The subdivision expands the Commission's jurisdiction over utilities, when there is a possibility of interconnecting with alternative energy sources. Under the first rule of statutory construction, which is to ascertain the legislative intent within the language of the statute, this subdivision clearly expands the jurisdiction of the Commission to meet a specific problem, which is the relations between utilities and these other energy producers.
>
> The phrase "that become interconnected with any qualifying facility . . ." does not appear to be a limiting clause that reduces or renders variable the scope of the Commission's jurisdiction over Minnesota electric utilities for purposes of this section. The word "that" is a personal pronoun like "who" or "which." It typically precedes an explanatory phrase that is intended to make more clear the subject preceding it. The phrase should not be considered to limit the Commission's authority to regulate all electric utilities in the area of their relations with qualifying facilities.
>
> In this instance, this interpretation of the phrase is necessary to give effect to the statute as a whole. Otherwise, an electric utility not otherwise covered by Chapter 216B could avoid jurisdiction under section 164 merely by declining to interconnect with any qualifying facility. The Commission's jurisdiction to resolve disputes is no greater nor no lesser than its jurisdiction over rules. See, M.S. § 216B.164, subd. 5 and subd. 6. Both subdivisions are dependent upon the applicability of the section as a whole. A restrictive reading of subdivision 2 on applicability could deny the Commission jurisdiction to hear a dispute over interconnection in the first instance and effectively allow the electric utility, rather than the Legislature or the Commission, to determine whether the statute applies. When enacting a statute, the Legislature does not intend a result that is absurd or impossible to execute. See, M.S. § 645.17.
>
> Further, it is appropriate to construe the applicability of this section broadly in order to satisfy the legislative intent expressed and found in the statute. Subdivision 1 sets forth the scope and purpose of the act, which states:

This section shall at all times be construed in accordance with its intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public.

M.S. § 216B.164, subd. 1 (1981 Suppl.) Consistency and certainty in the application of the statute can be achieved through the application of rules, even more than through the resolution of disputes, involving interconnection. Thus, rules governing the circumstances and conditions of interconnection should be found within the scope and applicability of this act in order to create an environment that encourages cogeneration and small power production and yet at the same time is in the ratepayers' and the public interest.

In order to carry out the words of the statute, according to their common and ordinary usage, as well as to execute the legislative intent clearly expressed in this section, the rulemaking authority of the Commission under this section must be applicable to all electric utilities, including cooperatives and municipal electric utilities. Rule sections such as the filing requirements (4 MCAR § 3.0452) and dispute resolutiuon (4 MCAR § 3.0460) are part of the affirmative environment that will encourage the introduction of qualifying facilities and are thus necessary to carry out the intent of the Legislature as found in the language of this section. The Examiner should find that the Commission has authority to promulgate these rules for all Minnesota electric utilities.

The Examiner found that a definition of the term "utility" is necessary due to the requirements in the proposed rules that a utility engage in specific activities. However, based upon his findings on the Commission's statutory authority to adopt these rules, he found that the proposed definition exceeded that authority and recommended revising the second sentence to clarify that cooperative electric associations and municipal electric utilities would not be included in the definition of "utility" until after an initial interconnection by that utility with a qualifying facility took place.

In his discussion of the Commission's ability to promulgate rules on cogeneration, the Examiner discussed several possible interpretations of the portion of the enabling legislation which authorizes the Commission to adopt rules, M.S. § 216B.164, subd. 6, and the portion of the legislation, M.S. § 216B.164, subd. 2, that limits the application of the cogeneration and small power production statute to "all Minnesota electric utilities, including cooperative electric associations and municipal electric utilities, that become interconnected with any qualifying facility as defined in 18 C.F.R. § 292.101 (B) (1)."

The Examiner noted three possible interpretations of the law:

that the law, and thus the rules, apply to all utilities regardless of the utility's form of ownership or interconnection status;

that the law, and thus the rules, only apply to utilities that have interconnected with a qualifying facility, regardless of the utility's form of ownership; or

that the law, and thus the rules, apply to all rate-regulated utilities, and to non-rate-regulated utilities only upon their interconnection with a qualifying facility.

He rejected the first, which was the Commission's, interpretation of the law, finding that this interpretation would render the language on interconnection in M.S. § 216B.164, subd. 2, mere surplussage, and would be contrary to recognized principles of statutory construction. He further found that the Commission did not have general rulemaking authority outside the cogeneration and small power production section of the law to adopt rules governing non-rate-regulated utilities, and thus could only draw its authority over those utilities from M.S. § 216B.164.

The Examiner also rejected the second possible interpretation of the statute, finding that a construction that pronibited the Commission from adopting rules regulating the relationship between any Minnesota utility and a qualifying facility until an interconnection had taken place would create a

conflict with § 210 of PURPA and the associated FERC rules. He noted that the Commission is mandated by the Federal law and rules to adopt rules governing the relationship between rate-regulated utilities and qualifying facilities, and reasoned that such a construction would impermissably limit the application of governing federal authority. He found that a statutory construction which avoids constitutional prohibitions is to be preferred if it can be reconciled with the statutory language.

The Examiner then found that the third possible interpretation of the law would give maximum effect to all the language of the subsection without impermissibly limiting the application of governing Federal authority. He noted that punctuation marks do not have the same controlling force of evidence of legislative intent as do words, and that the final comma in M.S. § 216B.164, subd. 2, could be read to apply the requirement of interconnection with a qualifying facility only to non-rate-regulated cooperatives and municipal electric utilities without accomplishing an unreasonable or absurd result.

The Examiner also rejected the Commission's concerns, stated in the Comments, that removing cooperatives and municipals from initial Commission jurisdiction could frustrate the intent of the law by allowing those utilities to avoid interconnection by refusing a first interconnection. He argued that PURPA, in § 202, and the FERC rules, in § 292.303(c), mandate initial interconnection regardless of whether the utility is rate-regulated or not. In his view, this would allow a rejected potential qualifying facility to seek relief from the FERC or through court action. He also noted that, under § 202 of PURPA, a state regulatory body can apply to the FERC for an order mandating interconnection.

The Commission adopts the Examiner's findings on the statutory interpretation of M.S. § 216B.164, subd. 2, and concludes that its jurisdiction, to be exercised through the proposed rules, extends to all rate-regulated utilities and to any non-rate-regulated utility that becomes interconnected with a qualifying facility.

The Commission's concerns that non-rate-regulated utilities might impede the development of qualifying facilities by simple refusal to interconnect have been reduced by several factors. As the Examiner noted, non-rate-regulated utilities are required by 16 USC § 824a-3(f)(2) to implement the FERC rules on interconnection and purchase. 292 CFR § 303(a) creates an obligation on the part of the utility to purchase from qualifying facilities. 16 USC § 824a-3(h)(2)(B) allows a qualifying facility to petition the FERC for enforcement of a non-rate-regulated utility's cogeneration rules. 16 USC § 824a-3(g)(2) allows a qualifying facility to bring a court action to enforce those rules. Most important, 16 USC § 824i(2) gives the Commission the right to apply to the FERC for an order requiring a non-rate-regulated utility to interconnect with a qualifying facility. While there may well be practical limitations on the ability of a small qualifying facility to seek administrative relief from the FERC in Washington, D.C., or to undertake a court suit to enforce its rights, the Commission will be able to alert the FERC of any actions contrary to Federal law or rules that are brought to the Commission's attention, and will be able to apply to the FERC for the appropriate relief.

The Examiner found that the Commission could remedy the defect in the definition of "utility" by revising the second sentence to more accurately reflect the Commission's jurisdictional limitations. He made no express finding on whether such a revision would constitute a substantial change within the meaning of M.S. § 14.15, subd. 3. The Commission finds that altering the definition of "utility" as it has done in response to the Examiner's findings is not a substantial change, since the rules as originally proposed gave adequate notice of the Commission's intent to assert jurisdiction over the broadest possible range of utilities, and did in fact prompt comments from those utilities seeking to avoid that jurisdiction. The change made to the rules as finally adopted is in response to those comments, and is limited to the jurisdictional restriction of the statute.

The Commission concludes that the definition in its final form is necessary and reasonable, and will order it adopted.

4 MCAR § 3.0452. Filing Requirements.

A. Filing dates.

B. Filing Option.

In the Statement, the Commission explained the importance of timely cost data and the reasonableness of the filing dates as follows:

> It is necessary that the covered utilities file timely cost information so that the cogeneration and small power production tariffs will reflect up-to-date avoided costs as required by M. S. § 2168.164, subd. 3. At the same time, the Commission wishes to minimize the administrative burden on the reporting utility. Accordingly, it is reasonable that the cogeneration and small power production tariff be filed every 12 months. The initial filing will be required within 60 days of the effective date of this rule to allow the covered utility adequate time to prepare the tariff filings.

The Commission made several language changes to the rules as initially proposed. The rules as finally proposed reduced the administrative burden and cost of compliance with the rules. In the Comments, the changes were discussed as follows:

> The first change puts the second filing date at January 1, 1984, one year later than in the proposed rule. This change is necessary to accommodate the delay already experienced in promulgating final rules.
>
> The second change provides an option for small generating utilities to eliminate the greatest portion of administrative burden and expense: the calculation of their avoided costs on Schedules A and B. Utilities pursuing this option would simply file their retail rate schedules instead of Schedules A and B. No calculation would be required, and the annual filing would be simply a process of gathering the necessary documents. This option would apply to generating utilities with annual sales of less than 500 million kilowatt-hours. The FERC rules use this cut-off point to identify utilities which do and do not have to file avoided cost data as specified in 18 CFR § 292.302. It is reasonable to use the same size criterion to reduce complexity. It is also reasonable to keep this whole procedure optional: nothing should act to prevent the utility from calculating its avoided costs and filing them, if it wishes.
>
> The third change is necessary to clarify the rule and reduce the administrative burden and expense on non-generating utilities. During the hearings, a concern was expressed that non-generating utilities might be unable to comply with the rules in the event that their wholesale suppliers refused to supply them the data necessary for Schedules A and B. The proposed change addresses this concern, clarifying that Schedules A and B need only be filed at the option of non-generating utilities. If the non-generating utility is unable to or does not wish to calculate the Schedule A and Schedule B avoided costs, the option is open to simply file Schedule G. Again, the rule does not prevent any utility from filing and using its actual Schedule A and B avoided costs. The data from the wholesale supplier is appropriate because it is costs of generation - which are incurred by the supplier - which may be avoided because the qualifying facility is providing electricity.

The Hearing Examiner found the rule as finally proposed both necessary and reasonable except to the extent that it would require the refiling of the tariff every 12 months whether or not there was a change to the tariff. He found that the Commission should amend the rules to allow a utility to formally advise the Commission in writing that there has been no change in its cogeneration and small power production tariff currently on file as a substitute for a physical annual tariff refiling.

The Commission agrees with the Examiner that a needless expense would arise without any attendant benefits if a utility were required to refile unchanged tariffs annually and adopts the Examiner's findings. 4MCAR § 3.0452 A remains essentially unchanged, reflecting only one technical change to recognize the deletion of 4 MCAR § 3.0463. However, 4 MCAR § 3.0452 B is a new section which is directly responsive to the recommendations of the Examiner. It provides that the annual tariff refiling is necessary only if there has been a change to the tariff. Of course, all covered utilities would still be required to make the initial filing.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition has been adequately demonstrated.

C. Schedule A.

The need for and reasonableness of the information required by Schedule A was explained in the Statement as follows:

> The hourly incremental energy costs are the direct fuel and variable operation and maintenance costs incurred by a utility when an additional kilowatt-hour is produced. As such, the incremental energy cost is the direct cost that will be avoided by the utility if a qualifying facility generates that kilowatt-hour instead of the utility. It has been the Commission's experience that incremental energy costs exhibit significant diurnal and seasonal variation. Each utility will have a unique set of hourly incremental energy costs due to such things as its generation mix and its load pattern. Consequently, this information is necessary for the computation of the utilities' avoided costs and it is reasonable to expect these costs to be peculiar to each utility. It is necessary for these incremental energy costs to be projected and reported for the next five years to enable potential qualifying facilities to evaluate the probable benefits of installing electric generation equipment. If the projection were made only for the coming year, there would be insufficient information for the qualifying facility to determine likely energy payments, because there could be no trends established. On the other hand, projection of these costs over a period of, for example, 10 years, would undoubtedly be costly, and the results of projections that far in the future could hardly be relied on. The choice of a 5 year projection is thus a reasonable compromise which yields useful results without extraordinary costs.
>
> The utilities are required to file their method of determining daily peak and off-peak and seasonal hours in order to provide interested parties an opportunity to review the methods and make judgements as to their reasonableness. This is necessary to insure that appropriate avoided cost rates are computed and to insure that the time periods selected are reasonable.

Evidence presented at the public hearings by the Minnesota Rural Electric Association (MREA) indicated that Schedule A failed to take line losses into account. The Commission agreed and revised the proposed rule to require the adjustment of energy costs for line losses. In the Comments, the Commission discussed the two changes incorporated into the rules as finally proposed as follows:

> First, an adjustment for line losses would apply to the energy component of costs. It was due to a simple oversight that the line loss calculation was not applied to Schedule A data in the proposed rule. This oversight was brought to the Commission's attention through the comments of the Minnesota Rural Electric Association (MREA). Capacity amounts are adjusted for line losses, so to be consistent, energy amounts must also be adjusted for line loses. Both factors are affected in precisely the same way by this phenomenon.
>
> The second change regarding line losses specifies that the percentage amount of the adjustment for line losses will be limited to one half of the utility's reported line losses. At least two parties testified that transformer core losses would be associated with the generation of power produced by qualifying facilities. It was also stated in testimony that approximately 50 percent of a distribution system's losses are due to energizing the transformer core. Because this is a cost which, in all likelihood, will not be reduced due to the provision of power by qualifying facilities, the Commission recommends that avoided costs be calculated using 50 percent of the reported line losses rather than 100 percent of reported line losses.
>
> It should be noted that the MREA commented that other losses, in addition to transformer core losses, would not be avoided due to the provision of power by qualifying facilities. The Commission observes that Mr. Eicher, commenting for the MREA, excluded transmission

losses in his analysis. To this extent, his estimate that only 30 percent of the losses would be associated with qualifying facility supplied power is too low. Consequently, the Commission believes that the 50 percent figure used is a reasonable approximation of the line losses which a qualifying facility may cause the utility to avoid.

The Examiner agreed with the Commission on this section of the proposed rule. He found that M. S. § 216B.164 requires a utility to reimburse fully a qualifying facility for both the utility's avoided energy and capacity costs. Further, he stated that the availability of the information will allow the Commission to administer the filed rates and provide a potential qualifying facility with the information necessary for it to determine the cost effectiveness of commencing operations in a particular location. Accordingly, he concluded that this section of the rule as finally proposed was both necessary and reasonable.

The Commission finds that the need for and reasonableness of the rule as finally proposed has been amply demonstrated and consequently adopts it as finally proposed.

D. Schedule B.

D. 1.

This subsection requires that Schedule B contain specific information relative to all planned utility generating facility additions anticipated during the next ten years. In the Statement the Commission explained the necessity and reasonableness of the required information as follows:

> Information regarding the operational characteristics of all planned utility generating facilities is necessary so that the Commission and any interested party can effectively make comparisons of utilities' generation plans and make judgments concerning the reasonableness of these plans. The costs associated with the planned generation facility are estimated future costs. As such, it is reasonable that the Commission be provided with at least a minimal description of the facility to be constructed. A disclosure of the name of the unit, its nameplate rating, the fuel type, energy costs and projected number of kilowatt-hours to be produced by the plant will provide a barebones sketch of the most important operating characteristics of the unit. It is reasonable to expect that any utility planning a major expenditure of this nature would have this basic information readily available. The in-service date, the completed cost per kilowatt, anticipated average annual fixed operation and maintenance cost in dollars per kilowatt, and the annual fuel savings are all required in order for the avoided capacity related generation costs to be calculated in 4 MCAR § 3.0452 (B) (4).

The Examiner concurred that the required information was both necessary and reasonable. The Commission finds that this subsection is necessary and reasonable, based upon the Statement, and adopts it as initially proposed.

D.2.

This subsection requires that Schedule B contain specified information relative to all planned firm capacity purchases other than from qualifying facilities during the next ten years. The Commission explained the reasonableness and necessity of this information in the Statement as follows:

> Planned firm capacity purchases are capacity purchases the utility intends to make to supplement its own generation or its present purchases, either indefinitely, or until it can bring its own new generation facilities on line. These purchases may be distinguished from capacity purchases to replace generation facilities during maintenance, and from unplanned purchases executed to take advantatge of transitory economies. Planned firm capacity purchases would appear in generation capacity expansion plans, and would be marked by identification of a specific kilowatt or megawatt purchase size.
>
> In the event that a utility does not have any generation facilities planned for construction in the next 10 years, the computation of tne utility's avoided capacity costs will be based on its planned firm

capacity purchases, excluding any purchases from qu... ying facilities, during the next 10 years. The capacity cost and energy cost components of the rates paid by the utilities for such purchases are an integral part of the calculation of the avoided cost rates for sales by qualifying facilities. Consequently, the reporting of these figures is necessary in order for these calculations to be made. A utility exercising sound judgment would be likely to have this information readily available since it would be an important factor in its decision to purchase power rather than build an additional power plant. Hence, this reporting requirement is reasonable. In addition, the characteristics of the proposed purchases, the year of the purchase, the name of the seller and the number of kilowatt-hours purchased is information that would be readily available to the utility and is needed to evaluate the nature of the avoidable costs.

The Commission made no changes to the rule as initially proposed.

The Examiner found this section of the rule necessary and reasonable, as does the Commission, based upon the Statement.

The Commission adopts this section of the rule as initially proposed.

D.3.

This subsection requires that Schedule B contain the utility's reported overall average percentage of line losses due to the distribution, transmission and transformation of electric energy. It is necessary to require the reporting of the overall average percent of line losses because that figure is used in the calculation of the utility's avoided capacity costs required by 4 MCAR § 3.0452 D.4.g. Because an appropriate calculation of line losses is an integral part of the calculation of avoided capacity cost, reporting line losses is both necessary and reasonable. The Examiner concured that this section was necessary and reasonable. The Commission notes that no objections were made to the reporting of line losses and adopts this section as initially proposed.

D.4.

This subsection requires the calculation and reporting of the utility's net annual avoided capacity costs stated in dollars per kilowatt-hour averaged over both the on-peak hours and the overall hours. The purpose of this subsection was described in the Statement as follows:

> The rates paid to qualifying facilities will be determined, in part, by the capacity cost that the utility will avoid due to the electric energy deliveries from qualifying facilities, so the avoided capacity cost must be measured. Once it is measured it will be expressed in two ways: cost per on-peak kilowatt-hour and cost per kilowatt-hour averaged over all hours. Qualifying facilities choosing to sell power based upon time of delivery would be compensated for the utilities' avoided capacity cost based upon the qualifying facility's on-peak deliveries. The qualifying facility would only receive compensation for deliveries of energy during off-peak hours. Qualifying facilities not choosing the time-of-day option would receive compensation for avoided capacity costs based upon total kilowatt-hour deliveries. It is shown below that such a division between on-peak capacity rates and all-hours capacity rates is necessary to appropriately compensate qualifying facilities and at the same time it is reasonable because it facilitates a system that minimized administrative costs.

The Examiner found this section necessary and reasonable.

The Commission finds that the necessity and reasonableness of this section has been adequately shown by the Statement, and adopts it as initially proposed.

D.4.a.

This subsection is the initial step in the calculation of the net annual avoided capacity cost. It requires the utility to multiply the completed cost per kilowatt of a utility's next major generating facility addition by a carrying charge rate. The justification for this calculation was explained in the Statement as follows:

Since a utility's electric generating plant will be in service for longer than a one year period, its costs must be spread out over a period of time representative of its expected useful life. This is accomplished by determining an appropriate marginal capital carrying charge rate, as discussed in the definition section earlier, and applying it to the investment cost of the new generation facility. The Commission is aware that some utilities may have difficulty determining the marginal capital carrying charge rate, which requires a complex calculation, so a default value of 15 percent has been established. This rate is reasonably close to comparable figures presented in recent electric utility rate case proceedings before this Commission. Such cases include Minnesota Power and Light, Docket No. E-015/GR-80-76 and Interstate Power Company, Docket No. E-001/GR-78-1065. Consequently, this figure may be used as a practical alternative for a utility that is unable to determine such a rate. This section of the proposed rule is necessary and reasonable because it provides for a reasonable estimate of the utility's avoided cost.

In the rules as finally proposed, the term marginal capital carrying charge rate was replaced by the term marginal capital carrying charge rate in the first year of investment. This change was necessary in this section because the identical change was made in the definitions section.

The Examiner found that record testimony supported a limitation of the marginal capital carrying charge rate to that experienced in the first year of investment. He concluded that this section is necessary and reasonable.

The Commission adopts the Examiner's findings and concludes that the necessity and reasonableness of this section has been amply shown and adopts it as finally proposed.

D.4.b.

This subsection requires that the calculation set forth in 4 MCAR § 3.0452 D.4.a. be discounted to present value. The justification for this adjustment was explained in the Statement as follows:

> It is important that the dollar amounts used in calculating the avoided cost based rates are stated in dollars of the year in which the rates are applicable. Due to inflation and the time preference for money, a dollar spent a few years from today is not as valuable as a dollar spent today. In order to compare dollars to be spent in the future with dollars spent today, future dollars must be discounted. An appropriate discount factor is the overall rate of return authorized by the Commission for each utility. This figure, which is a reasonable approximation of the cost of capital to the individual utility, captures the effects of inflation and investors' time preference for money. Obviously, if the utility is not rate regulated by the Commission, an overall rate of return will not be established by the Commission. In such a case, the overall rate of return most recently authorized by the Commission for the largest electric utility in the Commission's jurisdiction is a reasonable approximation of the appropriate discount rate. Also, such a figure is readily available. This entire section of the proposed rule is a necessary and reasonable step in the computation of the utilities' avoided costs.

Subsequently, in response to record testimony, the Commission changed the discount rate for present value calculations from the most recently authorized overall rate of return to the incremental cost of capital. In the Comments the Commission explained the need for this change as follows:

> This change is responsive to comments that the overall rate of return is inappropriate because it is based on historical capital costs, and will overstate avoided capacity costs during times of inflation, and understate them during times of deflation. It is reasonable to use the incremental cost of capital because the incremental cost reflects current capital costs, which are themselves the market estimate of future costs.

The Examiner found no record testimony opposed to the calculation required by the rule. He concluded that the section, as finally proposed, was reasonable. The Commission also finds this section to be reasonable and necessary and adopts it as finally proposed.

D.4.c.
D.4.d.

These subsections require that the present value of the average annual fuel savings per kilowatt be subtracted from the computed annual avoided capacity cost. The purpose of those calculations was explained in the Statement as follows:

> A utility planning to build additional generation capacity must decide to build one of two basic types of plants: a baseload plant (e.g., a coal fired plant) or a peaking plant (e.g., combustion turbine). A baseload plant is characterized by high capital costs and low running costs. Conversely, a peaking plant is characterized by low capital costs but high running costs. The utility, in its attempt to minimize total system costs, will choose between the alternative plants based upon the number of hours that each would be expected to be "on-line." It would only be economic to install a peaking plant if it was expected to be "on-line" for a relatively small number of hours. A baseload plant would be installed only if it was expected to be put "on-line" for a substantial number of hours in the year. Since a new baseload plant is likely to be much less expensive to run than many of the utility's existing plants, which are likely to be older, less fuel efficient plants, the utility could reduce fuel costs by installing and running a baseload unit. Consequently, the utility may be incurring capital costs in order to reduce its energy costs. Thus, the total increase in capital costs should be reduced by the fuel savings resulting from the installation of this plant in order to properly reflect the net additional cost resulting from the addition of this plant. This net figure represents the avoided capacity cost, i.e., the cost the utility avoids by virtue of not having to install the plant at all or by delaying the building of the plant for a year. It is important that the fuel savings be discounted to present value so that this cost will be on a comparable basis with the investment cost of a new plant, which also is discounted to present value. The calculation required by this portion of the proposed rule is necessary and reasonable in order to accurately compute the avoided costs of the utility resulting from a qualifying facility's delivery of electric energy.

The Examiner found these sections both necessary and reasonable.

The Commission concludes that the need for and reasonableness of these sections has been adequately demonstrated by the Statement and it adopts these sections as initially proposed.

D.4.e.

This section requires that the annual avoided capacity cost be increased to recognize a reserve margin. The purpose of this section was explained in the Statement as follows:

> Each utility must have a certain amount of reserve capacity available to meet system emergencies. The reserve margin for utilities belonging to the Mid-Continent Area Power Pool is 15%. This means that for every kilowatt of coincident peak demand the utility must build or have available to it 1.15 kilowatts of capacity. Conversely, if a customer's peak demand is reduced by 1 kilowatt and the utility's demand is reduced by 1 kilowatt, the utility needs to build 1.15 kilowatts less than it otherwise would have built. Every kilowatt delivered by a qualifying facility reduces the load that is required from the utility by 1 kilowatt. The reduction in load of 1 kilowatt means that the utility will be responsible for providing 1.15 kilowatts less of capacity than otherwise. Therefore, in order to accurately compute the cost avoided due to the qualifying facility's production, the reserve margin must be taken into account. Consequently, this section of the proposed rule is necessary and reasonable.

The Examiner found no record testimony opposed to the calculation required by the rule. He concluded that the section, as finally proposed, was reasonable. The Commission also finds this section to be reasonable and necessary and adopts it as finally proposed.

D.4.c.
D.4.d.

These subsections require that the present value of the average annual fuel savings per kilowatt be subtracted from the computed annual avoided capacity cost. The purpose of those calculations was explained in the Statement as follows:

> A utility planning to build additional generation capacity must decide to build one of two basic types of plants: a baseload plant (e.g., a coal fired plant) or a peaking plant (e.g., combustion turbine). A baseload plant is characterized by high capital costs and low running costs. Conversely, a peaking plant is characterized by low capital costs but high running costs. The utility, in its attempt to minimize total system costs, will choose between the alternative plants based upon the number of hours that each would be expected to be "on-line." It would only be economic to install a peaking plant if it was expected to be "on-line" for a relatively small number of hours. A baseload plant would be installed only if it was expected to be put "on-line" for a substantial number of hours in the year. Since a new baseload plant is likely to be much less expensive to run than many of the utility's existing plants, which are likely to be older, less fuel efficient plants, the utility could reduce fuel costs by installing and running a baseload unit. Consequently, the utility may be incurring capital costs in order to reduce its energy costs. Thus, the total increase in capital costs should be reduced by the fuel savings resulting from the installation of this plant in order to properly reflect the net additional cost resulting from the addition of this plant. This net figure represents the avoided capacity cost, i.e., the cost the utility avoids by virtue of not having to install the plant at all or by delaying the building of the plant for a year. It is important that the fuel savings be discounted to present value so that this cost will be on a comparable basis with the investment cost of a new plant, which also is discounted to present value. The calculation required by this portion of the proposed rule is necessary and reasonable in order to accurately compute the avoided costs of the utility resulting from a qualifying facility's delivery of electric energy.

The Examiner found these sections both necessary and reasonable.

The Commission concludes that the need for and reasonableness of these sections has been adequately demonstrated by the Statement and it adopts these sections as initially proposed.

D.4.e.

This section requires that the annual avoided capacity cost be increased to recognize a reserve margin. The purpose of this section was explained in the Statement as follows:

> Each utility must have a certain amount of reserve capacity available to meet system emergencies. The reserve margin for utilities belonging to the Mid-Continent Area Power Pool is 15%. This means that for every kilowatt of coincident peak demand the utility must build or have available to it 1.15 kilowatts of capacity. Conversely, if a customer's peak demand is reduced by 1 kilowatt and the utility's demand is reduced by 1 kilowatt, the utility needs to build 1.15 kilowatts less than it otherwise would have built. Every kilowatt delivered by a qualifying facility reduces the load that is required from the utility by 1 kilowatt. The reduction in load of 1 kilowatt means that the utility will be responsible for providing 1.15 kilowatts less of capacity than otherwise. Therefore, in order to accurately compute the cost avoided due to the qualifying facility's production, the reserve margin must be taken into account. Consequently, this section of the proposed rule is necessary and reasonable.

The Examiner found no testimony in the record opposing the recognition of a reserve margin in the calculation of avoided capacity costs when a qualifying facility provides firm power. He found that since a qualifying facility may provide firm power, it is reasonable to include the recognition of an appropriate reserve margin.

The Commission adopts the Examiner's findings, concludes that this section necessary and reasonable, and adopts it as initially proposed.

D.4.f.

This section takes the average annual fixed operating and maintenance costs into account. The purpose of this section was explained in the Statement as follows:

> When an electric utility installs a new generation plant it will incur fixed operation and maintenance costs, on an annual basis, which results from the installation of this plant. If this generation plant is not installed those costs will be avoided. Clearly, it is necessary and reasonable that those costs be included in the amount representing avoided capacity costs.

The Commission made a slight change to the rule as initially proposed as described in the Comments:

> In this portion of the proposed rule, avoided capacity costs are increased by an amount equal to the annual fixed operation and maintenance cost of the next anticipated generation plant. At least one party commented that those costs were not discounted to present value. It was due to an oversight that these costs were not discounted to present value in the proposed rule. It is necessary that these costs be discounted to present value in order to correctly reflect the time value of money and to put all calculations on a consistent basis.

The Examiner found this section as finally proposed both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement and Comments.

D.4.g.

This section adjusts the avoided capacity costs for line losses. The purpose of this section was described in the Statement as follows:

> Utilities typically generate electricity at centralized generation stations, step up power to transmission level voltage, transport it via transmission and subtransmission facilities to load centers, step down the power to distribution level and deliver it, via distribution facilities, to customers' locations. In the process of transforming and delivering power to load centers and to individual locations, significant amounts of electric power are lost. Since the output from qualifying facilities will typically be located near load centers, the amount of line losses from qualifying facility located near load centers, the amount of line losses from qualifying facility delivered power may be negligible. Consequently, for each kilowatt-hour produced by qualifying facilities, the utility will be able to avoid more than 1 kilowatt-hour of electric generation. For example, if the utility's reported average system line losses are 10%, the utility would avoid the production of 1.1 kilowatt-hours for each kilowatt-hour delivered by a qualifying facility. In order for the qualifying facility to be appropriately compensated for the avoided cost of the utility, consideration of the line loss is necessary and reasonable.

Upon consideration of record testimony, in the section as finally proposed the line losses adjustment was restricted to a percentage amount equal to one-half of the utility's average system line losses.

The Examiner found this section, as finally proposed, both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated.

D.4.h.
D.4.i.

The purpose of these sections was described, in part, in the Statement as follows:

> Up to this point in the calculation of the capacity related avoided generation costs, all costs have been expressed in terms of dollars per kilowatt. However, rates paid to qualifying facilities will be based upon kilowatt-hour deliveries, not kilowatt deliveries. Therefore, the cost per kilowatt must be converted to cost per kilowatt-hour. In fact, there must be two separate conversions. In this section of the proposed rule, the cost per kilowatt is converted to cost per on-peak kilowatt-hour. In this way customers providing on-peak power will be compensated for their proportionate share of the generation costs which are avoided.
>
> For qualifying facilities not choosing to sell power on a time-of-day basis, the capacity costs must be averaged over all hours instead of just on-peak hours.
>
> The Examiner found that these sections:
>
> complete the calculation in converting the avoided capacity costs to the utility's net annual on-peak avoided capacity costs stated in dollars per kilowatt-hour averaged over all hours. The provisions are reasonable since they require utilities to compensate qualifying facilities for delivered capacity on a basis appropriate to the delivery of energy with respect to the system peak period.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of these sections has been adequately demonstrated.

D.5.

This section specifies the calculation of avoided capacity costs to be reported in Schedule B in the event that the utility has no generating facility additions for the ensuing 10 years. This section was explained in the Statement as follows:

> If the utility has no planned generation facility additions for the ensuing 10 years, generation of electric energy by qualifying facilities will not help the utility avoid any generation capacity costs. Hence, under this condition, it would not be reasonable for the purchase rates to be based on avoided generation capacity costs.
>
> Even if the utility has no planned generation facilities, it may have planned capacity purchases. It is reasonable to assume that the utility can decrease these planned purchases if qualifying facilities deliver energy and capacity to the utility. The avoided cost to the utility would be the cost of the planned capacity purchase which would not have to be made. The cost of the planned purchase shall be expressed in current year dollars by applying an appropriate discount rate. In this way, qualifying facilities will be compensated on the basis of current year dollars. It is necessary and reasonable that rates accurately reflect the time period of expenditure because the value of the dollar changes over time.
>
> Since this section of the rule is applicable only to utilities with no planned generating facilities it is not appropriate to take into account the annual fixed operation and maintenance expenses associated with a new generating facility.
>
> Adjustments for a reserve margin and line losses are required in the same manner as in the previous section. In addition, the avoided costs are expressed on a kilowatt-hour basis in the same manner as in the previous sections. As previously discussed, those calculations are both necessary and reasonable.

In the Comments, the Commission discussed two changes to this section:

This recommended addition to the proposed rules clarifies that this section applies only to utilities that have planned additional capacity purchases, other than from qualifying facilities, during the ensuing ten years.

The Commission recommends a change in this paragraph to make the discount rate used for the present value calculation be the incremental cost of capital. This change simply parallels the change recommended in the computation of avoided capacity costs from additions of generating facilities.

The Examiner found this section, as finally proposed, both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement and Comments.

D.6.

The Examiner made the following findings on this subsection:

Section 3.0452 C.6., an entirely new provision in the rules as finally proposed, states that if a utility has neither planned generating facility additions nor planned additional capacity purchases during the next ten years, it has no avoided capacity costs. This provision makes explicit what was entirely explicit in the rules as initially drafted.

A number of public witnesses indicated a need, to avoid any misunderstanding, for a specific provision relative to the absence of avoided capacity costs under the circumstances described. (See, Pub. Ex. 57, MinnKota Power Coop., Inc., p. 6; Pub. Ex. 93, Red Lake Co-op, Inc.; and Pub. Ex. 112, PKM Electric Co-op.).

Subsection 6 of subpart C. is a reasonable clarification to make explicit what was otherwise implicit in the rule as initially drafted and avoids any possibility of confusion or misapplication of avoided capacity costs in rate calculation.

Since the contents of this provision of the rule as finally proposed was completely implicit in the rule as initially drafted, the amendment does not result in a substantial change within the meaning of 9 MCAR § 2.111. (See, Pub. Ex. 93, Red Lake Co-op., Inc.).

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated and that the subsection does not result in a substantial change.

E. Schedule C.

This section requires each utility to file all standard contracts to be used with qualifying facilities. Its purpose was described in the Statement as follows:

It is necessary and reasonable that all interested parties have available to them the standard contracts which a utility will use with qualifying facilities. This will allow qualifying facilities the opportunity to analyze the contracts and will give them an opportunity to either accept the contract or pursue a course of action whereby changes could be made in the contract. In addition, the requirement that all standard contracts be filed will help insure that all qualifying facilities are treated equally and fairly by the utility. Thus, this is a necessary provision since the Commission must implement fair and reasonable rates. It is reasonable because the utilities will have these documents readily available.

The Examiner found this section both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

F. Schedule D.

This section requires each utility to file its safety standards, required operating procedures for interconnection operations, and the functions to be performed by any control and protective apparatus. The purpose of this section was described in the Statement as follows:

> It is necessary that the utility file its safety standards, required operating procedures for interconnection operations and the functions to be performed by any control and protective apparatus in order to facilitate communication between the utility and the qualifying facility. A clear understanding of the technical requirements will help the qualifying facilities minimize their cost of interconnection equipment and will minimize safety related problems. An explicit publicized statement of the activity's operating procedures will help the parties coordinate their activities. The rule provides that the utility may not make requirements of a qualifying facility that are overly restrictive or that are established to discourage cogeneration and small power production. This is both necessary and reasonable since it is consistent with the intent of M.S. § 216B.164, to give the maximum possible encouragement to cogeneration and small power production. Anything more restrictive would not be consistent with the intent of the state law. On the other hand, each utility is allowed to require the qualifying facility to install all necessary control and protective apparatus as specified in 4 MCAR § 3.0462. Consequently, the proposed rule is consistent with the protection of the ratepayer and the public, as required by M.S. § 216B.164, subd. 1, and is necessary and reasonable.

The Examiner found that this section both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

G. Schedule E.

The Examiner stated that this section:

> . . .requires that the utility file with the Commission a statement of its procedures for notifying affected qualifying facilities of those periods of time when the utility will not purchase energy or capacity from a qualifying facilities "because of extraordinary operational circumstances which would make the costs of purchases during those periods greater than the cost of internal generation."
>
> The FERC Rules require a state commission to adopt rules specifying a procedure for notifying affected qualifying facilities of periods during which the utility will not purchase energy or capacity because of "extraordinary operational circumstances."

The Examiner also noted that a number of public witnesses commented that the phrase "extraordinary operational circumstances" is unduly vague. On this matter, he concluded that

> It is clear that, to qualify as an extraordinary operational circumstance, the condition must be one internal to the utility such as a light load factor which has the effect of rendering internal operation of its plant cheaper than the purchase of energy from a qualifying facility during a specified period. (Statement of Need and Reasonableness, p. 14). The Hearing Examiner finds that the phrase is adequately described in the proposed rule and is not subject to more precise definition. Moreover, any attempt by the utility to use the ability to suspend purchase of energy from a qualifying facility during an extraordinary operational circumstance is subject to review by the Commission as a consequence of § 3.0460.
>
> He concluded that this section is necessary and reasonable.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition has been adequately demonstrated.

H. Schedule F.

This section requires the filing of all of the computations made by the utility in determining Schedules A and B. This section was explained in the Statement as follows:

> This filing requirement is necessary in order for the Commission and all interested parties to review the reasonableness of the utilities' computational methods. Such a review may be necessary to determine whether or not the utilities' filings conform with the requirements of the rule. This requirement is reasonable since the Commission is responsible for the enforcement of the rule.
>
> The Examiner found this section both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

I. Schedule G; special rule for non-generating utilities.

The Statement explained the purpose of this section of the rules as initially proposed as follows:

> Schedule G applies to utilities that purchase all of their power for resale. Such a nongenerating utility is required to file Schedules A-G excluding E. The information for Schedules A and B are to be determined from cost information provided by the utility's suppliers since the nongenerating utility would have no such information pertaining to its own system. This information will be necessary for the Commission and other interested parties to compare the generation costs of all utilities and this will provide potential qualifying facilities with information that will help them estimate the likely future avoided cost payments from the utility. Schedules C, D and F are necessary and reasonable for the reasons stated above. Schedule E is not needed because the conditions assumed thereunder do not apply to nongenerating utilities. Schedule G is necessary because the rates for purchase of power delivered by qualifying facilities will be based on the rates paid by the utility for power from its normal supplier. The reasonableness of this basis for the avoided cost computation will be discussed in this statement under the explanation of 4 MCAR § 3.0455.

Several changes to the rules as initially proposed were discussed in the Comments:

> The Commission recommends changes in this paragraph which clarify the rule, reduce the administrative burden and expense on utilities, and, in conjunction with other recommended changes, permit utilities to choose between paying rates based on avoided costs or paying higher rates without expending the time and money to determine their avoided costs. The recommended changes are responsive to comments received from both municipal utilites and cooperative utilities.
>
> With the recommended changes, each non-generating utility files its wholesale purchase rates as Schedule G. Testimony received at the hearings indicated that several non-generating utilities purchase power from more than one supplier. The rule as recommended reasonably requires that Schedule G be based on the supplier from which purchasess may first be avoided. For example, if a non-generating utility purchases most of its requirements from supplier A, and supplements them with purchases from supplier B, purchases from supplier B would be avoided first. The utility would file as Schedule G the wholesale rate of supplier B.
>
> Municipal utilities were concerned that their suppliers would not provide them data for Schedules A and B. The recommended change clarifies the proposed rule to explicitly state that Schedules A and B are optional for non-generating utilities. This change is in line with the interpretation presented by Commission staff during the hearings.

The recomended change continues to permit non-generating utilities to file Schedules A and B. This is reasonable because the avoided generation costs calculated on Schedules A and B are the real costs which may be avoided due to electric generation by qualifying facilities. It is reasonable to assume that Schedule G rates will in most cases exceed Schedule A and Schedule B avoided costs. Therefore, utilities which avail themselves of the option with the lesser administrative burden, filing Schedule G, will not thereby subject qualifying facilities to lower rates. At the same time, utilities which choose to file actual costs which may be avoided, in the form of Schedules A and B, will pay the statutory requirement of full avoided costs.

As with Schedule G itself, if the nongenerating utility with more than one supplier chooses to also file Schedules A and B, the recommended change insures that Schedules A and B contain data from the supplier from which purchases would first be reduced or avoided.

The Examiner found this section, as finally proposed, necessary and reasonable. He also found that the changes did not result in a substantial change within the meaning of 9 MCAR § 2.111.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement and Comments.

J. Availability of filings.

This section specifies that all filings required by 4 MCAR § 3.0452 A-I shall be made with the Commission and shall be maintained at the utility's offices. The purpose of this section was explained in the Statement as follows:

It is necessary that all tariff filings concerning purchase rates be made readily available so that the Commission, all qualifying facilities, and any potential qualifying facility can estimate present and future avoided cost based purchase rates. Access to filings will allow interested parties an opportunity to make a judgment as to the reasonableness of all computations and an opportunity to understand their responsibilities as sellers of energy to a utility. Restricting access to the filed information would serve to frustrate the purpose of M.S. § 216B.164 by discouraging cogeneration and small power production and would be unreasonable.

The Examiner found this section both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

4 MCAR § 3.0453. Reporting Requirements.

A. General Requirements.

4 MCAR § 3.0453 A requires each utility which is interconnected with a qualifying facility to provide the information specified in subsections B through D of the section and allows the filing of certain information specified in subsections E and F.

The Commission discussed this portion of the rules in the Statement in the following manner:

Pursuant to M.S. § 216B.164, subd. 7, the Commission is required to submit a report to the Legislature on Jan. 1, 1983.

Such a report must address at a minimum, the following issues:

1) The location, type, and output of cogenerators and small power producers in the state;

2) Whether cogeneration and small power production has resulted in any major impacts on the utility system; and

3) The effectiveness of the provisions of the state law and the Commission's rules in encouraging cogeneration and small power production.

Because of this statutory requirement, the Commission must obtain reliable and accurate information from which a report may be compiled.

The Commission believes that such a reporting requirement is necessary and reasonable, because in most cases only the utility will have possession of the needed data or access thereto. In addition, the Commission does not possess the resources necessary to adequately collect and assemble the essential information.

One of the basic premises underlying the cogeneration and small power producton portions of PURPA was to alleviate as many burdens on the qualifying facility as possible and to provide it with a favorable climate in which to operate. To impose the reporting requirements on the individual qualifying facility, over which the Commission does not have general regulatory jurisdiction, would place a burden on the qualifying facility which would be contrary to the intent of the FERC rules as well as pertinent portions of PURPA. Such a reporting requirement may be more appropriately placed on the utilities which are within the scope of traditional regulatory jurisdiction.

The Commission amended the rules as initially proposed to limit the application of the subsection to those utilities which have actually interconnected with a qualifying facility. The provision was also amended to require filing on or before November 1, 19832, on January 1, 1986 and every two years thereafter, rather than at any time the Commission may require such filings in the future.

These amendments were discussed by the Commission in the Comments in the following manner:

The Commission is recommending two changes in this section of the rule. The first change restricts the reporting requirements to utilities which are interconnected with qualifying facilities. This is reasonable because the reports are needed to gather information about interconnected operations, and no information is needed from utilities which are not interconnected with qualifying facilities. The result of this change would be a reduction in the time, effort, and expense of compliance with these rules for utilities which are not interconnected.

The second recommended change affects the timing of the reports. The initial report due date is extended one year, to November 1, 1983 as a practical matter. Although the Commission must report to the Legislature on January 1, 1983, it is impossible to have rules in place to require reports by November 1, 1983. It is reasonable to assume the Legislature would be interested in the information when it does become available. The recommended change would also require new reports every two years, to be filed concurrently with the annual filing requirements on January 1. The Commission believes that the information required in 4 MCAR § 3.0453 is very important, particularly since experience with interconnected operations is now so limited. The Commission is, therefore, recommending a continuing reporting requirement which will develop information not available elsewhere of the effects on utility systems of interconnected operations with qualifying facilities over time. By requiring the reports regularly at two-year intervals, the recommended change reduces the regulatory burden as much as possible, and removes what some have perceived as too much agency discretion.

The Hearing Examiner discussed 4 MCAR § 3.0453 A, as finally proposed, in the following manner:

The need for interconnected utilities to file such information is twofold. Initially, the Commission is required by Minn Stat. § 2168.164, subd. 7 (1981 Supp.), to report to the Legislature concerning the status of cogeneration and small power production activities within the State of Minnesota and its attendant impact on the utilities. Finally, since information regarding the status and impact of qualifying facilitiess is virtually non-existent in Minnesota and the Commission, to oversee the implementation of its rules, must have continuing knowledge of the development of cogeneration and small power production in the state of Minnesota, it

is necessary that relevant information is available to the Commission both initially and on a reasonably on-going basis. Since it is necessary that the Commission be apprised or relevant information concerning the status of cogeneration and small power production facilities in the state of Minnesota, it is reasonable that such information be filed with the Commission. The two-year period selected gives certitude to the scope of the demands to be made on utilities and reduces the attendant regulatory burden to the greatest extent consistent with the availability of accurate information.

The comment by the MMUA that there is no evidence in the record regarding the need for continued filings of such information (Pub. Ex. 117, MMUA Reply Comments, p. 9), overlooks the Commission's rationale for regular filings. (See, Agency Ex. J. p. 9).

Section 3.0453 of the proposed rules is both necessary and reasonable.

The Hearing Examiner also concluded that the amendments to 4 MCAR § 3.0453 A do not constitute a substantial change within the meaning of 9 MCAR § 2111. In reaching this conclusion, the Hearing Examiner reasoned the following:

> The amendments to § 3.0453 A. which limit its application to utilities that have actually interconnected with a qualifying facility and specify the time interval for subsequent filings of the requested information do not constitute a substantial change within the meaning of 9 MCAR § 2111. The amendments introduced were solely for the purpose of responding to adverse comments made by public witnesses at the hearings. As such, they are clearly a logical outgrowth of the hearings which have the effect only of reducing the regulatory burden on affected utilities without compromising the integrity of the information sought.
>
> Since the only affected party is benefited by the change without adverse impact on any other potential interested person, the change results in no prejudice. A change benefitting all potentially interested persons adopted as a result of testimony received at the public hearings and adequately supported by the existing record is not a substantial change within the meaning of 9 MCAR § 2111.

The Commission adopts the findings and conclusions of the Hearing Examiner and concludes that the need for and reasonableness of 4 MCAR § 3.0453 A has been adequately demonstrated. The Commission further concludes that the amendments to this section do not constitute a substantial change within the meaning of 9 MCAR § 2.111.

B. Net energy billed qualifying facilities.

C. Other qualifying facilities.

4 MCAR § 3.0453 B requires an interconnected utility to provide specified information relative to interconnected qualifying facilities operating under net energy billing. The information to be filed details the operation and effect of qualifying facilities using net energy billing.

4 MCAR § 3.0453 C requires that certain specified information be filed by a utility with respect to its interconnected activities with qualifying facilities under rates other than net energy billing.

The Commission generally discussed the reporting requirements in the Statement as follows:

> In order for the Commission to accurately assess and report on the output of interconnected qualifying facilities as required by M.S. § 216B.164, it is necessary for the Commission to require the utilities to submit a summary of the following where applicable:
>
> 1. Total number of interconnected qualifying facilities.
>
> Such information is needed for the Commission to determine the extent of interconnected qualifying facilities as well as to evaluate the distribution of qualifying facilities within the respective service areas throughout the state.

2. Nameplate ratings.

The nameplate ratings are necessary to appraise the apparent addition of capacity through the interconnection of qualifying facilities.

3. Type of interconnected qualifying facilities.

By distinguishing qualifying facilities by type (e.g., wind, photovoltaic, hydro, etc.), the Commission will be able to determine what technologies are in fact being utilized as well as providing public information with respect to the use and contribution of various technologies.

4. For each qualifying facility type, the total Kwh deliverd per month to the utility.

This information is needed to effectively evaluate the amount of energy generated by small power production and cogeneration units in Minnesota. Such information is of great public importance also, as it may indicate the viability of alternative means of energy generation in the future. By segregating the information into unit types, the Commission will be able to appraise the relative effectiveness and contribution of energy to the system by different types of qualifying facilities, as well as to determine which technologies are capable of significant current contributions to the utility's system.

5. For each qualifying facility type, the total Kwh delivered per month by the utility.

This information is needed to evaluate the total impact of qualifying facilities on the utility system. Such information will allow the Commission to determine what effect, if any, interconnection of qualifying facilities will have on the system load.

6. For each qualifying facility type, the net energy delivered per month to the utility.

This data is needed to analyze the net impact of cogeneration and small power production units on the system as well as to assess the potential benefit to be gained from alternative means of energy production.

7. For each qualifying facility type, the total Kwh delivered per month to the utility, reported by on-peak and off-peak periods.

This information will allow the Commission to review the total amount of energy generated by those qualifying facilities not under the net billing option. By distinguishing between on-peak and off-peak deliveries, it will be possible to determine whether or not qualifying facilities are providing energy during crucial on-peak demand periods. This information will also allow the Commission to accurately describe and detail the output of those qualifying facilities utilizing the time-of-day classification.

The Hearing Examiner, in his review of 4 MCAR §§ 3.0453 B and C, found that it is necessary for the Commission to be aware of the impact of net energy billing qualifying facilities on each utility and on the energy network in the state. He also found that the most cost efficient way for the Commission to fulfill both its reporting requirements and its role in fostering cogeneration and small power production is for the Commission to require the filing of such information relative to such qualifying facilities.

The Hearing Examiner also recommended that the Commission add language to this section specifically stating that the word "type" refers to the energy source of the qualifying facility.

In accord with the Hearing Examiner's recommendation, the Commission has added the phrase "by energy source" to the section to reduce any possible uncertainty or ambiguity.

The Commission adopts the findings of the Hearing Examiner and concludes that the need for and reasonableness of 4 MCAR §§ 3.0453 B and C has been adequately demonstrated. The Commission further concludes that the amendments to these sections do not constitute a substantial change within the meaning of 9 MCAR § 2.111.

D. Wheeling.

4 MCAR § 3.0453 D requires that the utility file with the Commission a summary of wheeling activities undertaken by the utility.

The Commission discussed this section in the Statement in the following manner:

> The utilities are also required to submit a summary of all wheeling activities. Such information is needed to determine the extent of the wheeling of energy generated by qualifying facilities and to evaluate the attendent problems or concerns thereof by all interested parties.

The Commission amended this portion of the rules as initially proposed by limiting the reported information to those activities undertaken with respect to qualifying facilities. This amendment was discussed by the Commission in the Comments in the following manner:

> The purpose of this recommended change is to specify that only wheeling activities which are undertaken with respect to qualifying facilities are to be reported. The Commission never intended to require a utility to report wheeling activities not associated with qualifying facilities. This change clarifies that intention.

The Hearing Examiner found this provision of the rules as finally proposed to be necessary and reasonable. He also found the amendment did not constitute a substantial change within the meaning of 9 MCAR § 2.111:

> Limiting the report to those wheeling activities undertaken with respect to qualifying facilities was done to clarify the original intent of the Commission and make explicit what was prevoiusly implicit only in the proposed rule. The subject matter of Minn. Stat. § 216B.164 (1981 Supp.), is cogeneration and small power production and the responsibility of the Commission with respect thereto. The Commission has no regulatory authority over wheeling activities undertaken outside of the context specified in Minn. Stat. § 216B.164 (1981 Supp.). Such activities are regulated by FERC. In the absence of authority for the Commission to regulate all wheeling activities, it is both necessary and reasonable to limit the reporting to the Commission of wheeling activities to those wheeling activites over which it has jurisdiction. (See, Pub. Ex. 6, NSP; Pub. Ex. 65, Ottertail Power Company; and Pub. Ex. 117, MMUA Reply Comments, p. 9).
>
> Since the amendment merely restricts the application of the rule benefitting the only party even possibly affected without adverse impact on any other potentially interested party, and is a logical outgrowth of the hearings adequately supported in the record, the amendment to § 3.0453 D. does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

The Commission adopts the findings of the Hearing Examiner and concludes that the need for and reasonableness of 4 MCAR § 3.0453 D has been adequately demonstrated. The Commission further concludes that the amendments to this section do not constitute a substantial change within the meaning of 9 MCAR § 2.111.

E. Major impacts.

F. Effectiveness.

4 MCAR §§ 3.0453 E and F allow utilities to submit information relative to the major impacts of cogeneration and small power production on its utility system and the effectiveness of the cogeneration statute and the Commission's rules as observed by the utility.

The Commission discussed these provisions in the Statement in the following manner:

> The utilities are also required to include in their reports:
>
> A) A statement of any major impacts that cogenerators and small power production has had on the utility system; and

8) A statement of the effectiveness of M.S. § 216B.164 and the Commission's rules in encouraging cogeneration and small power production.

Both statements present an opportunity for the Commission to receive comments and information concerning cogeneration and small power production, as well as an opportunity for the utilities to submit their concerns, observations and subjective evaluations to the Commission for its consideration and evaluation.

The Commission amended the provision as initially proposed by making the filing of such information permissive rather than mandatory. The Commission discussed the amendments in the Comments in the following manner:

> It is recommended that these provisions of the rule be changed to remove the requirement that utilities submit reports concerning the major impact of qualifying facilities and the effectiveness of M.S. § 216B.164 and 4 MCAR §§ 3.0450-3.0463. The purpose of these changes is to reduce the administrative burden on reporting utilities. This is responsive to comments that the Commission's proposed rules are unduly burdensome on the utilities. At the same time, the rule provides utilities with an opportunity to express their opinions to the Commission on these matters.

The Hearing Examiner discussed 4 MCAR §§ 3.0453 E and F in the following manner:

> The Commission, pursuant to Minn. Stat. § 216B.164, subd. 7 (1981 Supp.), has the responsibility of reporting to the Legislature on the major impacts of cogeneration and small power production and on the effectiveness of regulation of qualifying facilitiess. Since utilities are substantially affected by the existence of cogenerators and small power producers, it is reasonable to afford such utilities an official opportunity to contribute to the Commission's assessment of the role of cogeneration and small power production in Minnesota. Since the purpose of the information is to afford the utilities some voice in Commission views, it is reasonable to make the filing of such information only optional. The change from a mandatory to permissive filing of the information herein discussed was a response by the Commission to comments of public witnesses that portions of the proposed rules imposed undue burdens on the utilities without offsetting regulatory benefits. If a utility does not wish to express its opinions on cogeneration and small power production to the Commission, it should not be required to do so.
>
> Since the only party affected by the change is benefitted thereby without any possibility of adverse impact on any other potentially interested party and the change is a logical outgrowth of the hearing process adequately supported in the record, the amendment to §§ 3.0453 E and F making the filing of information relative to the opinions of the utilities on cogeneration and small power production optional is not a substantial change within the meaning of 9 MCAR § 2.111.

The Commission adopts the findings of the Hearing Examiner and concludes that the need for and reasonableness of 4 MCAR §§ 3.0453 E and F has been adequately demonstrated. The Commission further concludes that the amendments to these sections do not constitute a substantial change within the meaning of 9 MCAR § 2.111.

4 MCAR § 3.0454 Conditions of service.

The Commission's Statement contained the following discussion of this rule as a whole:

> This proposed rule establishes the conditions which must be met by both the utility and the qualifying facility for engaging in interconnected operations. It is necessary because established conditions enable each party to know in advance what is expected of it and the other party. That knowledge greatly reduces uncertainty. It is reasonable to expect that reduction of uncertainty will encourage cogeneration and small power production. In addition,

established conditions ensure uniform treatment of qualifying facilities by utilities, and provide a basis for resolving disputes. This proposed rule is reasonable because it fairly assigns responsibility for meeting conditions between the utility and the qualifying facility.

The Examiner elected to discuss this rule section-by-section, and he made no response to this part of the Statement. The Commission will do likewise.

A. Requirement to purchase.

The rule as adopted differs from the rule as initially proposed in two ways. First, the conjunction has been changed to require utilities to purchase "energy and capacity", instead of "energy or capacity", from qualifying facilities. Second, the reference to the set of rules governing cogeneration and small power production has been revised because the Commission is not adopting 4 MCAR § 3.0463.

The Commission included the following discussion of the need for and reasonableness of this section in its Statement:

> This section requires the utility to purchase electricity from any qualifying facility agreeing to the conditions. The requirement to purchase is necessary because a utility which refused to purchase could leave the qualifying facility without a market for its power. A possible result could be that more efficient generation (by the qualifying facility) would be foregone for less efficient generation (by the utility). Such a result would be contrary to the most basic reason for encouraging cogeneration and small power production: promoting efficient use of resources. The requirement for utilities to purchase from qualifying facilities is part of both PURPA (Section 210 (a)) and the FERC rules (18 CFR § 292.303(a)). This section is reasonable in that it also requires qualifying facilities to agree to the conditions established in this rule.

The Examiner concentrated on the need to change "or" to "and" in his Report:

> Section 3.0454 requires that a utility purchase from a QF all "energy or capacity" offered for sale under the conditions set forth in the proposed rules. The requirement that a utility purchase all energy and capacity made available to it by a QF in accordance with governing legal standards is mandated by state statute. Minn. Stat. § 216B.164, subd. 4(b) (1981 Supp.).
>
> A number of public witnesses commented that the use of the word "or" rather than the use of the word "and" in line 2 of § 3.0454 A. conflicts with governing state and federal statutes. (See, Pub. Ex. 6, NSP, p. 9; Pub. Ex. 65, Ottertail Power Company, p. 8; Pub. Ex. 88, Interstate Power Company, p. 3; and Pub. Ex. 118, NSP Reply Comments). While a rule requiring that the utility purchase the energy and capacity made available by a QF is necessary as a consequence of federal and state law, the rule, as stated, is an unreasonable response to that need in that the usage of the word "or" between the word "energy" and the word "capacity" in the second line of § 3.0454 A. may rationally be construed as varying the legal responsibility of the utility to purchase both energy and capacity. The statute requires that available energy and capacity rather than energy or capacity be purchased.
>
> To remedy the defect, the Commission should substitute the word "and" between the word "energy" and the word "capacity" for the word "or" in line 2 of § 3.0454 A.

In the rule as adopted, the Commission has followed the Examiner's recommendation, and substituted "and" for "or." It is clear from the Statement that the Commission was not proposing to limit purchases to either energy or capacity. The Commission concludes that the need for and reasonableness of this section of the rule as adopted have been adequately demonstrated, and that the substitution of "and" for "or" does not result in a substantial change within the meaning of 9 MCAR § 2.111.

B. Written contract.

The Statement contained the following discussion of this section:

Interconnection implies the purchase and sale of energy and capacity by the utility and the qualifying facility over substantial periods of time. Neither the transactions nor the physical equipment necessary to accomplish the transactions are simple. It is both necessary and reasonable, therefore, that the parties to the transactions state their understanding of the terms and conditions in writing. This statement will prevent disputes from arising and will aid in the resolution of disputes.

Some persons have argued that requiring a contract would be in itself a significant discouragement to potential owners of qualifying facilities. The argument suggests both that unnecessary costs of legal review would be incurred and that utilities would unilaterally make unfair requirements of qualifying facilities in such contracts.

The Commission believes this argument is without merit. First, a written contract is a reviewable document. It, therefore, discourages unreasonable demands which might otherwise be made in oral agreements. Second, a written contract tends to make each party explicitly aware of its rights and obligations. Third, written contracts better enable the Commission to ensure uniform treatment of qualifying facilities by utilities. Fourth, standard written contracts, especially for small qualifying facilities, will effect significant administrative cost savings, as the contract need not be redrawn each time a qualifying facility applies for interconnection.

The Examiner found this section necessary and reasonable:

Section 3.0454 B. requires that a QF and a utility execute a written contract prior to interconnection of the QF. It is necessary that the respective legal obligations and business relationship between the QF and the utility be specified for certitude, clarity, and the protection of all involved parties and ratepayers. (See Statement of Need and Reasonableness, pp. 18-19). The Commission has proposed a written contract as the instrument for expressing the business relationship between the QF and the interconnected utility. A written contract is, of course, the normal means or specifying legal obligations.

A number of public witnesses, generally utilities, strongly favored the requirement of a written contract. (see, e.g., Pub. Ex. 4, Eicher, p. 8; Pub. Ex. 6, NSP, p. 9; Pub. Ex. 10, Minnesota Power, p. 4; Pub. Ex. 65, Ottertail Power Company, p. 15; Pub. Ex. 88, Interstate Power, p. 3; and Pub. Ex. 118, NSP Reply Comments, p. 10).

While cogenerators and small power producers did not dispute the need for certitude in the respective legal obligations of the parties, they suggest that the experience of small cogenerators and small power producers with the unilateral bargaining power of the utilities makes it more reasonable for the Commission to dispense with the requirements of a written contract. They suggested that the Commission generate and approve as part of its regulatory mechanism a uniform statewide contract. (See, Pub. Ex. 100, Senator Marion Menning; and Pub. Ex. 113, Jacobs Wind Electric Co., Reply Comments, p. 6).

As demonstrated by NSP, however, the formulation and unilateral imposition of a stated contractual relationship on all QFs and utilities, even if legally permissible, is practically impossible. (See, Pub. Ex. 118, NSP Reply Comments, p. 10). Moreover, there is no specific legal authority for the Commission to first formulate and then uniterally impose on all QFs and utilities a uniform statement of tneir respective legal obligations. The Hearing Examiner accepts the occurrence of instances of rapaciousness and the use by certain utilities of unilateral bargaining power in past relationships with QFs. He find, however, that the combination of the execution of a written contract which may not alter the respective obligations of the parties enumerated in federal and state statutes and regulations with the ability of a prospective QF to bring a specific dispute concerning a proposed contractual provision to the Commission for resolution, pursuant to § 3.0460, where the burden of proof will be on the utility, provides adequate protection to a QF.

The requirement of a written contract between a QF and a utility is both necessary and reasonable.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section have been adequately demonstrated.

C. Compliance with national electrical safety code.

The Commission included the following discussion in its Statement:

> Safe handling of electricity is vital to qualifying facilities, to utilities, and to the general public. In an early draft submitted for comment the Commission proposed to require the qualifying facility to comply with the National Electrical Safety Code. One manufacturer of small power production equipment objected that adherance to the Code could damage his equipment. The Commission has determined, therefore, that a reasonable requirement would be for the interconnection to meet Code specifications. The Commission notes that the Minnesota State Board of Electricity has asserted its jurisdiction over safe wiring of qualifying facilities.

The Examiner found that this section was both needed and reasonable:

> Section 3.0454 C. requires that the interconnection between the Qualifying Facility and the utility comply with the requirements of the National Electrical Safety Code, 1981 Edition. It is necessary for purposes of safety that an interconnection meet generally recognized safety standards. It is reasonable that the interconnection be accomplished in compliance with the generally accepted electric safety code.
>
> Northern States Power Company suggested that additional specific codes be referenced. (Pub. Ex. 118, NSP Reply Comments, p. 10). The legitimate concern expressed by NSP is fully answered by § 3.0462 J.
>
> Section 3.0454 C. is both necessary and reasonable.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section have been adequately demonstrated.

D. Responsibility for apparatus.

In the rule as adopted this section has been revised in accordance with the Examiner's recommendation by deleting the last sentence of the rule as initially proposed.

The Statement discussed this section as follows:

> This section requires qualifying facilities to install, operate, and maintain equipment required for safe and reliable generation in parallel with the utility, or, in the alternative, to pay the utility to install, operate and maintain the equipment. It is a necessary condition that the qualifying facility pay for interconnection costs. This is a requirement of state law (M.S. § 216B.164, subd. 8) and of the FERC regulations (18 CFR § 292.306), and is logically consistent with the purpose behind requiring utilities to pay full avoided cost to qualifying facilities. Payment of full avoided cost ensures that, in a "frictionless" world, all cogeneration and small power production which is more efficient (i.e., cheaper) than marginal utility production will come into being. All incremental efficiency gains are manifested as profits of qualifying facilities. The utility ratepayer then pays exactly as much for electricity generated by qualifying facilities as he would have if the utility had generated it all. He is thus economically indifferent between the sources. If, however, he were required, through his utility, to pay interconnection costs as well as full avoided costs, he would no longer be indifferent, but would be better off if the utility generated all its electricity and purchased none from qualifying facilities. It is, therefore, reasonable that the qualifying facility be responsible for this interconnection equipment.
>
> The utility may nevertheless have knowledge and expertise about interconnections which it would not be cost effective for the owner of the qualifying facility to acquire. The utility may also be able

to purchase interconnection equipment at lower prices than may be available to individuals. Consequently, it is reasonable to require the utility to install, operate, and maintain interconnection equipment if requested by the qualifying facility, provided the utility is reimbursed for its costs.

The Examiner discussed this section as follows:

> Section 3.0454 D. requires that the Qualifying Facility furnish, install, operate and maintain, without cost to the utility, apparatus required by the Qualifying Facility to operate in accordance with Schedule D. The rule additionally requires a utility, at the option of the QF, to provide, install and operate at cost, the equipment required for the QF to provide safe and reliable generation in parallel with the utility.
>
> It is necessary that the responsibility for payment of interconnection costs be fixed. Except as otherwise expressly provided, governing federal and state law require a QF to bear interconnection costs. As a consequence of both governing law and reasonable equity between the QF and the utility's ratepayers, therefore, the initial sentence of § 3.0454 D. is both necessary and reasonable.
>
> The second sentence of § 3.0454 D. requiring a utility to purchase, install and operate such equipment at cost at the request of the QF is assertedly necessary and reasonable because the utility has superior expertise which would not be cost effective for the QF to utilize otherwise. (See, Statement of Need and Reasonableness, p. 19).
>
> There are no facts adduced in the record supporting the assumption by the Commission that this sentence of subpart D. is responsive to a legitimate concern.
>
> A number of public witnesses testified that the broad language of this portion of the proposed rules may require a utility to completely staff and provide spare parts and repair equipment to its QFs. (See, Pub. Ex. 4, Eicher, p. 9). The MMUA testified that the requirements of this portion of the rule would place an undue burden on a smaller utility in that it typically does not have available personnel experienced in installing operating and maintaining those portions of a QF's apparatus required for it to operate in accordance with Schedule D. (Pub. Ex. 117, MMUA Reply Comments, p. 10).
>
> To correct the defect, the Commission should either delete the final sentence of § 3.0454 D., or reconvene the hearings to develop a record to support the need and reasonableness of such a requirement.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section of the rule as adopted have been adequately demonstrated.

The Commission finds, with respect to the deleted sentence, that potentially interested parties had notice that the issue of financing interconnection costs would be considered in the proposed rulemaking. Moreover, the Notice of Hearing informed potentially interested parties that, as a consequence of the hearing, any portion of the proposed rules might be altered. Finally, the Commission finds that the deletion is fully supported in the record, and is a logical outgrowth of the rulemaking proceeding. The Commission concludes that the revision is not a substantial change within the meaning of 9 MCAR § 2.111.

E. Liability insurance.

As initially proposed, this section of the rules read, "A utility or qualifying facility shall not require the procurement of liability insurance as a condition of service." In the Statement, the Commission discussed the issue of whether or not a qualifying facility should be required to procure liability insurance as a precondition to interconnected operation as follows:

> In the development of these proposed rules, few issues have generated as much controversy as has the question of whether utilities may require qualifying facilities to hold liability insurance.

Utilities have generally taken the view that the nature of their business makes them prime targets for persons seeking liability damage awards. In their view, interconnection with cogenerators and small power producers reduces the utility's control over its transmission and distribution system, and may, therefore, increase its exposure for liability. At the same time, utilities have feared that even if a qualifying facility is clearly at fault, it is the utility which will be sued, both because of the direct physical connection with the utility and because of the greater certainty of payment if damages are awarded. Utilities have, therefore, often demanded that qualifying facilities purchase liability insurance - usually in amounts of $500,000 to $1 million - as a condition of interconnection.

Owners and manufacturers of qualifying facilities, on the other hand, have taken the position that the real reason for requiring liability insurance is to discourage and inhibit cogeneration and small power production. They have argued either that such insurance is simply not available, or is available at a cost which is prohibitively high. The result in either case, they have said, is the same as having the utility simply refuse to interconnect and purchase power.

The Commission observes that there is little practical experience of the effects of interconnected cogenerators and small power producers on utility power supply systems. Consequently, there is no information of which the Commission is aware on how often interconnected operations cause damage (if ever), or on the size of claims won because of such damages. It is, therefore, impossible for the Commission to determine how much liability insurance would be appropriate if insurance were required.

The Commission believes that a prudent person, engaging in a business venture to supply a product as potentially dangerous as electricity, would want to secure liability protection. Nevertheless, the Commission feels it is appropriate for each owner of a qualifying facility to make his own judgment on this issue. It is likely that if an uninsured qualifying facility were successfully sued, the news would get out to other qualifying facilities, and might influence those without protection to seek it.

The Commission concludes, therefore, that it would be both unnecessary and unreasonable to require liability insurance as a condition of service. Section E. of this proposed rule makes this clear.

During the hearings, the Commission heard considerable testimony on this issue. As a result of that testimony, the Commission proposed the following altered text for this section, "A utility or qualifying facility may require proof of coverage or the procurement of a reasonable amount of liability insurance as a condition of service."

The Commission revised its supporting rationale in the Comments to read:

In the development of these proposed rules, few issues have generated as much controversy as has the question of whether utilities may require qualifying facilities to possess liability insurance.

Utilities have generally taken the view that the nature of their business makes them prime targets for persons seeking liability damage awards. In their view, interconnection with cogenerators and small power producers reduces the utility's control over its transmission and distribution system, and may, therefore, increase its exposure for liability. At the same time, utilities have feared that even if a qualifying facility is clearly at fault, it is the utility which will be sued, both because of the direct physical connection with the utility and because of the greater certainty of payment if damages are awarded.

Owners and manufacturers of qualifying facilities, on the other hand, have taken the position that the real reason for requiring liability insurance is to discourage and inhibit cogeneration and small power

production. They have argued either that such insurance is simply not available, or is available only at a cost which is prohibitively high. The result in either case, they have said, is the same as having the utility simply refuse to interconnect and purchase power.

Public testimony, as submitted for the record during the hearings, indicated that liability coverage was easily obtainable and relatively inexpensive.

The Commission also believes that by requiring a manual disconnect switch and by prohibiting the execution of a hold harmless clause as a condition of service, the amount of risk exposure is effectively reduced to the point that the cost of obtaining insurance should not be prohibitive nor burdensome.

The Commission is of the opinion that a prudent person, engaging in a business venture to supply a product as potentially dangerous as electricity, would want to secure liability protection. The Commission believes that all owners, not just the prudent ones, should have liability coverage to guard against the possibility of harm to others and any resulting legal claims in the event of an accident due to negligence on the part of an individual qualifying facility owner. Without insurance or liability coverage, an injured person could, for all practical purposes, be left without legal recourse or recovery should the party at fault be without financial assets or adequate liability coverage. The Commission believes further that liability coverage is necessary to relieve severe economic distress of uncompensated victims of such accidents within the state by allowing the utility to require the maintenance of liability coverage as a condition of service. This position is essentially analogous to the rationale supporting the Minnesota no-fault automobile insurance act (M.S. § 658.41 ff). The Commission concludes, therefore, that it is both reasonable and necessary to allow parties to require liability coverage as a condition of service.

The Commission observes that there is little practical experience of the effects of interconnected cogenerators and small power producers upon utility power supply systems. Consequently, there is no information of which the Commission is aware on how often interconnected operations cause damage (if ever), or on the size of claims won because of such damages. The Commission would not object to a recommendation by the Examiner of a specific dollar amount of insurance based upon the Examiner's review of the record.

The Examiner noted that this section as finally proposed took a position opposite to the section as originally proposed, but found that the procurement of insurance is a reasonable means of obviating the impact of a particular risk. He found evidence in the record which showed that interconnection with at least certain types of qualifying facilities posed a peculiar safety hazard, in that wind power production equipment has the potential to self-energize.

Examiner Campbell concluded that the rule as finally proposed was necessary when the peculiar risk imposed upon a utility by the operation of certain cogeneration activities was seen in concert with the inability of the utility to require a qualifying facility to demonstrate financial responsibility and with the possibility of a financially irresponsible qualifying facility beginning interconnected operations for a minimal expense.

However, the Examiner found that the section as finally proposed failed to respond to the documented need and did not avoid the potential for abuse. He objected to the Commission's requirement that a "reasonable amount" of insurance be provided, and concluded that, in order for the section to satisfy the statutory requirement of demonstrated reasonableness, that it must be reasonably specific and specify a maximum dollar amount of coverage. He felt the record would support a required coverage up to $300,000.

The Commission agrees. As stated in the Comments, the Commission had no objection to a specific dollar amount, based upon the Examiner's review of the record. The Commission adopts the Examiner's findings relating to the need to protect participants from the physical risk and the finalcial risk of interconnected operations, relating to the availability of insurance coverage

up to $300,000 under personal liability and homeowners' coverages without an umbrella liability policy, relating to the need to assure that utilities do not attempt to impose chrushingly large insurance requirements, and relating to the unreasonableness of forcing individual determination of "reasonable levels" of insurance coverage.

The Commission concludes that its adopted language of this section, specifying $300,000 as the maximum allowable required coverage, with the option for a utility to require less if circumstances warrant, is necessary and reasonable.

The Examiner also found that amending the rule as the Commission has now done would not result in a substantial change. He said:

> The correction of the defect found by the Hearing Examiner in this portion of the proposed rules would not result in a substantial change within the meaning of 9 MCAR § 2.111.
>
> The primary test of the presence of a substantial change is a lack of adequate notice so that a potentially interested party could present his views on the record. See, e.g., United Steel Workers of America v. Marshall, 647 F.2d 1189 (D.C. Cir. 1980); American Iron & Steel Institute v. EPA, 568 F.2d 284, 293 (3rd Cir. 1977). While the rule, as initially proposed, prohibited the requirement of insurance coverage, the presence of the provision advised potentially interested parties that the issue of an insurance requirement would be considered in the proposed rulemaking. Moreover, the Notice of Hearing informed potentially interested parties that, as a consequence of the hearing, any portion of the proposed rules might be altered. The Statement of Need and Reasonableness issued by the Commission with respect to its proposed rules admitted the presence of a need but a lack of documentation as to the amount of coverage to be required. (See Statement of Need and Reasonableness, p. 20). It is also important to note that the proposed rules involve an entirely new subject matter and do not concern amendments to existing rules under which persons may have vested interests. Finally, the amendment to the rules is fully supported in the record and is a logical outgrowth off the rulemaking proceeding. South Terminal Corp. v. EPA, 504 F.2d 646, 659 (1st Cir. 1974).

The Chief Hearing Examiner stated, in a Memorandum attached to his Report wnich approved the Examiner's Report, that he believed this section to have been substantially changed after being initially proposed. He felt the fundamental or basic thrust of the rule had been reversed, but believed he was without authority, under M.S. § 15.0412 (now M.S. § 14.15, subd. 3) to insert a "negative" finding.

The Commission agrees with the Examiner's findings. 9 MCAR § 2.111 prescribes the four criteria which the Examiner is to use to evaluate whether there has been a substantial change in the rule. The Examiner is to, "... consider the degree to which it:

> A. Affects classes of persons not represented at the previous hearing; or
>
> B. Goes to a new subject matter of significant substantive effect; or

C. Makes a major substantive change that was not raised by the original Notice of Hearing in such a way as to invite reaction at the hearing; or

D. Results in a rule fundamentally different from that contained in the Notice of Hearing."

The Commission finds that the change to this section will not effect any class of person not represented at the hearings. Persons on both sides of this issue gave considerable testimony at the hearings including testimony sponsored by a manufacturer of small power production equipment in support of a $300,000 level of insurance, and the Commission concludes that no additional classes of persons are likely to be affected by this section.

The Commission finds that the change to this section does not go to a new subject matter of significant substantive effect. Rather, it continues to address the same subject matter, that of how to respond to the additional risk imposed upon a utility by interconnected operations, and merely resolves the issue in a fashion different than first proposed.

The Commission finds that the change to this section does not make a major substantive change that was not raised in the Notice of Hearing in such a way as to invite reaction at the hearing, since the Notice of Hearing, at 7 S.R. 115, referred potential participants to the complete text of the proposed rules, and at 7 S.R. 116, advised all interested parties that the proposed rules might be modified as a result of the hearing process. In addition to that Notice, the Statement of Need and Reasonableness clearly indicated the Commission's awareness of both sides of this issue and the fact that it had preliminarily made a choice against requiring insurance. The Commission concludes that it advised potential participants that the issue of insurance had been considered and was highly controversial.

The Commission finds the change to this section does not result in a rule fundamentally different from that contained in the Notice of Hearing. While the issue of insurance is certainly important, it is not a fundamental component of the rules as a whole. The Commission could have proposed, and could adopt, rules that did not address the issue of insurance, and let that issue be settled between the interconnecting parties. In this respect, the insurance issue is quite different from the basic, fundamental issues of mandatory interconnection and purchase or the rates for purchase. At the worst, the change to this section will alter the calculation of revenues and expenses that a potential qualifying facility would carry absent the requirement of the rule, and will be a small portion of the total costs of becoming a qualifying facility.

The Commission adopts the Examiner's conclusion that the change to this section of the rule is not a substantial change, both for the reasons advanced in his Report and those outlined above.

F. Legal status not affected.

4 MCAR § 3.0454 F, as initially proposed, stated that the rules do not affect the legal liability, rights, or status of any party under existing law.

This section was amended to include a provision stating that no party may require the execution of an indemnity or hold harmless clause as a condition of interconnection.

The Commission, in the Statement, discussed the rule as initially proposed as being a necessary and reasonable warning of the fact that no responsibility or liability would be removed from any party.

The Commission further discussed the provision in its comments as follows:

> It is generally recognized that the inherent nature of an interconnection agreement between a qualifying facility and a utility results in unequal bargaining power. Typically, the utility will be in a superior bargaining position. The utility may utilize its position to the detriment of the owner of the qualifying facility by requiring the execution of an indemnity clause. Such clauses have the capability of taking undue advantage of an unsuspecting owner and subjecting him to open ended liability. In such a case, the utility has effectively transferred all risk to the qualifying facility. Testimony was received during public hearing to the effect that insurance companies are reluctant to write liability coverage for open ended indemnity clauses or that to do so requires higher premiums than would otherwise be present without such a clause. To be required to purchase a liability policy covering an open ended indemnity clause would place an inordinate financial burden upon the owner of a qualifying facility.

The Hearing Examiner found 4 MCAR § 3.0453 F necessary and reasonable as a result of the unequal bargaining power between the utility and a qualifying facility as well as the demonstrated proclivity on the part of the utility to shift the liability of the utility to the qualifying facility. He also noted as being significant the fact that broad indemnity clauses, currently required by utilities, may have the effect of voiding any insurance possessed by the qualifying facility.

The Hearing Examiner also found the amendment to 4 MCAR § 3.0454 F not to be a substantial change within the meaning of 9 MCAR § 2.111. The Hearing Examiner reasoned that the prohibition against indemnity and hold harmless clauses was implicit in the rule as initially proposed and that the amendment merely expressly provided so.

The Commission adopts the findings of the Examiner and concludes that the need for and reasonableness of this section has been adequately demonstrated. The Commission further concludes that the amendments to this section do not constitute a substantial change within the meaning of 4 MCAR § 2.111.

G. Payments for interconnection costs.

As initially proposed, this rule section enabled a qualifying facility to require a utility to finance the interconnection over the duration of the contract. The Statement had this discussion:

> Interconnection costs could, in some circumstances, amount to a very considerable sum. Because qualifying facilities may already be experiencing large capital requirements prior to beginning operations, the requirement to pay interconnection costs "up front" as well could cause a potential owner of a qualifying facility to decide not to proceed with the project. In that case, cogeneration and small power production would have been discouraged simply through the timing of payments. The FERC recognized this possibility and gave State regulatory authorities responsibility for determining the manner of payments for interconnection costs, expressly including the possibility of reimbursement over a reasonable period of time (18 CFR § 292.306 (h). The Commission believes that a period equal to the time covered by the contract between the utility and the qualifying facility is a reasonable period, as all other rates, terms, and conditions are covered over the same period.
>
> Some qualifying facilities may nevertheless find it advantageous, perhaps for tax purposes, to pay all interconnection costs as they are incurred. It is, therefore, reasonable to do as this section of the proposed rule

has done, and offer the qualifying facility its choice of the two possibilities. Because it is not possible for the Commission to foresee the circumstances of all qualifying facilities and utilities facing interconnection under these rules, it is also reasonable to allow both parties to agree to some payment schedule other than the two specific ones the qualifying facility is entitled to.

Whenever payments for interconnection costs are spread over a period of time, an additional cost - the cost of capital - is incurred. This cost would not exist without the interconnection and the qualifying facility's election not to pay all interconnection costs at once. Consequently, this cost of capital is appropriately classified as an interconnection cost, and is the responsibility of the qualifying facility. The proposed rule is reasonable because it does not prohibit the utility from recovering this cost through charges to the qualifying facility.

As a result of the comments received at the hearings, the Commission determined that it would be improper to require the utility to finance the interconnection. In its Comments the Commission said:

This recommendation is responsive to a number of comments which said it would be unreasonable to require the utility to enter into the lending business. The change would render moot questions of whether credit checks may be required. The Commission is persuaded that a requirement to finance interconnection costs is not fundamentally different (except possibly in magnitude) from a requirement to finance any other part (or all) of a qualifying facility. Such a requirement would not be reasonable. The change recommended above would also serve to reduce the administrative burden of compliance on utilities.

The Examiner concurred:

Section 3.0454 G. states that payments for interconnection costs may be made when the costs are incurred according to any schedule agreed upon by the QF and the utility. The rule, as finally proposed, amended the rule as initially proposed by eliminating the option of the QF to require a utility to amortize the interconnection cost payments over the life of the contract.

The need for § 3.0454 G. results from the requirements of the FERC Rules. Such rules require a state commission to specify the manner in which interconnection costs are to be reimbursed and give the Commission the option to allow payments amortized over the life of the contract. 18 C.F.R. § 292.306(h).

There is no evidence in the record that would require or even support the option of a QF to require a utility to finance the QF's interconnection costs. The testimony overwhelmingly indicated that a utility should not be forced into a banking function to the detriment of its ratepayers. (See, e.g., Pub. Ex. 6, NSP, p. 11; Pub. Ex. 10, Minnesota Power Company, p. 5; Pub. Ex. 65, Ottertail Power Company, p. 10; Pub. Ex. 88, Interstate Power Company, p. 4; Pub. Ex. 117, MMUA Reply Comments, p. 11). The only comment on behalf of requiring an optional time payment provision was that of Jacobs Wind Electric Company. Such comments, however, merely assert the desirability of the result with no specific reasoning. (Pub. Ex. 16, Jacobs Wind Electric Co., p. 10).

In addition to the lack of facts in the record that would justify requiring an optional time payment plan, such a provision would have the undesirable effect of fostering under-capitalized QFs. If a QF could require the utility to finance any interconnection equipment, the QF would be substituting the credit of the utility for its own credit. Moreover, as Minnesota Power Company commented, interconnection equipment tends to be individualized and would be virtually useless to a utility upon repossession. (See, Pub. Ex. 10, Minnesota Power Company, p. 5).

Section 3.0454 G., deleting the option of time payments, is both necessary and reasonable.

The amendment to § 3.0454 G. does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section have been adequately demonstrated. The Commission also concludes that the revision to this section does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

H. Types of power to be offered.

The Commission provided the following discussion of this section in the Statement:

> The FERC rules (18 CFR § 292.305 (b)) require utilities to offer maintenance, interruptible, supplementary, and back-up power to qualifying facilities upon request. The availability of these types of power may affect the economics of qualifying facilities such that it is necessary to provide them to encourage cogeneration and small power production. There is no requirement to provide these services below cost, so this condition is reasonable. It is also reasonable to only require these services to be offered on request. They are needed primarily by large cogeneration facilities. Many utilities, who will never interconnect with this kind of qualifying facility, or who will do so only several years from now, can save the time and expense of immediately establishing these services and charges if there is no blanket requirement.

The Examiner found there was a need for this section, and that the proposal was reasonable:

> Section 3.0454 H. requires that the utility offer maintenance, interruptible, supplementary and backup power to a QF upon request. Since governing federal rules require the furnishing of such types of power to a QF upon request, § 3.0454 H. is both necessary and reasonable. See 18 C.F.R. § 292.305(b).

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section have been adequately demonstrated by the Statement.

I. Metering.

The rule as adopted has been revised from the rule as initially proposed to conform to the Examiner's findings and recommendations. In its Statement, the Commission included the following discussion of this section as initially proposed:

> Metering is another very controversial issue. Much, but not all, of the controversy centers on cost. There is also controversy over the ownership and control of information made available through metering.
>
> To understand the nature of the cost controversy and the Commission's proposed resolution of the issue, it is helpful to keep the following points in mind: 1. Meter costs are interconnection costs and by the logic of the FERC rules are the responsibility of the qualifying facility. 2. Although metering costs tend to be greater for larger, more sophisticated facilities, those costs are a more significant proportion of total interconnection costs for smaller, less sophisticated facilities. 3. Metering costs are far larger, relative to potential revenues, for small qualifying facilities than for large qualifying facilities. 4. Some owners of qualifying facilities intend to make money selling electricity to utilities. 5. Some owners of qualifying facilities simply want to reduce their dependence on utilities and reduce their electric bills.
>
> In enacting M.S. § 216B.164, the Legislature made a special provision for qualifying facilities having capacity less than 40 kilowatts. That provision, known as "net energy billing," makes the net flow of electricity between the qualifying facility and the utility during a billing period the basis of the bill calculation. A single watt-hour meter, capable of running accurately forward and backward, would be sufficient to measure the net flow of electricity, in both direction and magnitude. Most classes of utility customers are already metered for sales by the utility. Hence, if only a single meter were required, its cost would not exceed the cost the utility would incur in selling electricity to the qualifying facility as a nongenerating customer, and would, therefore, not be an interconnection cost. The result would be that the qualifying facility would not have to pay an explicit metering charge. (The cost of the meter, or some part of it, may already be reflected in the monthly service charge for which the qualifying facility remains responsible). The Commission believes it is reasonable to infer that the Legislature wanted to remove metering cost disincentives from small potential cogenerators and small power producers.

The Legislature nevertheless required the Commission to report "[t]he location, type and output of cogenerators and small power producers in the state . . ." Although "output" could mean a measure of capacity, in kilowatts, the Commission believes it would be more meaningful as a measure of energy, in kilowatt-hours. A single meter running forward and backward could not measure output in this sense, as it could not distinguish between two qualifying facilities, one of which purchased 400 kilowatt-hours and sold 600, and the other of which purchased 20,000 kilowatt-hours and sold 20,200. In either case, the meter would show a net flow of 200 kilwatt-hours to the utility. The effects of the two qualifying facilities on the utility's system could, however, be drastically different. The Commission believes it is reasonable, therefore, both to meet its narrow reporting requirement and to provide information relative to utility planning and broad public policy questions, to require metering which will measure total deliveries to and receipts from the utility system.

Several persons observed that a full measure of "output" can only be achieved by metering the generator of the qualifying facility, because there may be load between the generator and the interconnection with the utility. Some suggested that the Commission's rules should permit the utility to install a third meter, at its own expense, if it wanted to monitor generator output.

Several owners and at least one manufacturer of qualifying facilities urged rejection of this suggestion. They claimed that the information sought was proprietary, and no one's business but theirs. They also feared utilities would make selective use of such information to discourage potential cogenerators and small power producers.

The Commission believes the information needed for utility planning, public policy, and its own reporting requirements is that information detailing the interaction of qualifying facilities and utilities. It is, therefore, not necessary to gather information on the output of the generator; energy flows at the point of interconnection will do. Nothing in the proposed rule prevents a utility from installing a third meter, either at its own expense or at the expense of the qualifying facility, if it is agreeable with the qualifying facility.

This section of the proposed rule requires the utility to meter the qualifying facility to obtain the data it must report to the Commission. It requires the qualifying facility to pay for the metering unless the qualifying facility is operating under net energy billing, in which case the utility must provide the additional metering without cost to the qualifying facility.

This section is both necessary and reasonable. Even if there were no reporting requirements, and no public policy needs for the information, metering would still be necessary to document the transactions between qualifying facilities and utilities. The proposal fairly apportions those costs to qualifying facilities except where those costs, as recognized by legislative action, would put an undue burden on small qualifying facilities, and thus discourage small-scale cogeneration and small power production. The Commission believes that the possible effect of a limited increase in rates to other consumers who, ultimately, must pay those costs, would be counterbalanced by the benefits, including externalities, of encouraging cogeneration and small power production.

The Examiner found that this section was necessary, but would need revision to become reasonable:

Section 3.0454 I. requires that the utility meter the QF to obtain the data necessary to fulfill the utility's reporting requirements to the Commission. Unless the utility is operating under net energy billing, the cost for requisite metering is an interconnection cost to be paid for by the QF. If the QF is using net energy billing, the utility must provide a second meter to the Qualifying Facility without charge.

Section 3.0454 I. is necessary so that there may be an assignment of the costs of metering resulting from the reporting requirements of the Commission. It is reasonable to assign the costs of metering to the QF as an interconnection cost as defined in the proposed rules.

The requirement that a second meter be provided free of charge to a net energy billing QF, however, is not supported by the record. Even the Commission recognizes that, ordinarily, metering is a legitimate interconnection cost to be borne by the QF. (See Statement of Need and Reasonableness, p. 21). Such costs are additional costs arising solely from the fact of interconnected activity, and are peculiar to the QF. Minn. Stat. § 2168.164, subd. 8 (1981 Supp.), in relevant part provides:

> Nothing contained in this section shall be construed to excuse the qualifying facility from any obligation for costs of interconnection and wheeling in excess of those normally incurred by the utility for customers with similar load characteristics who are not cogenerators or small power producers . . . . (Emphasis added)

Since the cost of a second meter is one peculiar to a QF under net energy billing, under the definition of Interconnection costs contained in either the proposed rules or the FERC Rules, a second meter is an Interconnection cost. Pursuant to Minn. Stat. § 2168.164, subd. 8 (1981 Supp.), a QF must bear all interconnection costs.

The Commission, while not explicitly discussing Minn. Stat. § 2168.164 subd. 8 (1981 Supp.), apparently concluded that requiring a QF to bear the cost of a second meter would unduly inhibit the development of cogeneration and small power production. (Statement of Need and Reasonableness, p. 21-22). There is no evidence in the record, however, supporting that conclusion. In fact, there is no evidence that requiring a QF subject to net energy billing to provide its own second meter would have any effect on the economic viability of such cogeneration or small power production installations. There is not even any evidence in the record regarding the cost of the second meter. Finally, the availability of net energy billing is a decided benefit to a QF and goes beyond the requirements of PURPA. Hence, in the absence of demonstrated need for subsidization of interconnection costs, the QF obtaining the benefits of such enhanced rates should bear the reasonable costs associated with its preferred status.

The testimony on behalf of the utilities uniformly recommended deletion of the availability of a free second meter for customers under net energy billing. (See, Pub. Ex. 4, Eicher, p. 9; Pub. Ex. 5, Land O'Power Co-op., p. 4; Pub. Ex. 10, Minnesota Power Company, p. 6; Pub. Ex. 31, City of Adrian, p. 5; Pub. Ex. 65, Ottertail Power Company, p. 10; Pub. Ex. 88, Interstate Power Company, p. 4; and Pub. Ex. 117, MMUA Reply comments, p. 11-13).

The only statement supporting the proposed rule other than that of the Commission contains no factual support for the necessity of providing a free second meter to a customer under net energy billing and does not consider the Commission's statutory authority to adopt such a requirement. (See, Pub. Ex. 16, Jacobs Wind Electric Co., p. 11; Pub. Ex. 113, Jacobs Wind Electric Co., Reply Comments, p. 9).

Therefore, on the basis of the record herein, the requirement of § 3.0454 I. that a utility provide a net energy billing customer with a free second meter has not been demonstrated to be reasonable and within the Commission's statutory authority.

To remedy the defect, the Commission should insert a period in the second sentence of the subsection after the word "cost" and strike the last sentence of § 3.0454 I.

The Commission adopts the Examiner's findings and concludes that the need for and reasonableness of this section of the rule as adopted have been adequately demonstrated.

The Commission finds, with respect to the revision of the rule as initially proposed, that potentially interested parties had notice that the issue of the allocation of metering costs would be considered in the proposed rulemaking. Moreover, the Notice of Hearing informed potentially interested parties that, as a consequence of the hearing, any portion of the proposed rules might be altered. The Commission finds that this rule section involves an entirely new subject matter, and does not concern amendments to existing rules under which persons may have vested interests. Finally, the Commission finds that the deletion is fully supported in the record, and is a logical outgrowth of the rulemaking proceeding. The Commission concludes that the revision is not a substantial change within the meaning of 9 MCAR § 2.111.

J. Discontinuing sales during emergency.

This section as adopted has been revised from the rule as initially proposed by adding language suggested by the Examiner to clarify that recommencement of service after interruption must also not be discriminatory.

The Statement discussed this section as follows:

> This section is necessary to implement 18 CFR § 292.307 (b)(2). It is reasonable in that a qualifying facility must be treated on a nondiscriminatory basis in any load shedding program - i.e., on the same basis that other customers of a similar class with similar load characteristics are treated with regard to interruption of service.

The Examiner found it necessary and reasonable as presented, but nevertheless suggested a nonsubstantial revision:

> Section 3.0454 J. allows the utility to discontinue service to a QF during a system emergency if not done on a discriminatory basis. This section is necessary to implement 18 C.F.R. § 292.037(b)(2).
>
> It is reasonable in that a qualifying facility must be treated on a non-discriminatory basis in any load shedding program. (See Statement of Need and Reasonableness, p. 22; and Pub. Ex. 65, Ottertail Power Company, p. 11).
>
> While the proposed rule is both necessary and reasonable as presented, the Hearing Examiner suggests that the Commission consider adding language at the end of the subsection that a reconnection of service to the QF must also be done on a non-discriminatory basis. Although a discrimination against a QF as a customer of the utility may be subject to redress under other provisions of Minn. Stat. Ch. 216B (1980), and the Commission rules, the limited authority that the Commission possesses with respect to the service provided by a municipally-owned electric utility under Minn. Stat. § 216B.17 (1980), makes it appropriate for the Commission to consider including in this section of the proposed rules a prohibition against discriminatory delays in the resumption of service to a QF. Specific language to accomplish that end is suggested in Pub. Ex. 16, Jacobs Wind Electric Company, p. 12.
>
> The addition of language prohibiting discrimination against a QF in the recommencement of electric service would not constitute a substantial change within the meaning of 9 MCAR § 2.111.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section have been adequately demonstrated. The Commission concludes that the addition of language prohibiting discrimination against a qualifying facility in the recommencement of service does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

K. Interconnection plan.

The Commission has revised the rule as initially proposed in accordance with the Examiner's recommendation.

The Statement discussed this section as initially proposed:

> Some owners and manufacturers of small qualifying facilities have maintained that there is no need to inform the utility that a small qualifying facility is coming on line. In their view, the physical effect of a small generator beginning to feed into the distribution system is the same as the effect felt when an electric motor of the same size is shut off. One is not required to tell the utility about the disposal of an appliance with an electric motor, so there should be no requirement to inform the utility about the acquisition of a small qualifying facility. These owners and manufacturers also admit to a revenue effect on the utility: as the qualifying facility generator takes part of the customer's load from the utility, the customer's bill and utility revenues fall. They argue that a person who replaces an electric water heater with a solar water heater causes the same effect, and does not have to inform the utility.

The Commission has considered these arguments, and has decided that the utility may require an interconnection plan. There are a number of reasons why the Commission believes this section of the proposed rule is necessary and reasonable. First, although the effects of very small qualifying facilities on the utility's system may be very small, these rules cover interconnections with qualifying facilities of all sizes. Interconnection with some of these will certainly require substantial modification of distribution systems, and perhaps transmission systems as well, and these modifications should be planned for. Second, as discussed above, the Commission has determined that it is both necessary and reasonable to collect data which is not available when a single meter runs both forward and backward. Consequently, the utility, which is responsible for gathering the information, must be told in advance that the interconnection will take place. The utility also needs to know the nature of the qualifying facility to anticipate its interconnection requirements. Finally, the Commission believes there is a fundamental difference between a retail utility customer and a qualifying facility which necessitates that the utility be informed in advance. That difference is that the qualifying facility injects power into the utility's system; the retail customer does not. Because the utility is responsible for providing power of a certain quality from its system to its users on demand, it has a legitimate need to know when someone other than itself is energizing its system.

This section of the proposed rule is reasonable as well as necessary. The interconnection plan which may be required is simple and straightforward, and will not be an undue burden on qualifying facilities. At the same time, it will provide the utility with the information it will need to arrange the interconnection smoothly.

The Examiner found that the section as proposed was necessary and reasonable. Nevertheless, he suggested that the Commission consider revising the section in accordance with a comment received during the hearings by setting a specific, reasonable lead time. He found such a revision would not constitute a substantial change:

> Section 3.0454 K. allows a utility to require the QF to submit an interconnection plan containing the technical specifications of the equipment, the proposed date of interconnection and the projection of net operative consumption by the QF prior to interconnection. No public testimony adverse to this provision was received. Since the interconnection of a QF will have an effect on the utility's system and the required information is readily available to the QF, § 3.0454 K. is both reasonable and necessary. (See Statement of Need and Reasonableness, p. 23; and Pub. Ex. 65, Ottertail Power Company, p. 11).
>
> The Commission may consider the suggestion of Ottertail Power Company that language be inserted in this portion of the proposed rule requiring that the information be supplied at least 30 days prior to the actual interconnection. Since the utility has need to know about the specific interconnection and the actions required of it prior to implementation, the inclusion of a reasonable lead time in the provision of the information prior to interconnection would be desirable. (See Pub. Ex. 65, Otttertail Power Company, p. 11).
>
> Requiring the submission of the interconnection plan not less than 30 days prior to the actual interconnection would not constitute a substantial change within the meaning of 9 MCAR § 2.111.

The Commission observes that a requirement to submit the interconnection plan "not less than 30 days prior to the actual interconnection" could be interpreted as permitting a utility to require a greater than 30-day lead time. This interpretation could provide an opportunity for a recalcitrant utility to attempt to harass the qualifying facility by requiring an unreasonably long lead time. The Commission has, therefore, revised the section to permit the utility to require submission of the plan not more than 30 days prior to interconnection. This language provides a reasonable lead time for utilities while eliminating the opportunity for harassment of qualifying facilities.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section of the rule as adopted have been adequately demonstrated. The Commission also concludes that the addition of language setting a reasonable period during which the plan must be submitted is not a substantial change within the meaning of 9 MCAR § 2.111.

4 MCAR § 3.0455 Rates for sales.

A. Rates to be governed by tariff.

The Commission discussed this section in its Statement as follows:

> This section requires utilities to sell electricity to qualifying facilities under standard retail tariffs. It is necessary to assure qualifying facilities that the Commission, not the utility, will set the rates for their purchase. It is reasonable in that it assures both qualifying facilities and other utility customers that neither group will be discriminated against relative to the other. It is also consistent with 18 CFR § 292.305(a)(ii).

The Examiner found this section to be needed and reasonable:

> Section 3.0455 A. requires that a utility, except as otherwise specifically approved by the Commission, sell electricity to Qualifying Facilities under the utility's standard retail rates. This provision is necessary to assure QFs that the Commission, not the utility, will set the rates for energy purchases by the QF. It is reasonable in that it assures both QFs and other utility customers that neither will be discriminated against relative to the other. Moveover, this portion of the proposed rule is consistent with 18 C.F.R. § 292.305(a)(ii).

The Commission adopts the Examiner's findings and concludes that the need for and reasonableness of this section have been adequately demonstrated by the Statement.

B. Petition for specific rates.

This section of the rule as adopted contains a revision to the rule as initially proposed. The revision was proposed by the Commission in its Comments to the Examiner.

The Statement discussed the rule as initially proposed as follows:

> This section enables any qualifying facility to petition the Commission to establish specific rates for supplementary, maintenance, interruptible, or backup power. It is necessary to establish a mechanism to develop rates for these types of power, which the utility must offer, on request, under 4 MCAR § 304.54 H. It is reasonable in that the initiative remains with the qualifying facility and in that the determination of an appropriate rate by the Commission need not necessarily await a general rate case for the utility.

Upon consideration of the comments received at the hearing, the Commission proposed adding language making explicit the utility's right to petition for specific rates. The Commission discussed this proposal in its Comments as follows:

> The Commission recommends the change shown above which explicitly permits the utility, as well as the qualifying facility, to petition for specific rates. Because regulated utilities may already petition the Commission to establish rates, the recommended change simply clarifies the application of the rule. This change is in response to a number of comments recommending it.

The Examiner found that section as finally proposed was necessary and reasonable:

> Section 3.0455 B. provides that either a QF or a utility may petition the Commission to establish a specific rate for supplementary, maintenance, backup, or interruptible power. The rule, as finally proposed, differs from the rule as initially drafted by allowing the utility the opportunity to petition the Commission for the establishment of such specific rates.
>
> A number of public witnesses commented on the desirability of specific allowing a utility to petition for the establishment of such rate. (See, e.g., Pub. Ex. 10, Minnesota Power, p. 7; and Pub. Ex. 4, NSP, p. 11).

Section 3.0455 B. is necessary in order to establish a mechanism to develop rates for the types of power that the utility must offer on request as a consequence of both the FERC Rules and § 3.0454 H. of the proposed rules.

It is reasonable in that either party to the interconnection may petition the Commission for the establishment of a specific rate. The option allowed a utility to so petition, as added by the amendment to the proposed rule, merely clarifies existing law. Since a regulated utility may already petition the Commission to establish rates for the provision of its electric service, the amendment merely clarifies the application of the rule.

The amendment to the proposed rule allowing a utility to petition for the establishment of a specific rate for the provision of electric service to a QF is declaratory of existing law and, as such, is not a substantial change within the meaning of 9 MCAR § 2.111.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section as adopted have been adequately demonstrated. The Commission also concludes that the amendment to the rule as initially proposed does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

4 MCAR § 3.0456. Standard rates for purchases.

A. General.

This section describes the rate structure applicable to the sale of electric power by a qualifying facility to a utility. This section was explained in the Statement as follows:

18 CFR § 292.304 (c) provides that standard rates will apply for qualifying facilities with capacity of 100 kilowatts or less. This will eliminate the administrative burden that would exist if all rates were negotiated separately. Furthermore, this will insure that rates for purchase are made available on a nondiscriminatory basis to all qualifying facilities selling to a particular utility. The existence of a simple standardized rate schedule for purchases of energy by utilities will serve to encourage cogeneration and small power production by making relevant information available to potential qualifying facilities.

Qualifying facilities with capacity of more than 100 kilowatts may negotiate contracts with the utility. This will allow the special circumstances of a large qualifying facility to be taken into account when rates for purchase are determined. This will not be unreasonably burdensome to the utilities because it can be expected that there will be a relatively smaller number of those types of qualifying facilities.

The standard rates may be considered a floor price for qualifying facilities with capacity of more than 100 kilowatts provided they make commitments to provide firm electric power. In this sense, large qualifying facilities will be treated the same as smaller qualifying facilities. The requirement that large qualifying facilities provide firm electric power is necessary because the likelihood of diversity of load among large qualifying facilities is lower than the likelihood of diversity among smaller qualifying facilities. In addition, there would be a larger negative impact upon the utilities if the larger qualifying facility did not provide firm power (or a group of large qualifying facilities did not provide firm power, on average, after considering diversity) than if smaller qualifying facilities (taken as a whole with recognition of diversity) did not provide firm power because of the absolute size of the facilities.

It is necessary that the qualifying facility specify its choice of one of the three types of standard rates in the written contract to insure clear communication between the parties involved. It is necessary that compensation to the qualifying facility be made either through a credit to its account with the utility or through direct payment by check. It is reasonable for the qualifying facility to

have the option to choose the method of compensation since the qualifying facility is, in effect, the seller of electricity and it is common business practice that the seller prescribe the terms of sale. It is desirable that both parties have a clear understanding of the chosen arrangement. Thus, it is reasonable that the option chosen be specified in the written agreement.

Finally, this section proposes that qualifying facilities continue to pay any monthly service charges and demand charges specified in the tariff under which they purchase electricity from the utility. This provision implements part of M.S. § 2168.164, subd. 8. It is a reasonable requirement because these fixed charges are designed to recover all or part of those costs of providing service which do not vary with the consumption of electricity, and which may not be avoided through the generation of electricity by the qualifying facility. If the qualifying facility were not required to pay these charges, the costs would have to be borne by the utility's other ratepayers through higher utility rates. This result would violate the Commission's mandate from the Legislature that cogeneration and small power production be encouraged consistent with protection of the ratepayers.

In the Comments, the Commission discussed one minor change made to the rules as initially proposed:

> The only recomended change in this section of the rule is the elimination of the word "electric" from the phrase firm electric power. The purpose of this recommended change is to make it clear that the Commission is referring to "firm power" as defined in these rules.

The Examiner found this section of the proposed rules both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement and Comments.

B. Net energy billing rate.

B.1.

This section was described in the Statement as follows:

> M.S. § 2168.164 provides that net energy billing be available to qualifying facilities with capacity of 40 kilowatts or less. This section of the proposed rule does just that. In addition, this section restricts availability of the net energy option to customers not choosing to sell power on a time-of-day basis. The net energy billing option is designed for smaller scale cogeneration and small power production that wish to minimize their metering costs and sell as much energy as can be efficiently produced. On the other hand, the purpose of the time-of-day option, which is discussed in a following section of this statement, is to encourage cogenerators and small power producers to provide substantial amounts of on-peak power. However, the time-of-day option requires much more expensive metering which should be paid for by the qualifying facility. A large amount of on-peak power relative to off-peak power would have to be generated by the qualifying facility in order to pay for the more expensive metering. Since it is the Commission's purpose to only encourage cost-effective applications of the time-of-day purchase rates, this provision is efficacious.

The Examiner found this section of the proposed rules both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

B.2.

This section requires that a utility bill a qualifying facility for the excess of energy supplied by the utility above energy supplied by the qualifying facility according to the utility's applicable retail rate schedule. The purpose of this section was explained in the Statement as follows:

This section is necessary in order to implement M.S. § 217B.164, subd. 4 which states the following:

For qualifying facilities having less than 40 kilowatts capacity, the customer shall be billed for the net energy supplied by the utility according to the applicable rate schedule for sales to that class of customer.

This provision is reasonable because it treats qualifying facilities in the same way that it treats the utility's other customers.

The Examiner found this section of the proposed rules both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

B.3.a.

This section of the proposed rules was explained in the Statement as follows:

This section of the proposed rule provides that payments for excess energy delivered to the utility by a net energy billed qualifying facility of 20 kilowatts or less shall be at the energy rate of the utility's retail rate schedule for serving the facility. If the utility charges its customers 5¢ per kilowatt-hour on that schedule, the utility would pay 5¢ per kilowatt-hour for energy delivered by the qualifying facility in excess of energy offsetting the qualifying facility's consumption from the utility. This section also provides that if the utility has a blocked rate schedule (a fixed number of kilowatt-hours at one rate, more at a different rate), the lowest priced block shall apply.

It is necessasry for the Commission to set the rates for payments to net energy billed qualifying facilities. M.S. § 216B.164, subd. 3, establishes net energy billing for qualifying facilities of less than 40 kilowatts. It includes this language:

In the case of net input into the utility system by the qualifying facility, compensation to the customer shall be at a per kilowatt-hour rate set by the Commission. In setting these rates, the Commission shall consider the fixed distributiuon costs to the utility not otherwise accounted for in the basic monthly charge and shall ensure that the costs charged to the qualifying facility are not discriminatory in relation to the costs charged to other customers of the utility. Notwithstanding any other language to the contrary in this section, the Commission shall set the rates for net input into the utility system based on avoided costs as defined in 18 C.F.R. Section 292.101 (b)(6), the factors listed in 18 C.F.R. Section 292.304, and all other relevant factors.

It is clear that the Commission must set the rates, that the rates must have a basis in avoided costs, and that the Commission must consider the utility's fixed distribution costs both with respect to the monthly fixed charge and with respect to the utility's other customers. In this statement, the Commission will first discuss fixed distribution costs and will then explain the avoided cost basis of its proposal.

The costs of providing electric utility service are often assigned to one of three categories: customer related costs, demand related costs, and energy related costs. Customer related costs vary not with usage, but with the number of customers on the system. The costs of meters, meter reading, and billing are usually classified as customer related costs. Demand related costs are costs which vary with the rate at which energy is consumed, and they are important both at the individual customer level, and across the whole system. Electric utility systems must be designed to meet maximum demands of individual customers as well as the maximum demand of the entire system (system peak). Energy related costs vary with the amount of energy consumed. In the short run, energy related costs tend to be variable, while demand and customer related costs are relatively fixed.

Rate schedules for residential cunsumption typically establish a two-part rate: a fixed monthly charge and one or more energy block rates. Under these schedules, a customer's bill is computed by multiplying his consumption by the energy rate and adding the fixed charge.

Often the fixed charge does not cover the full amount of the average fixed costs (demand and customer related) allocated to residential customers. When this is the case, the energy charge is raised from where it otherwise would be, so that the utility can collect its total costs. Sometimes this is done only in the initial block or blocks of consumption. The result is the familiar "declining block" rate structure, in which the charge for consuming an additional kilowatt-hour declines as consumption increases beyond set levels. In other cases, the rates are designed such that the energy charge per kilowatt-hour is constant at all levels of consumption.

In the short run, generation by qualifying facilities enables utilities to avoid energy related variable costs, but not customer related and demand related fixed costs. As has been discussed above, state law and these proposed rules require qualifying facilities to pay any monthly fixed charges which are assessed to similar nongenerating customers.

The Commission has considered "the fixed distribution costs to the utility not otherwise accounted for in the basic monthly charge." The Commission believes that if this were its only requirement it would be reasonable in many cases to assess qualifying facilities an additional fixed charge to recover fixed distribution costs which other customers pay through consumption of energy at elevated energy rates. However, the Commission must also "ensure that the costs charged to the qualifying facility are not also discriminatory in relating to the costs charged to other customers of the utility." If a nongenerating customer reduces his consumption to zero, he must pay only the monthly fixed charges. Consequently, the Commission believes it would be discriminatory to require a qualifying facilities to pay more than the standard monthly fixed charge.

The analysis above does show that if compensation for energy provided by a qualifying facility is to be at the retail energy rate, the lowest priced block in a blocked rate is the appropriate rate to choose. That lowest priced block is most closely related to costs the utility can avoid.

The Commission believes that it is appropriate to set the rate for net deliveries to the utility by this group of qualifying facilities at the retail energy rate. The Commission has reached this belief after consideration of a number of factors.

One of the factors was the level of retail rates relative to avoided cost rates. In most cases, the Commission anticipates retail rates will be higher than rates set at full avoided energy and capacity costs as calculated elsewhere in these rules. This is primarily because utilities cannot avoid all their costs, but their retail rates must collect enough revenues to cover total costs. The discussion above pointed out that utilities do not avoid fixed transmission and distribution costs. Some utilities also have costs like those associated with energy audits under the Minnesota Energy Conservation Service program which are not avoidable but which are recovered through retail rates.

While the Commission anticipates that the retail rate will in most cases be higher than the avoided cost rates calculated elsewhere in these rules, the Commission cannot be certain that the retail rate will be higher than the sum of the actual avoided cost of the utility and the external costs (e.g., acid rain caused by coal fired power plants) to the public. Although the Commission has attempted to balance the interests of qualifying facilities, utilities, ratepayers, and the general public with great care in developing the avoided cost calculation, that calculation is not perfect. One reason for this is that the Commission's calculated avoided cost rates excludes external costs. Since external costs are, by their very nature, unquantifiable, it is not appropriate to explicitly take them into account in the calculation of avoided cost based rates.

Nevertheless, the Commission believes that it is appropriate to take them into account in a judgemental way when setting purchase rates for qualifying facilities with capacity of less than 20 kilowatts. It is possible, therefore, that the retail rate may approximate avoided costs for these smaller facilities.

A related consideration taken into account in developing these proposed rules was the unquantifiable nature of some of the factors the Commission was directed to weigh. Examples of these are the aggregate value of capacity from qualifying facilities on the utility system, and the smaller capacity increments and shorter lead times available with additions of capacity from qualifying facilities. These both serve to increase the value of qualifying facilities, and are particularly applicable to the smaller facilities under discussion here. Yet neither lends itself to quantification in an avoided cost calculation.

A third factor the Commission considered was the advantage in simplicity and customer understandability of using retail rates instead of the avoided cost calculation. The retail rate is a readily available number which the potential owner of a qualifying facility can use to determine the feasibility of an investment without having to work through the complexities of the avoided cost calculation. Thus the use of the retail rate should encourage cogeneration and small power production by these small facilties, which are likely to be less sophisticated than larger facilities.

The Commission's fourth consideration was the effect of this proposal on the development and small power production throughout the state. Each utility has its own cost structure and its own plan for generation expansion. Consequently, there is great variation in the avoided costs of Minnesota utilities. This could lead to encouragement of cogeneration and small power production in some areas, and discouragement in others. Larger facilities may be able to wheel (transmit) power to other utilities, and thereby get around this problem, but small facilities are essentially limited to the utility to which they are interconnected. Use of retail rates should encourage more balanced development, and provide reasonably similar incentives to potential owners of qualifying facilities throughout the state.

Finally, the Commission considered legislative intent. In February of 1981, the Commission published and gave wide distribution to a proposed rule concerning cogeneration and small power production. In that document the Commission proposed to compensate small qualifying facilities for net deliveries at retail rates. That proposal was well known to House and Senate sponsors of H.F. 473, the bill which eventually was enacted as M.S. § 216B.164. The Commission received generally favorable comments on the proposed rule from those legislators. Representative Earl Hauge, chief House author of the bill wrote, "I think your proposed rules are excellent and will implement the intent of H.F. 473 and the PURPA regulations." Senator Gregory Dahl wrote:

I want to emphasize at the outset that I did not author the cogeneration and small power production legislation because I was dissatisfied with the Commission's actions in this area previously. Quite to the contrary. The Commission is to be strongly commended for the admirable job it has done in implementing PURPA 210 and the FERC rules in the face of a myriad of novel and complex issues.

Nearly all legislators supporting enactment of H.F. 473 were strong supporters of the Commission's proposed rule (although some wished higher purchase rates for small power production) and wanted to ensure that the Commission's rule and jurisdiction in this area would apply statewide, rather than merely to investor-owned utilities. Accordingly, in assessing the impact of H.F. 473 as enacted on the Commission's previously proposed cogeneration and small production rule, the Commission should keep in central focus that the Legislature's intent with this legislation was not to displace the Commission's proposed rule, but rather to expand and supplement the Commission's power to act in this area.

In light of these considerations, the Commission asserts that its proposal to compensate qualifying facilities of 20 kilowatts or less for energy delivered to the utility in excess of their consumption at the energy component of the retail rate is both necessary and reasonable.

Finally, it is necessary that the rates for purchase reflect changes to the energy rate due to the operation of the utility's fuel adjustment clause because as the utility's cost of fuel increases, its avoided cost will also increase. This is a convenient and reasonable way to track changes in avoided costs from year to year and month to month.

The Examiner found this section of the proposed rules both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

8.3.b.

This section of the proposed rules was explained in the Statement as follows:

This part of the proposed rule sets payment for excess energy deliveries of net energy billed qualifying facilities larger than 20 kilowatts at full avoided energy and capacity costs, as calculated through application of these rules.

The Commission believes it is necessary and reasonable to distinguish between smaller and larger net energy billed qualifying facilities. Such a distinction results in a more equitable balance between encouragement of cogeneration and small power production and protection of ratepayers.

In its discusssion in the previoius section, the Commission observed that retail rates may approximate avoided costs, particularly when externalities and unquantifiable concepts are taken into account. The Commission nevertheless thinks that its calculation of avoided cost is in most cases a better approximation of real avoided costs. The Commission also thinks the conditions which make the retail rate appropriate for qualifying facilities of 20 kilowatts or less do not apply to larger units.

If rates were set precisely at avoided costs, rates paid by utility customers would always be the same whether the utility purchased from qualifying facilities or generated all of its own electricity. If rates were set below avoided costs, ratepayers would probably be somewhat better off if the utility purchased from qualifying facilities. On the other hand, if rates for purchases from qualifying facilities were set above avoided cost, rates paid by utility customers would be higher with purchases from qualifying facilities. The ideal balance of encouraging cogeneration and small power production consistent with protection of ratepayers is achieved by setting rates equal to avoided costs.

Unfortunately, it is not possible to set rates precisely equal to avoided costs. The best that can be done is to approximate avoided costs. In developing its avoided cost calculation, the Commission has exerted every effort to achieve a reasonable approximation of real avoided costs. Nevertheless, judgments had to be made, and in exercising its judgement the Commission preferred to err on the side of encouraging cogeneration and small power production. To that extent, it is reasonable to expect one result of implementation of these rules to be a tendency to push utility rates slightly higher than they otherwise would be. This result will be tolerable if, as expected, the increase is very small, and cogeneration and small power production lead to expected benefits to the general public.

If the analysis above is correct, and the calculated avoided costs are in fact above the real avoided costs, by however a small margin, then it follows that purchase rates equal to retail rates, which are above calculated avoided costs, are also above real avoided costs, and by a greater margin. Compensating qualifying facilities at the retail rate thus presents a greater risk to the ratepayer than compensating them at calculated avoided costs.

The Commision believes that the increased risk is justified when the qualifying facility use 20 kilowatts or less, but not when it is larger. A 20 kilowatt generator is the largest unit which would reasonably be installed to simply replace utility power with self-generated power for the typical residential or farm customer. Any larger unit would be installed by one of these customers for the purpose of making net sales to the utility.

When the unit is installed simply to offset consumption from the utility, net deliveries to the utility will presumably be both random and small. Under these conditions, the Commission believes the additional risk and possible cost to the ratepayers will be kept under reasonable bounds, and will be justified by the additional encouragement given to cogeneration and small power production.

When the unit is installed to make net sales to the utility, however, the possible cost to the ratepayer increases substantially. Under these conditions, the Commission believes the better balance is struck by paying the larger qualifying facility at the calculated avoided cost rate. The cutoff level of 20 kilowatts is reasonable because that is the largest unit which would reasonably be installed simply to meet the individual needs of a typical residential or farm consumer.

The Examiner found this section of the proposed rules both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

C. Simultaneous purchase and sale billing rate.

C.1.

This section describes the rate to be paid a qualifying facility with capacity of 40 kilowatts or less which chooses not to offer electric power for sale on a time-of-day basis. The purpose of this section was explained in the Statement as follows:

The Commission believes it is necessary to allow a qualifying facility to sell all its output to a utility and at the same time purchase all its needs from the utility in order to encourage cogeneration and small power production. If purchase rates, as calculated under this rule and based on avoided costs, are greater than retail rates, this provision will encourage potential qualifying facilities to deliver energy to the system. Without this provision the maximum compensation to the qualifying facility for the initial kilowatt-hours generated would be the retail rate and consequently, because the purchased rates were greater than the retail rate, the qualifying facility would be compensated at a rate below the utility's avoided cost.

All qualifying facilities with capacity of greater than 40 kilowatts are covered in later sections of the proposed rule. Also, any qualifying facility of 40 kilowatts or less may choose to sell power on a time-of-day basis or on a net energy basis. Such a qualifying facility would not be covered under this section. The purpose of this secton of the proposed rule is to simply describe which qualifying facilities are covered under this section.

The Examiner found this section of the proposed rules both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

C.2.

This section states:

The qualifying facility shall be billed for all energy and capacity it consumes during a billing period according to the utility's applicable retail rate schedule.

The Examiner found that this section is required by M.S. § 216B.164 and that it is reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated.

C.3.a.
C.3.b.

These subsections require the utility to purchase all energy generated by the qualifying facility and to compensate the qualifying facility for avoided energy and capacity costs. In the Statement, the Commission described these subsections of the rule as initially proposed as follows:

> Qualifying facilities choosing to sell power under the simultaneous purchase and sale billing rate agree to consider their purchases and sales as separate economic transactions. These sections provide that purchases of energy and capacity by the qualifying facility shall be billed according to the utility's applicable retail rate schedule, just as all other customers of the utility are treated. By the same token all purchases of energy by the utility shall be set at appropriate rates, based upon the calculated avoided costs of the utility. It is necessary and reasonable to give qualifying facilities this purchase/sale option. In the event that avoided cost rates are higher than the applicable retail rate this option would compensate the qualifying facility based upon the utility's avoided cost. The qualifying facility would be paid less than avoided cost under this condition if it did not have this option and sold power on the basis of net energy billing. Because M.S. § 216B.164 requires that the purchase rates be based upon avoided cost, it is both necessary and reasonable that this option be provided.
>
> The sum of paragraphs (a) and (b) is the utility's calculated avoided energy and avoided capacity costs per kilowatt-hour averaged over the on-peak and off-peak periods. This section simply directed the utility to sum the avoided energy and avoided capacity costs pertaining to either generating or nongenerating utilities as calculated in an earlier section of the proposed rule to determine the appropriate purchase rate. It was shown earlier in this statement that those amounts are appropriate estimates of the utility's avoided energy and avoided capacity costs. Since the utility avoids both energy related costs and capacity related costs this section is necessary and reasonable if the qualifying facilities are to be compensated at avoided cost, as required by state law.

In the Comments, the Commission described its proposed changes to paragrapn (a) as follows:

> The changes are necessary and reasonable to accommodate recommended changes in definitions and filing requirements to reduce administrative burdens and to assure proper payments to qualifying facilities.
>
> In its comments about filing requirements, the Commission is recommending that small generating utilities be given the option of determining their avoided costs and filing Schedules A and B or simply filing their retail rate schedules. Choosing the second option would greatly reduce the time and expense necessary to comply with the rules. qualifying facilities are nevertheless entitled to be paid the full avoided costs of the utility. The Commission must, therefore, exercise reasonable care that payments made by utilities which choose not to calculate their avoided costs not be less than full avoided costs. The Commission believes it is reasonable to assume that in most cases the utility's retail rate will not be less than its avoided costs. The Commission does not believe that any fraction of the retail rate, less than 100%, can be assumed to be universally more representative of full avoided costs. The Commission also observes that setting payments equal to some fraction of the retail rate would increase the complexity of rules already criticized for being too complicated. The Commission recommends, therefore, that payments to qualifying facilities from generating utilities which choose not to calculate their avoided costs be set equal to the retail rates.

The Commission is also recommending changes in the filing requirements with respect to non-generating utilities. It is recommending that the filing of their suppliers' avoided costs shown on Schedules A and B be optional. The paragraph above, 4 MCAR § 3.0456 C.3.a. reasonably says that if Schedules A and B have been filed, the payments for energy shall be the Schedule A avoided costs. If, however, the utility has only filed Schedule G, the reasonable assumption is that the utility can avoid those costs, so the energy rate of Schedule G is made the energy component.

In the Comments, the Commission discussed its proposed changes to paragraph (b) as follows:

> In general, the changes recomended here parallel the changes recommened in paragraph C.3.a. Two comments should be made. First, it should not be assumed that there will be no capacity payment from a generating utility whose retail rate schedule has no demand charge. Where it is uneconomic to install demand meters due to the size and/or the uniformity of the customers' loads, the demand related costs are often recovered through the energy charge. Therefore, in those cases, payment under C.3.a., although classified as the energy component, will actually cover both energy and capacity.
>
> Second, the Commission has attempted to simplify the rule by recommending the substitution of "shown on Schedule B" for "as calculated according to 4 MCAR § 3.0452 C.4. or C.5. as appropriate." This substitution should make the rule easier to read. The same change has been recommended in D.3.b. below.

The Examiner found 4 MCAR § 3.0456 C.3. of the rules as finally proposed defective in part, stating:

> Section 3.0456 C.3. requires that the utility "purchase all energy generated by the qualifying facility" and compensate the qualifying facilities in accordance with the avoided costs of the utility.
>
> Both federal and state law only require that the utility purchase any energy and capacity which is made available from a qualifying facility. There is no legal authority for the Commission to require a QF to sell all energy generated by it to a utility. In fact, such a result would conflict with one of the presumed purposes for establishing a QF, the availability of the power generated by the QF for satisfaction of its own internal energy needs. Hence, the requirement that a Qf sell all energy generated to the utility is beyond the statutory authority of the Commission. For the reason hereinbefore enumerated, the requirement of § 3.0456 C.3. of the proposed rules is also unreasonable.
>
> To correct the defect, the language "generated by the qualifying facility" contained in the first sentence of § 3.0456 C.3. must be deleted and language substantially similar to the following included:
>
> All energy and capacity which is made available to it by the qualifying facility . . .
>
> Such an amendment will not result in a substantial change within the meaning of 9 MCAR § 2.111.

The Commission has added the language recommended by the Examiner, and has also added language to clarify the intent of this rate option that all power generated by a qualifying facility may be treated as being made available to the utility regardless of the qualifying facility's actual consumption. added p.14 of Rules.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated. Further, the Commission finds that these changes do not constitute a substantial change within the meaning of 9 MCAR § 2.111.

With respect to 4 MCAR § 3.0456 C.3.a., the Examiner found this section of the rules as finally proposed necessary and reasonable and found that the changes did not result in substantial change within the meaning of 9 MCAR § 2.111. He stated the following:

> Section 3.0456 C.3.a. describes the energy component of that portion of the rate applicable to the utility's avoided energy costs. Section 3.0456 C.3.a. has been amended to allow a Generating utility which has not filed Schedule A, as authorized by § 3.0452 A., to

substitute the energy rate contained in its retail rate schedule for the avoided cost calculation contained in Schedule A. The new language contained in the final portion of § 3.0456 C.3.a. relative to a Non-generating utility involves the same language relative to calculation of the avoided energy cost as was contained in the rule as initially submitted.

As previously discussed, Minn. Stat. § 216B.164 (1981 Supp.), requires that a QF be compensated for energy supplied by it on the basis of the utility's full avoided cost. Moreover, compensation for the full avoided costs of the utility is not prohibited by federal law. (See, PURPA § 210; 18 C.F.R. § 292.304 (a) (2). Hence, it is reasonable to compensate a QF for the utility's full avoided energy costs. Using for determination of such avoided energy costs the appropriate system average incremental energy costs shown on Schedule A for a Generating utility that has filed such Schedule, the energy rate of the retail rate schedule applicable to the QF for a Generating utility that has exercised its option not to file Schedules A and B, or the energy rate shown on Schedule G for a Non-generating utility most clearly approximates the utility's true avoided energy costs. (See, Statement of Need and Reasonableness, p. 7-8, 15, 29-30 and Agency Ex. J, Reply Comments, pp. 11-12).

Several distribution cooperatives argued that it is inappropriate to use the rate at which a Non-generating utility obtains wholesale power when the Non-generating utility itself owns the generation and transmission utility. (See, e.g., Pub. Ex. 4, Eicher; Pub. Ex. 14, United Power Association, p. 2; and Pub. Ex. 24, Cooperative Power Association, p. 4). Such comments argued that, in that case, the appropriate rate is the avoided cost of the generation and transmission utility not the wholesale rate paid by the distribution utility. It is not reasonable, however, to make the amount of compensation to be received by a QF dependent on the random factor of the organizational nature of the utility to which it is interconnected. The result of such a recognition of business organization in the rate paid the QF could reasonably be an uneven geographic development of QFs in areas containing distribution co-ops. which own the generating and transmission co-op.

The Hearing Examiner finds that Section 3.0456 C.3.a. is reasonable.

The amendments to § 3.0456 C.3.a. do not constitute a substantial change within the meaning of 9 MCAR § 2.111. The language of the subsection dealing with a Non-generating utility in all material respects relative to the calculation of the rate to be paid a QF is identical to the language as additionally proposed. Moreover, for the reasons enumerated in Finding 38, supra, the provision allowing a Generating utility which has not filed Schedule A to substitute the energy rate from its retail rate schedule does not constitute a substantial change which could adversely impact any interested person.

The Examiner found 4 MCAR § 3.0456 C.3.b. of the rules as finally proposed defective in part, stating:

Section 3.0456 C.3.b. describes the capacity component to be included in the simultaneous purchase and sale rate. The Commission attempts herein to allow recovery of a capacity component which fully compensates the QF for the utility's avoided capacity costs. With respect to a QF that provides Firm power, calculation of the utility's avoided capacity cost based on the factors specifically enumerated in § 3.0456 C.3.b. reasonably approximates the avoided capacity cost to the utility. To the extent that § 3.0456 C.3.b. allows a capacity component in the rate paid a QF that does not provide Firm power, however, the calculation contained in this portion of the proposed rules may exceed the avoided capacity costs of the utility. There is no support in the record for the conclusion that, in the absence of the provision of Firm power, a utility experiences any avoided capacity costs. Since true avoided costs of the utility is the maximum determinant of the rate to be received by a QF not subject to net energy billing under the proposed rules and Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), the Commission has not adduced facts on the record establishing either the requisite statutory authority or the reasonableness of reflecting in the rate paid a QF the capacity component authorized in § 3.0456 C.3.b. with respect to a QF not providing Firm power.

To correct the defect, the Commission has several options. It may add language in § 3.0456 C.3.b. limiting the availability of a capacity component under this provision to a QF providing Firm power. Inserting the words "If the qualifying facility provides firm power to the utility," at the beginning of subparagraph b. and the following sentence at the end of subparagraph b. would reasonably accomplish that result:

If the qualifying facility does not provide Firm power to the utility, no capacity component shall be included in the compensation paid to the qualifying facility as a consequence of simultaneous purchase and sale rate.

Neither the amendment suggested, nor the new language contained in § 3.0456 C.3.b., legitimately describing the avoided costs of certain Generating utilities and all Non-generating utilities, constitutes a substantial change within the meaning of 9 MCAR § 2.111. (See, Findings 38 and 39, supra).

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this definition has been adequately demonstrated. Also, the Commission finds that the changes made in the rule as finally proposed do not constitute a substantial change within the meaning of 9 MCAR § 2.111.

D. Time-of-Day Purchase Rates.

D.1.

This subsection of the rules states which qualifying facilities are eligible for time-of-day rates. The purpose of this subsection was explained in the Statement as follows:

Purchase or buy back rates based upon the time-of-day of energy deliveries have several advantages over non-time differentiated rates. First, since the utilities' incurred costs vary by the time of day so do the utilities' avoided costs vary by the time of day. In short, a kilowatt-hour delivered to a utility during on-peak hours is more valuable than a kilowatt-hour delivered during off-peak hours because it is more expensive for the utility to generate electricity in the on-peak hours. Consequently, the utility's avoided costs are higher in the on-peak period than in off-peak periods and so to the extent that purchase rates are based upon time-of-day energy deliveries those purchase rates will be more accurate estimates of the utility's avoided costs.

In addition, purchase rates based upon the time of day of energy deliveries will give qualifying facilities appropriate incentives to deliver as much on-peak energy as is economically possible. Under this pricing scheme, the qualifying facilities will be paid higher rates for on-peak energy deliveries and so they are likely to deliver more energy during on-peak hours than they otherwise would.

The disadvantage of time-of-day purchase rates is the higher metering cost that will be incurred in order to implement this method of pricing. The qualifying facility will have to finance a time-of-day meter. These meters are more expensive than standard watt-hour meters. The cost of these meters is the reason that time-of-day purchase rates are not being implemented on a mandatory basis for qualifying facilities with capacity of less than 40 kilowatts.

It is the Commission's judgement that 40 kilowatts is an appropriate and reasonable cutoff point for the implementation of mandatory time-of-day purchase rates. Clearly, at some point the advantage previously discussed begin to outweigh the disadvantage of slightly higher metering costs. It is likely that the 40 kilowatt level is a conservative estimate of this balancing point and hence is a reasonable level.

An example may illustrate the appropriateness of the chosen cutoff level. Assume the following:

1. The standard purchase rate is 3¢/kwh.
2. The on-peak purchase rate is 4¢/kwh.
3. The off-peak purchase rate is 2¢/kwh.

4. 50% of all hours are on-peak and 50% are off-peak hours.
5. $4.60/month is a reasonable estimate of the monthly carrying cost of one time-of-day meter (this is the fixed monthly charge which Northern States Power Company bills its General Service Time-of-Day customers).

Given these assumptions, a qualifying facility with generating capacity of 40 kilowatts and an average monthly load factor of 80 percent would generate (40 kwh x 720 hours x .8 = 23,040 kwh) 23,040 kilowatt-hours in one month. If we further assume that such a qualifying facility would respond to time-of-day purchase rates by shifting some production of energy from off-peak to on-peak hours the benefit to the qualifying facility can be measured. If, after the switch, the qualifying facility generated energy at 100% of capacity on-peak and at 60% of capacity off-peak, a comparison of the before and after payments is as follows:

Payment under standard rate

23,040 kwh x 3.0¢ = $691.20

Payment under time-of-day rate

on-peak kwh = 40 kw x 360 hours x 1.0 = 14,400		
off-peak kwh = 40 kw x 360 hours x .6 = 8,640		
on-peak:	14,400 kwh x 4.0¢ =	$576.00
	8,640 kwh x 2.0¢ =	172.80
	23,040	$748.80

payment under time-of-day rate =	$748.80
payment under standard rate =	691.20
difference (per month)	$ 57.60
less: monthly cost of one time-of-day meter	4.60
net gain to qualifying facility	$ 53.00

This example shows that it would be cost effective for a qualifying facility with the operating characteristics shown to sell energy on a time-of-day basis.

For the above reasons the proposed rule would be effective at encouraging cogeneration and small power production and would more accurately compensate QF for the utilities' avoided costs. Consequently, this section of the proposed rule is both necessary and reasonable.

It is necessary and reasonable that the 40 kilowatt limit be applied in a mandatory fashion so that qualifying facilities will be compensated appropriately and given the proper production incentives. This will not place an unreasonable burden on these qualifying facilities. At the same time, it is reasonable that any QF with capacity less than 40 kilowatts that are willing to pay the additional metering costs should be allowed to sell energy on a time-of-day basis.

In addition, it is necessary and reasonable that QF with capacity greater than 100 kilowatts also have the option to sell energy on a time-of-day basis to insure that these qualifying facilities are not treated unfairly in comparison with other qualifying facilities. At the same time, however, it is necessary to make eligibility for this rate conditional upon the delivery of firm power to protect the financial condition of the utility and to protect the utility's ratepayers. The protection of the utility and its ratepayers is a serious concern when considering the rate for purchase applicable to qualifying facilities with capacity greater than 100 kilowatts because these qualifying facilities may not necessarily be generating during the utility's peak load hours whereas a large number of smaller qualifying facilities will on average be generating a consistent proportion of energy during those peak hours. Therefore, due to this potential lack of diversity, the utility may need some guarantee that the qualifying facility with capacity greater than 100 kilowatts will provide firm power during peak hours in order to meet the utility's peak demand.

The Examiner found this section of the rules necessary and reasonable but also found that the phrase "firm electric power" should be replaced by "firm power" in order to eliminate an element of uncertainty and vagueness insomuch as the term "firm power is a defined phrase in these rules, and "firm electric power" is not.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

D.2.

This section requires that a qualifying facility be billed for the energy and capacity it consumes on the same basis as other customers of the utility in the same rate class through application of the utility's retail rate schedule. The purpose of this section was explained in the Statement as follows:

> This section of the proposed rule requires that the qualifying facility will not be billed on a net energy basis if it chooses to sell power on a time-of-day basis. Any appropriately sized qualifying facility wishing to sell energy on a net energy basis may do so under 4 MCAR § 3.0456 (8) so it is unnecessary to duplicate that option here. Further, since the qualifying facility should be billed according to the retail rate schedule it will be treated in a nondiscriminatory fashion, compared to the utility's other ratepayers.
>
> If it were not for the high cost of metering, it is safe to assume that most utility rates would be based upon time-of-day, i.e., time-of-day rates would be the standard instead of the exception. This proposed rule provides that if a qualifying facility has time-of-day metering installed and if the utility to which the qualifying facility is connected is rate regulated by this Commission, the utility may petition to require the qualifying facility to buy energy as well as sell energy on a time-of-day basis. This is necessary and reasonable because it will allow the utility to more appropriately price the electric service to the qualifying facility. At the same time, the qualifying facility's interests will be protected by representation before the Commission.
>
> The Examiner found this section of the rule necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

D.3.

In the rules as finally proposed, this section required that a utility purchase all energy generated by the qualifying facility and compensate the qualifying facility for the utility's avoided energy and capacity costs as described in (e) and (b). The Examiner found the following:

> For the reasons stated in Finding 91, supra, the requirement in § 3.0456 D.3. that the utility purchase all energy generated by the Qualifying Facility exceeds the statutory authority of the Commission and hence, is neither necessary nor reasonable.
>
> To correct the defect, the Commission must amend § 3.0456 D.3. by striking "generated by" and inserting in lieu thereof "made available to it" in the first sentence of this subsection.
>
> The amendment suggested, since it is mandated by Minn. Stat. § 2168.164, subd. 4 (1981 Supp.), does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

The Commission has made the change recommended by the Examiner, adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated.

D.3.a.
D.3.b.

In the Statement, these paragraphs of the rule as initially proposed were justified as follows:

This section of the proposed rule is identical to Section C.3. and it is necessary and reasonable for the same reasons stated in the applicable Section of this statement.

The rules as finally proposed, contained several changes to these paragraphs, as described in the Comments:

> In general, the Commission's comments with respect to C.3.a. and C.3.b. apply to the two paragraphs shown above. D.3.b. is also shown changed to include division of Schedule G rates by the number of on-peak hours. "On-peak" was inadvertently omitted from the proposed rule, although the Statement of Need and Reasonableness addressed this. The Commission is also recommending the addition of the last sentence shown to avoid any ambiguity. Comments during the hearings indicated that not everyone understood that capacity payments under time-of-day rates would be made only for on-peak deliveries.
>
> With respect to paragraph a, the Examiner found the following:
>
> The calculation of the avoided energy costs of the utility for purposes of the time-of-day rate, as stated in § 3.0456 D.3.a. of the proposed rules is a realistic approximation of the utility's avoided energy costs. As such, it is reasonable.
>
> For the reasons stated in Findings 38 and 39, supra, the amendments to § 3.0456 D.3.a. do not constitute substantial changes within the meaning of 9 MCAR § 2.111.
>
> With respect to paragraph b, the Examiner found the following:
>
> Section 3.0456 D.3.b. is a description of the avoided capacity cost to be paid a QF selling energy on a time-of-day basis. For the reasons stated in Finding 93, supra, and the accompanying Discussion, § 3.0456 D.3.b., as applied to a QF providing Firm power is reasonable. With respect to a QF not providing Firm power to the utility, for the reasons stated in the Discussion following Finding 93, supra, the Commission has not demonstrated that the payment of a full avoided capacity component to a QF not providing Firm power is reasonable by an affirmative presentation of facts.
>
> To correct the defect, the Commission may make the availability of an avoided capacity component contingent upon the provision of Firm power by the QF. Such a result could reasonably be accomplished by inserting in this provision an amendment similar to that suggested with respect to § 3.0456 C.3.b. of the proposed rules in Finding 93, supra.
>
> For the reasons stated in Findings 38 and 39, supra, the amendment to § 3.0456 D.3.b. does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

The Commission has made the changes recommended by the Examiner, adopts the findings of the Examiner, and concludes that the need for and reasonableness of these sections has been adequately demonstrated.

4 MCAR § 3.0457. Negotiated rate for purchases.

A. Contracts negotiated by customer.

This section states that a qualifying facility with capacity greater than 100 kilowatts may negotiate by contract with its interconnected utility for the payment of avoided capacity and energy costs. In the Statement, the Commission explained the purpose of this section as follows:

> Under the FERC regulations (18 CFR § 292.304 (c)), utilities must offer to purchase from QF of 100 kilowatts or less on the basis of standard rates. There are several advantages to using established standard rates. Among the advantages are the assurance of non-discriminatory treatment, the ability to plan construction and interconnection of a qualifying facility more easily because rates, terms, and conditions already exist, and a reduced administrative burden on both the qualifying facility and the utility. These advantages make standard rates particularly appealing for smaller QF.

There are nevertheless disadvantages to standard rates. When all are treated alike, individual differences are not taken into account. One qualifying facility may employ a unique technology or operating practice which is particularly suited to helping its interconnected utility to avoid costs. If the qualifying facility is interconnected under standard rates, it may lose payment for some of those avoided costs. Worse, the standard rates may operate to deter development of such technologies or practices.

The inability to account for special circumstances becomes a greater disadvantage as the capacity of the qualifying facility increases. Also, because more resources are invested in the qualifying facility and its effects on the utility are greater, it becomes more cost effective to devote administrative efforts towards addressing challenges and opportunities involved as the capacity of the qualifying facility increases.

The FERC recognized these phenomena in requiring standard rates for QF of 100 kilowatts and under, and making them an option above that capacity. The Commission also believes that recognition is necessary and reasonable.

The Examiner concluded that this section of the rule is necessary and reasonable but added the following statement:

> While the Hearing Examiner has concluded that § 3.0457 A. is reasonable as drafted, several witnesses testified that the language of § 3.0457 A. contradicts the earlier provision of the rules requiring each QF to negotiate an interconnection contract with the utility. (See, Pub. Ex. 10, Minnesota Power, p. 8; Pub. Ex. 65, Ottertail Power Company, p. 16). For purposes of clarity and to avoid a conflict with an earlier provision of the rules, the Commission may wish to redraft § 3.0457 A. in substantially the following language:
>
> Except as provided in D., a Qualifying Facility with capacity greater than 100 kilowatts shall provide by contract with the utility the applicable rates for payment to the qualifying facility for avoided capacity and energy costs.

The Commission has made the changes recommended by the Examiner, adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated.

B. Amount of capacity payments; considerations.

This section of the rules states that the qualifying facility of a capacity greater than 100 kilowatts shall be compensated for capacity cost savings of the utility through consideration of nine enumerated factors. In the Statement, the Commission explained the purpose of this section as follows:

> A number of factors may offset the costs avoided by the utility as a result of the qualifying facility's energy output. It is necessary and reasonable that each of these factors is listed in the proposed rule to insure that these relevant factors are considered by the parties in their negotiation. Each of the factors affects either the amount of capacity, in kilowatts, which the qualifying facility causes the utility to avoid or they affect the cost, per kilowatt, of the capacity avoided due to the delivery of power by the qualifying facility. The capacity factor of the qualifying facility, the length of the contract term, the scheduling of maintenance, the willingness and ability of the qualifying facility to provide firm power or capacity during system emergencies or system peaks and its willingness to allow the utility to dispatch its generated energy are all factors which, together with the rates capacity of the qualifying facility, may determine the amount of capacity, measured in kilowatts, which the qualifying facility is causing the utility to avoid. Obviously, the cost of the utility's avoidable capacity is the cost, per kilowatt, of the capacity avoided due to the delivery of power by the qualifying facility. Any actions for noncompliance with contract terms and the smaller capacity increments and the shorter lead times available when capacity is added from QF are factors which may affect, in a general sense, the costs which a qualifying facility causes the utility to avoid.

In the Comments, the Commission explained one minor change to the rules as follows:

> The Commission recommends the addition of the word "capacity" simply to make it clear that the utility is supposed to consider the nine factors listed in the rule to determine the amount of capacity payments. The Commission expects qualifying facilities that are selling power under negotiated rates will receive energy rates equal to the full avoided energy costs of the utility as provided in 4 MCAR § 3.0457C.

The Examiner found this section of the rule reasonable, but added the following statement:

> While the Hearing Examiner has found § 3.0457 B. to be reasonable as drafted, several representatives of larger QFs suggested that the absence in § 3.0457 B. of a statement that the Qualifying Facility is entitled to the utility's full avoided capacity costs as determined through the contractual negotiation allows a utility to legitimately bargain for a capacity payment of less than its avoided capacity costs. A review of the Statement of Need and Reasonableness suggests that such was not the intent of the Commission. Moreover, that result would be prohibited by the requirements of Minn. Stat. § 216B.164, subd. 4(b) (1981 Supp.). To clarify any ambiguity in the final rules, however, the Commission may consider adding to § 3.0457 B., after the heading of the section, language substantially similar to the following:
>
> "The qualifying facility shall be entitled to the full avoided capacity costs of the utility."
>
> Both the amendment suggested by the Hearing Examiner and the addition of the word "capacity" as qualifying the word "payments" in § 3.0457 B. do not constitute substantial changes within the meaning of 9 MCAR § 2.111. That the section relates to capacity payments was implicit in the rule as initially drafted. The word was merely added to avoid any ambiguity. The change suggested by the Hearing Examiner was likewise explicit in the language as initially drafted and is merely declaratory of existing law.

The Commission has made the change recommended by the Examiner, adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated.

C. Full avoided energy costs.

This section requires that the qualifying facility be paid the full avoided energy costs of the utility adjusted as appropriate to reflect line losses. In the Statement, the Commission described the purpose of this section of the rule as follows:

> The energy output from the qualifying facility with capacity greater than 100 kilowatts will cause the utility to avoid incremental energy costs in the same way that the output from smaller qualifying facilities cause the utility to avoid energy costs. Consequently, in order to base purchase rates on avoided cost it is necessary and reasonable to insure that qualifying facilities are compensated for the full avoided energy costs adjusted for line losses as described earlier in this statement.

The Examiner found this section of the rules both necessary and reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

D. Qualifying facilities of greater than 100 kilowatts.

This section allows a qualifying facility with a capacity of greater than 100 kilowatts to be interconnected to a utility at the utility's standard rates. This section must be read in conjunction with 4 MCAR § 3.0456 D.1., which conditions the availability of the standard rate to a qualifying facility with a capacity in excess of 100 kilowatts when it provides firm power on a time-of-day basis. In the Statement, the Commission described the purpose of this section of the rule as follows:

Upon mutual agreement of the qualifying facility and a utility, a utility may simply connect the qualifying facility according to the standard rates applicable to all other customers. However, since these qualifying facilities have capacity of greater than 40 kilowatts (in fact greater than 100 kilowatts) the only standard rate to which these qualifying facilities would be eligible is the time-of-day rate tariff. This provision is necessary and reasonable since it simply allows one possible outcome of the negotiation process (the connection of the qualifying facility at standard rates) to occur.

The Examiner found this section of the rules reasonable.

The Commission adopts the findings of the Examiner, and concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

4 MCAR § 3.0458 Utility treatment of costs.

The Statement said:

This rule is needed to insure that utility purchases of electricity from qualifying facilities are properly accounted for. It is reasonable in that it flows these costs through to ratepayers in the same manner that costs of purchases from other energy suppliers (i.e., other utilities) are flowed through via Minn. Reg. PSC 392.

The Examiner found that this rule was necessary and reasonable on the record:

108. Section 3.0458 requires that all purchases from a QF with capacity of 100 kilowatts or less and purchase of energy from Qualifying Facilities with a capacity of over 100 kilowatts be considered an energy cost in calculating the utility's fuel adjustment clause. This provision is necessary to ensure that utility purchases of electricty from QF are properly accounted for. The rule is reasonable in that it flows these costs through to ratepayers in the same manner that costs of purchases from other energy suppliers are flowed through to the ratepayers as a result of Minn. Reg. PSC 392.

The Hearing Examiner finds that § 3.0458 is both necessary and reasonable.

The Commission adopts the Examiner's findings and concludes that the need for and reasonableness of this rule have been adequately demonstrated by the Statement.

4 MCAR § 3.0459 Wheeling and exchange agreements.

The Commission's Statement included the following discussion of the need for and reasonableness of this rule:

Wheeling is simply the transmission of electric power from one utility to another. M.S. § 216B.164, subd. 4(c), requires the utility to wheel a qualifying facility's output to another utility if the qualifying facility requests such wheeling, provided that the qualifying facility is at least 30 kilowatts and provided that the wheeling is practicable.

This rule is needed to encourage cogeneration and small power production throughout the state. Because electric utilities have exclusive franchises to serve in particular areas, most potential cogenerators and small power producers can interconnect with just one utility. Different utilities, though, have different cost structures and different load growth expectations. In theory, a utility with no plans to build or purchase capacity for at least 10 years has no avoidable capacity costs. Because utilities are required to pay only their full avoided costs, payments to qualifying facilities from this utility would be correspondingly less than payments from a utility with a great deal of generation expansion planned, and hence large avoidable capacity costs. The wheeling provision enables the qualifying facility to sell to whatever utility is offering the best price, no matter where the utility is located in Minnesota, as long as wheeling is practicable. Looked at from another angle, the

wheeling provision encourages power produced from cogenerators and small power producers throughout the state to flow to those utilities with the greatest need for it. This provision is needed to provide the greatest substitution of power produced from cogenerators and small power producers for power produced from utility central generating stations.

The rule contains three sections concerning payments for wheeling transactions. The Statement's discussion of those sections was as follows:

> These sections provide a reasonable means of accomplishing the wheeling provision. The utility to which the power is wheeled pays exactly its full avoided costs. The payment is made to the utility to which the qualifying facility is interconnected. That utility pays the wheeling charges which have been incurred. It subtracts these payments and its own wheeling costs from the amount it was paid by the receiving utility. The difference is the payment to the qualifying facility. Line losses and transformation losses are automatically accounted for, since the receiving utility pays only for power delivered. The qualifying facility pays for the wheeling, as contemplated in both Minnesota law and the FERC regulations. Finally, the qualifying facility is not burdened with the necessity to deal directly with more than its own local utility.

The Examiner found that the rule was necessary and reasonable on the record:

> Section 3.0459 requires that for Qualifying Facilities with a capacity of at least 30 kilowatts, the utility, at the option of the QF shall wheel the output of the QF to any other Minnesota utility that would experience avoided capacity costs as a result of receiving the wheeled power. The procedure for compensating the QF for its power wheeled requires the utility to initially pay the wheeling charges from the recipient utility and transmit to the QF, upon timely payment by the recipient utility of its full avoided and capacity costs to the wheeling utility, the payment it has received for the wheeled power less its own reasonable costs and the charge imposed by the recipient utility.
>
> Section 3.0459, insofar as it requires the availability of wheeling for a QF with a capacity of 30 kilowatts or greater, is a restatement of Minn. Stat. § 216B.164, subd. 4(c) (1981 Supp.). It is therefore both necessary and reasonable. Minn. Stat. § 216B.164, subd. 4(c) (1981 Supp.), also requires the Commission to establish the methods and procedure for the reimbursement to the QF for the power wheeled. It is reasonable to require the QF to bear the charges associated with wheeling, both because Minn. Stat. § 216B.164, subd. 4 (1981 Supp.), requires that result and because a different allocation of costs would require the utility to bear expenses in excess of the full avoided costs of the recipient utility. It is the purpose of PURPA, the FERC Rules, and Minn. Stat. § 216B.164, subd. 4 (1981 Supp.), that the expense occasioned to a utility as a result of interconnection not exceed true avoided costs of the utility ultimately using the power. The governing law balances the interests of the utility's ratepayers and the cogenerators and small power producers in favor of compensation for full avoided costs. Under such a balance, the ratepayer pays no more for power than would be paid for that delivered from conventional sources.
>
> Hence, § 3.0459 is both necessary and reasonable.
>
> Ottertail Power Company argues that wheeling should be limited to energy in excess of 1,000 kilowatts. It asserts that it is currently impractical to wheel power of less than 1,000 kw. Moreover, it suggests that any QF that can deliver more than 1,000 kilowatts of power does not need the intermediary of a utility in its dealings for wheeling of power. (See, Pub. Ex. 65, Ottertail Power Company, p. 17). The Hearing Examiner finds that a limitation on the availability of wheeling to increments of 1,000 kilowatts would serve no useful purpose. If Ottertail Power Company is correct that it is impractical to wheel power in increments less than 1,000 kilowatts, under § 3.0459, as proposed, the utility could legitimately refuse wheeling. Both Minn. Stat. § 2168.164, subd. 4(c) (1981 Supp.), and § 3.0459 condition the availability of wheeling upon the existence of practicable wheeling conditions. The suggestion by Ottertail Power Company, therefore, adds nothing to the proposed rule and may introduce a totally undesirable element of rigidity.

Actaeon Corporation suggests that the use of the subjective phrase "whenever practicable" is unreasonable in that it could be used to deny wheeling and impede the development of QFs. The phrase, however, is taken directly from Minn. Stat. § 216B.164, subd. 4(c) (1981 Supp.). As such, it is presumptively necessary and reasonable. Further, it would be decidedly impractical to specify fully all conditions under which wheeling should not be available. Since, pursuant to § 3.060 of the proposed rules, all parties have available to them the Commission to resolve disputes, the use of § 3.0459 as an element of oppression by a utility is not a likely occurrence.

Froedtert Malt Corporation suggests that the recipient utilities not be limited to a Minnesota utility. (Pub. Ex. 13, Froedtert Malt Corporation, p. 1). The limitation of required wheeling to another Minnesota utility, however, is expressly stated in Minn. Stat. § 216B.64, subd. 4(c) (1981 Supp.). Additionally, since the calculation of avoided capacity and energy costs contained in the proposed rules, of necessity, only applies to a Minnesota utility that is subject to the jurisdiction of the Commission, extending recipient utilities under § 3.0459 to other than Minnesota utilities would serve no useful function.

The Commission adopts the Examiner's findings and concludes that the need for and reasonableness of this rule have been adequately demonstrated.

4 MCAR § 3.0460. Disputes.

4 MCAR § 3.0460 provides for the Commission to be available to resolve either a dispute or an impasse in the contractual negotiations between a qualifying facility and a utility. It also provides that the burden of proof in such proceedings is on the utility.

In the Statement, the Commission discussed the rule as initially proposed in the following manner:

> The Commission has jurisdiction to resolve disputes between utilities and their customers under M.S. § 216B.17, and has promulgated Minn. Reg. PSC 507 and 508 to establish procedures for handling informal and formal customer complaints. This section of the proposed rules is needed to clearly indicate the Commission's ability and intent to resolve disputes over rule-related issues.
>
> In addition, M.S. § 216B.164, subd. 5, contains essentially the same language as this section of the proposed rules. It is reasonable for the Commission to adopt the same scope of jurisdiction and burden of proof as are required by the enabling legislation.

The Hearing Examiner found the rule to be in response to a statutory requirement and thus both necessary and reasonable. Although the Hearing Examiner found the rule to be necessary and reasonable, he suggested the deletion of the word "electric" as modifying the word "utility" to conform to the defined terms and to be consistent with the usage in other provisions of the rules.

The Commission has followed the Hearing Examiner's suggestion and deleted the word "electric."

The Commission adopts the findings of the Examiner and concludes that the need for and reasonableness of this section has been adequately demonstrated. The Commission further concludes that the change to this section does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

4 MCAR § 3.0461. Notification to customers.

A. Contents of written notice.

4 MCAR § 3.0461 A requires that the utility furnish to its customers notice regarding the following aspects of the Commission's cogeneration and small power production rules: that the utility must provide the information specified in B of this section to all interested parties free of charge upon request, and that any disputes arising as a result of application of the Commission's cogeneration and small power production rules are subject to resolution by the Commission.

In the Statement, the Commission discussed this portion of the rule as follows:

> This rule imposes a duty upon the appropriate utilities to provide notice to their respective customers of:
>
> 1) the utility's obligation to interconnect with and purchase electricity from cogenerators and small power producers;
>
> 2) the utility's obligation to provide customer information concerning cogeneration and small power production to all interested persons free of charge upon request; and
>
> 3) that any disputes concerning interconnection, sales and purchase are subject to resolution by the Commission upon compliance.
>
> This notification requirement is intended to annually inform the utility's customers of the existence of rules concerning cogeneration and small power production in addition to identifying some of the very basic provisions of the rules (i.e., utility's obligation to interconnect with and purchase from a qualifying facility).
>
> Another important aspect of this rule is the notification portion with respect to the availability of free customer information upon request. It is the Commission's position that to effectively encourage cogeneration and small power production, the public must know that there is conveniently accessible information available for their examination and review. Such information is to be available without charge to encourage the unrestricted dissemination and the continuous flow of information to the public.
>
> The required notice is also designed to insure that the public is aware that there is a governmental agency with the capacity to resolve disputes that may be utilized upon proper complaint procedures.
>
> All notices are to be approved in form and content by the Commission to insure clarity and understandability.

In reviewing 4 MCAR § 3.0461 A, the Hearing Examiner stated the following:

> The purpose of the Commission's proposed rules and of Minn. Stat. § 2168.164 (1981 Supp.), is to encourage cogeneration and small power production. That end can only be achieved if potentially interested parties are aware of the existence and minimal requirements of such rules. Including in the material provided to a utility's customers a minimal notice designed to acquaint such customers with the basics of the Commission's cogeneration and small power production rules is the least expensive, most reasonable method of accomplishing that objective. The only comment received relating to § 3.0461 A. of the proposed rules favored the provision. (See, Pub. Ex. 4, Eicher, p. 15).

The Commission finds that 4 MCAR § 3.0461 A is both necessary and reasonable based upon the Statement.

B. Availability of information.

4 MCAR § 3.0461 B requires that the utility publish and make available to all interested persons upon request, free of charge, certain information from which the cost effectiveness of the establishnent and interconnection of a qualifying facility could be determined by a potentially interested party.

The Commission discussed this provision in the Statement in the following manner:

> In addition to the notice requirement, this rule also imposes an obligation on the utility to publish and make available customer information without charge. The Commission recognizes that there is a need to have customer information available for interested persons to inspect.

At a minimum, such customer information must include:

1. A statement of rates, terms and conditions of interconnection;

This information is necessary to provide accurate information from which a prospective cogenerator or small power producer may make an informed and prudent decision. Such information will allow an individual to determine the approximate cost of interconnection as well as the attending obligations and implications thereof.

2. A statement of technical requirements;

Such information is needed to allow a prospective cogenerator or small power producer to determine the appropriate technical specifications to be complied with as well as to select and install the equipment necessary for safe and proper interconnection.

3. A sample contract containing the applicable terms and conditions;

A sample of the contract is needed to allow the prospective cogenerator or small power producer to review, understand and become familiar with the obligations, duties, rights and responsibilities that may be involved by the execution of such a contract.

It is only reasonable and prudent that an individual contemplating the execution of a document be furnished with the document to become familiar with it in order to fully comprehend the implications and obligations thereof.

4. Pertinent Rate Schedules;

This information is intended to provide an accurate foundation for a cogenerator or small power producer to calculate the approximate value of actual or projected output. Such information may be invaluable to an individual contemplating interconnection as it will allow him to evaluate the economic feasibility of such a venture.

5. The title, address and telephone number of the department of the utility to which inquiries should be directed;

This provision is intended to provide a means by which a utility may be contacted to answer questions or to supply additional information. It is an attempt to enhance the flow of information and stimulate communication between potential qualifying facilities and the utilities.

6. This statement: "The Minnesota Public Utilities Commission is available to resolve disputes upon written request," and the address and telephone numbers of the Commission.

This provision is intended and is needed to provide information to any interested person concerning the availability of the Commission to assist in the resolution of any disputes that may arise in addition to providing the public with an address and telephone number by which the Commission may be contacted.

The Hearing Examiner, in his review of 4 MCAR § 3.0461 B, found that the purpose of both the Commission's proposed rules and M. S. § 2168.164 is to encourage cogeneration and small power production to the maximum extent consistent with the interests of the utility's ratepayers. He concluded that since the information required by this provision would be readily available to the utility and its dissemination upon request would not pose an economic burden on the utility, 4 MCAR § 3.0461 B is both necessary and reasonable.

While the Hearing Examiner found 4 MCAR § 3.0461 B was both reasonable and necessary as drafted, he suggested that to avoid ambiguity in the application of subsection B and to be consistent with the hearing examiner's interpretation of subsection B, the word "customer" as it modifies the word "information" should be deleted where the phrase appears in 4 MCAR § 3.0461 A. 2. and in 4 MCAR § 3.0461 B. The Commission agrees with the Hearing Examiner that the word "customer" in the identified context adds nothing to the proper interpretation of the rule and, in fact, may introduce an unnecessary element of confusion. Therefore, in accordance with the Hearing Examiner's recommendation, the Commission has amended the rule as initially proposed by deleting the word "customer" in the pertinent locations.

The Commission adopts the findings of the Hearing Examiner and concludes that the need for and reasonableness of this section has been adequately demonstrated. The Commission further concludes that the amendments to the section do not constitute a substantial change within the meaning of 9 MCAR § 2.111.

4 MCAR § 3.0462 Interconnection guidelines.

The Commission's Statement discussed this rule generally as follows:

The Commission believes a rule covering interconnection guidelines is necessary to achieve two broad objectives. The first of these is to insure the reliability and safety of electric utility service; the second is to encourage cogeneration and small power production.

Electric utilities must furnish continuous reliable service to their customers - service at a fixed frequency with voltages maintained within prescribed limits. Further, their systems must be constructed and operated to be safe for their employees and the general public. Different systems may vary considerably in the physical plant and electrical characteristics employed to deliver electric service safely.

Like utility systems themselves, the generating units used by qualifying facilities may be of many different types. They will probably come in a broad range of capacities and may exhibit markedly different operating characteristics. Their effect on any particular distribution system may vary with both their location on the system and the concentration of qualifying facilities on the system.

There is a potential for problems to develop on the utility system when a utility engages in interconnected operations with a qualifying facility. Whether such problems actually occur depends on the specific electrical characteristics and capacity of the qualifying facility, its location and the concentration of such units on the utility system, the characteristics of the distribution system, and the interaction of these factors with each other. In general, interconnected operations will be successful to the extent these potential problems are anticipated and resolved.

Each of the interconnection guidelines in this proposed rule is designed to prevent one or more of the following potential problems:

1. Safety hazards resulting from a qualifying facility energizing a portion of a distribution system which has been deenergized because of an outage or to enable utility personnel to perform maintenance.

2. Improper operation of equipment installed to protect and regulate the distribution system because qualifying facilities have changed the nature of power flows on the system.

3. Damage to or improper operation of customer-owned equipment due to irregularities in frequency or voltage, or both, or due to excessive harmonics, resulting from interconnected operations with qualifying facilities.

4. Interference with communications circuits caused by excessive levels of harmonic frequencies which may be produced by some qualifying facilities.

These problems point out the need for interconnection guidelines to insure safe and reliable electric service. The Commission believes the proposed rule on interconnection guidelines is also necessary to encourage cogeneration and small power production.

The Commission notes that uncertainty concerning required interconnection equipment may deter potential qualifying facilities. If interconnection guidelines are established by rule, a great deal of uncertainty is eliminated or reduced. In turn, planning becomes simpler and feasibility calculations more accurate. Further, reasonable guidelines established by rule prevent utilities from making unreasonable demands on qualifying facilities. Utilities which did not want to encourage cogeneration and small power production might make such demands in the absence of a rule.

A. Denial of interconnection application.

This section as adopted has been revised from the rule as initially proposed to incorporate the Hearing Examiner's suggestions. The Statement contained the following discussion of the need for and reasonableness of the section as initially proposed:

> This section is necessary in that it provides the utility with advance notice prior to interconnection. The utility and the qualifying facility may then together work out any potential problems before electricity flows and damage is done. It reasonably prohibits the utility from denying interconnection for reasons other than noncompliance with applicable laws or regulations.

The Examiner found that the section was necessary and reasonable as proposed, but suggested some clarifying language:

> Section 3.0462 A. provides that a utility may refuse to interconnect with a QF only until the QF has applied for interconnection pursuant to § 3.0454 K. and the application is approved by the utility. The utility may withhold approval of the application only for failure to comply with applicable utility or governmental laws. Finally, the utility is authorized to include in its contract reasonable technical connections and operating specifications for the QF.
>
> As a consequence of both Federal and State law, a utility is required to interconnect with a QF that offers to sell it power. The interconnection of a QF may, however, result in service problems to both the utility and its customers as a result of interconnected operations. Whether such problems develop, depends upon the degree to which the QF and the utility, through their joint planning efforts, are able to resolve potentials for disruption of the utility's service. It is, therefore, both necessary and reasonable that interconnection not occur until the utility has approved an application for interconnection made pursuant to § 3.0454 K. of the proposed rules. Moreover, the QF is reasonably protected by specifying the conditions on the ability of the utility to deny the interconnection application. A denial of the application is reasonably conditioned only on the failure of the QF to comply with applicable rules or laws.
>
> The Hearing Examiner finds that § 3.0462 A. is both necessary and reasonable.
>
> Several witnesses commented that the failure to include in § 3.0462 A. an affirmative statement regarding the duty of the utility to interconnect with a QF introduces an element of uncertainty into the relationship between a utility and a QF. The Hearing Examiner finds that both the requirements of existing Federal and State law and the language of § 3.0462 of the proposed rules does require an interconnection except as otherwise specifically provided in § 3.0462 A. To avoid any uncertainty, however, the Commission may wish to insert in § 3.0462 A., after the title of subsection A., language substantially similar to the following:
>
> Except as hereinafter expressly provided, a utility shall interconnect to a qualifying facility that offers to make available to the utility energy or capacity.
>
> Jacobs Wind Electric Company asserts that the proposed rule is unreasonable in that it allows a utility rule to serve as a basis for denying interconnection. (Pub. Ex. 16, Jacobs Wind Electric Co., p. 14). Apparently, Jacobs Wind Electric Company posits the use of a utility rule as a means potentially employable by a utility in preventing interconnection. The Hearing Examiner finds that the proposed rules contain adequate safeguards to prevent such a result.
>
> Although the Hearing Examiner finds that the rule is both reasonable and necessary as proposed, in order to remove ambiguity, and for purposes of clarity, the Commission may wish to insert in § 3.0462 A. after the word "utility" and before the word "or" language substantially similar to the following: "rules not prohibited by 9 MCAR §§ 3.0450 - 3.0463".

The Commission has added the clarifying language suggested by the Examiner. The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section has been adequately demonstrated.

B. Notification of telephone utility and cable television firm.

The Statement discussed this section as follows:

> This section makes the electric utility responsible for notifying communications companies of an impending interconnection with a qualifying facility. The notification is necessary to prevent potential communications problems due to possible increases in harmonics in the utility lines. There are two reasons for the utility, rather than the qualifying facility, to take this responsibility. First, it is reasonable to minimize the administrative burden on the qualifying facility in order to encourage cogeneration and small power production. Second, the utility has had to cooperate with telephone and cable firms in the historical development of its system. This implies that coordination has already been established among the appropriate personnel. It is more efficient to make use of this established coordination than to require each qualifying facility to try to find the right people to talk to.

The Examiner found that this section was both needed and reasonable:

> Section 3.0462 B. requires that the utility, as early as practicable, notify affected telephone and cable television companies of a prospective interconnection.
>
> Since the interconnection of a QF may result in increases in harmonics on the utility lines and resulting disruption to the service of both telephone and cable television firms, it is necessary that such firms be notified of the interconnection of a QF prior to its actual in-service date. It is reasonable that the burden be placed on the utility rather than on the QF since administrative burdens will be reduced and the utility has developed coordination with such firms previously in the normal conduct of the utility's business.
>
> The Hearing Examiner finds that § 3.0462 B. is both necessary and reasonable.

The Commission adopts the Examiner's findings, and concludes that the need and reasonableness of this section have been adequately demonstrated by the Statement.

C. Separate distribution transformer; when required.

The Commission has revised the rule as initially proposed in this section to respond to the Examiner's findings and recommendations. The Statement discussed this section as initially proposed as follows:

> This section is necessary for two reasons. First, some installations using inverters may require a transformer to provide proper grounding for safety. Second, a separate distribution transformer may be necessary to prevent service problems such as excessive light flicker or equipment operating problems caused by voltage variations experienced by nearby utility customers. These problems may be caused by the starting, stopping, or irregular operations of a generating unit feeding into a common distribution transformer. A separate distribution transformer for the qualifying facility should largely mitigate these voltage variations. The section reasonably limits the ordinary requirement of this equipment to those units of size and operating characteristics where such problems might be expected to arise.

The Examiner found that the first sentence of this section was necessary and reasonable:

> Section 3.0462 C. allows a utility to require that a QF have a separate distribution transformer if necessary "either to protect the safety of employees or the public or to keep service to other customers within prescribed limits". It also provides that such a

requirement will not ordinarily be necessary for an induction-type generator with a capacity of five kilowatts or less, or for other units with a capacity of ten kilowatts or less that utilize line-commutated inverters.

The Commission suggests that the rule is necessary for two reasons. First, some installations using inverters may require a separate transformer to provide proper grounding for safety. Second, a separate distribution transformer may be necessary to prevent service problems such as excessive light flicker or equipment operating problems caused by voltage variations experienced by nearby utility customers. (See, Statement of Need and Reasonableness, pp. 38, 39). Since such service problems may be caused by a generating unit feeding into a common distribution transformer, it is reasonable, if such problems are likely to occur, to require a separate distribution transformer for the QF. A separate distribution transformer to the QF could mitigate the voltage variations caused by the use of a common distribution transformer. The first sentence of § 3.0462 C. is, therefore, both necessary and reasonable.

He found that the second sentence served no regulatory purpose and should be deleted:

The Commission has attempted to detail the types of QFs that "ordinarily" shouldn't require a separate distribution transformer. The Commission states:

"The section reasonably limits the ordinary requirements of its equipment to those units of size and operating characteristics where such problems might be expected to arise."

(Statement of Need and Reasonableness, p. 39).

Minn. Stat. § 15.0411, subd. 3 (1980), however, requires that a rule have some regulatory effect. The requirement of a separate distribution transformer for a QF can only be imposed if it is necessary either to protect the safety of employees or the public or to keep service to other customers within prescribed limits. There is no "ordinary" application of the requirement. The condition for its application must be demonstrated by the utility irrespective of the size or operating characteristics of the QF. Hence, the nortatory statement in the second sentence of § 3.0462 C. is unreasonable in that it serves no regulatory purpose not adequately expressed in the first sentence of that subdivision.

To correct the defect, the Commission should delete the last sentence of § 3.0462 C. Since the last sentence of § 3.0462 C. is mere surplusage serving no legitimate regulatory purpose, its deletion would not result in a substantial change within the meaning of 9 MCAR § 2.111.

The Commission adopts the Examiner's findings. It has deleted the offending sentence. The Commission concludes that the need for and reasonableness of this section as adopted has been adequately demonstrated, and that the deletion of the second sentence of the section as proposed does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

D. Limiting capacity of single-phase generators; when permitted.

The Commission, in the Comments, proposed eliminating the last sentence of this section as initially proposed. The Examiner concurred, and the section as adopted reflects this revision from the section as proposed.

In its Statement, the Commission discussed this section as initially proposed as follows:

Utility distribution circuits are generally three-phase or single-phase. Three-pnase power is more effective in supplying larger electrical loads than is single-pnase. Single-phase distribution circuits are generally supplied from three-phase circuits. In a balanced three-phase circuit, each conductor, or phase, supplies approximately the same amount of power, and the voltage conditions on each phase are approximately equal. If one phase carries considerably more electrical load, or if single-phase generators connected to that pnase supply considerably more power than the other two phases, then higher losses or voltage regulation problems, or both, may result.

To protect other customers from voltage and service problems, utilities have for years limited maximum size, starting, and operating characteristics of single-phase motors which may be served from their system. Some generating units are operated as motors in starting up to reach the necessary rpm. Other single-phase generators are also expected to affect local voltage levels in the same way as single-phase motors.

This section is necessary, therefore, to protect service to other customers, just as their service is protected by limitations on motors. It is reasonable because it places no burden on qualifying facilities which are different from the burdens of similar, but nongenerating, customers.

In the Comments, the Commission said:

In response to comments by several qualifying facilities, the Commission is recommending the removal of the limitation of single phase generators to a maximum capacity of 10 kilowatts. In light of the testimony that this restriction is unwarranted, it is reasonable to remove this limitation. However, it should be noted that the utility may limit the capacity of single phase generators in a way consistent with the utility limitations on single phase motors. Thus, the utility's ability to insure the safety and power quality of the system is not impaired.

The Examiner found that this section was needed and reasonable. He also found that the final sentence, as initially proposed, was mere surplusage, and that its deletion did not constitute a substantial change:

Section 3.0462 D. allows the utility to limit the capacity and operating characteristics of a single-phase generator in a way consistent with the utility limitations for single-phase motors when the limitation is necessary to avoid "the likelihood that a qualifying facility would cause problems with the service of other customers".

This provision is necessary to protect the integrity of the utility service received by other utility customers. (Statement of Need and Reasonableness, p. 39.). It is reasonable because it places no burden on a QF which is different from the burden placed on a similar, non-generating customer. Section 3.0462 D., therefore, is necessary and reasonable.

The Commission has stricken from the proposed rule the following language:

Ordinarily, single-phase generators should be limited to a capacity of ten kilowatts.

The deletion was made in response to a number of public comments received. (See, e.g., Pub. Ex. 16, Jacobs Wind Electric Co., p. 16; Pub. Ex. 66, Daryl Jorud, p. 2; Pub. Ex. 67, Russell C. Sletmoen, p. 1; Pub. Ex. 68, Daryl Nelson; and Pub. Ex. 77, Wind Power Systems, Inc., p. 1). For the reasons enumerated in the previous Findings, the Hearing Examiner finds that the language stricken was mere surplusage not qualifying as a general statement of future regulatory effect. Minn. Stat. § 15.0411, subd. 3 (1980). The deletion of surplus language which introduces no change in the test for application of the subsection previously stated does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

The Commission adopts the Examiner's findings and concludes that the need for and reasonableness of this section have been adequately demonstrated. The Commission also concludes that the deletion of the final sentence from the rule as initially proposed does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

E. Isolation of generator.

This section as initially proposed allowed a utility to require a qualifying facility to have a system for automatically isolating the generator from the utility's lines upon loss of utility supply. The Commission explained its reasoning for that language in the Statement:

This section of the proposed rule addresses another point of extremely intense controversy: disconnection of the qualifying facility from the utility when the utility line is deenergized.

The need for disconnection is acknowledged by all. Maintenance, such as restoring a line after an outage, must be carried out while the line is deenergized. The generation which comes from a qualifying facility can shock just as severely as the utility's own generation.

The utility's system is designed, through use of devices such as circuit breakers, to automatically isolate a line, or a portion of a line, from the utility's generation when a fault occurs on the line.

Utility work rules require repair crews to open and tag a manual disconnect switch on either side of the fault before beginning work on the line. In addition, the crews are supposed to ground the line on each side of the fault. Utilities have maintained that the safety of their employees requires each qualifying facility to have a manual disconnect switch which is accessible to the utility at all times and which the utility may lock open while performing maintenance.

Qualifying facilities may employ any of several different generating and interconnection technologies. Some of these require an electric signal to be present in the electric utility system in order to operate, while others will generate regardless of whether the utility system is energized.

Some owners and manufacturers of qualifying facilities which use technologies requiring input from the utility system have maintained that a lockable manual disconnect switch should not be required. Because their generator would automatically shut down on the loss of the utility signal, they say, a manual disconnect would be an unnecessary additional expense. They also object to giving the utility unlimited access to their property and ultimate control over their generator. They have recommended instead that a positive disconnect on loss of utility's signal be the only feature required.

Utilities have voiced a concern that under certain conditions of load and operation of qualifying facilities on portions of a distributiuon system it would be possible for several facilities to excite each other and continue to energize the line even after the loss of utility power. The response of owners and manufacturers to this concern has been that the probability of exactly the right conditions occurring is so remote as to be completely negligible, and that without the utility's fixed frequency signal, even if the conditions did occur, generation could not continue beyond a few seconds after loss of utility power.

The Commission believes this section of the proposed rule is reasonable. If a utility requires a qualifying facility to disconnect automatically on loss of utility supply, and if the utility employee properly grounds both sides of the fault before working on it, utility personnel will not be endangered. At the same time, the qualifying facility will not be subjected to needless expense and possible utility harrassment.

During the hearings, the Commission heard testimony from manufacturers of generating equipment and from utilities. As a result of that testimony, the Commission altered this section as finally proposed to allow a utility to require either a system for automatically isolating the generator or a manual disconnect switch. The Commission explained its reasoning for the change in its Comments:

The Commission is recommending that the proposed rule be changed to permit the utility to require that the qualifying facility have a lockable manual disconnection switch readily accessible to the utility. The Commission reached this conclusion after considering several matters.

First, testimony was submitted by Jacobs Wind Electric Company that its equipment would automatically shut down if the utility system was deenergized. However, there was no assurance that all types of equipment which could conceivably be connected to the utility system

would always work in a fail-safe manner. It must be concluded that there is an element of risk associated with automatic disconnect equipment which is not associated with a manual lockable disconnect switch.

Second, although utility work crews are supposed to ground the line on each side of a fault, it was stated in testimony that the crew could be injured while attempting to ground the line if a qualifying facility was sending power into the system.

The Commission believes that requiring a lockable disconnect will not impose an unreasonable burden on the qualifying facility. The benefit of a safer work place for utility personnel outweighs the low cost of a lockable disconnect switch. The Commission also believes that the installation of a lockable manual disconnect switch may aid the qualifying facility in obtaining liability insurance because of the lower risks.

The proposed language should not be construed to require the placement of the lockable manual disconnect switch on the qualifying facility's property. To the contrary, the Commission expects there will be circumstances where the convenience of both parties will be satisfied by locating the switch on the utility's side of the interconnection.

The Hearing Examiner repeated the Commission's concerns that qualifying facilities pose a peculiar hazard upon utility systems, and that there is no assurance that all generating systems will contain internal automatic isolation systems.

He also found that a visible disconnect switch is required for qualifying facilities by the National Electric Code and by the Safety Manual adopted by the State of Minnesota Joint Training and Safety Commission. Further, he found that the State Board of Electricity has determined that the 1981 electric code requires that a qualifying facility have a lockable disconnecting means between the cogenerating equipment and the utility source. Examiner Campbell concluded that an automatic isolation system would not satisfy the State Board of Electricity's requirements because it would not be lockable.

The Examiner reasoned that the section as finally proposed would not meet the need shown in the record because it would allow a utility to impose excessive or conceivably impossible requirements upon a qualifying facility by requiring an automatic isolation system when the generating system already has a manual disconnect, thereby inflating the cost of the qualifying facility, or by exercising its option to require an automatic isolation system when the generating apparatus is incapable of supporting such an automatic system. He recommended the Commission remove the language in this section giving the utility the option to choose which form of isolation system the qualifying facility would have to use.

The Commission agrees. The purpose of this section has always been to provide a safe, effective, and reasonable means of isolating the qualifying facility during periods of loss of utility power. Of particular concern, of course, has been the safety of utility crews working on deenergized utility lines, and of other customers on the same distribution system.

The Commission finds, based upon the record and the Examiner's recommendations, that a manual disconnect switch will be required of all qualifying facilities in order to pass an electrical safety inspection prior to operation. It would be senseless for the Commission to require additional isolation equipment which would not materially improve the safety of the installation but would raise the cost. Similarly, it would be unreasonable for the Commission to allow a utility to impose such an additional requirement upon a qualifying facility. The language in this section as finally proposed was intended to allow flexibility under the assumption that such flexibility was needed. The Commission now finds that the simpler requirement that all qualifying facilities need only have a manual lockable disconnect switch will adequately address the safety needs of an interconnected qualifying facility and utility, and that no additonal complication need be mandated by this section.

The Examiner found that the change now adopted by the Commission would create a section the need for and reasonableness of which had been shown. The Commission adopts the finding of the Examiner.

The Examiner also found that the change to this section now adopted by the Commission would not result in a substantial change. The Commission adopts the Examiner's basis for that finding as follows:

> As previously noted, the important test of substantial change is the presence of reasonable notice to potentially affected persons. American Iron & Steel Institute v. EPA, 568 F. 2d 284, 293 (3d Cir., 1977); International Harvester Co. v. Ruckelshaus, 478 F. 2d 615, 632, n. 51 (D.C. Cir. 1973); South Terminal Corp. v. EPA, 504 F. 2d 646, 659 (1st Cir. 1974). The Notice of Hearing reasonably raised the question of mandated methods of isolation of the qualifying facilities's generator. Moreover, the Statement of Need and Reasonableness specifically discussed the subject of the manual disconnect switch. Statement of Need and Reasonableness, pp. 39-40). The issue of requiring a lockable, manual disconnect switch was thoroughly debated at the hearings. To find that a substantial change results in the change of position by the Commission would lead to the conclusion that an Agency can learn from the comments on its proposals only at the peril of instituting a new rulemaking proceeding. International Harvester Co. v. Ruckelshaus, supra. The change ultimately adopted by the Commission allowing a manual, lockable disconnect switch is a logical "outgrowth" of the rulemaking proceeding. South Terminal Corp. v. EPA, supra. Finally, the amendment suggested by the Hearing Examiner is already required by the State Board of Electricity. (See, Pub. Ex. 78, State Board of Electricity).

The Commission concludes the section as adopted is needed, reasonable, and does not result in a substantial change.

F. Discontinuing parallel operation.

In the Statement, the Commission said that this section was necessary and reasonable for the reasons given in the discussion of the disconnect section. (That discussion has been reproduced under E above.)

The Examiner reported receiving no comments in opposition to this section. He found it necessary and reasonable for the reasons put forward in his discussion of the disconnect section (also reproduced under E above).

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section have been adequately demonstrated by the Statement.

G. Permitting entry.

The Commission discussed the need for and reasonableness of this section in the Statement as follows:

> This section is necessary to afford the utility and affected communications companies a reasonable opportunity to assure safe and effective operations of their systems in conjunction with parallel electric generation by QF. It reasonably limits the reasons for entry and the times at which entry may be gained. Specifically, entry may occur only during reasonable hours, and only for purposes of evaluating the qualifying facility's impact on system safety and quality of service.

The Examiner found this section necessary and reasonable as proposed, but recommended a minor change:

> Section 3.0462 G. requires a Qualifying Facility to make equipment available and permit entry by "electric and communication utility personnel" to test isolation and protective equipment. Such tests would be conducted to evaluate the quality of power delivered to the utility and to determine whether the QF is responsible for any service problems experienced by the customers of a utility or communication system.
>
> The Commission asserts that this section is necessary to afford the utility and affected communication companies a reasonable opportunity to assure safe and effective operation of their systems in conjunction with the parallel electric generation of the QF.

(Statement of Need and Reasonableness, p. 40). The Commission also asserts that the section reasonably limits the reasons for such entry and the times at which it may occur. (Statement of Need and Reasonableness, p. 40).

A number of utilities testified that allowing entry for purposes of inspection and testing by utility personnel is necessary for the safety of all parties and the proper functioning of the interconnected utility. (See, e.g., Pub. Ex. 65, Ottertail Power Company, p. 19).

The cogenerators and small power producers, however, asserted a need to limit the application of subsection G. Jacobs Wind Electric Company, for example, pointed out that utility personnel are exempt from the State Board of Electricity requirements which apply to the QF's side of the interconnection. (Pub. Ex. 113, Jacobs Wind Electric Co., p. 11; Pub. Ex. 78, State Board of Electricity, p. 1). Further, there is no evidence that the normal electric and communication utility personnel will either be familiar with the equipment used by the QF or qualified to inspect and adjust it. (See, Pub. Ex. 113, Jacobs Wind Electric Co., Reply Comments, p. 11).

The Hearing Examiner finds that § 3.0462 G. is both necessary and reasonable. The concern expressed by Jacobs Wind Electric Company is not a likely occurrence. In the event that unqualified personnel attempt to make an entry, the QF could refuse to allow such personnel to test or adjust the equipment and resolve their reasonableness in doing so under the Commission's complaint procedure. Also, if unqualified personnel damaged the QF's equipment or otherwise interfered with the production of electricity by the QF as a result of their own lack of knowledge and training, the utility affected and the person accomplishing entry would be liable to the QF for damages in tort.

Although the Hearing Examiner has found that § 3.0462 G. is both necessary and reasonable, for purposes of clarity and to avoid misconstruction, the Commission may consider inserting in the second line of G., after the word "permit", and before the word "electric", the word "qualified".

Such an amendment is implicit in § 3.0462 G. and would not constitute a substantial change within the meaning of 9 MCAR § 2.111.

The Commission has reviewed the Examiner's recommendation, and has considered inserting the word "qualified." The Commission has, after consideration, decided not to make that revision. The Examiner pointed out that the qualifying facility has available to it both the dispute resolution procedure of the Commission and the courts for protection against unqualified personnel. The Commission finds that the insertion of the word "qualified" would not change the nature or application of the rule, but would form a potential new focal point for disputes as QF and utilities argue over what constitutes qualified personnel.

The Commission concludes that the need for and reasonableness of this section has been adequately demonstrated by the Statement.

H. Maintaining power output.

This section and the next (I. Varying voltage levels) were discussed together in the Statement:

> These two sections establish a necessary and reasonable requirement that operations of the qualifying facility not disturb the quality of service to other customers through frequency or voltage variations or through introduction of undesirable levels of harmonics. This requirement conforms to the legislative intent that encouragement of cogeneration and small power production be consistent with protection of the ratepayers and the public.

The Examiner found that this section was needed and reasonable:

> Section 3.0462 H. requires the QF to maintain its power output in such a manner that frequency and voltage produced are compatible with the utility's normal service and do not cause the prohibited degradation of such service.

Section 3.0462 H. is both necessary and reasonable since a balancing of the interests of the customers of the utility and the QF require that the service to the customer not be degraded as a result of interconnection. The only comment received on this section of the proposed rules suggested that the word "standard" contained in the fifth line of § 3.0462 H. should be deleted as being unduly vague because standard limitations on service do not exist in the utility industry. (See, Pub. Ex. 16, Jacobs Wind Electric Co., p. 17). It is suggested that the word "customary" be inserted in lieu of ithe word "standard" in the rule. The Hearing Examiner finds that the two words are synonyms and that the inclusion of the word "standard" in the rule does not render it impermissibly vague.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section have been adequately demonstrated by the Statement.

I. Varying voltage levels.

This section has been revised in accordance with the Examiner's recommendations.

The Commission's discussion of the need for and reasonableness of this section was reproduced under H above.

The Examiner found that this section was necessary, but would require revision to become reasonable:

Section 3.0462 I. requires that a Qualifying Facility be operated so that variations from "acceptable voltage levels and other service-impairing disturbances" do not adversely affect other utility customers and so that the facility does not produce "undesirable levels of harmonics" in the utility's power supply.

The Commission asserts that § 3.0462 I. is both reasonable and necessary for the reasons discussed in the previous Finding.

A number of utilities suggested embellishment of the language to insert additional operating characteristics on the quality of power provided by the QF. (See, Pub. Ex. 6, NSP, p. 19; Pub. Ex. 10, Minnesota Power, p. 10: and Pub. Ex. 117, MMUA Reply Comments, p. 23).

Jacobs Wind Electric Company testified that the word "undesirable" as modifying levels of harmonics in § 3.0462 I. is impermissibly vague and may be used by a utility as a method of oppression.

The Hearing Examiner finds that the subsection is necessary to establish the responsibility of the QF for the safe operation of its generating capacity in harmony with the electric service provided by the utility to its customers. Such a balancing of interests is inherent in Minn. Stat. § 216B.164, subd. 1 (1981 Supp.).

The Comment of Jacobs Wind Electric Company that the word "undesirable" is impermissibly vague and may be used by a utility to discourage cogeneration and small power production is persuasive. There is no standard in the proposed rule governing when or at what level harmonics become "undesirable". Further, the party that determines undesirability is not identified. What is undesirable to the utility may not be undesirable to another customer or even the Commission. Hence, § 3.0462 I. is unreasonable.

To correct the defect, the Commission should strike the word "undesirable" in the second to last line of § 3.0462 I. and substituted after the word "harmonics" in the same line language substantially similar to the following language suggested by Jacobs Wind Electric Company"

which exceed the prescribed limits of Commission rules or other levels customarily accepted.

(See Pub. Ex. 16, Jacobs Wind Electric Co., p. 17).

The Commission has adopted the change recommended by the Examiner. The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section have been adequately demonstrated. The revision to the section as initially proposed is in the nature of clarification of language which was "impermissibly vague." The Commission concludes that this revision does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

J. Safety.

This section has been revised from the section as initially proposed in accordance with the Examiner's recommendations.

The Statement discussed the section as initially proposed as follows:

> This section is necessary to establish the location of responsibility for safety and protection of equipment owned by the qualifying facility. It reasonably places that responsibility with the qualifying facility, not the utility. It warns a potential owner of the responsibility and suggests investigation of a particular piece of equipment which may be necessary.

The Examiner found that the first sentence of the section as initially proposed was necessary and reasonable, while the second was surplusage:

> Section 3.0462 J. states that a Qualifying Facility shall be responsible for operating its equipment in adherence to all applicable national, state and local codes. The section adds the following advisory statement:
>
> The design and configuration of certain cogeneration and small power production equipment might require an isolation transformer as part of the qualifying facility's installation for safety and protection of the qualifying facility equipment.
>
> The Commission asserts that this subsection is necessary to fix the responsibility for safety and protection of equipment owned by the QF. It states that the section is reasonable in that it places the burden for the protection and maintenance of the equipment on the owner of the equipment who has created any additional resulting risk. Such an allocation of responsibilities is inherent in the legislative intent expressed in Minn. Stat. § 2168.164, subd. 1 (1981 Supp.).
>
> The Hearing Examiner finds that, for the reasons relied upon by the Commission in its Statement of Need and Reasonableness, the first sentence of § 3.0462 J. is both necesssry and reasonable. (See, Statement of Need and Reasonableness, p. 40).
>
> For the reasons stated in Finding 127, supra, however, the Hearing Examiner finds that the advisory statement contained in the second sentence of § 3.0462 J. is either mere surplusage or, if an additional requirement beyond that expressed in the first sentence is meant to be imposed, is impermissibly vague. It contains no statement of conditions under which an isolation transformer may be required of a QF for reasons of safety. The reasonableness of the second sentence of § 3.0462 J. of the proposed rules, therefore, has not been demonstrated by an affirmative presentation of facts in the record.
>
> To correct the defect, the Commission should delete the second sentence of § 3.0462 J.

The Commission has made the revision recommended by the Examiner. The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section as adopted have been adequately demonstrated. The Commission finds that the deletion of the second section of the section as initially proposed does not change the application of the rule, and concludes that this deletion does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

K. Right of appeal for excessive technical requirements.

The Statement contained the following discussion of this section.

The purpose of this provision is to protect the qualifying facility against unreasonable demands of the utility where such demands have the effect of discouraging cogeneration and small power production, and where such demands are not warranted to insure safety, protection of equipment, quality of service, or protection of ratepayers. This provision is necessary to carry out the legislative mandate that disputes must be determined by the Commission.

The Examiner found that it was necessary and reasonable:

Section 3.0462 K. allows the Qualifying Facility to appeal to the Commission if it considers the technical requirements for interconnection imposed by the utility to be unreasonable. Section 3.0462 K. is both necessary and reasonable as a consequence of Minn. Stat. § 216B.164, subd. 5 (1981 Supp.), and as a more specific statement of the Commission's dispute resolution authority contained in § 3.0460.

The Commission adopts the Examiner's findings, and concludes that the need for and reasonableness of this section have been adequately demonstrated by the Statement.

4 MCAR § 3.0463 Existing contracts.

In the Statement, the Commission stated its basis for including a section allowing the reopening of existing cogeneration and small power production contracts as follows:

The Commission is aware that qualifying facilities have begun interconnected operations with utilities around the state, and is aware that contracts have been executed between qualifying facilities and utilities in conjunction with these operations. The Commission has to date received two formal complaints (Docket No. E-002/C-82-117 and E-148/C-81-5486) concerning the terms and conditions of the contracts being offered by the utilities.

All utilities covered by the proposed rules will be required, under 4 MCAR § 3.0452 (D) to file for Commission review and approval all their standard contracts. The Commission will thus approve the form of all contracts to be executed between utilities and qualifying facilities.

The Commission believes it would be unreasonable to create, through inaction, two classes of qualifying facilities: one with unreviewed and unapproved contracts, the other with reviewed and approved contracts. The Commission has previously found that its jurisdiction extends to the provisions of contracts which were privately negotiated between an electric utility and its retail customers. Anoka Electric Cooperative, Docket No. U-75-103 (February 24, 1977). The Commission has scrutinized contractual rate provisions and abrogated provisions it has found to be unlawfully discriminatory, Minnesota Power and Light Company, Docket No. E-015/GR-76-408 (December 18, 1976), or preferential, Minnesota Power and Light Company, Docket No. E-015/GR-77-360 (February 3, 1978).

On appeal of the latter case, the St. Louis County District Court upheld the Commission's right to investigate and, after notice, to abrogate contracts. This provision of the proposed rules is necessary to provide notice to utilities and qualifying facilities that contracts drawn and executed before the effective date of the proposed rules may be replaced with a standard, approved contract under the proposed rules.

It is reasonable to permit either party to reopen a pre-rule contract, since the provisions of the standard, approved contract are as likely to work in favor of one party as the other.

The Commission made no additional remarks on this section in the Comments.

The Examiner found the intent of this section to be retroactive rulemaking. While no participant introduced evidence into the record as to the legal limitations on the Commission's authority in this area, the Examiner found that the Commission has authority to adopt retroactive rules by virtue

of the general rulemaking authority in M.S. § 2168.164, subd. 6. He reasoned that a valid administrative rule has the force and effect of law. When acting in a legislative capacity, Examiner Campbell stated, an agency has the ability, in a fashion parallel to the legislature, to make rules retroactive, absent constitutional impediments, if it is reasonable to do so. He found clear intent in the language of this section to make the rule retroactive, and concluded that the section could be promulgated if it could withstand constitutional challenge.

He reviewed the general constitutional prohibition against the impairment of contracts, and traced the evolution of court review from a strict application of the contract clause of the United States Constitution through the modern interpretation that states may exercise their police powers, even if private contracts are modified or abrogated thereby, when the state's actions serve a legitimate public purpose and are limited to those provisions necessary to achieve that purpose.

Further, he reasoned that a regulatory agency must exercise its ability to abrogate pre-existing contracts in accordance with the limitations on the exercise of such authority with respect to private contracts generally. This would mean that an abrogation must be made upon reasonable conditions and be of a character appropriate to the public purpose justifying its adoption.

The Examiner found that the Commission had failed to present on the record any documentation of the public purpose that it was seeking to achieve through this section. Without a clearly stated public purpose, he was unable to determine if the section would be necessary and reasonable within the constitutional prohibitions he had earlier described.

Examiner Campbell concluded that this section as proposed violated the prohibition in the Minnesota and United States Constitutions against a state adopting a law impairing an existing contract, and recommended that the Commission either strike the section from the rules or reconvene the hearings to provide a record that would support a redrafted section.

Under M.S. § 14.15, subd. 4, and M. S. § 14.16, the Commission has three choices when, as here, a Hearing Examiner finds that the need for and reasonableness of a proposed rule have not been shown. The Commission may take the action recommended by the Examiner to correct the defect, it may modify the rule in a fashion other than that suggested by the Examiner, or it may submit the proposed rule to the Legislative Commission to Review Administrative Rules (LCRAR) for the LCRAR's comments.

The Commission believes both the second and third choices would be inappropriate here. Making changes other than those suggested by Examiner Campbell is unlikely, given the clear and strong position he took in his Report, to result in any change in his position, and would merely cause delay. Submitting the proposed rules to the LCRAR with this section intact would insure that no portion of the rules would go forward until the LCRAR had completed its review. Under M.S. § 14.15, subd. 4, the LCRAR is allowed 30 days for that review. The Commission believes that the subject matter of these rules is too important to unnecessarily delay further.

Within the first choice, the Examiner left two courses of action open to the Commission: delete the section or reconvene the hearings for further support of a redrafted section. The Commission is unwilling at this time to delay the adoption of all the proposed rules by reconvening the hearings, and has therefore deleted this section from the rules as adopted.

The Commission remains concerned with the possible discrimination noted in the Statement. That discrimination, now that the Commission has ceded jurisdiction over non-rate-regulated utilities prior to interconnection, could take two forms. First is the problem of excessively burdensome contractural requirements prior to an initial interconnection. Second is the problem of inter-customer discrimination after an initial interconnection.

On the first problem, the Commission notes its general complaint authority under M. S. § 2168.17. As to cooperative electric associations, M.S. § 2168.17, subd. 6a, authorizes the Commission, upon complaint or upon its own motion, to investigate the cooperative's service standards or practices. The Minnesota Supreme Court reviewed a decision of the Commission regarding the meaning of this subdivision in Beltrami Electric Cooperative v. Minnesota Public Utilities Commission, 319 NW 2nd 52 (1982). The Court faced the question of whether a cooperative's policy on deposits for connecting

mobile homes to electric service was a "rate" as defined in M.S. § 216B.02, subd. 5, or a "service" as defined in M.S. § 216B.02, subd. 6. The Court noted the limiting language of M.S. § 216B.17, subd. 6a, and stated, "A statutory provision enacted to reduce unnecessary bureaucracy in rate-setting does not remove from the Commission the authority to prohibit arbitrary and discriminatory barriers to the provision of service." 319 NW 2nd at 56. The Court found the connection policy to be a condition of service which the Commission could review.

The Commission believes that the provisions of an interconnection contract are similarly conditions of service: the provisions of a contract establishing the terms and conditions under which energy will be bought and sold between a utility and a qualifying facility concern the installation of equipment for delivering and measuring electricity, and can be scrutinized to assure they are not arbitrary and discriminatory barriers to the provision of interconnected service. The Commission would expect to receive complaints from qualifying facilities who felt that initial interconnection contracts offered by non-rate-regulated cooperatives were unreasonable or unjustly discriminatory, and would expect to resolve those complaints under M.S. § 216B.17.

As to municipal electric utilities, M.S. § 216B.17, subd. 6, authorizes the Commission to hear, determine, and adjust complaints concerning rates and services upon petition of ten percent of the non-resident consumers of the municipal utility or 25 such non-resident consumers, whichever is less. Thus, the subject matter over which the Commission has jurisdiction for complaints about a municipal utility is broader and covers the terms and conditions of interconnection, but the circumstances under which the Commission could hear a complaint are more narrow. Only if ten percent of the utility's consumers who live outside the city limits (or 25 of those consumers, whichever is fewer) complain to the Commission about the utility's cogeneration rates or practices could the Commission hear a complaint about an initial interconnection contract.

In addition, the protections of Federal law that require interconnection apply here as well. 16 USC § 824a-3(h)(2)(B) allows a qualifying facility to petition the FERC to enforce its rules or to seek judicial enforcement.

The second problem could arise where a non-rate-regulated utility required an interconnection contract with its first qualifying facility that contained terms contrary to these rules. Once that initial qualifying facility signed the contract and became interconnected with the non-rate-regulated utility, these rules would cover the utility and require that any interconnection contracts signed thereafter not conflict with the rules. In those circumstances, one qualifying facility could have a contract markedly different and, from the qualifying facility's viewpoint, inferior to any and all other qualifying facilities.

Under those circumstances, the Commission would rely upon M. S. § 216B.164, subd. 5, which gives the Commission the ability to resolve disputes between an electric utility and a qualifying facility, and would expect to use as a standard of review the intent of M. S. § 216B.07, which prohibits a public utility from granting an unreasonable preference or advantage to any person or persons or from subjecting any person to any unreasonable prejudice or disadvantage. Such dispute resolution would be on a case-by-case basis.

The Commission is satisfied that these statutory provisions will afford a considerable measure of protection against the potential abuses of initial interconnection. Of course, should this prove not to be the case, and should interconnection of qualifying facilities into the systems of all the state's utilities proceed at a rate slower than the Commission expects to be the case, or should there be an unmanageable number of individual disputes, a rules hearing to amend the adopted rules to add a section dealing with contracts could be convened.

III. MISCELLANEOUS FINDINGS

The Examiner made two miscellaneous findings in his Report in addition to his discussion of the text of the proposed rules.

First, he rejected the suggestion of MMUA that the rules contain a detailed variance provision. He felt that a variance provision would be desirable, but found that MMUA's suggestion would improperly give unfettered discretion to the Commission.

The Examiner incorrectly stated that the Commission's existing rules do not contain a variance provision. On October 26, 1981, at 6 SR 723, the Commission publisned final notice of the adoption of a Variance Rule. That rule, codified as 4 MCAR § 3.0600, now covers variances to all the Commission's rules, and will permit variances to be made to these rules when necessary and appropriate.

Second, the Examiner suggested that the Commission capitalize defined terms within the body of the rules, so as to avoid ambiguity and unnecessary confusion. The Commission agrees that such capitalization would avoid ambiguity and unnecessary confusion, but is unable to adopt the Examiner's suggestion. Under M.S. § 14.07, subd. 2, and M.S. § 14.08, the Revisor of Statutes alone determines the form of agency rules. The Revisor's current style requirements preclude capitalization of defined terms within the text of rules, and the Commission nas no choice but to comply.

ORDER

1. The rules governing cogeneration and small power production, appended hereto as Attachment A, are hereby adopted.

2. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Randall D. Young
Executive Secretary

SERVICE DATE: MAR 7 1983

(S E A L)

Please be advised that the issues to be considered at the hearing may, without further notice, be modified or amended by the hearing examiner during prehearing conferences. Additionally, prehearing conferences may result in the establishment of foundation for witnesses and exhibits and, furthermore, may lead to a settlement of the issues surrounding the University's application for a variance and a State Disposal System Permit.

If no person intervenes as a party and no person appears at the hearing at 9:00 a.m. on June 10, 1980, the variance may be approved and the State Disposal System Permit, as drafted, may be issued by the MPCA. In any event, some time after the close of the hearing, the hearing examiner will submit a report to the MPCA and make a recommendation on the variance and the permit. The MPCA Board will then make the final decision.

Questions concerning the issues raised in the Order or concerning informal disposition or access to information may be directed to Special Assistant Attorney General Dennis M. Coyne, Minnesota Pollution Control agency, 1935 W. County Road B2, Roseville, Minnesota, 55113, (612) 296-7702.

If any person has a good reason for requesting a delay of the hearing, a request must be made in writing to the hearing examiner at least five days prior to the hearing. A copy of the request must be served on all parties.

April 28, 1980

Terry Hoffman
Executive Director

STATE OF MINNESOTA
COUNTY OF RAMSEY

MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of the Application by the City of Winsted for a Variance from WPC 14 (c) (6) for its Existing and Proposed Municipal Wastewater Treatment Facility

NOTICE OF APPEARANCE

Date of Hearing:

Name and Telephone Number of Hearing Examiner:

TO THE HEARING EXAMINER:

You are advised that the party named below will appear at the above-entitled hearing.

Name of Party: _____

Address: _____

Telephone Number: _____

Party's Attorney or Other Representative: _____

Office Address: _____

Telephone Number: _____

Signature of Party or Attorney: _____

Date: _____

NOTE: This Notice of Appearance should only be submitted by persons who have been admitted as parties after filing a Petition to Intervene. Interested persons who wish to make statements without becoming parties need not submit this Notice.

Department of Public Safety
Fire Marshal Division

Notice of Intent to Solicit Outside Opinion Regarding Proposed Revision of the Minnesota Uniform Fire Code (11 MCAR §§ 1.5030-1.5051)

Notice is hereby given that the Department of Public Safety is seeking information, comments, and opinions from sources outside of the department in preparing to draft revisions to the uniform fire code rules. Such rules are authorized by Minn. Stat. § 299F.011.

All interested or affected persons or groups are invited to provide information on this subject until October 1, 1980 by contacting:

Wes Werner
State Fire Marshal
1246 University Avenue
St. Paul, MN 55104

Written statements will be made part of the public hearing record.

Department of Public Service
Public Service Commission

Notice of Intent to Solicit Outside Opinion Concerning Implementation of FERC Cogeneration and Small Power Production Rules

Notice is hereby given that the Minnesota Public Service Commission is seeking information or opinions from outside the commission on appropriate methods for implementation of Federal Energy Regulatory Commission (FERC) rules concerning arrangements between electric utilities and qualifying cogeneration and small power production facilities. The Public Utility Regulatory Policies Act of 1979 (PURPA) required the FERC to establish such rules. PURPA also requires state regulatory authorities, such as the Minnesota Public Service Commission, to implement the rules within one year of their adoption by the FERC.

Background

The intent of PURPA and the FERC rules is to encourage electric power generation by smaller units in order to realize significant resource savings. Cogeneration facilities are capable of producing electricity and other forms of energy with significantly less fuel than

would be needed to produce the two separately. Small power production facilities use biomass, waste, or renewable resources to produce electric power. Reliance on these sources of energy can reduce the need to consume traditional fossil fuels to generate electric power.

The FERC rules provide that electric utilities must purchase electric energy and capacity made available by qualifying cogenerators and small power producers at a rate reflecting the cost that the purchasing utility can avoid as a result of obtaining energy and capacity from these sources, rather than generating an equivalent amount of energy itself or purchasing energy or capacity from other suppliers. To enable potential cogenerators and small power producers to estimate these avoided costs, the rules require electric utilities to furnish data concerning present and future costs of energy and capacity on their systems.

These rules also provide that electric utilities must furnish electric energy to qualifying facilities on a nondiscriminatory basis, and at a rate which is just and reasonable and in the public interest; and that they must provide certain types of service which may be requested by qualifying facilities to supplement or back up these facilities' own generation.

The Minnesota Public Service Commission will host a FERC public informational meeting on the rules for cogeneration and small power production on June 2, 1980, at 1:30 p.m. The meeting will be held in the commission's Large Hearing Room, 7th Floor, American Center Building, Kellogg and Robert, St. Paul. It is anticipated that the meeting will allow for both explanation of the rules by members of the FERC staff, and exploration of methods and problems of implementation by this commission. The deadline for comments—June 9, 1980—has been chosen to encourage commenters to incorporate information from the meeting.

Information Requested

The commission believes outside comment on the procedure for implementation may be as important as comment on the content of rules, tariffs, or other means of implementing the FERC rules. Accordingly, parties are invited specifically to address alternatives (rulemaking, contested case, etc,) which may be available for implementation. In addition, parties are invited to provide comment and opinion on the technical details the commission must address. These details include the appropriate techniques for calculation of avoided costs and interconnection costs, necessary conditions for standard rates, the issues of standard rates for large blocks of sales and for different generation technologies, and appropriate operating reliability standards.

All interested or affected parties or groups are invited to submit written statements or comments by June 9, 1980, addressed to:

Mary L. Harty, Secretary
Minnesota Public Service Commission
7th Floor, American Center Building
Kellogg and Robert Streets
St. Paul, Minnesota 55101

Written material received by June 9, 1980 will become part of the record of any rules hearing held on this subject.

April 28, 1980

Mary L. Harty
Commission Executive Secretary

Department of Public Welfare
Mental Health Bureau

Notice of Intent to Solicit Outside Opinion Concerning Approval of Mental Health Centers and Clinics for Insurance Reimbursement

Notice is hereby given that the Minnesota Department of Public Welfare is drafting a temporary rule, 12 MCAR § 2.029 and, subsequently, a permanent rule, 12 MCAR § 2.029, governing conditions or approval of mental health centers and clinics insurance reimbursement. This notice is to request comments and opinions for the permanent rule. A separate notice will be published in the *State Register* soliciting comments when the proposed temporary rule is published.

These rules, authorized by Minn. Stat. § 245.69 (amended, 1980), govern the conditions under which the commissioner will approve mental health centers and clinics for insurance reimbursement.

The proposed rules will set forth the minimum requirements to qualify for approval such as staffing, peer review of clinical work, and continuing education standards.

All interested or affected persons or groups are requested to participate. Statements of information and comment may be made orally or in writing. Written statements of information and comment may be made to:

Terry Sarazin, Director
Mental Illness Program Division
Fourth Floor, Centennial Building
St. Paul, Minnesota 55155

Oral statements of information and comment will be received during regular business hours over the telephone at (612) 296-2710. The cutoff date for input concerning the permanent rule, 12 MCAR § 2.029, is June 15, 1980.

10. Install flow restrictors on all shower heads.

Information or opinion concerning the subject matter of the proposed rules is hereby requested from all interested individuals or groups. The purpose of the rules is to insure that energy is conserved, the comfort level of the tenant is increased, and that owners and tenants save money from reduced energy consumption.

All interested or affected persons or groups may submit information on this subject. Statements of information and comment may be made orally or in writing. Written comments are preferred. Written or oral information and comment should be addressed to:

Vic Spadaccini, Jr.
State Energy Compliance Coordinator
Minnesota Energy Agency
980 American Center Building
150 East Kellogg Boulevard
St. Paul, Minnesota 55101

Written statements will be made part of the public hearing record.

Department of Public Service
Public Service Commission

Notice of Change of Location and Date of Public Meeting, and Change of Due Date of Comments Concerning Implementation of FERC Cogeneration and Small Power Production Rules

On May 5, 1980, the Minnesota Public Service Commission published a Notice of Intent to Solicit Outside Opinion Concerning Implementation of FERC Cogeneration and Small Power Production Rules (4 S.R. 1743).

Since May 5, the Federal Energy Regulatory Commission (FERC) has rescheduled its public meeting in Minnesota. The meeting is now scheduled to convene at 1:30 p.m. on June 25, 1980, at the Rodeway Inn-Airport, 1321 E. 78th Street, Bloomington, Minnesota. To provide opportunity for commenters to incorporate information from the public meeting, the comment period has been extended to July 3, 1980.

All interested or affected parties or groups are invited to submit written statements or comments by July 3, 1980, addressed to:

Mary L. Harty, Secretary
Minnesota Public Service Commission
7th Floor, American Center Building
Kellogg and Robert Street
St. Paul, Minnesota 55101

Written material received by July 3, 1980, will become part of the record of any rules hearing held on this subject.

May 19, 1980

Mary L. Harty
Commission Executive Secretary

Department of Public Service
Public Service Commission

Notice of Intent to Solicit Outside Opinion Concerning the Adoption of the Automatic Adjustment Clauses Standard Set Forth in Section 115(e) of the Public Utility Regulatory Policies Act of 1978 (PURPA)

Notice is hereby given that the Public Utility Regulatory Policies Act of 1978 (PURPA) Sections 113 and 115(e) require state public utility regulatory authorities, including the Minnesota Public Service Commission, to consider a certain standard concerning automatic adjustment clauses for electric utilities, and to adopt such a standard if appropriate and consistent with state law. Therefore, the Commission is hereby soliciting outside opinion on the appropriateness of the PURPA standard, and the adequacy of PSC 390, 391, 392, 394, and 395.

PURPA Section 113(b) requires the commission to consider this standard: No electric utility may increase any rate pursuant to an automatic adjustment clause unless such clause meets the requirements of Section 115(e).

PURPA Section 115(e) states the following:

115(e) Automatic Adjustment Clauses.—(1) An automatic adjustment clause of an electric utility meets the requirements of this subsection if—

(A) such clause is determined, not less often than every four years, by the State regulatory authority (with respect to an electric utility for which it has ratemaking authority) or by the electric utility (in the case of a nonregulated electric utility), after an evidentiary hearing, to provide incentives for efficient use of resources (including incentives for economical purchase and use of fuel and electric energy) by such electric utility, and

(B) such clause is reviewed not less often than every two years, in the manner described in paragraph (2), by the state

1. Should the State of Minnesota proceed with a study of operating and design safety of Minnesota's nuclear power plants?
2. Is this a good plan of study?
3. What deviations, if any should be made from the Study Plan?
4. What other steps should the State of Minnesota undertake to assess the safety of Minnesota's nuclear power plants?

Therefore, the Committee, in conjunction with the Minnesota Pollution Control Agency staff, has scheduled a public meeting for Monday, September 8 for the purpose of allowing input from the public. The public meeting is scheduled to start at 7:00 p.m. in the Board Room of the Minnesota Pollution Control Agency located at 1935 West County Road B-2, Roseville.

The Committee is requesting that those parties who wish to testify at the public meeting have written copies of their testimony available at the public meeting. However, this is not an absolute requirement and testimony will be heard even if written testimony is not available.

Copies of a summary of the Study Plan will be available for the public when the final Study Plan is completed in the middle of August. If you have any questions on the scheduled public meeting, or if you are interested in reviewing the Study Plan before the public meeting, please contact Tim Scherkenbach of the Minnesota Pollution Control Agency at 296-7236.

August 4, 1980

Public Utilities Commission

Notice of Intent to Solicit Outside Opinion Concerning Implementation of FERC Cogeneration and Small Power Production Rules

Notice is hereby given that the Minnesota Public Utilities Commission is seeking information or opinions from outside the commission on appropriate methods for implementation of the Federal Energy Regulatory Commission (FERC) rules governing arrangements between electric utilities and qualifying cogeneration and small power production facilities. The Public Utility Regulatory Policies Act of 1978 (PURPA) required the FERC to establish such rules. PURPA also requires state regulatory authorities, such as the Minnesota Public Utilities Commission, to implement the rules within one year of their adoption by the FERC.

Background

On Monday, May 5, 1980, the Minnesota Public Utilities Commission (then the Minnesota Public Service Commission) published a Notice of Intent to Solicit Outside Opinion on this subject in the *State Register* (4 S.R. 1743). The time and place of the public meeting were changed, and the comment period extended, by Notice appearing in the *State Register* on May 26, 1980 (4 S.R. 1870).

In response to those notices, comments were received from Owatonna Public Utilities, the cities of Hibbing and Virginia, the Minnesota Public Interest Research Group (MPIRG), and Leland S. Watson.

In its comments, MPIRG noted the difficulties facing both the commission and commenters in engaging in worthwhile discussion without a specific proposal to focus upon. It proposed that the commission publish a synopsis of comments and commission reaction and current thinking on the major issues. Following publication, the commission should hold a public hearing for discussion of the issues. Following that hearing, proposed rules should be drafted and published.

The commission believes the suggestion is a good one, and is expanding upon it in this notice. Along with its summary, the commission is publishing a Staff Discussion Paper for comment. A public meeting to discuss the Paper is scheduled for 9:30 A.M. Wednesday, September 3, 1980 at the Commission's Large Hearing Room, 7th Floor, American Center Building, Kellogg and Robert Streets, St. Paul, MN. In addition, written comments are invited, provided they are submitted by September 12, 1980. The commission will then draft and publish a Proposed Rule.

Summary of July 3, 1980 Comment

Owatonna Public Utilities. The primary concern expressed by Owatonna Public Utilities was that payments for capacity not be excessive. To this end, the comments noted the utility's need for reliability when purchasing capacity. Furthermore, dollar for dollar present payments for avoided future capacity were seen to be unfair to current customers.

Virginia and Hibbing. The cities of Virginia and Hibbing expressed concern that "no rules be implemented which would impair or prejudice their otherwise clear status as 'qualified cogeneration facilities'."

MPIRG. MPIRG felt that, at least in the initial years, metering costs should not be treated as interconnection costs, but as research expenses chargeable to all taxpayers. Other interconnection costs could be amortized over a reasonably long period, or paid at once, at the option of the qualifying facility. Administrative costs associated with a class of cogenerators or small power producers should be spread to all such qualifying facilities; not assigned totally to the first applicant. With respect to capacity costs, MPIRG recommended

payments of the present value of future capacity displacement, with a pro rata share of such payments going to facilities which may not be individually reliable but which, as a group, are capable of providing reliable capacity through diversity. MPIRG presented three alternative rate structures for the required standard rates for qualifying facilities under 100 kilowatts. These included (in order of MPIRG's preference): 1) rates for peak and off peak energy with capacity compensation based on aggregate capacity displaced by facilities of this size; 2) net energy billing (essentially running the meter backward); and 3) net energy billing which varies by time of day. Finally, MPIRG suggested that only qualifying facilities requesting individually assessed capacity displacement payments be required to meet operating reliability standards.

Leland S. Watson. Mr. Watson began his comments with a comprehensive discussion of the benefits of electricity generation through cogeneration and small power production. He then observed that Minnesota's present generation mix of primarily coal and nuclear units yields much lower avoided energy costs than does New Hampshire's primary reliance on oil fired generation. He recommended that the commission encourage cogeneration and small power production at least to the extent they are encouraged by New Hampshire's avoided cost rates. To achieve this encouragement, he made the following recommendations, among others:

First, the commission would semiannually hold hearings and make determinations of the energy and capacity costs associated with a new 200 megawatt coal fired generating plant. These determinations would form the basis for avoided energy and capacity costs of baseload power for Minnesota utilities during the following six months. Second, an on peak energy component should be determined at least quarterly for power supplied on peak. If the power is sufficiently reliable and dispatchable, a capacity component equal to at least 20% of the energy component should be included. Third, no utility with excess coal and/or nuclear generation capacity within its system would be excused from purchasing capacity from qualifying facilities unless it is already purchasing such capacity in an amount equal to at least 20% of its maximum annual peak demand. Finally, utilities would be required to offer long term contracts.

The commission has not formulated its opinions on the appropriate course to take in implementing the FERC rules. The attached Staff Discussion Paper is exactly that, and should not be understood to reflect commission decisions. In writing the paper, staff had in mind three objectives:

1. The rule should not be so complex as to frighten people off;

2. All costs actually avoided should become payments to qualifying facilities, so as to provide maximum encouragement for cogeneration and small power production;

3. Electric utility ratepayers should be made no worse off through the program than they would be without it.

The commission invites comments on the appropriateness of the objectives, as well as on staff's success in achieving them.

All interested or affected parties are invited to submit written statements or comments addressed to:

Randall D. Young, Director
Commission Staff
Minnesota Public Utilities Commission
American Center Building
Kellogg & Robert Streets
St. Paul, MN 55101

Written material received by September 12, 1980 will become part of the record of any rules hearing held on this subject.

Cogeneration and Small Power Production
Staff Discussion Paper

AVAILABLE

In Minnesota

APPLICABLE

To all persons willing and able to enter into an agreement with the utility in Minnesota. Provisions of this rule shall not supersede existing contracts. At the expiration of any existing contract between the utility and a cogenerator or small power producer, any contract extension or new contract shall comply with this rule. Persons who have been awarded the status of "qualifying small power producer" and/or "qualifying cogenerator" pursuant to Section 201 of the Public Utility Regulatory Policies Act of 1978 (16 USC 796) are eligible to apply for service under this rule.

DEFINITIONS

I. "Estimated avoidable energy costs" means the estimated costs to the utility of electric energy which, but for the purchase from a cogenerator or small power producer, the utility would generate itself or purchase from another source. Monthly estimated avoidable energy costs are the average incremental costs of purchases or generation avoidable through purchases from qualifying facilities. These costs are to be determined in blocks of ten (10) megawatt-hours or less and are to be expressed on a cents-per-kilowatt-hour basis for:

A. daily peak estimated avoidable energy costs (averaged over each month),

B. daily off-peak estimated avoidable energy costs (averaged over each month),

C. seasonal peak estimated avoidable energy costs, and

D. seasonal off-peak estimated avoidable energy costs.

II. "Actual avoided energy costs" means the costs which would have been incurred by the utility for electric energy which the utility would have had to generate itself or purchase from another source, had it not purchased the electric energy from a qualifying facility. Actual avoided energy costs shall be expressed on a cents-per-kilowatt-hour basis for:

A. daily peak avoided energy costs (averaged over the month), and

B. daily off-peak avoided energy costs (averaged over the month).

III. "Capacity costs" are the costs associated with providing the capability to deliver energy; they consist primarily of the capital costs of facilities used to generate and transmit electricity.

IV. "Cogeneration facility" is a facility which satisfies the conditions established in 18 CFR Part 292, Section 292.202(c).

V. "Costs of interconnection" means the reasonable costs of connection, switching, metering, transmission, distribution, safety provisions and administrative costs incurred by the utility directly related to the installation and maintenance of the physical facilities necessary to permit interconnected operations with a qualifying facility, to the extent such costs are in excess of the corresponding costs which the utility would have incurred if it had not engaged in interconnected operations, but instead generated 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.

VI. "Demand" means the average rate in kilowatts at which electric energy is delivered during a 15-minute period, or any other period to be determined by mutual agreement between the utility and the customer.

VII. "Energy" means electric energy, measured in kilowatt-hours (kwh).

VIII. "Energy costs" are the variable costs associated with the production of electric energy. They represent the cost of fuel and some operating and maintenance expenses, or the total cost of purchased energy. Identifiable capacity charges included in purchased power agreements shall not be included in the calculation of the cost of purchased energy. Such charges shall, when appropriate, be considered in the determination of capacity costs.

IX. "Interruptible power" means electric energy or capacity supplied by the utility to the cogeneration facility subject to interruption by the utility under certain specified conditions.

X. "Maintenance power" means electric energy or capacity supplied by a utility during scheduled outages of the qualifying facility.

XI. "Purchase" means the purchase of electric energy or capacity or both from a qualifying facility by the utility.

XII. "Qualifying facility" is a facility which satisfies the conditions established in 18 CFR Part 292, Section 292.101(b)(1).

XIII. "Sale" means the sale of electric energy or capacity or both by the utility to a qualifying facility.

XIV. "Small power production facility" means a facility which produces electric energy solely by the use, as a primary energy source, of wind, biomass, waste, renewable resources, or any combination thereof. Only small power production facilities which, together with any other facilities located at the same site (as determined by the Federal Energy Regulatory Commission), have power production capacities of 80 megawatts or less, are covered by this rule.

XV. "Backup power" means electric energy or capacity supplied by the utility to replace energy ordinarily generated by a facility's own generation equipment during an unscheduled outage of the facility.

XVI. "Supplementary power" means electric energy or capacity supplied by the utility which is regularly used by a qualifying facility in addition to that which the facility generates itself.

XVII. "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.

CONDITIONS OF SERVICE

The conditions listed in this paragraph shall apply to all customers served under this schedule.

I. The utility shall purchase energy and/or capacity from any cogenerator or small power producer who offers to sell energy to the utility and agrees to the conditions set forth in this rule.

II. The qualifying facility shall be billed under the applicable residential, general, or industrial service schedule.

III. The qualifying facility shall execute a written agreement with the utility.

IV. The qualifying facility shall comply with the requirements of the National Electrical Safety Code.

V. The qualifying facility shall furnish, install, operate, and maintain in good order and repair and without cost to the utility such relays, locks and seals, breakers, automatic synchronizers, and other control and protective apparatus as shall be designated by the utility as being required as suitable for the operation of the qualifying facility in parallel with the utility system.

VI. Switching equipment capable of isolating the qualifying facility from the utility's system shall be accessible to the company at all times.

VII. At its option, the utility may choose to operate the switching equipment described in (VI) above if, in the sole opinion of the utility, continued operation of the qualifying facility in connection with the utility's system may create or contribute to a system emergency. The utility shall endeavor to minimize any adverse effects of such operation on the customer.

VIII. The qualifying facility shall indemnify and hold harmless the utility from any and all liability arising from the operation and interconnection of the customer's facilities. The qualifying facility shall bear full responsibility for the installation and safe operation of the interconnection facilities.

IX. The utility will provide sufficient data to allow the customer to determine the cost effectiveness of the qualifying facility if it goes into operation under any of the purchase agreements in this rule.

X. Any costs of interconnection incurred due to the interconnection of the qualifying facility, which are over and above the interconnection costs that would be incurred due to the connection of a non-generating customer, shall be the responsibility of the qualifying facility. Interconnection costs may be amortized over a period of time not greater than the length of the contract between the utility and the qualifying facility.

XI. The utility shall offer to provide maintenance, interruptible, supplementary, and back-up power to the qualifying facility.

XII. The utility may discontinue purchases from the qualifying facility if such purchases would contribute to a system emergency.

XIII. The utility may discontinue sales to the qualifying facility during a system emergency, providing that such discontinuance is on a nondiscriminatory basis.

RATES FOR SALES AND PURCHASES

I. For facilities of 100 KW or less capacity, for facilities who would not be demand metered under the applicable rate schedule and for facilities who select Option IIA.

The customer shall be billed for the net energy supplied by the utility according to the applicable rate schedule.

If it can be reasonably predicted that the facility will produce an average net input into the utility's system of 1,000 kwh per month or less on an annual basis, compensation to the customer shall be at the energy rate of the appropriate schedule. If the rate form consists of more than one block, the rate for the last block shall apply. Any net credit to the customer shall, at the customer's option, be rendered to the customer by check within 15 days from the billing date or credited to the customer's account. If it can be reasonably predicted that the facility will produce an average net input into the utility's system of more than 1,000 kwh per month on an annual basis, the rate for all net input into the utility's system shall be calculated according to the estimated avoidable energy costs per kilowatt-hour or the actual avoided energy costs per kilowatt-hour, the choice to be decided by the customer. The decision shall become a provision in the written agreement and may be reconsidered after a period of one calendar year.

In the event that a customer who is demand metered is served under this section due to the size of the facility or the customer's own option, demand charges shall be assessed according to the guidelines in IIB.

II. For installation of greater than 100 KW capacity and for customers who are demand metered.

The customer may select either one of the following options:

OPTION A

The customer may elect to receive service under the conditions outlined in I, above.

OPTION B

The customer may negotiate a contract with the utility. The contract shall explicitly address and resolve each of the issues described below.

A. The customer shall be billed for all energy supplied by the utility according to the applicable rate schedule.

B. Demand charges shall be assessed as follows:

1. Maintenance power: Demand charges for generation during outages for routine maintenance, when such outages are scheduled and occur as agreed upon by contract between the qualifying facility and the utility, shall be ignored when calculating the demand under any applicable rate schedule. Demand charges for back-up facilities shall be negotiated by contract.

2. Interruptible power: Unless a standard rate schedule for interruptible power has been developed, demand charges for interruptible power shall be assessed according to a negotiated contract between the utility and the qualifying facility. The contract shall consider the restrictions, limitations, and prior notice provisions related to the utility's ability to interrupt the customer's power supply.

3. Supplementary power: The demand charge shall be assessed according to the appropriate rate schedule for the highest demand level experienced during the last 12 months in which the customer was served under this schedule. If the customer has been served under this schedule for less than 12 months, the demand charge shall be assessed according to the appropriate rate schedule for the highest demand level experienced while the customer was being served under this schedule or for the highest demand level that the customer can be expected to put on the utility's system. Supplementary power demand charges are subject to the limitations in IIB1.

4. Back-up power

a. The back-up requirement shall be determined on a contractual basis. As long as the customer has been served for less than 12 months under this rule or draws on the back-up requirement 50% or less of the time averaged over the previous 12 months of service, the demand charge shall be assessed as the demand charge from the applicable rate schedule times 50% of the customer's back-up requirement.

b. Any customer who has been served under this schedule for at least 12 months and has drawn on the back-up requirement more than 50% of the time, on average, during the previous 12 months, shall be assessed 100% of the demand charge from the applicable rate schedule during the time that the back-up power is being used by the customer. At other times, the customer shall be assessed 50% of the demand charge from the applicable rate schedule.

All back-up demand charges are subject to the limitations in IIB1.

C. The utility shall reimburse the customer in the following manner:

1. Payments for energy.

The total compensation to the customer shall be the relevant estimated avoidable energy costs or actual avoided energy costs as defined in the Definitions section and as specified in the various provisions of this rule. If the utility determines that purchases from the qualifying facility would result in costs greater than those which the utility would incur if it did not make such purchases, the utility may temporarily cease purchases from the qualifying facility with sufficient notice, as contractually determined.

Energy payments shall be adjusted for the following items if it can be reasonably expected that the customer's facility will produce, on the average, more than 100,000 kwh per month:

a. Line losses. The contract shall take into account the costs or savings resulting from variations in line losses from those that would have existed in the absence of purchases from the qualifying facility, if the utility generated or purchased an equivalent amount of energy.

b. Reasonable scheduling of maintenance at the convenience of the utility.

c. The availability of energy during system daily and seasonal peak periods.

d. The willingness of the customer to provide firm power during system emergencies.

e. The willingness of the customer to allow the utility to dispatch the customer's generated energy at any given time.

f. The historical or predicted reliability of the facility to provide power during the periods described in c through e, above.

g. The sanctions for noncompliance with any contract term.

2. Payments for capacity.

Payments for capacity shall be made in any case in which the customer enters into a legally enforceable agreement to provide capacity that allows the utility to defer a capacity purchase from another source. The payment for the capacity purchase from the customer shall reflect the cost of the utility's alternate source of capacity purchase. A customer who is willing to enter into a legally enforceable contract to provide capacity for at least five years shall be eligible for payment of long-run incremental costs for generation on a prorated basis. The proration shall take into account the following items of information:

a. The length of the contract term.

b. Reasonable scheduling of maintenance.

c. The willingness and ability of the customer to provide firm power during system emergencies.

d. The willingness and ability of the customer to allow the utility to dispatch the customer's generated energy.

e. The willingness and ability of the customer to provide firm capacity during system peaks.

f. The sanctions for noncompliance with any contract term.

g. The date the facility first began providing capacity.

If the qualifying facility contributes to an aggregate capacity value to the utility and the utility is not otherwise purchasing capacity directly from the customer, the energy payments described in Option B, C1 shall be adjusted to reflect the facility's prorated share of any such aggregate capacity value.

Nothing in this rule excuses the utility from carrying out its responsibilities as described in Section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA) or in the rules promulgated pursuant to said Act.

In the event of an impasse in negotiations between the utility and the customer, either party may request a determination of the issue by the commission.

Department of Public Welfare
Department of Health
Department of Public Safety

Notice of Intent to Solicit Outside Opinion Concerning Merit System Rules

Notice is hereby given that the Minnesota Department of Public Welfare (12 MCAR), the Minnesota Department of Health (7 MCAR) and the Minnesota Department of Public Safety (11 MCAR) are considering proposed amendments to those rules affecting their compensation plans and salary schedules.

If adopted, these rule changes will alter the salaries paid to those personnel in agencies under the jurisdiction of the Merit System which have not negotiated a compensation plan with a bargaining unit's exclusive representative. The jurisdiction of the Merit System includes most County Welfare Agencies and Human Services Boards, some County and Local Emergency Services Agencies, and some County and Local Public Health Agencies.

The proposed rule changes are:

12 MCAR § 2.840

7 MCAR § 1.314

11 MCAR § 1.2140

The Minnesota Department of Public Welfare, the Minnesota Department of Health, and the Minnesota Department of Public Safety are also considering proposed amendments to those rules affecting:

(1) salary adjustments for 1981;

(2) holidays.

If adopted, these rules will alter various personnel policies in agencies under the jurisdiction of the Merit System.

The proposed rule changes are:

12 MCAR § 2.516 Salary adjustments and increases.

B. Adjustments to be made in accordance with Merit System Official Compensation Plan.

7 MCAR § 1.260 Salary adjustments and increases.

B. Adjustments to be made in accordance with Merit System Official Compensation Plan.

11 MCAR § 1.2116 Salary adjustments and increases.

B. Adjustments to be made in accordance with Merit System Official Compensation Plan.

12 MCAR § 2.504 Leaves of absence.

B. Minimum policy.

7. Holidays.

7 MCAR § 1.250 Leaves of absence.

B. Minimum policy.

7. Holidays.

Additionally, the Minnesota Department of Public Welfare and the Minnesota Department of Health are considering proposed amendments to those rules affecting their position classification specifications.

All interested or affected persons or groups may submit information on this subject. Written or oral information and comment should be addressed to:

George B. Droubie, Manager
Personnel Licensing and Placement Section
Special Services Division
Minnesota Department of Education
610 Capitol Square Building
550 Cedar Street
St. Paul, Minnesota 55101

All statements of information and comment must be received by November 14, 1980. Any written material received by this date will become part of the record, in the event rules concerning this subject are adopted.

September 19, 1980

Howard B. Casmey, Secretary
State Board of Education

Department of Health
Health Systems Division

Notice of Intent to Solicit Outside Opinions Concerning a Request for A Waiver of HMO Statutes and Rules by Physicians' Health Plan

Notice is hereby given that the Department of Health is seeking opinions and comments pertaining to a request by Physicians' Health Plan for waiver of HMO statutes and rules for its Medicare Supplement Program. Such waivers are authorized for demonstration projects by Minn. Stat. § 62D.30.

The request submitted by Physicians' Health Plan is available for inspection during normal business hours at the following location:

HMO Unit
Room 216
Minnesota Department of Health
Minneapolis, Minnesota 55440

Comments on the application must be received at the HMO Unit by October 20, 1980.

Department of Labor and Industry
Labor Standards Division

Notice of Prevailing Wage Rates for Commercial Construction

On September 29, 1980, the commissioner certified prevailing wage rates for commercial construction for each of the 87 counties in Minnesota.

A copy of the determined wage rates for Minnesota counties may be obtained by writing to the *State Register* and Public Documents Division, 117 University Avenue, St. Paul, Minnesota 55155. The charges for the cost of copying and mailing are $.50 for the first county and $.30 for any subsequent copies of the same or other counties. For all 87 counties, the charge is $25.00. Minnesota sales tax of 4% must be added to all orders.

A check or money order payable to the State of Minnesota must accompany each request.

Harry D. Peterson, Commissioner
Department of Labor and Industry

Public Utilities Commission

Notice of Intent to Solicit Outside Opinion Concerning Implementation of FERC Cogeneration and Small Power Production Rules Docket No. E-999/R-80-560

Notice is hereby given that the Minnesota Public Utilities Commission is seeking information or opinions from outside the commission on appropriate methods for implementation of the Federal Energy Regulatory Commission (FERC) rules governing arrangements between electric utilities and qualifying cogeneration and small power production facilities. The Public Utility

Regulatory Policies Act of 1978 (PURPA) required the FERC to establish such rules. PURPA also requires state regulatory authorities, such as the Minnesota Public Utilities Commission, to implement the rules within one year of their adoption by the FERC.

The commission has previously issued two Notices of Intent to Solicit Outside Opinion on this subject. The second one was published in the *State Register* on August 11, 1980. The notice included a staff discussion paper to help focus comment. It also scheduled a public meeting for discussion on September 3, and requested comment by September 12.

Response to the notice was gratifying. There was good attendance and discussion at the public meeting, and many thoughtful comments were submitted. The commission very much appreciates the assistance it has been given so far.

Nevertheless, some of the comments received raised issues not contained in the staff discussion paper, or advocated positions on issues not assumed in the paper. The commission believes consideration of these points by all interested parties is essential for the commission to draft proposed rules which are truly reflective of the public interest. The purpose of this notice is, therefore, to solicit additional comment particularly related to those items. They are:

1. How will municipal and cooperative utilities be affected by the commission's rules?
2. Should present payments be made when the avoided costs are only in the future? If so, how is the effect on the utility ratepayer different from the practice of allowing Construction Work in Progress (CWIP) in the rate base?
3. Should the commission specify a method of calculating the present value of avoided future costs? If so, how? If not, why not?
4. Should costs of capacity and (or) energy purchased or planned to be purchased from other utilities or from a power pool be considered as costs which may be avoided by purchasing capacity and (or) energy from qualifying facilities?
5. When capacity may be avoided because of the diversity of a group of qualifying facilities, none of which individually can provide sufficiently reliable capacity, should the amount of capacity avoided be calculated based on a reasonable estimate of the number of such qualifying facilities which are likely to be constructed and selling to the affected utility in a specified number of years?
6. Should the commission's rules require qualifying facilities to obtain liability insurance?

All interested or affected parties are invited to submit written statements or comments addressed to:

Randall D. Young, Director
Commission Staff
Minnesota Public Utilities Commission
American Center Building
Kellogg and Robert Streets
St. Paul, MN 55101

Please reference the commission's Docket No. E-999/R-80-560 on submitted materials. Responses received by October 17, 1980 will become part of the record of any rules hearing held on this subject.

For questions or further information, please contact Stuart Mitchell at (612) 296-8662.

Department of Transportation

Petition of Chicago and North Western Transportation Company for Authority to Retire and Remove ICC Tracks Nos. 235, 236, 237, and 238 at St. Louis Park, MN

Notice of Application and of Opportunity for Hearing

Notice is hereby given that the Chicago and North Western Transportation Company, with attorneys at 4200 IDS Center, 80 South 8th Street, Minneapolis, Minnesota 55402, has filed a petition with the Commissioner of Transportation pursuant to Minn. Stat. § 219.741 to retire and remove ICC Tracks Nos. 235, 236, 237, and 238, all located at St. Louis Park, Minnesota.

Any person may file a written objection to the action proposed by the petitioner by means of a letter addressed to the Commissioner of Transportation, Transportation Building, Saint Paul, Minnesota 55155, not later than the date specified below. An objection must be received on or before October 20, 1980. The objection should state specifically how the objector's interest will be adversely affected by the proposed action.

The petition recites among other matters that:

"The subject track is no longer needed for rail transportation service, constitutes a continuing and burdensome maintenance expense, and is an unnecessary safety hazard. The track is not used at the present time, and there is no present prospect that the subject track will be needed in the future. The only shipper, patron or member of the public who might have any interest in the retention of the tracks or facilities, or who has used the same to any substantial degree within the past several years is Burdick Grain Company.

Public Utilities Commission

Notice of Intent to Solicit Outside Opinion Concerning Cogeneration and Small Power Production Rules

Docket No. E-999/R-80-560

Notice is hereby given that the Minnesota Public Utilities Commission is seeking information or opinions from outside the commission on certain elements of a rule to implement the Federal Energy Regulatory Commission (FERC) regulations governing arrangements between electric utilities and qualifying cogeneration and small power production facilities in a manner consistent with Minnesota law.

Since the FERC regulations were promulgated in February of 1980, the commission has published three solicitations of comment and sponsored two public meetings on this topic. As a result of the comment received, and lengthy deliberations, the commission completed a proposed rule in February 1981.

A bill on cogeneration and small power production was introduced in the Minnesota Legislature at almost the exact date on which the commission completed its proposed rule. Upon reviewing the bill, House File 473, the commission determined it could significantly alter what ought to be the content of the proposed rule. Accordingly, the commission suspended its rulemaking pending completion of legislative action. House File 473 was passed as amended, and signed into law by Governor Al Quie on May 17, 1981. It has been codified in Chapter 237, Laws of Minnesota, 1981.

The principal effects of the bill are these: 1) municipal and cooperative utilities become subject to the commission's rules in this area; 2) the net flow of energy during a billing period is to be the basis for billing for qualifying facilities of less than 40 kilowatts; 3) a utility must wheel power if requested by the qualifying facility; and 4) a requirement is established for the commission to report to the Legislature.

The commission is seeking comment primarily on how to accommodate these requirements within its proposed rule. Specifically:

1. What special provisions (if any) are necessary to construct a rule which applies fairly and equally to investor-owned, cooperative, and municipal utilities? (H.F. 473, subd. 2)

2. What metering arrangements should be required? (subd. 3, subd. 7)

3. How should this sentence be interpreted: "In setting these rates, the commission shall consider the fixed distribution costs to the utility not otherwise accounted for in the basic monthly charge and shall ensure that the costs charged to the qualifying facility are not discriminatory in relation to the costs charged to other customers of the utility." What provisions (if any) should be in the rule to accomplish this requirement? (subd. 3)

4. How shall the commission determine wheeling charges and line losses? (subd. 4)

5. What provisions of a rule are required by subd. 4?

6. What reporting requirements should the commission establish to meet its obligations to report to the Legislature in accordance with subdiv. 7?

The Commission is also seeking comment on a recommendation it has received for determining the capacity to be credited to hydroelectirc facilities. The recommendation is that the capacity for which the facility is paid be the sum of that capacity available 85% of the time (presumably 85% of the hours in the year), plus ½ the difference between capacity available 70% of the time and that available 85% of the time, plus ¼ the difference between capacity available 50% of the time and that available 70% of the time (Capacity Credit = $C_{85} + \frac{1}{2}(C_{70} - C_{85}) + \frac{1}{4}(C_{50} - C_{70})$).

1. Should such a provision be part of the rule?

2. Is this an appropriate calculation?

3. Should a similar provision apply to other types of qualifying facilities?

All interested or affected parties are invited to submit written statements or comments addressed to:

Randall D. Young
Executive Secretary
Minnesota Public Utilities Commission
7th Floor, American Center Building
Kellogg and Robert Sts.
St. Paul, MN 55101

Please reference the Commission's Docket No. E-999/R-80-560 on submitted materials. Responses received by August 31, 1981 will become part of the record of any rules hearing held on this subject.

Errata

1. The rules of the Department of Revenue relating to individual income tax and property tax refund, published at 5 S.R. 2060 on Monday, June 22, 1981 contained an error. Rule 13 MCAR § 1.6004 A.3.d.(2) should read as follows:

A.3.d.(2) Business conducted within Minnesota and which has a nexus within Minnesota so that the business is subject to Minnesota income tax would include income or losses from sales within Minnesota and a business dealing in personal and professional services where such services were performed in this state. Trade or business income or loss assignable to Minnesota and earned by a nonresident individual as a proprietorship or partnership which was carried on partly within and partly without Minnesota is subject to the three-factor apportionment formula contained in § 290.19 or apportionment under § 290.20 except for construction business on which the three-factor formula is not permitted. A non-resident individual who has farm income from within Minnesota and from outside of Minnesota may also use the ~~three-factor~~ ~~apportionment formula~~ apportionment formulas contained in § 290.19 and 290.20.

2. At S.R. 2109 (Monday, June 29, 1981), the rule designations EDU 460 and EDU 461 should have been struck out as shown below:

5 MCAR § 1.0460 ~~EDU 460~~ Enrollment.

5 MCAR § 1.0461 ~~EDU 461~~ Credentials.

CERTIFICATE OF BOARD'S

AUTHORIZING RESOLUTION

I, Randall D. Young, do hereby certify that I am a member and the Executive Secretary of the Minnesota Public Utilities Commission, a commission duly authorized under the laws of the State of Minnesota, and that the following is a true, complete, and correct copy of a resolution adopted at a meeting of the Minnesota Public Utilities Commission, duly and properly called and held on the 8th day of February, 1982, that a quorum was present at said meeting, that a majority of those present voted for the resolution and that said resolution is set forth in the minutes of said meeting and has not been rescinded or modified.

> "RESOLVED, that Randall D. Young, Executive Secretary of the Minnesota Public Utilities Commission, be and he hereby is granted the authority and directed to call a hearing for the purpose of promulgating rules of the Commission governing cogeneration and small power production, as well as perform any and all acts incidental thereto, including but without being limited to signing an Order for Hearing and Notice of Hearing as well as acting as or designating other members of the Commission's staff to act as the Commission's representative at all hearings."

IN WITNESS WHEREOF, I have hereunto subscribed my name this 12th day of August, 1982.

Executive Secretary

Attest 8/12/82

PUC Exhibit No. A
File No. PUC-82-063
8/13/82 Date Bdc

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Lillian Warren-Lazenberry	Chairman
Leo G. Adams	Commissioner
Roger L. Hanson	Commissioner
Terry Hoffman	Commissioner
Juanita R. Satterlee	Commissioner

In the Matter of the Proposed Adoption of Rules of the Public Utilities Commission Governing Cogeneration and Small Power Production.	DOCKET NO. E-999/R-80-560 H.E. DOCKET NO. PUC 82-063-8C NOTICE AND ORDER FOR HEARING

Notice is hereby given that public hearings in the above entitled matter will be held by the Minnesota Public Utilities Commission (the Commission) pursuant to Minn. Stat. § 15.0412, Subd. 4, at the following times and locations:

Tuesday, September 7, 1982, 9:00 a.m., Room 123, State Capitol Bldg., Aurora Avenue, St. Paul, MN 55155;

Wednesday, September 8, 1982, 10:00 a.m., Auditorium, Minnesota Valley Regional Library, 100 E. Main St., Mankato, MN 56064;

Wednesday, September 8, 1982, 7:00 p.m., Council Chambers, City Hall, Fourth Ave. and Third St. S.W., Rochester, MN 55901.

Monday, September 13, 1982, 10:00 a.m., Council Chambers, City Hall Annex, 20 Fourth Avenue South, St. Cloud, MN 56301;

Monday, September 13, 1982, 6:00 p.m., County Commissioners Board Room, St. Louis County Courthouse, Fifth Avenue West and First Street, Duluth, MN 55802;

Tuesday, September 14, 1982, 9:30 a.m., Conference Room, City Hall, 420 Pokegama Ave., Grand Rapids, MN 55744;

Tuesday, September 14, 1982, 6:00 p.m., Board Room, Koochiching County Courthouse, 711 Fourth St., International Falls, MN 56649;

Wednesday, September 15, 1982, 1:00 p.m., Conference Room, Polk County Courthouse, 617 North Broadway, Crookston, MN 56716;

Thursday, September 16, 1982, 9:00 a.m., Basement Meeting Room, Government Services Building, 505 South Court St., Fergus Falls, MN 56537;

Friday, September 17, 1982, 9:00 a.m., Community Room, Pipestone County Courthouse Annex, South Hiawatha St., Pipestone, MN 56164;

The hearings will commence at the designated times and continue until all persons or representatives of associations or other interested groups have had an opportunity to be heard concerning adoption of the proposed rules by submitting either oral or written data, statements or arguments.

This rulemaking proceeding is being held pursuant to Minn. Stat. § 216A.05, Subd. 1 and Minn. Stat. § 216B.164, Subd. 6 and arises from the need to promulgate rules to implement Minn. Stat. § 216B.164, certain provisions of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. § 2601 et seq.) and the Federal Energy Regulatory Commission regulations thereunder (18 CFR § 292.101 et seq.).

The purpose of the proceeding is to determine the need for and reasonableness of the proposed rules as well as allowing the Commission the opportunity to obtain additional public input on the form and content of the proposed rules.

The hearings will be held before Hearing Examiner Bruce Campbell, Office of Administrative Hearings, 400 Summit Bank Building, 310 South 4th Ave., Minneapolis, Minnesota 55415, telephone (612) 341-7602, a Hearing Examiner appointed by the Chief Hearing Examiner of the State of Minnesota.

All parties have the right to be represented by legal counsel, by themselves, or any other representative of their choice, if not otherwise prohibited as the unauthorized practice of law. The hearings will be conducted in accordance with the applicable laws relating to the Commission, the Administrative Procedures Act (Minn. Stat. §§ 15.0411 through 15.0417 and 15.052), the Rules of the Office of Administrative Hearings (9 MCAR §§ 2.101 through 2.113), and the Rules of Practice of the Commission (Minn. Reg. PSC 500 through 521), to the extent that they have not been superseded by the Rules of the Office of Administrative Hearings.

The above-cited procedural rules are available for inspection at the Office of Administrative Hearings and the Public Utilities Commission or may be purchased from the State Register & Public Documents Division of the Department of Administration, 117 University Ave., St. Paul, Minnesota 55155, telephone (612) 297-3000.

The cited procedural rules provide generally for the procedural rights and obligations including the right to present evidence and cross examine witnesses, the right to purchase a record or transcript, and the obligation to meet certain time limits.

The hearings will address issues pertaining to terms, conditions, rates for purchases, rates for sale, and interconnection specifications and procedures for cogeneration and small power production facilities. A cogeneration facility uses heat of combustion to produce both electricity and useful heat or mechanical energy. A small power plant production facility generates electrical energy from renewable resources (hydro, wind, solar, biomass, etc.) A topical outline of the rules is as follows:

4 MCAR § 3.0450	Scope and Purpose
4 MCAR § 3.0451	Definitions
4 MCAR § 3.0452	Filing Requirements
4 MCAR § 3.0453	Reporting Requirements
4 MCAR § 3.0454	Conditions of Service
4 MCAR § 3.0455	Rates for Sales
4 MCAR § 3.0456	Standard Rates for Purchases
	(A) Net Energy Billing
	(B) Simultaneous Purchase and Sale
	(C) Time of Day Purchase Rates
4 MCAR § 3.0457	Negotiated Rates for Purchases
4 MCAR § 3.0458	Utility Treatment of Costs
4 MCAR § 3.0459	Wheeling and Exchange Agreements
4 MCAR § 3.0460	Disputes
4 MCAR § 3.0461	Notification to Customers
4 MCAR § 3.0462	Interconnection Guidelines
4 MCAR § 3.0463	Existing Contracts

The proposed rules appear in their entirety in the STATE REGISTER, VOLUME 6, NUMBER 39, March 29, 1982, pages 1640-1648.

Any interested person will be provided with one copy of the proposed rules without charge upon request to Howard D. Swanson, 780 American Center Bldg., 150 East Kellogg Boulevard, St. Paul, Minnesota 55101, telephone number (612) 296-0863. Additional copies will be available at the hearings.

The adoption of this rule by the Commission will require the expenditure of monies by Minnesota municipal electric utilities. Minnesota Statutes § 15.0412, subd. 7 requires that a fiscal note accompany this notice if the total cost to all public bodies in the State to implement the rule for the two years immediately following adoption of the rule exceeds $100,000 in either year. The Commission estimates that the total cost to implement this rule incurred by Minnesota municipal electric utilities to be $600,000.00.

In the interest of efficiency, the Commission requests that any person having comments on or objections to any part of the proposed rules submit their comments or objections to the Commission (attention Randall D. Young, Executive Secretary, Docket No. E-999/R-80-560) and to Hearing Examiner Campbell as soon as possible and preferably prior to September 7, 1982. Any such comments or objections should:

state concisely and with particularity each portion of the proposed rules that the author supports or objects to;

state the basis for the author's support or objection; and

state any proposed modifications to the proposed rules, the author's reasons for those modifications, and the basis for those modifications.

Failure to submit such comments or objections prior to the hearings will not prohibit any person from submitting written or oral statements on the record at the hearings.

Notice is hereby given that 25 days prior to the hearing, a Statement of Need and Reasonableness will be available for review at the Commission offices and at the Office of Administrative Hearings. This Statement of Need and Reasonableness will include a summary of all the evidence and argument which the Commission anticipates presenting at the hearing justifying both the need for and the reasonableness of the proposed rules. Copies of the Statement of Need and Reasonableness may be obtained from the Office of Administrative Hearings at a minimal charge.

All persons are advised that no factual information or evidence which is not part of the hearing record shall be considered by the Hearing Examiner or by the Commission in the determination of the above-cited matter. Persons attending the hearings should bring all factual information and evidence bearing on the case which they wish to have included in the record.

At the hearings, the Commission will, through its staff's written and oral testimony, explain the proposed rules and the Commission's reasons for proposing them. Copies of any written testimony and the Statement of Need and Reasonableness will be available at the hearings.

Upon completion of the Commission's presentation, interested persons will be given an opportunity to address questions to the Commission's staff and to submit written and oral statements. It is the Commission's intent and desire that after its staff has completed its presentation, comments and statements be received from interested persons before proceeding to questioning. An opportunity to question the Commission's staff will be afforded all persons upon completion of the exchange of information and comments.

Interested persons who wish to make statements may do so by responding to the Commission's presentation or by offering new information. In addition, interested persons may request the Commission's staff to provide further explanations of any portion of the proposed rules if the persons are unclear about the Commission's reasons. All persons making oral statements are subject to questioning by the Commission's staff.

The Commission will respond, in so far as possible, at the hearings to objections and questions presented at the hearings by interested persons. Interested persons may respond with oral or written statements to any new information presented by the Commission. The Commission may respond to objections or comments in writing after the close of the hearings.

Written material may be submitted and recorded in the hearing record for five working days after the conclusion of the public hearings. Such a comment period may be extended for a period not to exceed 20 calendar days if so ordered by the Hearing Examiner.

Notice: Any person may request notification of the date on which the Hearing Examiner's Report will be available, after which date the Commission may not take any final action on the rules for a period of five working days. Any person may request notification of the date on which the hearing record has been submitted (or resubmitted) to the Attorney General by the Commission. If you desire to be so notified, you may so indicate at the hearing. After the hearing, you may request notification by sending a written request to the Hearing Examiner (in the case of the Hearing Examiner's Report), or to the Commission (in the case of the Commission's submission or resubmission to the Attorney General).

All persons are advised that the proposed rules may be modified as a result of the hearing process.

Questions concerning the content or form of the above-entitled rules should be directed to Stuart Mitchell, 780 American Center Bldg., 150 East Kellogg Boulevard, St. Paul, Minnesota 55101, telephone (612) 296-8662. Any questions concerning the conduct of the hearings should be directed to the assigned Hearing Examiner.

Minn. Stat. Ch. 10A requires each lobbyist to register with the State Ethical Practices Board within five days after he or she commences lobbying. A lobbyist is defined in Minn. Stat. § 10A.01, subd. 11 as any individual:

> (a) Engaged for pay or other consideration, or authorized by another individual or association to spend money, who spends more than five hours in any month or more than $250, not including his own travel expenses and membership dues, in any year, for the purpose of attempting to influence ligislative or administrative action by communicating or urging others to communicate with public officials; or
>
> (b) Who spends more than $250, not including his own traveling expenses and membership dues, in any year for the purpose of attempting to influence legislative or administrative action by communicating or urging others to communicate with public officials.

The statute provides certain exceptions. Questions should be directed to the Ethical Practices Board, 41 State Office Building, St. Paul, Minnesota 55155, telephone (612) 296-5615.

ORDER

1. Hearings shall be held in this proceeding as listed herein.

2. A copy of this Order shall be mailed to all persons who have registered their names with the Commission for that purpose.

3. A copy of this Order and of the proposed rules shall be published in the State Register.

4. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Randall D. Young
Executive Secretary

SERVICE DATE: JUL 12 1982

(S E A L)

PUC Exhibit No. C
File No. PUC-82-063BC
BBC Date 8-12-82

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Lillian Warren-Lazenberry	Chairman
Leo G. Adams	Commissioner
Roger L. Hanson	Commissioner
Terry Hoffman	Commissioner
Juanita R. Satterlee	Commissioner

In the Matter of the Proposed Adoption of Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production

AFFIDAVIT OF MAILING

Docket No. E-999/R-80-560
H.E. Docket No. PUC-82-063-BC

Howard D. Swanson, being first duly sworn on oath, deposes and says:

That on the 30th day of July, 1982, at the City of St. Paul, County of Ramsey, State of Minnesota, he served the attached Notice and Order for Hearing by depositing in the United States mail at the City of St. Paul, a true and correct copy thereof, properly enveloped, with postage prepaid, to all persons and associations at the address listed upon the attached mailing lists maintained by the Commission for the purpose of providing notice of rules proceedings.

Howard D. Swanson

Mary E. Swanson

Subscribed and sworn to before me
this 30th day of July, 1982.

MARY E. SWANSON
NOTARY PUBLIC—MINNESOTA
RAMSEY COUNTY
MY COMMISSION EXPIRES FEB. 8, 1983

PERSONS INTERESTED
IN MORE THAN ONE TYPE
OF RULE HEARING-PAGE ONE

Marvin J. Johnson G,E,T
718 N. Highway
Jackson, MN 56143

Burlington Northern Inc.
Law Department
176 East Fifth Street
St. Paul, MN 55101
E,TR

Wendy Borsheim G,E,T
MN Retail Merchants Assn.
180 Metro Square Building
St. Paul, MN 55101

C. Wayne Fox G,E
Montana-Dakota Utilities Co.
400 No. Fourth Street
Bismark, N.D. 58501

Loren I. Reid, Supt. G,E
Light and Power Commission
Municipal Electric Plant
305 Eleventh Street East
Glencoe, MN 55336

John G. Horner G,E
MN Multi Housing Assn.
3100 West Lake Street
Minneapolis, MN 55416

Hutchinson Utilities Comm.
225 Michigan Street
Hutchinson, MN 55350
G.E

E.A. Schroedermeier G,E,T
Minnegasco
733 Marquette Avenue
Minneapolis, MN 55402

State Regulatory Division
Federal-State Reports, Inc.
5203 Leesburg Pike, Suite 120
Falls Church, VA 22041
G,E,T

City Clerk's Office E,TR
444 Ninth Street
Windom, MN 56101

G.J. O'Brien, Secty.
North Central Public Service Co.
1080 Montreal Avenue
St. Paul, MN 55116
G,E

Philip W. Getts G,E,T
Dayton, Herman, Graham & Getts
Suite 930, Ten South Fifth St.
Minneapolis, MN 55401

Al Ross E,T,TR
6356 Ware Road
Lino Lakes, MN 55014

R.G. Kirkham, Exec. Dir.
MN Municipal Utilities Assn.
P.O. Box B
10 Central Avenue
Buffalo, MN 55313 G,E

Metropolitan Senior Federation
1951 University Avenue
St. Paul, MN 55104
G,E,T

M.D. Olson G,E
Vice President, Com'l. Ops.
Northern States Power Co.
414 Nicollet Mall
Minneapolis, MN 55401

Ted C. Odenwald, G.M.
Municipal Utilities Comm.
P.O. Box 937
Willmar, MN 56201
G,E

Penny McCarren
St. Paul Area Chamber of Comme
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445 Minneaota Street
St. Paul, MN 55101 G,E

Lyon-Lincoln Elect. Coop.
Box 639, W. Highway 14
Tyler, MN 56178
E,TR

N.E. Dietrich, Supt-G.M.
Austin Utilities
P.O. Box 368
Austin, MN 55912 G,E

Clement F. Springer, Jr.
39 South LaSalle, Room 1120
Chicago, Ill. 60603
G,E

Menno Mennenga G,E
14 North Marshall Avenue
Sprinffield, MN 56087

Virgil C. Anderson G,E
Mora Municipal Utilities
16 North Lake Street
Mora, MN 55051

R.L.Leach, Mgr.-Rate Dept.
Interstate Power Company
1000 Main Street
Dubuque, Iowa 52001 G,E

D.H. Logue, Supt. of Utilities
130 Second Avenue NW
Sleepy Eye, MN 56085
G,E

President G,E
Interstate Power Company
1000 Main Street
Dubugue, Iowa 52001

Matilda Howard G,E,T
222 Grain Exchange Building
323 Fourth Avenue
Minneapolis, MN 55415

Norm Schroeder, City Admin.
611 Iowa Avenue
Staples, MN 56479 E,TR

Michael D. Casper G,E,TR
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R.A. Forbes G,E
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Minneapolis, MN 55402

Jeff Baill, Esq.
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~~Mr. Leonard Erickson~~
~~Energy Engineer~~
~~Boise Cascade Corp.~~
~~International Falls, MN 56649~~

Izaak Walton League of Amer.
Minnesota Division
111 E. Franklin Ave., #200
Minneapolis, MN 55404

BURT Associates
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Columbus, Ohio 43214

Michael J. Ahern
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Minneapolis, MN 55402

Mr. Leonard Erickson
Energy Engineer, Paper Group
Biose Cascade Corp.
International Falls, MN 56649

Kay Bonner Nee
219 Logan Pkwy.
Fridley, MN 55432

City of Warren
126 West Johnson
Warren, MN 56762

Jerry Neppel
E. Grand Forks Water & Light
Box 480
East Grand Forks, MN 56721

D. H. Thomsen
Burlington Northern, Inc.
Room 1200, 176 E. 5th St.
St. Paul, MN 55101

Harold Steppuhn
P.O. Box 218
Princeton, MN 55371

Tom Hedges
3795 Pilot Knob Road
Eagan,MN 55122

PERSON INTERESTED IN
MORE THAN ONE TYPE OF RULES
HEARING, PAGE TWO

Judy Karon G,E
Ransey County Board
316 Court House
St. Paul, MN 55102

Peggy Moody G,E
309 Sibley Street
St. Paul, MN 55101

Garfield E. Lovaas
200 South Fifth Street
Room 1800
Minneapolis, MN 55402
G,E,T

Family Service of the St. Croix Area
Jo Ann Ford, MSE
216 Myrtle Street
Stillwater, MN 55082 G,E,T

Ottertail-Wadena Community Action Council
Box L
New York Mills, MN 56567
G,E

Peter J. McLaughlin
Urban Coalition of Minneapolis
39 South Tenth Street
Minneapolis, MN 55403
G,E,T

Kenvin C. Jones G,E
George A. Hormel & Company
P.O. Box 800
Austin, MN 55912

WAKX AM-FM G,E,T
119 West Michigan Street
Duluth, MN 55802

Spencer Blaw G,E
St. Paul Tenants' Union
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St. Paul, MN 55102

Richard O. Johnson G,E,T
3457 Columbus Avenue South
Minneapolis, MN 55420

Gerald L. Mahon, Dir. Water Util.
City Hall
St. Cloud, MN 56301
G,E

City of Rosemount G,E,T
P.O. Box 455
Rosemount, MN 55068

City Administrator,
City of Maple Grove
9401 Fernbrook Lane
Maple Grove, MN 55369
E,T

Kenneth L. Gebert
300 Public Health Building
250 South Fourth Street
Minneapolis, MN 55415
E,T

W.C. Viitala, Dir. of Pub Aff.
Honeywell, Inc.
Honeywell Plaza MN12-5215
Minneapolis, MN 55408
E,TR

W. John Licke, Genl. Counsel
Blandin Paper Company
114 First Street SW
Grand Rapids, MN 55744
G,E,TR

A.L. Pooler G,E
Minnegasco
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Minneapolis, MN 55402

Joseph A. Vumbaco, P.E.
19th Street & Sixth Avenue
Hibbing, MN 55746
G,E

Roger L. Herdt G,E,T
Director of Govt. Affairs
United Telephone Company
850 NW National Bank Bldg.
St. Paul, MN 55101

Minnesota LP Gas Assn.
7515 Wayzata Blvd.- Suite 101
Minneapolis, MN 55426

Roy H. Berglund
VP of Commercial Operations
Northern States Power
414 Nicollet Mall G, E
Minneapolis, MN. 55401

Roy Munson G,E,T
2387 University Avenue
St. Paul, MN 55114

James D. Miller G,E,T
2412 University Avenue SE
Minneapolis, MN 55414

Berdette Boyum G,E
Room 300, Public Health Cente
250 South Fourth Street
Minneapolis, MN 55415

David J. Therkelsen G,E
100 South Robert Street
St. Paul, MN 55107

Lawrence C. Ware, Genl. Mgr.
Garden Valley Telephone Co.
Erskine, MN 56535
E,T

Elizabeth Schmidt, City Clerk
1015 Second Avenue
Mountain Lake, MN 56159
G,E,T

Winfield Foroberg T,TR
518 Summit Avenue
New Ulm, MN 56073

Michael L. Johnson T,TR
117 West Fifth Street
Blue Earth, MN 56013

PERSONS REQUESTING NOTICE
OF ELECTRIC RULE HEARINGS-PAGE 1

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PUC Exhibit No. D
File No. PUC-82-063BC
Bde Date 8-12-82

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Lillian Warren-Lazenberry	Chairman
Leo G. Adams	Commissioner
Roger L. Hanson	Commissioner
Terry Hoffman	Commissioner
Juanita R. Satterlee	Commissioner

In the Matter of the Proposed Adoption of Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production	AFFIDAVIT OF ADDITIONAL NOTICE Docket No. E-999/R-80-560 H.E. Docket No. PUC-82-063-BC

Howard D. Swanson, being first duly sworn on oath, deposes and says:

That on the 30th day of July, 1982, at the City of St. Paul, County of Ramsey, State of Minnesota, he served the attached Notice and Order for Hearing by depositing in the United States Mail at the City of St. Paul, a true and correct copy thereof, properly enveloped, with postage prepaid, to all persons and associations at the addresses listed upon the attached mailing list for the purpose of discretionary notice pursuant to M. S. § 15.0412, subd. 4.

Howard D. Swanson

Mary E. Swanson

Subscribed and sworn to before me
this 30th day of July, 1982.

MARY E. SWANSON
NOTARY PUBLIC—MINNESOTA
RAMSEY COUNTY
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Clear Lake, SD 57226

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Boise Cascade Corporation
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PUC Exhibit No. B
File No. PUC-82-063BC
Bde Date 8-12-82

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Lillian Warren-Lazenberry	Chairman
Leo G. Adams	Commissioner
Roger L. Hanson	Commissioner
Terry Hoffman	Commissioner
Juanita R. Satterlee	Commissioner

In the Matter of the Proposed Adoption of Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production	AFFIDAVIT OF ACCURACY AND COMPLETENESS OF MAILING LIST Docket No. E-999/R-80-560 H.E. Docket No. PUC-82-063-BC

Howard D. Swanson, being first duly sworn on oath deposes and says:

1. That he is an employee of the Minnesota Public Utilities Commission.

2. That he is responsible for maintaining the mailing lists of persons who have requested notice of rules proceedings under M. S. § 15.0412, subd. 4.

3. That on the 30th day of July, 1982, he reviewed the mailing lists containing the names of those persons who had requested notice of rules proceedings on all rules and on rules concerning electric matters, and found those lists to be accurate and complete as of that date.

4. That those mailing lists were used to provide notice to persons who had requested such notice.

5. Further, affiant saith not.

Howard D. Swanson

Mary E. Swanson

subscribed and sworn to before me
this 30th day of July, 1982.

MARY E. SWANSON
NOTARY PUBLIC—MINNESOTA
RAMSEY COUNTY
MY COMMISSION EXPIRES FEB. 5, 1986

RECEIVED

JAN 3 1983

MINNESOTA PUBLIC UTILITIES COMMISSION

HE Report

PUC-82-063-BC

E-999/R-80-560

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of the Proposed Adoption of New Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production.

REPORT OF THE CHIEF HEARING EXAMINER

The above-entitled matter came on for review by the Chief Hearing Examiner pursuant to the provisions of Minn. Stat. § 15.0412, subd. 4d (1980) which provides in part:

> If the [hearing examiner's] report contains a finding that the proposed rule is substantially different from that which was proposed at the public hearing, or that the agency has not met the requirements of section 15.0412, subdivisions 4 through 4f, it shall be submitted to the chief hearing examiner for approval. If the chief hearing examiner approves the finding of the hearing examiner, he shall advise the agency of actions which will correct the defects, and the agency shall not adopt the rule until the chief hearing examiner determines that the defects have been corrected. If the chief hearing examiner determines that the need for and reasonableness of the rule has not been established pursuant to subdivision 4, clause (c), and if the agency does not elect to follow the suggested actions of the hearing examiner to correct that defect, then the agency shall submit the proposed rule to the legislative commission to review administrative rules for the commission's advice and comment. The agency shall not proceed to adopt the rule until it has received and considered the advice of the commission; provided, that the agency is not required to delay adoption longer than 30 days after the commission's receipt of the agency's submission.

Based upon a review of the record in this proceeding, the Chief Hearing Examiner hereby approves the Report of the Hearing Examiner in all respects and specifically as to any finding of substantial change or of failure to comply with Minn. Stat. § 15.0412, subd. 4-4f (1980) or of failure to establish need for and reasonableness of the proposed rule.

In order to correct the defects enumerated by the Hearing Examiner, the agency shall either take the action recommended by the Hearing Examiner or reconvene the rule hearing if appropriate. If the agency chooses to reconvene the rule hearing, it shall do so as if it is initiating a new rule hearing, complying with all substantive and procedural requirements imposed on the agency by law or rule.

If the agency chooses to take the action recommended by the Hearing Examiner, it shall, prior to submitting the rules to the Attorney General for review, submit to the Chief Hearing Examiner a copy of the rules as initially published in the State Register, a copy of the rules as proposed for final adoption in the form required by the State Register for final publication, and a copy of the agency's Findings of Fact and Order Adopting Rules. The Chief Hearing Examiner will then make a determination as to whether the defects have been corrected and whether the modifications in the rules are substantial changes.

Should the agency make changes in the rules other than those recommended by the Hearing Examiner, it shall also, prior to submitting the rule to the Attorney General, submit the complete record to the Chief Hearing Examiner for a review in regard to substantial changes.

Dated: January 3, 1983.

DUANE R. HARVES
Chief Hearing Examiner

M E M O R A N D U M

While the Hearing Examiner's Report is being approved, there are several findings in that Report which require further discussion.

Minn. Stat. § 15.0412 does not allow the Chief Hearing Examiner to insert his own "negative" findings but requires an approval or disapproval only together with a statement of actions which will correct the defects. In the findings, while I am in agreement with the end result, it is necessary to point out that there are additional legality problems with the rules which, if left unchanged, will result in the rules being rejected by the Attorney General.

In Finding 25, the phrase "under certain specified conditions" is found to be impermissibly vague. In Finding 72, the word "reasonable" is found to lack specificity. In both instances, the Hearing Examiner has found that the rules are unreasonable. Rules must be specific and may not grant unfettered discretion to the agency. Rules which do not meet this test are not legal as they fail to comply with a substantive requirement imposed on the agency by law, the requirement of specificity. I have approved the findings on the basis that an illegal rule is also unreasonable.

Finding 72 also presents the question of "substantial change". As first proposed, the rule prohibited a utility from requiring a QF from carrying insurance. As now proposed for adoption, the rule mandates insurance coverage. In other words, it is now exactly the opposite of what was proposed. As such, the fundamental or basic thrust of the rule has been reversed. The Examiner has found that this change is not a "substantial change" requiring a new notice and hearing. I disagree but am without authority to change this "affirmative" finding. However, the question of "substantial change" is a legality problem. Just because the Hearing Examiner has ruled that a change in a rule is not a "substantial change" does not preclude the Attorney General from rejecting the rule if he disagrees. The Agency should keep this factor in mind when proceeding furthr with its rules.

Finally, while Finding 139 is approved and the Agency directed to take the action described in Finding 140 to correct the defect, no inference should be drawn on the question of retroactivity of rules, at least from this Report. Minn. Stat. § 15.0411, subd. 3, defines "rule" as "every agency statement of

general applicability and future effect . . ." (Emphasis added). That statement, coupled with the fact that no rule is effective until five days after publication in the State Register, leads me to the conclusion that, absent some other specific statutory authority granted to the agency allowing retroactivity, it would not be legal.

D.R.H.

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MINNESOTA PUBLIC
UTILITIES COMMISSION

PUC-82-063-BC

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of the Proposed Adoption of New Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production.

REPORT OF THE HEARING EXAMINER

The above-entitled matter came on for hearing before State Hearing Examiner Bruce D. Campbell as follows: September 7, 1982 - Room 123, State Capitol Building, Aurora Avenue, St. Paul, Minnesota at 9:00 a.m.; September 8, 1982 - Auditorium, Minnesota Valley Regional Library, 100 E. Main Street, Mankato, Minnesota at 10:00 a.m. and City Council Chambers, City Hall, Fourth Avenue and Third Street S. W., Rochester, Minnesota at 7:00 p.m.; September 13, 1982 - at Council Chambers, City Hall Annex, 24th Avenue South, St. Cloud, Minnesota at 10:00 a.m. and County Commissioners Boardroom, St. Louis County Courthouse, Fifth Avenue West and First Street, Duluth, Minnesota at 6:00 p.m.; September 14, 1982 - Conference Room, City Hall, 420 Pokegama Avenue, Grand Rapids, Minnesota at 9:30 a.m. and Boardroom, Koochiching County Courthouse, 711 Fourth Street, International Falls, Minnesota at 6:00 p.m.; September 15, 1982 - Conference Room, Polk County Courthouse, 617 N. Broadway, Crookston, Minnesota at 1:00 p.m.; September 16, 1982 - Basement Meeting Room, Government Services Building, 505 S. Fourth Street, Fergus Falls, Minnesota at 9:00 a.m.; and September 17, 1982 - Community Room, Pipestone County Courthouse Annex, South Hiawatha Street, Pipestone, Minnesota at 9:00 a.m.

This Report is a part of the rule hearing procedure required by Minn. Stat. §§ 15.0411 - 15.0417 and 15.052 to determine whether the proposed rules governing cogeneration and small power production should be adopted by the Minnesota Public Utilities Commission (Commission).

Members of the Agency panel appearing at the hearing included: Stuart Mitchell, member of Commission Staff; Paul Schweizer, member of Commission Staff; Howard Swanson, Intern; and Karl Sonneman, Special Assistant Attorney General, representing the Commission. No witness outside the Agency was solicited to appear on behalf of the Commission.

Three-hundred-eleven people signed the hearing registers at the various public hearings. Some persons, however, appeared and spoke at more than one of the public hearings. One hundred-thirty-four public witnesses appeared and spoke at the hearings held herein. The Department submitted written exhibits numbered Agency exhibits A through J. One hundred-nineteen timely filed written exhibits were received from members of the public.

The Chief Hearing Examiner, acting pursuant to his statutory authority, has extended the time for the filing of this Report of the Hearing Examiner and this Report was issued by the Hearing Examiner within the date thereby fixed for the issuance of this Report.

The Commission must wait at least five working days before taking any final action on the rules; during that period, this Report must be made available to all interested persons upon request.

Pursuant to the provisions of Minn. Stat. § 15.0412, subd. 4d (1980), this Report has been submitted to the Chief Hearing Examiner for his approval. If the Chief Hearing Examiner approves the findings of this Report, he will advise the Commission of actions which will correct the defects and the Commission may not adopt the rule until the Chief Hearing Examiner determines that the defects have been corrected. However, in those instances where the Chief Hearing Examiner identifies defects which relate to the issues of need or reasonableness, the Commission may either adopt the Hearing Examiner's recommendations to cure the defects or, in the alternative, if the Commission does not elect to adopt the recommendations, it may submit the proposed rule to the Legislative Commission to Review Administrative Rules for the Commission's advice and comment. Provisions relating to this submission to the Commission may be found in Minn. Stat. § 15.0412, subd. 4d (1980).

If the Commission elects to adopt the recommendations of the Hearing Examiner and makes no other changes and the Chief Hearing Examiner determines that the defects have been corrected, then the Commission shall submit the rule to the Attorney General for review of form and legality. If the Commission makes changes in the rule other than those recommended by the Hearing Examiner, then it shall submit the rule, with the complete record, to the Chief Hearing Examiner for a review of the changes before adopting it and submitting it to the Attorney General. Procedures relating to this subsequent review by the Chief Hearing Examiner are set forth in Minn. Stat. § 15.0412, subd. 4e (1980).

When the Commission submits the rule to the Attorney General, it shall give notice on the day of submission to all persons who requested that they be informed of the submission to the Attorney General.

Based upon all the testimony, exhibits and written comments, the Hearing Examiner makes the following:

FINDINGS OF FACT

Procedural Requirements

1. On March 16, 1982, the Commission filed the following documents with the Chief Hearing Examiner:

   (a) A copy of the proposed rules;
   (b) The Order for Hearing;
   (c) The Notice of Hearing proposed to be issued; and
   (d) A Statement of the number of persons expected to attend the hearing and the estimated length of the Agency's presentation.

2. On March 29, 1982, a Notice of Hearing and a copy of the proposed rules were published at 6 State Register 1637.

3. On July 26, 1982, a Revised Notice of Hearing was published at 7 State Register 114.

4. On July 30, 1982, the Commission mailed the Notice of Hearing to all persons and associations who had registered their names with the Commission for the purpose of receiving such notice.

5. On August 12, 1982, the Commission filed with the Hearing Examiner the following documents:

   (a) The Notice and Order for Hearing as mailed;.
   (b) The Commission's certification that its mailing lists were accurate and complete;
   (c) The Affidavit of Mailing of the Hearing Notice to all persons registered with the Commission for purpose of receiving such notice;

(d) The Statement of additional Notice required pursuant to Minn. Stat. § 15.0412, subd. 4 (1980);
(e) The Statement of Need and Reasonableness;
(f) The materials received by the Commission pursuant to solicitation of opinions from outside the Agency dated May 5, 1980, August 11, 1980, September 29, 1980 and July 20, 1981;
(g) The names of the Commission personnel representing the Agency at the hearing together with the names of any other witnesses solicited by the Commission to appear on its behalf; and
(h) A copy of the State Register containing the proposed rules.

The documents were available for inspection at the Office of Administrative Hearings for at least 25 days prior to the date of the initial hearing.

5. The record remained open through October 7, 1982, the period having been extended by order of the Hearing Examiner to 20 calendar days following the final hearing.

6. On October 7, 1982, the date of the closing of the record, the Commission filed with the Hearing Examiner revised proposed rules and a statement of additional comments on behalf of the Commission.

Nature of the Proposed Rules.

7. The above-captioned rules are newly proposed rules of the Commission designed to regulate the relationship between Minnesota electric utilities, including cooperative and municipal utilities otherwise exempt from the provisions of Minn. Stat. § 216B (1980), except as otherwise expressly so stated, and qualifying cogeneration and small power production facilities (QF) as defined in Minn. Stat. § 216B.146 (1981 Supp.), and governing Federal law. As hereinafter discussed, the Commission was mandated by portions of the Public Utility Regulatory Act of 1978 (PURPA), the Cogeneration and Small Power Production Rules of the Federal Energy Regulatory Commission 18 CFR § 292.301 et seq. (FERC Rules), and Minn. Stat. § 216B.164, subd. 6 (1981 Supp.), to adopt rules regulating the relationship between electric utilities and qualifying cogenerators and small power producers. The rules deal with questions of scope and purpose, definitions, filing requirements, reporting requirements, conditions of service, rates for sales, standard rates for purchases, negotiated rates for purchases, utility treatment of costs, exchange agreements, the resolution of disputes, the notification to customers of the Commission's rules, interconnection guidelines and the validity of existing contracts between a QF and its interconnected electric utility.

Statutory Authority.

8. The Commission advances the following authority for promulgating general rules regulating the relationship between QFs and all Minnesota electric utilities, including cooperative and municipal utiities. Section 210 of the Public Utility Regulatory Policy Act of 1978 (PURPA), 16 U.S.C.A. § 843a-3 (1978); the FERC Rules; Minn. Stat. § 216B.164, subd. 6 (1981 Supp.); Minn. Stat. § 216A.05, subd. 1 (1980); and Minn. Stat. §§ 216B.08, 216B.03, 216B.16, 216B.04, 216B.07, 216B.09, 216B.14 and 216B.17 (1980). Statement of Need and Reasonableness, pp. 2-3.

Federal Rulemaking Authority

9. Neither § 210 of PURPA, nor § 292.401 of the FERC Rules expand the rulemaking or regulatory authority of a state utility commission. Each only

authorizes the adoption by the state of rules governing the relationship between QF's and those electric utilities over which the state utility commission has general ratemaking authority.

10. Cooperative and municipally-owned electric utilities are not within the general ratemaking authority of the Minnesota Public Utilities Commission. Minn. Stat. § 216B.01, 216B.02, subd. 4 (1980).

11. With respect to electric utilities exempt from the ratemaking authority of a state commission, compliance with § 210 of PURPA and the FERC Rules is to be individually undertaken by each such utility with the availability for review by FERC and the federal judicial system.

12. The hearing record reflects a general compliance by cooperative and municipal electric utilities with § 210 of PURPA and § 292.401 of the FERC Rules.

13. As a consequence of Findings 9-11, supra, § 210 of PURPA and § 292.401 of the FERC Rules provide general authority for the adoption by the Commission of rules regulating the relationship between QF's and all Minnesota electric utilities other than cooperative and municipally-owned electric utilities. There is no federal authority for the adoption by the Commission of cogeneration and small power production rules respecting cooperative and municipally-owned electric utilities.

State Rulemaking Authority

14. As a consequence of Minn. Stat. §§ 216B.01 and 216B.02, subd. 4 (1980), cooperative and municipally-owned electric utilities are exempt from the general regulatory authority of the Commission unless otherwise specifically so stated in Minn. Stat. Ch. 216B (1980).

15. Since, as a consequence of Minn. Stat. § 216B.02, subd. 4 (1980), cooperative and municipally-owned electric utilities are exempt from the definition of a utility, the general grants of rulemaking authority to the Commission contained in Minn. Stat., Ch. 216A. and 216B (1980), have no application to a cooperative or municipally-owned electric utility.

16. Even with respect to a utility as defined in Minn. Stat. § 216B.02, subd. 4 (1980), the general grants of rulemaking authority to the Commission contained in Minn. Stat. § 216A.05, subd. 1 (1980), and Minn. Stat. Ch. 216B. (1980), extend only to the rates charged and the provision of electric service to energy users. Such grants of rulemaking authority do not authorize the adoption of rules regulating the provision of electricity by a QF to a utility.

17. While Minn. Stat. § 216B.164, subd. 6 (1981 Supp.), authorizes the Commission to adopt rules to implement that section, Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), limits the application the cogeneration and small power production statute, Minn. Stat. § 216B.164 (1981 Supp.), to "all Minnesota electric utilities, including cooperative electric associations and municipal electric utilities, that become interconnected with any qualifying facility as defined in 18 C.F.R. Section 292.101(B)(1)." (Emphasis added).

18. A literal construction of Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), as limiting the scope of the Commission's rulemaking authority, pursuant to Minn. Stat. § 216B.164, subd. 6 (1981 Supp.), § 210 of PURPA and the FERC Rules, only to any electric utility, whether investor-owned or non-profit,

that has actually interconnected with a QF involves a contradiction with governing federal law that could subject Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), to constitutional infirmity as a prohibited attempt to constrict the federal regulatory scheme.

19. A construction of the rulemaking authority of the Commission regarding cogeneration and small power production continued in Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), which authorizes the Commission to adopt rules regarding cogeneration and small power production as applicable to Minnesota electric utilities other than cooperative and municipally-owned electric utilities irrespective of the presence of an initial interconnection and to cooperative and municipally-owned electric utilities only after an initial interconnection gives the maximum effect to all provisions of the subdivision when considered as a whole, does not result in a conflict with federal law and is in harmony with the general regulatory scheme reflected in Minn. Stat. Ch. 216B (1980).

20. As a consequence of Findings 8-19, supra, the Commission has authority under § 210 of PURPA, § 292.401 of the FERC Rules and Minn. Stat. § 216B.164 (1981 Supp.) to adopt rules regulating the relationship between a QF and an electric utility other than a municipal or cooperative electric utility irrespective of an initial interconnection with a QF. With respect to a cooperative or municipally-owned electric utility the Commission lacks authority to apply such rules until the particular utility has interconnected with at least one QF. Prior to the occurrence of an initial interconnection with a QF, a cooperative or municipally-owned electric utility is governed exclusively by § 210 of PURPA and the FERC Rules with respect to cogeneration and small power production.

DISCUSSION - STATUTORY AUTHORITY

The Commission relies on a variety of federal and state provisions authorizing the proposed rules. See, Finding 8, supra. The general subject of statutory authority was treated by the Commission in its Statement of Need and Reasonableness and Reply Comments. See, Statement of Need and Reasonableness, pp. 2-3; Agency Ex. J, Reply Comments, pp. 4-5. The only public witness to comment on the issue of statutory authority was the Minnesota Municipal Utilities Association (MMUA). See, Pub. Ex. 17, MMUA, p. 14. The MMUA argued that the proposed rules could only apply to a municipally-owned electric utility subsequent to an initial interconnection with a QF. The investor-owned utilities and the cooperative utilities did not specifically contest the statutory authority of the Commission to adopt the proposed rules.

With respect to the Federal authority advanced by the Commission, it is clear that neither § 210 of PURPA, nor § 292.401 of the FERC Rules authorizes a state utility commission to regulate the relationship between a QF and a utility not subject to the general ratemaking authority of that state commission by state law. The mandate of both the federal statute and rules is for the state commissions to adopt rules regarding the relationship between a QF and an electric utility otherwise subject to the ratemaking authority of the commission. An electric utility that is not subject to the ratemaking authority of a state commission, however, must still comply with § 210 of PURPA and the FERC Rules. It must do so, however, under the federal directive, not through application of general rules of a state commission but by adopting its own rules, or by any

substitute means achieving substantial compliance. In short, neither § 210 of PURPA, nor the FERC Rules expands the scope of the rulemaking authority of a state commission to subjects not within its general ratemaking authority under state law. With respect to a utility subject to the ratemaking authority of a state commission, § 210 of PURPA and § 292.401 of the FERC Rules not only authorize the state commission to adopt rules regulating the relationship between the utility and a QF but mandate that they do so. Since Minn. Stat. §§ 216B.01 and 216B.02, subd. 4 (1980), specifically exclude cooperative and municipally owned electric utilities from the authority of the Commission except as specifically otherwise stated in Minn. Stat. Ch. 216B (1980), the Commission derives no authority to adopt rules regarding cogeneration and small power production as affecting either cooperative or municipally-owned electric utilities from either PURPA or the FERC Rules.

Moreover, the Commission's general grants of rulemaking and regulatory authority, contained in Minn. Stat. § 216A.05, subd. 1 (1980), and Minn. Stat. Ch. 216B (1980), do not authorize the Commission to regulate the relationship between a QF and an electric utility. The general grant of rulemaking authority to the Commission contained in Minn. Stat. § 216A.05, subd. 1 (1980), does not sanction the proposed rules. That provision merely authorizes the Commission to adopt rules as it may, from time to time, be authorized by the Legislature to do so. As such, it must be read in conjunction with a specific grant of rulemaking authority.

Nor do the general grants of rulemaking and regulatory authority contained in Minn. Stat. Ch. 216B (1980), provide statutory authority for adoption of the proposed rules.

Initially, it should be noted that Minn. Stat. § 216B.02, subd. 4 (1980), exempts municipally-owned and cooperative utilities from the definition of a utility for purposes of Minn. Stat. Ch. 216B (1980), unless the specific provision of the Chapter mandates their inclusion. Hence, the general grant of rulemaking authority contained in Minn. Stat. § 216B.08 (1980), since it relates only to public utilities defined in Minn. Stat. § 216B.02, subd. 4 (1980), has no ap- plication to a municipally-owned or cooperative utility. Under similar analy- sis, the grants of regulatory authority contained in Minn. Stat. §§ 216B.03, 216B.04, 216B.07, 216B.09, 216B.14 and 216B.16 (1980), have no direct applica- tion to a municipally-owned or cooperative utility. Except for Minn. Stat. § 216B.164 (1981 Supp.), the sole regulatory authority the Commission possesses over such utilities is a limited one of complaint resolution. Pursuant to Minn. Stat. § 216B.08 (1980), the Commission could only have authority to promulgate rules with respect to a non-rate regulated utility regarding its limited function of complaint resolution. The section provides no authority for rules regulating the total relationship between a non-rate regulated utility and a QF.

With respect to a rate regulated utility, the Commission, pursuant to Minn. Stat. § 216B.08 (1980), has authority to adopt rules to accomplish its regulatory duties specifically enumerated in the sections of Minn. Stat. Ch. 216B (1980), previously discussed. The grants of regulatory authority, however, relate to the conduct of the utility in the provision of its utility service to customers. To the extent that a QF is a customer of a utility, the provision of electric service by the utility to a QF could be the subject of rules as a

consequence of Minn. Stat. § 216B.08 (1980). The same rationale does not apply to those aspects of the relationship between the rate regulated utility and the QF involving the utility as a customer of the QF. Hence, even as regards a rate regulated utility, Minn. Stat. § 216B.08 (1980), does not provide general statutory authority to adopt the proposed rules.

The Commission relies upon Minn. Stat. § 216B.164, subd. 6 (1981 Supp.), as its primary authority for adoption of the proposed rules. The authority to adopt rules contained in Minn. Stat. § 216B.164, subd. 6 (1981 Supp.), however, is subject to Minn. Stat. § 216B.164, subd. 2 (1981 Supp.).

Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), provides:

> This section as well as any rules promulgated by the commission pursuant to the public utility regulatory policies act of 1978, Pub. L. 95-617, 92 Stat. 3117, and the federal energy regulatory commission regulations thereunder, 18 C.F.R. Part 292, shall apply to all Minnesota electric utilities, including cooperative electric associations and municipal electric utilities, that become interconnected with any qualifying facility as defined in 18 C.F.R. Section 292.101(b)(1).

The Minnesota Municipal Utilities Association (MMUA) argues that the authority of the Commission to adopt rules regarding cogeneration and small power production, at least as regards a municipally-owned electric utility, is limited to those utilities that have experienced an initial interconnection with a QF. See, Pub. Ex. 17, MMUA Comments, p. 14. The Commission argues that the language regarding interconnection contained in Subdivision 2 is merely descriptive without limiting the general applicability of Minn. Stat. § 216B.164 (1981 Supp.). See Agency Ex. J, Reply Comments, pp. 4-5. A final alternative construction of the subdivision, and one arguably in accord with its language and strict punctuation, is to limit the general application of Minn. Stat. § 216B.164 (1981 Supp.), to those utilities, whether investor-owned or publicly held, that have experienced an initial interconnection with a QF. No public witness advanced such a construction of the subdivision.

The fundamental aim of statutory construction is to ascertain and give effect to the intention of the legislature as expressed in the language used. City of St. Louis Park v. King, 246 Minn. 422, 75 N.W.2d 487 (Minn. 1956). The construction suggested by the Commission renders the language regarding interconnection contained in Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), mere surplusage. The same construction would result from replacing the last comma in that subdivision with a period. A statute, however, is to be construed as a whole so as to harmonize and give effect to all its parts, and, where possible, no word, phrase, or sentence should be held superfluous, void or insignificant. Anderson v. Commissioner of Taxation, 253 Minn. 528, 93 N.W.2d 523 (1959); Northern Border Pipeline Co. v. Jackson County, 512 F.Supp. 1261 (D.C.Minn. 1981).

In accordance with recognized principles of statutory construction, the Hearing Examiner concludes that the language of Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), relating to interconnection is not mere disruptive surplusage but modifies some portion of the prior part of the sentence. Rejection of the construction of Minn. Stat. § 216B.164B, subd. 2 (1981 Supp.), advanced by the Commission, as hereinafter discussed, involves no obvious absurdity, is consistent with the general scope of Minn. Stat. Ch. 216B (1980), and gives maximum effect to the specific language contained in the statute.

It could be argued that the so-called "plain meaning rule" of statutory construction requires the Hearing Examiner to construe Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), to prohibit the Commission from adopting rules regulating the relationship between any Minnesota electric utility and a QF until there has been an interconnection between a QF and that specific electric utility. Such a construction, however, conflicts with § 210 of PURPA and the implementing of FERC Rules. Under the federal authority previously cited, the Commission is mandated to adopt rules governing the relationship between rate regulated utilities and QFs. If a literal construction of Subdivision 2 as punctuated is adopted, the Commission could only execute its federal mandate with respect to rate regulated electric utilities subsequent to the occurrence of an actual interconnection. See, Minn. Stat. § 216B.164, subd. 2 (1981 Supp.). Since Commission rules provide the mechanism for executing § 210 of PURPA and the FERC Rules as regards a rate regulated utility and the Federal authority contains no similar limitation on the application of such rules, a literal construction of § 216B.164, subd. 2 (1981 Supp.), as punctuated, would impermissibly limit the application of governing federal authority. A construction which avoids constitutional prohibitions is to be preferred if it can be reconciled with the language employed. See, State on Behalf of Forslund v. Bronson, 305 N.W.2d 748 (Minn. 1981); Housing and Redevelopment Authority of City of St. Paul v. Greenman, 225 Minn. 396, 96 N.W.2d 673 (1959).

A construction of Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), which makes the final clause of that subdivision relate only to cooperative electric associations and municipal electric utilities, disregarding the final comma in the subdivision, gives maximum effect to all of the language of the subdivision without impermissibly limiting the application of governing federal authority.

Punctuation marks do not have the same controlling force of evidence of legislative intention as do words, and punctuation is subordinate to context. Judd v. Landin, 211 Minn. 465, 1 N.W.2d 861 (1942); City of Dickinson v. Thress, 69 N.D. 748, 290 N.W.653 (1940). See, Minn. Stat. § 645.18 (1980).

The Minnesota Court has held that a comma in a regulation which rendered the regulation textually inappropriate should be disregarded. In State of Minnesota, Department of Highways, v. Ponthan, 290 Minn. 58, 186 N.W.2d 180 (1971), a regulation of the Department of Highways provided that a course of instruction for peace officers should be considered equivalent by the Commissioner of Highways if:

> (1) It is conducted by a municipal, county, state or federal government agency or a college or university, accredited by one of the six regional accrediting associations.

The trial court held that the comma after the words "college or university" required that the final phrase of the sentence modify all of the prior portion of the quoted definition. The Supreme Court held that the final comma was inappropriate and that the phrase "accredited by one of the six regional accrediting associations" related only to the antecedent "college or university" rather than to the entire definition as would be required by a literal construction of the rule according to its punctuation.

The construction of Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), adopted by the Hearing Examiner, gives maximum effect to the express language of the statute without accomplishing an unreasonable or absurd result.

The Commission argues that the language of the section relative to the necessity for interconnection is mere surplusage by asserting that any contrary construction would vitiate the purposes of Minn. Stat. § 216B.164 (1981 Supp.). See, Agency Ex. J, Reply Comments, pp. 4-5. The Commission suggested that a utility could avoid compliance with either the state or federal statutes by the simple expedient of refusing to engage in interconnection.

Under the construction of the Commission's rulemaking authority adopted by the Hearing Examiner, there is no question that, with respect to a rate-regulated utility, such a result could not obtain. Even with respect to a non-rate regulated utility, however, which, under the construction of the statute adopted by the Hearing Examiner, would not be subjected to the rulemaking authority of the Commission prior to an interconnection, obstructional avoidance of an initial interconnection would be impossible. Section 292.303(c) of the FERC Rules and § 202 of PURPA mandate initial interconnection irrespective of the rate regulated nature of the affected electric utility. Such interconnection can be required, if not done voluntarily, either by the Federal Energy Regulatory Commission or through appropriate federal judicial relief. Moreover, under § 202 of PURPA, a state regulatory authority may apply to the Federal Energy Regulatory Commission for an Order mandating interconnection. Finally, limiting the rulemaking authority of the Commission as regards cogeneration of its small power production in relation to municipally-owned and cooperative electric utilities until there has been an actual interconnection with a QF is in accordance with the general regulatory scheme of Minn. Stat. Ch. 216B (1980), and reflects the legislative findings contained in Minn. Stat. § 216B.01 (1980), concerning the general lack of need for specific regulation of cooperative and municipal electric utilities by the Commission.

In summary, the Commission has general statutory authority to regulate the relationship between a QF and a rate regulated utility, both pursuant to Minn. Stat. § 216B.164, subd. 6 (1981 Supp.), and § 210 of PURPA and the FERC Rules. With respect to a municipal or cooperative electric utility, not rate regulated by the Commission under Minnesota Law, the Commission has authority to regulate the relationship between the non-rate regulated utility and a QF only after there has been an initial interconnection between the utility and a QF.

4 MCAR § 3.0450 - Scope and Purpose.

21. § 3.0450 is a restatement of Minn. Stat. § 216B.164, subd. 1 (1981 Supp.). Minn. Stat. § 15.0411, subd. 3 (1980), de- fines a rule as a "statement of general applicability and future effect . . .". Both the complexity of the proposed rules and the recent vintage of the subject matter makes the inclusion of a scope and purpose section appropriate. Moreover, even though the proposed rule is a verbatim restatement of Minn. Stat. § 216B.164, subd. 1 (1981 Supp.), the Hearing Examiner finds that duplication of the statutory language is crucial to the ability of a person affected by the rule to comprehend its meaning and effect. See Minn. Stat. § 15.0412, subd. 1 (1980). The inclusion of a scope and purpose section in the proposed rules is both necessary and reasonable.

22. The failure of the Commission to include within its scope and purpose section a general exclusion from its proposed rules of cooperative and municipally-owned electric utilities and its decision to subject such electric utilities to the same regulations as are applicable to privately owned utilities does not render the proposed rules either unnecessary or unreasonable.

DISCUSSION - REGULATION OF MUNICIPAL AND COOPERATIVE ELECTRIC UTILITIES

The largest volume of both written and oral comments received by the Hearing Examiner in this rulemaking proceeding concerned the propriety of treating municipal and cooperative electric utilities in the same fashion as investor-owned utilities for purposes of the proposed rules.

The MMUA filed testimony on behalf of its membership requesting that municipal utilities be exempt from the proposed rules except as the rules should specifically otherwise so provide or as agreed to by the municipal utility. See, Pub. Ex. 117, MMUA Posthearing Comments, p. 7; Pub. Ex. 17, MMUA Initial Comments, p. 33. Representatives of the following cities or municipal utilities appeared at the hearings and filed written comments expressing a similar conclusion: Pub. Ex. 23 - Anoka; Pub. Exs. 25 and 26 - St. James; Pub. Ex. 27 - Janesville; Pub. Ex. 28 - Kenyon; Pub. Ex. 29 - Worthington; Pub. Ex. 30 - Sleepy Eye; Pub. Ex. 31 - Adrian; Pub. Ex. 32 - Rochester; Pub. Ex. 33 - Austin; Pub. Ex. 35 - St. Charles; Pub. Ex. 36 - Spring Valley; Pub. Ex. 38 - Preston; Pub. Ex. 39 - Owatonna; Pub. Ex. 41 - Wadena; Pub. Ex. 42 - Litchfield; Pub. Ex. 43 - Chaska; Pub. Ex. 48 - Virginia; Pub. Ex. 49 - Moose Lake; Pub. Ex. 50 - Hibbing; Pub. Ex. 54 - Stephen; Pub. Ex. 56 - Warren; Pub. Ex. 58 - Thief River Falls; Pub. Ex. 59 and 62 - Detroit Lakes; Pub. Exs. 60 and 61 - Breckenridge; Pub. Ex. 63 - Moorhead; Pub. Ex. 70 - Marshall; Pub. Ex. 75 - Waseca; Pub. Ex. 89 - Litchfield; Pub. Ex. 96 - Roseau; Pub. Ex. 101 - Hutchinson; Pub. Ex. 111 - Moorhead; and Pub. Ex. 84 - Fosston. Moreover, several members of the State Legislature appeared at the public hearings and generally suggested that municipal utility systems be afforded special treatment under the proposed rules. See, e.g., Pub. Ex. 7, Chmielewski.

While the comments received from the individual municipal electric utilities and the MMUA varied somewhat in detail, all generally asserted a lack of demonstrated need for an indiscriminate application of the proposed rules to municipal electric utilities. Moreover, all such commentators concluded that, even in the presence of a demonstrated need, the rules, as initially proposed, placed an unreasonable burden on municipal electric utilities with no offsetting benefit to the general class of ratepayers.

The primary argument concerning a lack of demonstrated need was premised on the municipal electric utilities' full compliance with § 210 of PURPA and the FERC Rules without measurable response by potential QFs. The representatives of the municipal electric utilities also asserted that such utilities were fundamentally different than investor-owned electric utilities. The argument was advanced that the self-regulation by the elected municipal utility boards and their ultimate responsiveness to the electorate, when combined with a lack of a profit, avoided the indiscriminate need for supervisory regulation by the Commission. Finally, the comments asserted a genuine lack of abuse of potential cogenerators and small power producers by municipal electric utilities.

In addition to the arguments concerning the lack of need for treating municipal electric utilities the same as investor-owned utilities, the comments heretofore enumerated also suggested that the proposed rules were not reasonable as applied to municipal electric utilities. That argument was premised on the assertion that compliance with the proposed rules, as initially drafted,

would require the expenditure of substantial amounts of public funds to determine complex rate calculations and accomplish the requisite filings with little or no public benefit. See, Pub. Ex. 17, MMUA Initial Comments, Ex. II.

The Commission did not make a direct response to the concerns of the municipal electric utilities. Although the municipal electric utilities have a significant interest in the outcome of this rulemaking proceeding, the Commission did not explicitly deal with the issue of the appropriate treatment of municipal electric utilities in its Statement of Need and Reasonableness, its Reply Comments, Agency Ex. J, or in oral testimony at any hearing. Moreover, the issue of the propriety of indiscriminate application of the proposed rules to municipal electric utilities was minimally considered in the remainder of the record. See, Pub. Ex. 115, L & S Wind Energy, Fairfax, Mn.; and Pub. Ex. 16, Jacobs Wind Electric Company at Ex. A, p. 3.

Irrespective of the paucity of the record regarding the position of the Commission, for the reasons hereinafter enumerated, the Hearing Examiner finds that general application of the rules as finally proposed to municipal electric utilities is both necessary and reasonable.

Initially, Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), itself states a need for some inclusion of non-rate regulated utilities in the Commission's proposed rules.

The presumption underlying all of Minn. Stat. Ch. 216B (1980), as reflected in Minn. Stat. §§ 216B.01, 216B.02, subd. 4 (1980), is that the effective self-regulation of the municipal and cooperative electric utilities justifies a general exemption from the regulatory authority of the Commission except as otherwise specifically stated. Several sections of Minn. Stat. Ch. 216B (1980), however, specifically authorize the Commission to regulate such otherwise self-regulated utilities. See, e.g., Minn. Stat. §§ 216B.17 (1980), and 216B.164, subd. 2 (1981 Supp.). In those situations in which the self-regulation of the cooperative and municipal electric utilities is not an effective substitute for Commission regulation, such utilities are not exempt from the regulatory jurisdiction of the Commission. In such circumstances, the statutory presumption is that a municipal or cooperative electric utility is indistinguishable from an investor-owned electric utility. As previously discussed, with regard to the relationship between a QF and a municipal electric utility, the Legislature has determined in Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), that regulation by the Commission subsequent to the appearance of an actual interconnection is appropriate.

The rationale for the legislative conclusion is evident from the difference between the relationship of a municipal electric utility to a QF and its relationship to its ratepayers generally. As regards the conduct of its business in the provision of electric service, the utility must act uniformly with respect to the general body of ratepayers. The same ratepayers ultimately elect the governing body of the municipality and may also elect, in certain communities, the actual board of the municipal utility. Under such circumstances, general regulation by the Commission is duplicative and largely unnecessary. Here, the Commission has been given only limited authority to resolve disputes. See, Minn. Stat. § 216B.17, subd. 6 (1980).

With respect to the relationship between a QF and the municipal electric utility in the purchase by the utility of the electric energy of the QF, the

same protections do not apply. The municipal utility must attempt to secure electric power at a rate most advantageous to its ratepayers. In such regard, a QF is viewed as a supplier the same as any other producer of electric power. Under such circumstances, it is of little comfort to the QF that the municipal electric utility, which will be motivated to act in what it considers to be the interests of its ratepayers, is ultimately controlled by a popularly elected local governing body. Popular election of the municipal electric utility's ultimate regulatory authority offers no protection to the interests of a QF. Such interests are not necessarily coincident with the immediate attainment by the utility of electric power at the lowest possible price. In that regard, the political power belongs to and the ultimate accountability is to the electorate, the consumers of power, and not to the QF, the supplier of power. Moreover, there is evidence in the record that surplus funds generated by the municipal electric utility may be used to defray general expenses of the municipality. Again, the local governing body has an incentive, largely akin to the profit motive of an investor-owned electric utility, to minimize the rate paid to a QF. To the extent that rates for the purchase of power from a QF can be minimized, the municipal utility may either reduce its rates to its consumers, or defray general expenses and reduce the taxes of the electorate. Under such circumstances, as recognized in Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), the ultimate accountability of the municipal electric utility to the electorate provides no basis for exempting such utili- ties from general oversight by the Commission as regards the relationship of the utility to a QF.

The analysis of Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), advanced by the Hearing Examiner herein, has been judicially recognized. In Taylor v. Beltrami Elec. Co-op., Inc., 319 N.W.2d 52 (Minn. 1982), the Court broadly interpreted Minn. Stat. § 216B.17, subd. 6a (1980), a statutory provision analogous to Minn. Stat. § 216B.164, subd. 2 (1981 Supp.). Both sections concern conditions under which an otherwise unregulated utility is appropriately subject to regulation by the Commission. In so construing Minn. Stat. § 216B.17, subd. 6a (1980), the Court stated a rationale substantially similar to that adopted by the Hearing Examiner:

> The legislative history indicates that the 1978 amendments were intended to reduce unnecessary bureaucracy in rate-setting by cooperatives. The statutory scheme is designed to exempt from state regulation those activities of a cooperative which the members can control by themselves. A cooperative need not be subject to the Commission in setting rates because the membership through its voting power can effectively review and modify the proposal and because the members of the cooperative are the ultimate recipieants of any profit made. But this rationale for deregulating cooperatives does not apply to the situation before us. A statutory provision enacted to reduce unnecessary bureaucracy in rate-setting does not remove from the Commission the authority to prohibit arbitrary and discriminatory barriers to the provision of service.

Taylor v. Beltrami Elec. Co-op., Inc., 319 N.W.2d 52, 55-56 (Minn. 1982).

The Hearing Examiner notes that the trend of recent statutory law is in accordance with the separation of regulatory authority from the governmental agency concerned as a party. In that regard, the Legislature has recently created a centralized office of Administrative Hearings and has separated the Department of Public Service from the Public Utilities Commission.

Compliance by the municipally-owned utilities with PURPA does not vitiate the need expressed in Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), for the general inclusion of such utilities in the Commission's proposed rules. Minn. Stat. § 216B.164 (1981 Supp.), and the proposed rules require that a QF be reimbursed in its energy rate for the full avoided cost of the utility. That result need not obtain under PURPA. The avoided cost of a utility does not depend on its rate regulated status. If the legislature has determined that compensation for full avoided cost is appropriate to encourage cogeneration and small power production, such compensation should be available to all QFs irrespective of the rate regulated status of the interconnected utility. Finally, Minn. Stat. § 216B.164 (1981 Supp.), provides an encouragement of small QFs through net energy billing that is not contained in PURPA.

Irrespective of the theoretical justification for the inclusion of municipal electric utilities in the Commission's proposed rules accepted by the Hearing Examiner, the record does contain affirmative evidence of need to generally include such utilities in the Commission's proposed rules. See, Pub. Ex. 115, L&S Wind Energy, and Pub. Ex. 16, Jacobs Wind Electric Company, Ex. A, p.3.

The argument of the municipal electric utilities that the rules as applied to them are unreasonable is premised on the provisions of the rules as initially drafted. The assertion was made that the extensive filing requirements and rate calculations required by the rules as initially drafted would require the expenditure of large sums of public funds with little or no attendant benefit. The amendments to the rules as finally drafted which reduce extensive filing requirements for smaller utilities and allow the substitution of the retail rate for certain complex rate calculations adequately respond to the primary argument of unreasonableness advanced by the municipal electric utilities. Additionally, the Hearing Examiner has determined that the Commission has statutory authority to adopt rules regarding municipal electric utilities only after an actual interconnection to a QF has occurred.

Although the Hearing Examiner finds that the general inclusion of municipally-owned electric utilities in the proposed rules is both necessary and reasonable, a contrary finding may be appropriate with respect to a particular provision of the proposed rules. Therefore, the Hearing Examiner will consider the specific position of the MMUA as stated in Public Exhibit 117 with respect to each relevant provision of the proposed rules where the application of such provision may be either unnecessary or unreasonable as regards a municipally-owned electric utility.

Certain witnesses testifying on behalf of cooperative electric utilities advanced arguments concerning the need and reasonableness of treating cooperative electric utilities the same as investor-owned electric utilities. Such arguments largely paralleled those of the municipal electric utilities previously discussed. For the reasons heretofore enumerated regarding municipally-owned electric utilities, the general inclusion of cooperative electric utilities in the proposed rules does not affect the need for or reasonableness of the proposed rules.

4 MCAR § 3.0451 - Definitions.

23. The following definitions were not amended in the revised proposed rules, received no comment at the hearings herein or in the filed exhibits

and, as to need and reasonableness, are adequately supported by the Commission's Statement of Need and Reasonableness: § 3.0451 B. - Average Annual Fuel Savings; § 3.0451 C. - Backup power; § 3.0451 D. - Capacity; § 3.0451 E. - Capacity costs; § 3.0451 F. - Commission; § 3.0451 G. - Energy; § 3.0451 H. - Energy Costs; § 3.0451 N. - Maintenance Power; § 3.0451 Q. - On-peak Hours; § 3.0451 R. - Purchase; § 3.0451 T. - Sale; § 3.0451 U. - Supplementary Power; and § 3.0451 V. - System Emergency.

24. Section 3.0451 L. defines "Interconnection costs" as the reasonable costs incurred by the utility directly related to the interconnected activities of the QF to the extent that they are extra costs incurred by the utility as a result of the interconnected operations of the QF. A definition of Interconnection costs is necessary since the phrase is used in § 3.0454 G. of the proposed rules. Such interconnection costs are also explicitly assigned to QFs by both the FERC Rules, 18 C.F.R. § 292.101(b)(7), and Minn. Stat. § 216B.164, subd. 8 (1981 Supp.). The proposed definition of Interconnection costs is reasonable since it defines as such a cost the added expense to a utility resulting from interconnected activities with a QF. Moreover, except for the last sentence of the definition, it fully comports with the FERC definition.

The final sentence of the definition, which has no cognate FERC provision, is necessary and reasonable because part or all of the costs excluded as interconnection costs by the last sentence of the definition are recoverable by a utility in fixed charges as part of its retail rates under Minnesota law and the proposed rules. A QF must pay any fixed charges in the utility's tariff under which it consumes electricity. Without the final exclusionary sentence of the definition, the QF could be discriminated against relative to other members of its class. Both the resulting discrimination and double payment for the same costs to the utility would be unreasonable.

Only two public comments on the proposed definition of interconnection costs were received. Northern States Power Company suggests adding the word "existing" prior to the word "non-generating" and the word "retail" prior to the word "customer" in the third sentence of the definition. (Pub. Ex. 6, NSP, p.3). The proposed language of Northern States Power Company, however, does not clarify the rule and, in fact, introduces ambiguity. If the word "existing" is added to modify the word "customer", arguably the costs associated with providing electric service from the utility to the QF would be an interconnection cost, even though the cost would be one common to any other non-generating customer. Further, any cost associated with the provision of electric service to an new QF would not be a cost that would be incurred by an existing non-generating customer. Jacobs Wind Electric Co. proposes to add additional language to the definition limiting Interconnection costs to those specifically provided for by the proposed rules. (See, Pub. Ex. 16, Jacobs Wind Electric Co., p. 4). Since it would be virtually impossible and entirely impractical to detail in these rules each specific cost that may be legitimately occasioned by interconnection, the addition of the language suggested by Jacobs Wind Electric Company is inappropriate.

25. Section 3.0451 M. defines "Interruptible power" as electric energy or capacity supplied by the utility to a qualifying facility subject to interruption under certain specified conditions. A definition of Interruptible power is necessary because it is used in the proposed rules to indicate which types

of power are to be offered by a utility. The Commission in its Statement of Need and Reasonableness asserts that the definition is reasonable because it fully comports with the federal definition of the term in the FERC Rules and is consistent with standard industry usage. (Statement of Need and Reasonableness, p. 3). As Jacobs Wind Electric Company points out, however, it is not clear from the definition whether the phrase "under certain specified conditions" relates to conditions peculiar to a QF or to conditions that would affect retail customers of the same class generally. (See, Pub. Ex. 16, Jacobs Wind Electric Co., p. 4). The phrase "under certain specified conditions" is impermissibly vague. The rules do not define the "specified conditions" under which the power may be interrupted. Further, there is no indication in the rules as proposed of who is to specify the conditions for interruption and in what manner such conditions are to be enumerated.

Since the definition proposed by the Commission is, in fact, a FERC definition, the Hearing Examiner has reviewed Agency Ex. I, the explanation of the FERC Rules, without any clarification of the definition. Several constructions of the proposed definition are possible. The initial construction is that Interruptible power must be made available to a QF on the same conditions that such power is made available to any other retail customer. The second construction of the definition is that power may be interrupted to a QF under conditions specified in the interconnection contract in situations peculiar to a QF. Therefore, since the Hearing Examiner is unable to determine which is the appropriate construction of the proposed definition, the Commission has failed to substantiate the reasonableness of the proposed definition by an affirmative presentation of facts.

26. To correct the defect, the Commission should amend the proposed definition by appropriate language to clarify whether the interruption may be made on a basis peculiar to QFs and, if so, any limitations on the ability of the utility to define, in its interconnection undertaking, the conditions of interruption. The appropriate clarification to the definition must be supported by the record and must not result in a substantial change to the rule as proposed without a new notice and hearing. 9 MCAR § 2.111.

27. Section 3.0451 S. defines "Qualifying facility" in accordance with both the FERC and Minnesota statutory definition. The Commission has added a second sentence to the definition stating that a cogeneration or small power production facility installed prior to the passage of both PURPA and Minn. Stat. § 216B.164 (1981 Supp.), may still be considered a Qualifying facility within the provisions of the proposed rules. In that regard, the definition of Qualifying facility contained in the proposed rules deviates from the FERC definition. Under the FERC Rules, a cogeneration or small power production facility operational prior to the effective date of PURPA is not considered a Qualifying Facility.

A definition of the term "Qualifying facility" is necessary because the term is used specifically throughout the rules and is a condition on the type of facility entitled to the benefit of the rules. The initial sentence of the definition is reasonable since it exactly parallels the statutory definition. (See, Minn. Stat. § 216B.164, subd. 2 (1981 Supp.)). The statute, however, is silent on the question of whether a cogeneration or small power production facility interconnected prior to the adoption of both PURPA and the

Minnesota statute may be considered a Qualifying facility for purposes of the proposed rules. The Commission asserts that it would be unreasonable to distinguish between cogeneration and small power production facilities based on their date of interconnection. (Statement of Need and Reasonableness, p. 6). To make such a distinction, the Commission would have to determine in an individual contested case proceeding that a rate lower than that allowed to other QFs would be sufficient nevertheless to encourage cogeneration and small power production. Making such a determination would be time consuming and not cost-beneficial. The Commission further argues that the avoided costs resulting from the interconnection of a QF are the same irrespective of the in-service date of the facility. Hence, it is argued that to distinguish between QFs on the basis of their interconnection date would be inequitable.

A number of witnesses testified that the purpose of both PURPA and the state statute is to encourage cogeneration. Presumably, QFs that were in service prior to the effective date of PURPA and the Minnesota statute would not require enhanced rates because they were interconnected without benefit of such advantages. (See, Pub. Ex. 6, NSP, p. 4; Pub. Ex. 65, Ottertail Power Company; Pub. Ex. 88, Interstate Power Company, p. 2; and Pub. Ex. 118, NSP Reply Comments, p. 3).

A number of witnesses, including existing cogenerators, supported the definition as proposed. (See, e.g., Pub. Ex. 53, Boise-Cascade Company, p. 1; Pub. Ex. 110, Department of Public Service).

The Hearing Examiner accepts the rationale of the Commission regarding the reasonableness of extending the benefits of the rules to all cogeneration and small power production facilities irrespective of their in-service date. The Hearing Examiner believes that, as a matter of practicality and equity, all cogeneration and small power production facilities should obtain the benefits of the proposed rules. Moreover, the argument that the existing cogenerators do not need the stimulus of the rules is not supported adequately by the record. Existing cogenerators and small power producers, irrespective of their in-service dates, could benefit from the proposed rules by maintaining the viability of their facilities, engaging in necessary repair and/or expansion of existing facilities, and the establishment of additional QFs. The definition as proposed by the Commission is both necessary and reasonable.

28. Section 3.0451 W. defines "System incremental energy costs" as amounts representing the hourly energy costs associated with the utility generating the next kilowatt-hour of load during each hour. A definition of the term is necessary because it is used in calculating a utility's avoidable energy costs. The Commission suggests that the definition is reasonable because it is consistent with industry usage of the term and adequately summarizes the variable costs of generating an additional kilowatt-hour at any particular time. (Statement of Need and Reasonableness, p. 7). The only public comment received on the proposed definition was that of NSP which suggested a different definition but only to comport with its specific proposal relative to § 3.0452 B. of the proposed rules. (See, Pub. Ex. 6, NSP. p.4). Since the Hearing Examiner has not accepted the proposal of NSP relative to § 3.0452 B. of the proposed rules, the different definition suggested by the Company is not appropriate. The definition of System incremental energy costs proposed is both necessary and reasonable.

29. Section 3.0451 X. of the proposed rules defines "Utility" as follows:

"Utility means any public utility engaged in the generation, transmission, or distribution of electricity in Minnesota. The term includes cooperative electric associations and municipally-owned electric utilities."

A definition of the term "utility" is necessary due to the requirements in the proposed rules that a utility engaged in specific activities. Since the Hearing Examiner has found that the Commission has statutory authority to adopt rules governing cooperative electric associations and municipally-owned electric utilities only after an actual interconnection has occurred, the definition contained in this paragraph exceeds the authority of the Commission. (See, Findings 8-20, supra and accompanying Discussion).

To remedy the defect, the Commission must revise the second sentence of the definition to clarify the fact that the term "Utility" includes cooperative electric associations and municipally-owned electric utilities only after an initial interconnection by that utility with a QF.

30. Section 3.0451 I. defines "Firm power" in terms of a 65% on-peak capacity factor in a given month. The rules, as initially drafted and submitted, contained no definition of Firm power even though the specific term was used in the rules. A definition of Firm power is necessary because the term is used in the rules to determine whether or not a QF with a capacity of more than 100 kilowatts is eligible for standard rates. Although the Commission adduced no independent facts of the reasonableness of the 65% on-peak capacity factor used in the definition, a number of public witnesses supplied testimony substantiating the reasonableness of the criteria ultimately adopted by the Commission. For example, Interstate Power Company testified that the Company's system capacity factor is about 65% and should likewise be achieved by a QF to rate an avoided capacity cost payment in a billing month. (Pub. Ex. 88, Interstate Power Co., p.3). Northern States Power Company testified that a 65% capacity factor is a realistic industry standard based primarily on its own experience. (Pub. Ex. 118, NSP Reply Comments, p. 1). Moreover, a 65% capacity factor reflects the expected performance of NSP's next proposed generating unit, Sherburne County Unit 3. (Pub. Ex. 118, NSP Reply Comments, p. 1). The MMUA also suggested the adoption of a definition of Firm power utilizing a 65% capacity factor as comporting with the experience of municipal electric utilities. (Pub. Ex. 117, MMUA Posthearing Statement, p. 8). Finally, the County of Hennepin testified that an appropriate factor would be less than the 70% factor suggested by the Minnesota Energy Agency in respect to hydroelectric facilities. (Pub. Ex. 106, County of Hennepin, p.3). There is no support in the record for a definition of Firm power other than the 65% capacity factor ultimately accepted by the Commission. Therefore, the definition of Firm power is both necessary and reasonable.

The addition of the definition of Firm power does not constitute a substantial change within the meaning of 9 MCAR § 2.111 so as to require additional notice and hearings. The term "Firm power" was used in the rules as initially proposed. All participants in the hearing were apprised of its presence in the proposed rules and had an opportunity to comment thereon. The addition of the definition, in fact, was in specific reaction to the comments from affected public witnesses. Finally, that portion of the proposed rules relative to the rate for the supplying of Firm power would, in itself, be unreasonable without an appropriate definition of the term.

31. Sections 3.0451 J. and P. are the definitions of the terms "Generating utility" and "Non-generating utility". Such definitions were not contained in the rules as initially proposed. Definitions of the terms are necessary to distinguish generating utilities from non-generating utilities because the nature of their avoided costs may be different and the proposed rules require different actions from the two kinds of utilities. (Agency Ex. J, Reply Comments, p. 3). Testimony at the public hearings revealed a need for such definitions to enable interested persons to comply with the provisions of the proposed rules. The definitions ultimately proposed by the Commission are in accordance with the testimony of a number of public witnesses. The definitions proposed are reasonable because they make a distinction not on the basis of installed capacity but on the basis of the ability of the utility to use capacity to meet its own needs. This distinction focusses specifically on the matter of avoided costs, the basis for certain of the rate calculations. No public comments were received suggesting a definition of the two terms materially different than that ultimately proposed by the Commission. Moreover, the Commission Staff's explanation of the terms during the hearings, even though the terms were not then included in the proposed rules, engendered no adverse comments from public witnesses. The Hearing Examiner concludes that the definitions of Generating utility and Non-generating utility are necessary and reasonable.

The addition of definitions of the two terms does not result in a substantial change within the meaning of 9 MCAR § 2.111. Distinctions in the proposed rules were made on the basis of a utility being a non-generating utility. The rules as initially proposed, however, contained no definition of that term and its cognate term "Generating utility". Participants in the public hearings were adequately apprised both by the rules as proposed, and by discussion at the various public hearings that a definition of generating and non-generating utilities would be appropriate. In fact, the definitions have been proposed in response to public comments. Finally, since the terms "Generating utility" and "Non-generating utility" were employed in the rules as initially drafted without definition, the insertion in the rules as finally proposed of appropriate definitions merely avoids what would otherwise be a defect in the proposed rules.

32. Section 3.0451 K. defines "Incremental costs of capital" in terms of the current weighted cost of the components of a utility's capital structure. A definition of the term is necessary because of a proposed change in the present value computations required in Schedule B as described in § 3.0452 C. of the proposed rules. The definition is reasonable because it fully complies with the common usage of the term in both the Commission's rate regulation experience and industry practice. The definition reasonably uses the current costs of all kinds of capital employed by the utility to determine the overall cost rate which is then used to discount future values to their present value. Hence, the definition of Incremental costs of capital is both necessary and reasonable.

The addition of the definition of Incremental cost of capital does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

33. Section 3.0451 O. defines "Marginal capital carrying charge rate in the first year of investment". The rule, as finally proposed, varies from the

rule as initially proposed in limiting the effect of the definition to the initial year of investment. A definition of the term is necessary since the term is specifically used in § 3.0452 C.4.a. of the proposed rules. The Commission asserts that the proposed definition is reasonable to rectify a problem in its initial definition raised by several utilities at the public hearings. (See, Agency Ex. J, p.4). Unless the definition is limited to the initial year of investment, the capacity rates to be paid a QF would exceed avoided costs because the escalation in the costs of new generating plants as a result of inflation would push the capacity cost payment higher each year. The utility companies argued that such a result is inappropriate because the cost of a plant that would have been built would remain constant for the life of the plant. Hence, it is reasonable to reflect the benefit or costs saved by building a plant one year earlier as a reduction to the carrying charge rate associated with owning such plant. The marginal capital carrying charge rate must be adjusted for inflation to show the true costs associated with building and owning a plant this year as opposed to a later point in time. Since the utility would save money by building the plant this year rather than next year, inflation adjustment is a downward adjustment to the marginal capital of carrying charge rate. (Agency Ex. J, p. 4) The record contains no testimony contrary to the definition ultimately proposed by the Commission.

so limited p. 3

The limitation of the definition of Marginal capital carrying charge rate in the first year of investment does not constitute a substantial change within the meaning of 9 MCAR § 2.111. The rules, as initially proposed, contained a definition of Marginal capital carrying charge rate and the appropriate definition of that term became an issue at the public hearings held herein. Further, the Notice of Hearing which contained a summary of the proposed rules specifically advised the public that, as a consequence of the hearings, provisions might be changed. The major purpose of the substantive change rule is to ensure that the public is afforded adequate notice and opportunity to comment on the proposed rules. American Iron & Steel Institute v. EPA, 58 F.2d 284, 293 (3rd Cir. 1977); International Harvester Co. v. Ruckelshaus, 478 F.2d 615, 632 n.51 (D.C. Cir. 1973). Where the change in a rule as initially proposed and as finally proposed subsequent to public hearings is important, the question is whether the rule, as finally proposed, is a "logical outgrowth" of the rulemaking proceeding. South Terminal Corp. v. EPA, 504 F.2d 646, 659 (1st Cir. 1974). Under all of the judicial standards heretofore enumerated, the public had adequate notice of the nature of the proposed rulemaking and an opportunity to comment thereon. The definition, as ultimately proposed, is not only a "logical outgrowth" of the hearings held herein, but was, in fact, the result of specific comments by a number of participants. It is important to note that none of those cogenerators and small power producers who would be affected by the change in the rate occasioned from the revised definition commented, either orally or in writing, on the testimony of the various utility companies of the need to restrict the definition of the term "Marginal carrying charge rate" to do equity to the utilities.

4 MCAR § 3.0452 - Filing Requirements.

34. Section 3.0452 A. requires a utility to file with the Commission within 60 days after the effective date of the rules, on January 1, 1984, and every 12 months thereafter, a cogeneration and small power production tariff. The

tariff must contain the appropriate schedules. The tariff for a Generating utility must contain Schedules A through F except that a Generating utility with less than 500,000,000 kilowatt-hour sales in the calendar year preceding the filing may substitute its retail rate schedules for Schedules A and B. The tariff for a Non-generating utility must contain Schedules C, D, F, and G and may, at the option of the utility, contain Schedules A and B, compiled from data supplied by the utility's wholesale supplier. The rule, as finally proposed, varies from the initial rule by delaying the second filing and simplifying the filing of schedules for a small Generating utility and for a Non-generating utility.

35. The filing requirements embodied in § 3.0452 A. are necessary so that the cogeneration and small power production tariffs reflect current avoided costs as required by Minn. Stat. § 216B.164, subd. 3 (1981 Supp.). Moreover, the filing of a current tariff with the Commission is in accordance with the oversight responsibility of the Commission and is consonant with its current practice regarding the administration of the tariffs of utilities over which it has regulatory authority.

36. The requirement that the tariff be filed within 60 days after the effective date of the rules and on January 1, 1984, is reasonable in light of the administrative responsibilities of the Commission regarding the administration of cogeneration and small power production tariffs and will allow the Commission to fulfill the reporting requirement imposed on it by the Legislature.

37. With respect to the requirement of an annual filing, there is no specific evidence in the record relative to the reasonableness of totally new filings that often. The Commission merely states that it is reasonable that the tariff be refiled every 12 months without adducing facts to support that statement. (Statement of Need and Reasonableness, p. 7). Since the FERC Rules require a tariff filing not less often than every 24 months, the reasonableness of an annual filing is not self-evident. 18 C.F.R. § 292.302(b). The more frequently a utility is required to file entirely substitutional tariffs, the greater will be the expense to the utility and ultimately its ratepayers. It is entirely possible that the expense occasioned by annual filings would not be offset by benefits to the Commission or prospective QFs who desire to obtain avoided cost data. A utility's rate schedule for cogenerators and small power producers may not change annually. Apparently, under a strict interpretation of the rule, the utility would still be required to entirely resubmit its tariff to the Commission. This would not only result in needless expense to the Commission but also in expense to the utility without any attendant benefit. It is necessary, as recognized by the Commission, to strike a balance between the legitimate interests of the Commission and prospective QFs in having reliable avoided cost data and the expense and inconvenience caused the utility by annual filings. The Hearing Examiner finds that an annual filing in the event of changes in the cost calculations reflected in the various schedules is reasonable. However, to the extent that the filing requirement mandates the physical refiling of an unchanged tariff, it is unreasonable.

To correct the defect, the Commission should amend § 3.0452 A. to allow a utility to formally advise the Commission in writing that there has been no change in its cogeneration and small power production tariff currently on file. Such a notification process should substitute for a physical annual tariff refiling in the event of a lack of change in the tariff.

so amended by new added S B P.5

38. The provision in § 3.0452 A. that the tariff for a Generating utility with less than 500,000,000 kwh sales in the preceding calendar year may substitute a retail rate schedule for Schedules A and B, the avoided cost calculations, is a reasonable accommodation to a small Generating utility. The bulk of the expense entailed in the preparation of the tariff would result from the calculation of avoided costs as reflected in Schedules A and B. The option of substituting the retail rate schedule will be cost effective for smaller utilities under defined circumstances. The 500,000,000 kilowatt-hour sales criteria for the requirement of filing Schedules A and B is reasonable in that it fully comports with the FERC definition, 18 C.F.R. § 292.302(a). Following the Federal definition under these circumstances is appropriate to reduce the complexity of competing definitions and to promote uniformity. The record also adequately supports adoption of the 500,000,000 kilowatt-hour sales limitation. (See, e.g., Pub. Ex. 64, City of Moorhead, p. 4).

Addition of the 500,000,000 kwh sales limitation as a condition to the requirement of filing Schedules A and B is not a substantial change within the meaning of 9 MCAR § 2.111. The necessity to accommodate the smaller utilities in the Commission's rules was a central issue in the hearing. The accommodation to the small utilities was a logical outgrowth of the hearing process after affected persons had notice of the various filing requirements. Moreover, the impact of the change to the proposed rule is on the utilities. It is to their benefit in that filing complexity and costs are reduced. Hence, a utility could not be prejudiced by the inclusion of the 500,000,000 kilowatt-hour limitation on filings of Schedules A and B. Nor could the change in filing requirement adversely impact any potentially affected QF. Substitution of the retail rate schedule for Schedules A and B, the avoided cost calculation, can only benefit a Qualifying Facility. The retail rate will generally be in excess of the avoided costs as reflected in Schedules A and B. A generating utility would not avail itself of the option to substitute its retail rate schedule for Schedules A and B unless it would be less expensive for it to do so than to calculate avoided costs.

39. The ability of a Non-generating utility to dispense with the filing of Schedules A and B is a reasonable clarification of the rule to reduce the administrative burden and expense on a Non-generating utility. As a consequence of public comment, it is apparent that non-generating utilities might be unable to comply with the rules if their wholesale suppliers did not supply the utility with the data necessary for the calculation of Schedules A and B, the avoided cost calculations. This concern is reasonably addressed by allowing a Non-generating utility to substitute Schedule G, its wholesale charges, for Schedules A and B. The rule, as amended, however, does not prevent a utility from filing and using its avoided cost calculations as reflected in Schedules A and B if it considers it cost effective and possible to do so.

The amendment to § 3.0452 A. regarding a Non-generating utility does not result in a substantial change within the meaning of 9 MCAR § 2.111. (See, Finding 38, supra).

40. Section 3.0452 B. describes the required contents of Schedule A. The subsection amends the initial proposed rule by adjusting the energy costs upward by a factor equal to 50% of the line losses shown in Schedule B. Reporting avoided energy costs is necessary since Minn. Stat. § 216B.164 (1981

Supp.), requires a utility to reimburse fully a QF for both the utility's avoided energy and capacity costs. The availability of the information will allow the Commission to administer the filed rates and provide a potential QF with the information relative to avoided energy costs necessary for it to determine the cost effectiveness of commencing operations in a particular location. Section 3.0452 B., excluding the change introduced in the third sentence of that provision relative to line losses, is both necessary and reasonable.

41. It is necessary to reflect appropriate line losses in the calculation of avoided energy cost in order to prevent overstatement of cost savings. As suggested by the Minnesota Rural Electric Association, the failure to include a line loss provision in the contents of Schedule A was merely a Commission oversight which it has now corrected. (Pub. Ex. 4, Eicher, p.3). With regard to the specific limitation on the adjustment to 50% of the line losses shown in Schedule B, at least two parties testified that transformer core losses would be associated with the generation of power produced by QFs. It was also stated in testimony that approximately 50% of the distribution system's losses are due to energizing the transformer core. Since line losses resulting from the energization of the transformer core will not be reduced by a QF providing energy, it is appropriate to calculate avoided energy costs using the 50% of reported line losses suggested in testimony rather than the entire 100% of reported line losses. Hence, the revision to the rule to recognize 50% of line losses as affecting avoided energy costs is both necessary and reasonable.

The amendment to § 3.0452 B. does not result in a substantial change within the meaning of 9 MCAR § 2.111. The rules, as initially proposed, contained an adjustment for line losses with respect to the capacity component of the avoided cost calculation. It should have been apparent from the proposed rules that the failure to include a similar adjustment in the calculation of avoided energy costs was a mere oversight which the Commission has now corrected.

42. Section 3.0452 C.1. requires that Schedule B contain specific information relative to all planned utility generating facility additions anticipated during the next ten years. The information regarding the operational characteristics of all planned utility generating facilities is necessary so that the Commission and any interested potential QF can make comparisons of utilities' generation plans and make judgments concerning the reasonableness of such plans. Moreover, information regarding the in-service date of the facility, the completed cost per kilowatt, the anticipated average annual fixed operation and maintenance costs in dollars per kilowatt and the annual fuel savings are necessary in order to make the avoided capacity cost calculation required by the proposed rules. A requirement that the information detailed in § 3.0452 C.1. be filed with the Commission is reasonable since it will assist the Commission in the administration of the rate structure contained in the proposed rules and will be readily available to a utility planning additional generating capacity in the near time horizon.

The only comment regarding § 3.0452 C.1. was filed by Northern States Power Company. (See. Pub. Ex. 6, p. 5-6). The changes in the section suggested by NSP are in accordance with the Company's proposals to amend the rate structure contained in § 3.0456. Since the Hearing Examiner did not accept the amendments to § 3.0456 suggested by NSP, its proposed amendments to § 3.0452 C.1. are inappropriate.

The Hearing Examiner finds that § 3.0452 C.1. of the proposed rules is both necessary and reasonable.

43. Section 3.0452 C.2. requires that Schedule B contain specified information relative to all planned firm capacity purchases other than from qualifying facilities during the next ten years. This provision of the rule is necessary since the purchase of planned firm capacity may substitute for the construction of additional generating facilities, and, therefore, it must be included in the calculation of avoided capacity costs. The requirement of reporting the specified information regarding firm capacity purchases during the next ten years is reasonable since any utility contemplating such purchases would have the information readily available. (Statement of Need and Reasonableness, p.9). The suggestions of NSP for changes in the subsection are rejected for reasons identical to those enumerated in the previous Finding. Section 3.0452 C.2, therefore, is both necessary and reasonable.

44. Section 3.0452 C.3. requires the utility to report in Schedule B its overall average percentage of line losses due to the distribution, transmission and transformation of electric energy. It is necessary to require the reporting of the overall average percent of line losses because that figure is used in the calculation of the utility's avoided capacity costs required by § 3.0452 C.4.g. Since an appropriate calculation of line losses is an integral part of the calculation of avoided capacity costs, reporting line losses is both necessary and reasonable.

45. Section 3.0452 C.4. requires Schedule B to contain a calculation of the utility's net annual avoided capacity costs stated in dollars per kilowatt-hour and the utility's net annual avoided capacity costs stated in dollars per kilowatt-hour averaged over both the on-peak hours and the overall hours. The calculation of the net annual avoided capacity cost requires eight separate detailed calculations enumerated in the rule. Since the rate paid to a QF will be determined, in part, by its avoided capacity cost, the avoided capacity cost must be measured. Moreover, since the Commission will administer the tariff charged and the information must be available to a prospective QF so that the business feasibility of operations can be determined, the requirement that the calculation of net avoided capacity cost be included in the tariff filed fulfills a substantive need. Therefore, § 3.0452 C.4. is necessary.

46. The Commission asserts that the calculation of net annual avoided capacity cost contained in § 3.0452 C.4. and the reporting thereof to the Commission in the utility's tariff is reasonable because Minn. Stat. § 216B.164, subd. 1 (1981 Supp.), requires that a QF be fully reimbursed for the utility's true avoided capacity cost. While the Hearing Examiner accepts this interpretation of the statute, it follows that the same provision would prohibit a rate component to the QF of an amount in excess of the utility's true avoided capacity cost unless specifically authorized by statute.

A number of public witnesses representing utilities testified that recognition of avoided capacity cost in general and specific elements of the calculation contained in § 3.0452 C.4. would be inappropriate and in excess of the Commission's statutory authority unless the QF provided Firm power to the interconnected utility. (See, e.g., Pub. Ex. 4, Eicher, p. 6; Pub. Ex. 6, NSP, passim; Pub. Ex. 5, No. Power Co-op., p. 2; Pub. Ex. 14, United Power Association, p. 1; Pub. Ex. 110, DPS, p.2; and Pub. Ex. 4, Eicher, p. 5).

There is testimony in the record, however, that the cumulative power provided by QFs would provide a composite substitute for the individual provision of Firm power. (See, Pub. Ex. 113, Supplemental Comments of Jacobs Wind Electric Co., p. 4, and attached testimony of Prof. Neil Hamilton).

The conflict in the testimony relative to the necessity for the provision of Firm power by a QF as a condition precedent to the recognition in the rate structure of an avoided capacity cost component is hereinafter considered at Finding 93, infra, and the accompanying Discussion. Although, on the basis of the record presented, the Hearing Examiner finds that the rate paid a QF for energy supplied appropriately recognizes an avoided capacity cost component only in the event that the QF provides Firm power, reporting of the calculation of the net annual avoided capacity cost as reflected in § 3.0452 C.4. is reasonable since a QF may be able to provide Firm power and, hence, qualify for a recognition in the rate received of an avoided capacity cost component. Since, under specified circumstances, a QF may obtain the benefit of the utility's net annual avoided capacity cost in the rate it receives, inclusion of such avoided capacity cost in Schedule B serves the legitimate purpose hereinbefore described.

47. Section 3.0452 C.4.a., the initial step in the calculation of net annual avoided capacity cost, requires the utility to take the completed cost per kilowatt of the utility's next major generating facility addition and multiply that cost by the utility's marginal carrying charge rate in the first year of investment. If the utility is unable to determine the carrying charge rate, a rate of 15% must be used.

The subsection as finally proposed utilizes the revised definition contained in § 3.0451 O., limiting the marginal carrying charge rate to such rate in the "first year of investment". The Commission asserts that the cost of a utility's electric generation plant must be spread over a period of time representative of its useful life. This is accomplished by determining the appropriate marginal carrying charge rate as previously defined and applying it to the investment cost of a new generation facility. (Statement of Need and Reasonableness, p.9).

Specific public testimony supported a limitation of the marginal carrying charge rate to that experienced in the first year of investment. (See, e.g., Pub. Ex. 4, Eicher).

For the reasons previously discussed relative to the definition of marginal carrying charge rate in the first year of investment contained in § 3.0451 O. of the proposed rules, a limitation of the marginal carrying charge rate to the initial year of investment is reasonable. (See, Finding 33, supra).

For the reasons discussed at Finding 33, supra, inclusion of the amended definition of marginal carrying charge rate in the first year of investment in this provision, does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

48. Section 3.0452 C.4.b. requires that the calculation set forth in subsection C.4.a. be discounted to present value. The rule, as finally proposed, substitutes the incremental cost of capital, as defined in § 3.0451 K., for the most recent overall rate of return authorized by the Commission for the reporting utility as the appropriate means of discounting to present value.

It is reasonable to use the incremental cost of capital in the discount calculation rather than the current overall rate of return because the incremental cost of capital reflects current capital costs, which are themselves the market estimate of future costs. The overall rate of return is inappropriate because it is based on historical capital costs which overstate avoided capacity costs during times of inflation and understate such costs during periods of deflation. (See Agency Ex. J, p.7). The change is also responsive to public testimony. (See Pub. Ex. 4, Eicher; Pub. Ex. 65, Ottertail Power Company, p.6). Moreover, the record contains no testimony opposed to the calculation of the discount rate contained in § 3.0452 C.4.b. Hence, § 3.0452 C.4.b. is reasonable.

so changed 9.7

The use in § 3.0452 C.4.b. of the revised definition of incremental cost of capital rather than the most recent overall rate of return for the utility is not a substantial change within the meaning of 9 MCAR § 2.111.

49. Section 3.0452 C.4.c. requires that the figure for average fuel savings per kilowatt described in § 3.0452 C.1.i. be discounted to present value. An integral part of the calculation of avoided capacity cost is the annual fuel savings per kilowatt described in § 3.0452 C.1.i. There is no evidence in the record opposing the discounting of average annual fuel savings per kilowatt to present value.

It is both necessary and reasonable to discount the fuel savings to present value so that this cost will be on a comparable basis with the investment cost of a new plant, which is also discounted to present value. (Statement of Need and Reasonableness, p. 10).

50. Section 3.0452 C.4.d. requires that the number resulting from the discounting of average annual fuel savings per kilowatt to present value as calculated in § 3.0452 C.4.c. be subtracted from the calculations of the completed cost per kilowatt of the utility's next major generating facility multiplied by the utility's marginal carrying charge rate in the first year of investment as calculated in § 3.0452 C.4.a. and b.

It is reasonable to subtract the fuel savings resulting from the installation of a particular plant from the total increase in capital costs in order to properly reflect the net additional cost resulting from the addition of a particular generating facility. Unless such fuel savings are subtracted in the calculation of net annual avoided capacity costs, it will be impossible to compute accurately the avoided costs of the utility resulting from a QF's delivery of electric energy. (Statement of Need and Reasonableness, p. 10).

51. Section 3.0452 C.4.e. requires that the net annual avoided capacity cost calculated in subparagraph d be multiplied by 1.15 to recognize a reserve margin. The Commission asserts that unless a reserve margin is recognized, the resulting computation of avoided capacity cost will understate the savings to the utility. Each utility must have an amount of reserve capacity available to meet system emergencies. For every kilowatt of coincident peak demand, the utility must build capacity in excess of the actual demand experienced. (Statement of Need and Reasonableness, p. 11). The reserve margin for utilities belonging to the Mid-Continent Area Power Pool is 15%. (Statement of Need and Reasonableness, p.11). Each utility, therefore, must have a reserve margin of approximately 15%. A reduction of one kilowatt in the customer's peak demand results in a reduction in capacity requirements of 1.15 kilowatts. Unless

a reserve margin is recognized, the avoided capacity cost to the utility will be understated by approximately 15%.

A number of public witnesses commented that recognition of a reserve margin is appropriate only if a QF provides Firm power. (See, e.g., Pub. Ex. 4, Eicher, p. 5; Pub. Ex. 5, Land O'Power Co-op., p. 2; Pub. Ex. 14, United Power Association, p. 1; and Pub. Ex. 110, DPS, p. 2). There is, however, no testimony in the record opposing the recognition of a reserve margin in the calculation of avoided capacity costs when a QF provides Firm power.

As further discussed in the Findings relative to the rates to be paid to a QF for the provision of electric energy, on the basis of the record presented, recognition of any avoided capacity cost factor is appropriate only if the QF provides Firm power. (See, Finding 93, and accompanying Discussion, infra). That conclusion, however, does not affect the reasonableness of § 3.0452 C.4.e. The appropriate limitation on the application of subparagraph e is realized not by deletions to that subparagraph but by the appropriate limitations in the application of that calculated reserve margin in those portions of the proposed rules dealing with payment for avoided capacity costs. (See Findings 93 and 99, infra). Since the propriety of recognizing a reserve margin for the provision of Firm power is conceded, and since a QF may provide Firm power, it is reasonable to include the recognition of an appropriate reserve margin in the calculation of avoided capacity cost and to include that recognition of a documented reserve margin in the tariff filed with the Commission as a component of Schedule B. Therefore, § 3.0452 C.4.e. is reasonable.

52. Section 3.0452 C.4.f. requires that the figure previously calculated by the application of subparagraphs a through e of § 3.0452 C.4. be increased by the present value of the anticipated average annual fixed operating and maintenance costs reported as a result of § 3.0452 C.1.f. The rule, as finally proposed, amends the rule as initially published by discounting the anticipated average annual fixed operating and maintenance costs to present value. When an electric utility installs a new generation plant, it will incur fixed operation and maintenance costs on an annual basis. If the generation plant is not built such costs will be avoided. Hence, it is reasonable to include in the calculation of avoided capacity cost the amount of anticipated average annual fixed operating and maintenance costs avoided.

A number of public witnesses commented on the necessity to discount the avoided fixed operating and maintenance costs to present value. (See, e.g., Pub. Ex. 4, Eicher, p. 6; Pub. Ex. 14, United Power Association, p. 1; and Pub. Ex. 110, DPS, p. 3). Average annual fixed operating and maintenance costs are future avoided costs. Since such costs are future avoided costs, it is reasonable to discount such costs to present value prior to their inclusion in the avoided cost calculation in order to reflect the time value of money and to put all calculations on a consistent basis. (Agency Ex. J., p. 7). As the Commission recognizes, the failure to discount the anticipated average annual fixed operating and maintenance costs avoided to present value was the result of an oversight which was corrected in the rules as finally proposed. Section 3.0452 C.4.f. is both necessary and reasonable.

The amendment to the proposed rules discounting to present value the anticipated average annual fixed operating and maintenance costs does not constitute a substantial change within the meaning of 9 MCAR § 2.111. While the

discounting of the cost saving to present value of this element of avoided capacity cost will reduce by some undetermined amount the rate received by a QF, potentially affected parties had adequate notice of the necessity for such an amendment. Throughout the calculation of avoided capacity cost contained in § 3.0452 C.4. of the rules as initially proposed, all future costs except the anticipated average annual fixed operating and maintenance costs were consistently discounted to present value. The failure to do so in subparagraph f was clearly the result of an oversight which should have been apparent to any interested person. In the absence of a discounting to present value of the cost in question, the avoided capacity cost would be inappropriately overstated.

53. Section 3.0452 C.4.g. requires that the calculation contained in subparagraphs a through f of § 3.0452 C.4. be increased by one-half of the percentage amount of the average system line losses experienced by the utility. This provision amended the rule as initially proposed by limiting the recognition of line losses to only one-half of such losses. As previously discussed, a recognition of line losses excluding core losses is reasonable to state properly avoided capacity cost. The 50% factor adopted by the Commission in the rules as finally proposed is reasonable and supported by the record. (See, Pub. Ex. 14, United Power Association, p. 1. See, also, Finding 41, supra).

so amended p.7

The amendment to § 3.0452 C.4.g. of the proposed rules to allow the recognition of only a portion of the line losses in the calculation of avoided capacity costs does not result in a substantial change within the meaning of 9 MCAR § 2.111. (See Finding 41, supra).

54. Section 3.0452 C.4.h. and i. complete the calculation in converting the avoided capacity costs to the utility's net annual on-peak avoided capacity costs stated in dollars per kilowatt-hour and the utility's net annual avoided capacity cost stated in dollars per kilowatt-hour averaged over all hours. The provisions are reasonable since they require utilities to compensate qualifying facilities for delivered capacity on a basis appropriate to the delivery of energy with respect to the system peak period. (See, Statement of Need and Reasonableness, p. 11-12).

55. Section 3.0452 C.5. requires that a calculation similar to that expressed in § 3.0452 C.4. be applied to a utility without planned generating facility additions but with planned additional capacity purchases during the next ten years. The rule, as finally proposed, contains an amendment stating that subsection 5 applies only to a utility that has planned additional capacity purchases during the next ten years even though it has no planned generating facility additions during such period.

so amended p.8

Since a utility may experience cost savings by avoiding either the building of an additional generating facility or by not purchasing additional capacity, it is necessary and reasonable for purposes of both equity and consistency to recognize such avoided costs to the utility in the event that the production of electricity from a QF reduces planned capacity purchases even though the utility has no planned generating facility additions. In both situations, there is a saving to the utility that should be recognized in the rate paid a QF if such producer is to be fully compensated for the avoided cost to the utility.

The amendment to the rule making explicit what was logically implicit in the rule as initially proposed, that subpart 5 only applied if a utility not having planned generating facility additions during the next ten years did have planned additional capacity purchases during such period, does not result in a substantial change within the meaning of 9 MCAR § 2.111. Moreover, the use of the incremental cost of capital as the appropriate discount rate in 5a of this subpart, as previously discussed, likewise does not result in a substantial change within the meaning of 9 MCAR § 2.111.

56. Section 3.0452 C.6., an entirely new provision in the rules as finally proposed, states that if a utility has neither planned generating facility additions nor planned additional capacity purchases during the next ten years, it has no avoided capacity costs. This provision makes explicit what was entirely explicit in the rules as initially drafted.

A number of public witnesses indicated a need, to avoid any misunderstanding, for a specific provision relative to the absence of avoided capacity costs under the circumstances described. (See, Pub. Ex. 57, MinnKota Power Co-op., Inc., p. 6; Pub. Ex. 93, Red Lake Co-op, Inc.; and Pub. Ex. 112, PKM Electric Co-op.).

Subsection 6 of subpart C. is a reasonable clarification to make explicit what was otherwise implicit in the rule as initially drafted and avoids any possibility of confusion or misapplication of avoided capacity costs in rate calculation.

Since the contents of this provision of the rule as finally proposed was completely implicit in the rule as initially drafted, the amendment does not result in a substantial change within the meaning of 9 MCAR § 2.111. (See, Pub. Ex. 93, Red Lake Co-op., Inc.).

57. Section 3.0452 D. requires that all standard contracts to be used with QFs be filed with the Commission as Schedule C. Since § 3.0454 B., found by the Hearing Examiner to be necessary and reasonable, requires that a QF execute a written contract with an interconnected utility, the Commission in the exercise of its oversight responsibility has a need to be aware of the contents of the standard contracts being used by utilities. The most certain way to be apprised of the contents of such contracts is for the utility to file them with the Commission. They would then be available for Commission review and inspection by any potentially interested cogenerator or small power producer.

The only comment received adverse to the filing of such standard contracts argued that such contracts should not be required between a QF and a utility. (Pub. Ex. 16, Jacobs Wind Electric Co., p. 5).

Since the Hearing Examiner has found that the requirement for such a contract is both necessary and reasonable, see Finding 69, infra, the provision of the rule requiring that such contracts be filed with the Commission is both necessary and reasonable.

58. Section 3.0452 E. requires that the utility file with the Commission its safety standards, required operating procedures for interconnected operations and the functions to be performed by any control and protective apparatus. Standards and procedures may not be more restrictive than the interconnection guidelines enumerated in § 3.0462. Further, a utility is prohibited from establishing a standard or procedure designed to discourage cogeneration or small power production.

It is necessary that the contents of Schedule D. be available both to the Commission which has the responsibility of monitoring compliance with the cogeneration and small power production rules and a prospective cogenerator or small power producer. A clear understanding of the technical conditions to govern the interconnection will assist the cogenerator or small power producer and minimize the cost of interconnection equipment and safety-related problems. (Statement of Need and Reasonableness, p. 3). The most efficient means of making the requisite information available to the Commission and to prospective cogenerators and small power producers is the filing of that information with the Commission as required by subsection E.

Since § 3.0462 establishes specified interconnection guidelines, it is appropriate that the standards and procedures adopted by a utility not be more restrictive than the specified interconnection guidelines. Moreover, allowing a utility to establish a standard or procedure designed to discourage cogeneration or small power production would conflict with the stated legislative intent of Minn. Stat. § 216B.164 (1981 Supp.).

Section 3.0452 E. is necessary and reasonable.

59. Section 3.0452 F. requires that the utility file with the Commission a statement of its procedures for notifying affected QFs of those periods of time when the utility will not purchase energy or capacity from a QF "because of extraordinary operational circumstances which would make the costs of purchases during those periods greater than the cost of internal generation".

The FERC Rules require a state commission to adopt rules specifying a procedure for notifying affected QFs of periods during which the utility will not purchase energy or capacity because of "extraordinary operational circumstances". See 18 C.F.R. § 292.304(f). Hence, this provision of the rule is necessary as a result of governing federal regulations specifically implementing a binding federal statute.

Since, pursuant to 18 C.F.R. § 292.304(f), the Commission has oversight responsibility regarding the legitimacy of a claimed extraordinary operational circumstance it is reasonable that the procedures be filed with the Commission in advance of such a claimed occurrence.

A number of public witnesses commented that the phrase "extraordinary operational circumstance" is unduly vague. (See, e.g., Pub. Ex. 6, NSP, p. 9; Pub. Ex. 16, Jacobs Wind Electric Co., p.6; and Pub. Ex. 65, Ottertail Power Company). One witness indicated that such an ability to refuse to purchase power from a QF should not be limited to extraordinary operational circumstances but should occur whenever the utility has an opportunity to purchase less expensive power. (Pub. Ex. 65, Ottertail Power Co.).

It is clear that, to qualify as an extraordinary operational circumstance, the condition must be one internal to the utility such as a light load factor which has the effect of rendering internal operation of its plant cheaper than the purchase of energy from a QF during a specified period. (Statement of Need and Reasonableness, p. 14). The Hearing Examiner finds that the phrase is adequately described in the proposed rule and is not subject to more precise definition. Moreover, any attempt by the utility to use the ability to suspend purchase of energy from a QF during an extraordinary operational circumstance is subject to review by the Commission as a consequence of § 3.0460. Section 3.0452 F. is both necessary and reasonable.

60. Section 3.0452 G. requires the filing of a Schedule F containing all of the computations made by the utility in determining Schedules A and B. Since the Commission must administer the rates resulting from the calculations contained in Schedules A and B, it is necessary for the Commission to have the means available to verify the computations therein contained. Filing of the computations as required by subsection G. is the most efficient means available to the Commission to execute its responsibilities in the administratiion of the tariffs resulting from the calculations contained in Schedules A and B. Section 3.0452 G. is necessary and reasonable.

61. Section 3.0452 H. requires a specific filing for a Non-generating utility. Subsection H. allows a Non-generating utility to file, for purposes of rate calculation, the rates at which it purchases energy and capacity. The rule, as previously drafted, required a Non-generating utility to file a complete schedule A and B, obtaining the requisite information from its suppliers. Testimony adduced at the hearings indicated that a supplier, who is not subject to Commission regulation, was under no obligation to provide a Non-generating utility with the information required to complete Schedules A and B. Moreover, in the event that the supplier did not provide the information necessary to calculate Schedules A and B, the avoided cost calculations, the utility would be required to generate the information internally at major expense. It was argued that the resulting impact on small utilities would be excessive for the benefit obtained. Both the cooperative and municipally-owned utilities argued that it would be less expensive for them to pay rates based on retail costs rather than to calculate Schedules A and B.

It is necessary that Non-generating utilities have on file with the Commission data from which an appropriate rate for energy purchases from QFs can be determined. In this regard, a Non-generating utility does not differ from a generating utility.

Allowing a Non-generating utility to substitute its purchase costs in lieu of calculating avoided costs under Schedules A and B is reasonable in that for small utilities, the administrative burden and expense is reduced and the utility has the option to choose between paying rates based on avoided costs or paying higher rates without expending the time and expense to determine true avoided cost. Any cost savings resulting from the Non-generating utility's substitution of its purchase energy costs for avoided costs as calculated in Schedules A and B will benefit ratepayers. If it is cost-effective for a Non-generating utility to pay rates based on true avoided costs, it will calculate Schedules A and B.

Therefore, § 3.0452 H. is necessary and reasonable.

The amendment to § 3.0452 H is not a substantial change within the meaning of 9 MCAR § 2.111. The resulting rule is not one fundamentally different, does not go to a new subject matter, does not adversely affect classes of persons not represented at the hearing, or make a substantive change not raised by the original Notice of Hearing so as to invite reaction at the hearing. The change was an accommodation to Non-generating utilities who testified that the substitute would be less expense for them in calculating Schedules A and B. The provision then results in a cost saving to the Non-generating utility. Since the rate paid to a QF as a result of the amendment would usually be higher than would result from the rule as previously proposed, no interested party is adversely affected by the amendment.

62. Section 3.0452 I. requires that the filings mandated by subsections A. - H. of this section be filed with the Commission, kept at the utility's general office and made available for public inspection during normal business hours. The record contains no public testimony commenting adversely on this provision of the proposed rule. The rule is necessary because, if the information is to serve its purpose in assisting both the Commission in the oversight of the tariffs and potential cogenerators and small power producers, it must be available. Requiring a filing with the Commission and the maintenance of the information at the general offices of the utility is reasonable as satisfying the legitimate demand for the availability of such information.

4 MCAR Section 3.0453 - Reporting Requirements.

63. Section 3.0453 A. requires each utility which is interconnected with a Qualifying Facility to provide the information specified in subsections B through D of the section and allows the filing of certain information specified in subsections E. and F. The information is required to be filed on or before November 1, 1983, on January 1, 1986, and every two years thereafter in the form that may be required by the Commission. The rule, as finally proposed, limited the application of the subsection to those utilities which have actually interconnected with a QF and required filings every two years rather than at any time the Commission may require such filings in the future.

The need for interconnected utilities to file such information is two-fold. Initially, the Commission is required by Minn. Stat. § 216B.164, subd. 7 (1981 Supp.), to report to the Legislature concerning the status of cogeneration and small power production activities within the State of Minnesota and its attendant impact on the utilities. Finally, since information regarding the status and impact of QFs is virtually non-existent in Minnesota and the Commission, to oversee the implementation of its rules, must have continuing knowledge of the development of cogeneration and small power production in the state of Minnesota, it is necessary that relevant information be available to the Commission both initially and on a reasonably on-going basis. Since it is necessary that the Commission be apprised of relevant information concerning the status of cogeneration and small power production facilities in the state of Minnesota, it is reasonable that such information be filed with the Commission. The two-year period selected gives certitude to the scope of the demands to be made on utilities and reduces the attendant regulatory burden to the greatest extent consistent with the availability of accurate information.

The comment by the MMUA that there is no evidence in the record regarding the need for continued filings of such information (Pub. Ex. 117, MMUA Reply Comments, p. 9), overlooks the Commission's rationale for regular filings. (See, Agency Ex. J. p.9).

Section 3.0453 of the proposed rules is both necessary and reasonable.

The amendments to § 3.0453 A. which limit its application to utilities that have actually interconnected with a QF and specify the time interval for subsequent filings of the requested information do not constitute a substantial change within the meaning of 9 MCAR § 2.111. The amendments introduced were solely for the purpose of responding to adverse comments made by public witnesses at the hearings. As such, they are clearly a logical outgrowth of the hearings which have the effect only of reducing the regulatory burden on affected utilities without compromising the integrity of the information sought.

Since the only affected party is benefited by the change without adverse impact on any other potential interested person, the change results in no prejudice. A change benefitting all potentially interested persons adopted as a result of testimony received at the public hearings and adequately supported by the existing record is not a substantial change within the meaning of 9 MCAR § 2.111.

64. Section 3.0453 B. requires a utility to provide specified information relative to interconnected QFs operating under net energy billing. The information to be filed details the operation and effect of QFs using net energy billing. It is necessary that the Commission be aware of the impact of net energy billing QFs on each utility and on the energy network within the state of Minnesota. (See, Finding 63, supra). The most cost-efficient way for the Commission to fulfill both its reporting requirements previously discussed and its role in fostering cogeneration and small power production is for it to require the filing of information relative to such QFs. Section 3.0453 A. is both necessary and reasonable.

Northern States Power Company suggests that the lack of definition of the word "type" as it relates to a QF introduces undesirable uncertainty into the reporting requirement. (See Pub. Ex. 6, NSP, p. 9). It is clear to the Hearing Examiner from the context that the word "type" as used in this subsection of the rule relates to the energy source of the QF, i.e., solar, wind, hydroelectric, biomass, etc. Although the rule is both necessary and reasonable as proposed, in order to eliminate any confusion, the Commission may desire to add language in this portion of the rule which specifically states that the word "type" refers to the energy source.

65. Section 3.0453 C. requires that certain specified information be filed by a utility with respect to its interconnected activities with QFs under rates other than net energy billing. The information required to be filed is information necessary to assess the impact of QFs not under net energy billing on the utility network within the state of Minnesota.

For the reasons stated in Findings 63-64, supra, § 3.0453 D. is both necessary and reasonable.

66. Section 3.0453 D. requires that the utility file with the Commission a summary of wheeling activities undertaken with respect to QFs. The rule, as finally proposed, limits the information regarding wheeling activities that must be filed to those wheeling activities which relate to QFs rather than all wheeling activities as initially proposed. For the reasons stated in Findings 63-64, supra, reporting to the Commission the wheeling activities relating to Qualifying Facilities is both necessary and reasonable.

Limiting the report to those wheeling activities undertaken with respect to QFs was done to clarify the original intent of the Commission and make explicit what was previously implicit only in the proposed rule. The subject matter of Minn. Stat. § 216B.164 (1981 Supp.), is cogeneration and small power production and the responsibility of the Commission with respect thereto. The Commission has no regulatory authority over wheeling activities undertaken outside of the context specified in Minn. Stat. § 216B.164 (1981 Supp.). Such activities are regulated by FERC. In the absence of authority for the Commission to regulate all wheeling activities, it is both necessary and reasonable to limit the reporting to the Commission of wheeling activities to those wheeling activities over which it has jurisdiction. (See, Pub. Ex. 6,

NSP; Pub. Ex. 65, Ottertail Power Company; and Pub. Ex. 117, MMUA Reply Comments, p. 9).

Since the amendment merely restricts the application of the rule benefitting the only party even possibly affected without adverse impact on any other potentially interested party, and is a logical outgrowth of the hearings adequately supported in the record, the amendment to § 3.0453 D. does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

67. Sections 3.0453 E. and F. allow a utility, at its option, to provide information relative to the major impacts of cogeneration or small power production on its utility system and the effectiveness of the cogeneration statute and the Commission's rules as observed by the utility. The rule, as ultimately proposed, differs from the rule as submitted initially by making the filing of such information permissive rather than mandatory.

made permissive p. 11

The Commission, pursuant to Minn. Stat. § 216B.164, subd. 7 (1981 Supp.), has the responsibility of reporting to the Legislature on the major impacts of cogeneration and small power production and on the effectiveness of regulation of QFs. Since utilities are substantially affected by the existence of cogenerators and small power producers, it is reasonable to afford such utilities an official opportunity to contribute to the Commission's assessment of the role of cogeneration and small power production in Minnesota. Since the purpose of the information is to afford the utilities some voice in Commission views, it is reasonable to make the filing of such information only optional. The change from a mandatory to permissive filing of the information herein discussed was a response by the Commission to comments of public witnesses that portions of the proposed rules imposed undue burdens on the utilities without offsetting regulatory benefits. If a utility does not wish to express its opinions on cogeneration and small power production to the Commission, it should not be required to do so.

Since the only party affected by the change is benefitted thereby without any possibility of adverse impact on any other potentially interested party and the change is a logical outgrowth of the hearing process adequately supported in the record, the amendment to §§ 3.0453 E. and F making the filing of information relative to the opinions of the utilities on cogeneration and small power production optional is not a substantial change within the meaning of 9 MCAR § 2.111.

4 MCAR Section 3.0454 - Conditions of Service.

68. Section 3.0454 requires that a utility purchase from a QF all "energy or capacity" offered for sale under the conditions set forth in the proposed rules. The requirement that a utility purchase all energy and capacity made available to it by a QF in accordance with governing legal standards is mandated by state statute. Minn. Stat. § 216B.164, subd. 4(b) (1981 Supp.).

A number of public witnesses commented that the use of the word "or" rather than the use of the word "and" in line 2 of § 3.0454 A. conflicts with governing state and federal statutes. (See, Pub. Ex. 6, NSP, p. 9; Pub. Ex. 65, Ottertail Power Company, p. 8; Pub. Ex. 88, Interstate Power Company, p. 3; and Pub. Ex. 118, NSP Reply Comments). While a rule requiring that the utility purchase the energy and capacity made available by a QF is necessary as a consequence of federal and state law, the rule, as stated, is an unreasonable

response to that need in that the usage of the word "or" between the word "energy" and the word "capacity" in the second line of § 3.0454 A. may rationally be construed as varying the legal responsibility of the utility to purchase both energy and capacity. The statute requires that available energy and capacity rather than energy or capacity be purchased.

To remedy the defect, the Commission should substitute the word "and" between the word "energy" and the word "capacity" for the word "or" in line 2 of § 3.0454 A.

substituted p.11

69. Section 3.0454 B. requires that a QF and a utility execute a written contract prior to interconnection of the QF. It is necessary that the respective legal obligations and business relationship between the QF and the utility be specified for certitude, clarity, and the protection of all involved parties and ratepayers. (See Statement of Need and Reasonableness, pp. 18-19). The Commission has proposed a written contract as the instrument for expressing the business relationship between the QF and the interconnected utility. A written contract is, of course, the normal means of specifying legal obligations.

A number of public witnesses, generally utilities, strongly favored the requirement of a written contract. (See, e.g., Pub. Ex. 4, Eicher, p.8; Pub. Ex. 6, NSP, p. 9; Pub. Ex. 10, Minnesota Power, p.4; Pub. Ex. 65, Otter-tail Power Company, p. 15; Pub. Ex. 88, Interstate Power, p. 3; and Pub. Ex. 118, NSP Reply Comments, p. 10).

While cogenerators and small power producers did not dispute the need for certitude in the respective legal obligations of the parties, they suggest that the experience of small cogenerators and small power producers with the unilateral bargaining power of the utilities makes it more reasonable for the Commission to dispense with the requirements of a written contract. They suggested that the Commission generate and approve as part of its regulatory mechanism a uniform statewide contract. (See, Pub. Ex. 100, Senator Marion Menning; and Pub. Ex. 113, Jacobs Wind Electric Co., Reply Comments, p. 6).

As demonstrated by NSP, however, the formulation and unilateral imposition of a stated contractual relationship on all QFs and utilities, even if legally permissible, is practically impossible. (See, Pub. Ex. 118, NSP Reply Comments, p.10). Moreover, there is no specific legal authority for the Commission to first formulate and then uniterally impose on all QFs and utilities a uniform statement of their respective legal obligations. The Hearing Examiner accepts the occurrence of instances of rapaciousness and the use by certain utilities of unilateral bargaining power in past relationships with QFs. He finds, however, that the combination of the execution of a written contract which may not alter the respective obligations of the parties enumerated in federal and state statutes and regulations with the ability of a prospective QF to bring a specific dispute concerning a proposed contractual provision to the Commission for resolution, pursuant to § 3.0460, where the burden of proof will be on the utility, provides adequate protection to a QF.

The requirement of a written contract between a QF and a utility is both necessary and reasonable.

70. Section 3.0454 C. requires that the interconnection between the Qualifying Facility and the utility comply with the requirements of the National Electrical Safety Code, 1981 Edition. It is necessary for purposes of safety

that an interconnection meet generally recognized safety standards. It is reasonable that the interconnection be accomplished in compliance with the generally accepted electric safety code.

Northern States Power Company suggested that additional specific codes be referenced. (Pub. Ex. 118, NSP Reply Comments, p.10). The legitimate concern expressed by NSP is fully answered by § 3.0462 J.

Section 3.0454 C. is both necessary and reasonable.

71. Section 3.0454 D. requires that the Qualifying Facility furnish, install, operate and maintain, without cost to the utility, apparatus required by the Qualifying Facility to operate in accordance with Schedule D. The rule additionally requires a utility, at the option of the QF, to provide, install and operate at cost, the equipment required for the QF to provide safe and reliable generation in parallel with the utility.

It is necessary that the responsibility for payment of interconnection costs be fixed. Except as otherwise expressly provided, governing federal and state law require a QF to bear interconnection costs. As a consequence of both governing law and reasonable equity between the QF and the utility's ratepayers, therefore, the initial sentence of § 3.0454 D. is both necessary and reasonable.

The second sentence of § 3.0454 D. requiring a utility to purchase, install and operate such equipment at cost at the request of the QF is assertedly necessary and reasonable because the utility has superior expertise which would not be cost effective for the QF to utilize otherwise. (See, Statement of Need and Reasonableness, p. 19).

There are no facts adduced in the record supporting the assumption by the Commission that this sentence of subpart D. is responsive to a legitimate concern.

A number of public witnesses testified that the broad language of this portion of the proposed rules may require a utility to completely staff and provide spare parts and repair equipment to its QFs. (See, Pub. Ex. 4, Eicher, p.9). The MMUA testified that the requirements of this portion of the rule would place an undue burden on a smaller utility in that it typically does not have available personnel experienced in installing operating and maintaining those portions of a QF's apparatus required for it to operate in accordance with Schedule D. (Pub. Ex. 117, MMUA Reply Comments, p.10).

The Hearing Examiner finds that the Commission has failed to adduce on the record facts supporting either the need or reasonableness of the requirement that a utility furnish, install, operate and maintain at cost all or any portion of the apparatus required for the cogenerator or small power producer to operate in accordance with Schedule D.

To correct the defect, the Commission should either delete the final sentence of § 3.0454 D., or reconvene the hearings to develop a record to support the need and reasonableness of such a requirement.

deleted. p. 11

72. Section 3.0454 E. allows either a utility or a QF to require proof of coverage or the procurement of a reasonable amount of liability insurance as a condition of interconnection. This section of the proposed rules, as initially formulated, took an exactly opposite position and prohibited a requirement of liability insurance. The record herein does not contain evidence of any instance in which physical injury or property damage was occasioned by the interconnection of a QF with a utility.

now permits requirement.

The position of the Commission regarding the option for requiring liability insurance is that the inherently dangerous nature of the product, electricity, when coupled with the possibility that a cogenerator or a small power producer having minimal financial responsibility could mandate interconnection with a utility, requires protection of the parties through insurance from financial irresponsibility on the part of either participant. (Agency Ex. J, Reply Comments, pp.9-10).

Public witnesses representing utility companies generally testified in favor of an insurance requirement on the basis of the rationale ultimately advanced by the Commission. (See, e.g., Pub. Ex. 5, Land O'Power Co-op. p.3; Pub. Ex. 6, NSP, p. 10; Pub. Ex. 10, Minnesota Power Company, p. 4; Pub. Ex. 14, United Power Association, p. 2; Pub. Ex. 57, MinnKota Power Co-op., Inc.; Pub. Ex. 65, Ottertail Power Company, p.9; Pub. Ex. 88, Interstate Power Company, p. 3; Pub. Ex. 117, MMUA Reply Comments, p.10; and Pub. Ex. 118, NSP Reply Comments, p. 2).

The public witnesses appearing on behalf of cogenerators responded that there is no evidence in the record that the interconnection between a QF and a utility poses any additional degree of risk to that experienced by the utility in providing electric service to its customers. (See, e.g., Pub. Ex. 113, Jacobs Wind Electric Co., Reply Comments, p. 8). Moreover, several witnesses testified that utilities have used an unreasonably high insurance requirement as a means of discouraging cogenerators and small power producers. (See, e.g., Pub. Ex. 71, Sen. Marion Menning, passim). It has not been unusual for a utility to require insurance coverage in excess of $1,000,000 from even a small QF.

Irrespective of the lack of a sophisticated discussion of the peculiar risks engendered by the interconnection of a QF with a utility, there is some evidence in the record that interconnection with at least certain types of QFs does pose a peculiar safety hazard. Ford Motor Company, for example, testified that wind power production equipment has a proclivity to self-energize, resulting in a potentially lethal voltage. (See, Pub. Ex. 99, Ford Motor Co., p. 3). Moreover, even Jacobs Wind Electric Company agreed that certain wind activated small power production equipment may self-energize. (See, Pub. Ex. 113, Jacobs Wind Electric Co., Reply Comments, Attachment E). The potentiality of certain wind powered small power production equipment to self-excite is also confirmed by at least one major study. (See, Operations of Small Wind Turbines on a Distribution System, March, 1981, summarized in Pub. Ex. 4, Eicher, pp. 16, 17, 18).

Hence, at least with respect to certain types of cogeneration and small power production equipment, interconnection with a Qualifying Facility poses a peculiar hazard not common to the provision of electric service by the utility to a customer.

Since the utility may not require a QF to demonstrate financial responsibility, and since functional cogeneration and small power production equipment may be constructed at a minimal cost, financially irresponsible individuals may engage in cogeneration and small power production in order to reduce their utility bills. The participation of financially irresponsible parties in cogeneration and small power production when considered in light of the peculiar risk associated with certain such activities renders the rule as proposed necessary.

While the procurement of insurance is a reasonable means of obviating the impact of a peculiar risk, the Hearing Examiner finds that the rule as proposed by the Commission fails to respond to the documented need and does not avoid the potentiality for abuse.

The Commission has chosen to require only a "reasonable" amount of insurance coverage. In the event of dispute between the parties as to the amount of coverage required, recourse to the Commission for resolution of the dispute would be available, pursuant to § 3.0460. Apparently, the Commission concluded that no more precise standard of coverage is supported by the record.

The need demonstrated, however, is to protect participants from the specific danger occasioned by the use of certain wind operated small power production equipment by a financially irresponsible party. The most likely coincidence of both the risk engendered and under-capitalization of the cogenerator or small power producer would be with respect to a system installed on the premises of a customer to defray his energy costs. The record supports the conclusion that, for such persons, liabiliy insurance up to coverage limits of the standard home owners' policy is readily available at reasonable rates. (See, e.g., Testimony of W. Raymond and Sen. Marion Menning, September 7, 1982, St. Paul hearing; D. Juel, September 15, 1982, Crookston hearing; and R. Kroeger, September 17, 1982, Pipestone hearing). The availability of such coverage at reasonable rates, however, is limited in amount to the normal maximum coverage of the homeowners' liability policy. Although there is evidence in the record that insurance of up to $300,000 can be obtained under personal liability and homeowners' coverage without an umbrella liability policy, (See Pub. Ex. 69, Testimony of Richard G. Kroeger, p.2), rates increase substantially for coverages in excess of $100,000. (Testimony of Richard G. Kroeger, September 17 1982, Pipestone hearing). Moreover, coverage in excess of $100,000 is substantially in excess of that required of motorists pursuant to Minnesota law. (Testimony of Richard G. Kroeger, September 17, 1982, Pipestone hearing).

There is no specific limitation in the rule as proposed by the Commission on the amount of insurance coverage required. As indicated, utilities have demanded coverage in excess of $1,000,000 from a QF and have used such large amounts of coverage as a means of discouraging cogeneration and small power production. Moreover, one utility has stated that it intends to ask for coverage of at least $500,000. (Pub. Ex. 118, NSP Reply Comments, p. 2). Another utility suggests coverage of $750,000. There is no evidence in the record that such coverage would be readily available at reasonable rates.

Recourse to the Commission in an individual case to determine reasonableness is not an appropriate substitute for a specified limitation on the required coverage. It would be time-consuming and expensive for a small QF to engage in what may be a full contested case proceeding before the Commission to avoid mandated coverage in excess of that available under most standard homeowners' policies. Nor does the rule contain any guidelines as to what factors the Commission could consider in determining whether the insurance coverage requested is reasonable.

A proposed rule, in order to satisfy the statutory requirement of demonstrated reasonableness, must be reasonably specific so as to obviate the demonstrated need. It is possible, based on the record herein, to specify a maximum dollar amount of insurance coverage to be required of the participants

in interconnected activities. To do so would obviate the use of the Commission's rule as a means of coercion by a party to the interconnection. Since the use of the word "reasonable" in this section of the proposed rule, based on the record herein presented, is capable of more precise definition so as to avoid use of the rule as a means of oppression, the Hearing Examiner finds that the Commission has failed to demonstrate the reasonableness of § 3.0454 E.

To correct the defect, the Commission should state a maximum limitation on required coverage. The record herein would support a required coverage of up to $300,000. (See, Pub. Ex. 69, Testimony of Richard G. Kroeger, p. 2). Requiring coverage of less than $300,000 is also supported by the record herein. Two lesser alternative coverages are as follows: the current statutory limits for Minnesota motorists of $25,000 per person, $50,000 per accident for bodily injury, and $10,000 for property damage; and the $100,000 coverage generally available under homeowners' insurance policies without significantly increased rates. (Pub. Ex. 69, Testimony of Richard G. Kroeger, p.2.)

The Hearing Examiner suggests that the limitation on coverage be a maximum with the availability in individual cases for the Commission to determine that a lesser coverage would be reasonable. The Hearing Examiner suggests that the section be amended in line 3 thereof by inserting after the words "liability insurance", the coverage ultimately selected by the Commission as a maximum amount.

The correction of the defect found by the Hearing Examiner in this portion of the proposed rules would not result in a substantial change within the meaning of 9 MCAR § 2.111.

The primary test of the presence of a substantial change is a lack of adequate notice so that a potentially interested party could present his views on the record. See, e.g., United Steel Workers of America v. Marshall, 647 F.2d 1189 (D.C. Cir. 1980); American Iron & Steel Institute v. EPA, 568 F.2d 284, 293 (3rd Cir. 1977). While the rule, as initially proposed, prohibited the requirement of insurance coverage, the presence of the provision advised potentially interested parties that the issue of an insurance requirement would be considered in the proposed rulemaking. Moreover, the Notice of Hearing informed potentially interested parties that, as a consequence of the hearing, any portion of the proposed rules might be altered. The Statement of Need and Reasonableness issued by the Commission with respect to its proposed rules admitted the presence of a need but a lack of documentation as to the amount of coverage to be required. (See Statement of Need and Reasonableness, p.20). It is also important to note that the proposed rules involve an entirely new subject matter and do not concern amendments to existing rules under which persons may have vested interests. Finally, the amendment to the rules is fully supported in the record and is a logical outgrowth of the rulemaking proceeding. South Terminal Corp. v. EPA, 504 F.2d 646, 659 (1st Cir. 1974).

73. Section 3.0454 F. states that the rules do not affect the legal liability, rights or status of any party under existing law and that no party may require the execution of an indemnity or hold harmless clause as a condition of interconnection. The final rule amends the rule as initially proposed by adding the prohibition against the requirement of an indemnity or hold harmless clause.

Section 3.0454 F. is necessary as a result of the unequal bargaining power between the utility and a QF and the demonstrated proclivity on the part of the utility to shift to the QF the liability of the utility. (See, e.g., Pub. Ex. 16, Jacobs Wind Electric Co., p.9; Pub. Ex. 113, Jacobs Wind Electric Co., Reply Comments, p.6; and Pub. Ex. 71, Sen. Marion Menning, Passim). Equally as significant, the broad indemnity clauses currently required by utilities may have the effect of voiding any insurance possessed by the QF. (Pub. Ex. 69, Testimony of Richard G. Kroeger, p.2).

The prohibition against shifting statutory and common law tort liability, especially as accomplished by a hold harmless or indemnity clause is, therefore, both reasonable and necessary.

The amendment to § 3.0454 F. is not a substantial change within the meaning of 9 MCAR § 2.111. The prohibition against indemnity and hold harmless clauses was implicit in the language of the rule, as initially proposed. (Testimony of Richard Kroeger, September 17, 1982, Pipestone hearing). The amendment now merely expressly so provides.

74. Section 3.0454 G. states that payments for interconnection costs may be made when the costs are incurred according to any schedule agreed upon by the QF and the utility. The rule, as finally proposed, amended the rule as initially propsed by eliminating the option of the QF to require a utility to amortize the interconnection cost payments over the life of the contract.

The need for § 3.0454 G. results from the requirements of the FERC Rules. Such rules require a state commission to specify the manner in which interconnection costs are to be reimbursed and give the Commission the option to allow payments amortized over the life of the contract. 18 C.F.R. § 292.306(h).

There is no evidence in the record that would require or even support the option of a QF to require a utility to finance the QF's interconnection costs. The testimony overwhelmingly indicated that a utility should not be forced into a banking function to the detriment of its ratepayers. (See, e.g., Pub. Ex. 6, NSP, p. 11; Pub. Ex. 10, Minnesota Power Company, p. 5; Pub. Ex. 65, Ottertail Power Company, p.10; Pub. Ex. 88, Interstate Power Company, p.4; Pub. Ex. 117, MMUA Reply Comments, p. 11). The only comment on behalf of requiring an optional time payment provision was that of Jacobs Wind Electric Company. Such comments, however, merely assert the desirability of the result with no specific reasoning. (Pub. Ex. 16, Jacobs Wind Electric Co., p.10).

In addition to the lack of facts in the record that would justify requiring an optional time payment plan, such a provision would have the undesirable effect of fostering under-capitalized QFs. If a QF could require the utility to finance any interconnection equipment, the QF would be substituting the credit of the utility for its own credit. Moreover, as Minnesota Power Company commented, interconnection equipment tends to be individualized and would be virtually useless to a utility upon repossession. (See, Pub. Ex. 10, Minnesota Power Company, p.5).

Section 3.0454 G., deleting the option of time payments, is both necessary and reasonable. deleted p.12

The amendment to § 3.0454 G. does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

75. Section 3.0454 H. requires that the utility offer maintenance, interruptible, supplementary and backup power to a QF upon request. Since governing federal rules require the furnishing of such types of power to a QF upon request, § 3.0454 H. is both necessary and reasonable. See 18 C.F.R. § 292.305(b).

76. Section 3.0454 I. requires that the utility meter the QF to obtain the data necessary to fulfill the utility's reporting requirements to the Commission. Unless the utility is operating under net energy billing, the cost for requisite metering is an interconnection cost to be paid for by the QF. If the QF is using net energy billing, the utility must provide a second meter to the Qualifying Facility without charge.

Section 3.0454 I. is necessary so that there may be an assignment of the costs of metering resulting from the reporting requirements of the Commission. It is reasonable to assign the costs of metering to the QF as an interconnection cost as defined in the proposed rules.

The requirement that a second meter be provided free of charge to a net energy billing QF, however, is not supported by the record. Even the Commission recognizes that, ordinarily, metering is a legitimate interconnection cost to be borne by the QF. (See Statement of Need and Reasonableness, p. 21). Such costs are additional costs arising solely from the fact of interconnected activity, and are peculiar to the QF. Minn. Stat. § 216B.164, subd. 8 (1981 Supp.), in relevant part provides:

> Nothing contained in this section shall be construed to excuse the qualifying facility from any obligation for costs of interconnection and wheeling in excess of those normally incurred by the utility for customers with similar load characteristics who are not cogenerators or small power producers. . . . (Emphasis added)

Since the cost of a second meter is one peculiar to a QF under net energy billing, under the definition of Interconnection costs contained in either the proposed rules or the FERC Rules, a second meter is an Interconnection cost. Pursuant to Minn. Stat. § 216B.164, subd. 8 (1981 Supp.), a QF must bear all interconnection costs.

The Commission, while not explicitly discussing Minn. Stat. § 216B.164 subd. 8 (1981 Supp.), apparently concluded that requiring a QF to bear the cost of a second meter would unduly inhibit the development of cogeneration and small power production. (Statement of Need and Reasonableness, p.21-22). There is no evidence in the record, however, supporting that conclusion. In fact, there is no evidence that requiring a QF subject to net energy billing to provide its own second meter would have any effect on the economic viability of such cogeneration or small power production installations. There is not even any evidence in the record regarding the cost of the second meter. Finally, the availability of net energy billing is a decided benefit to a QF and goes beyond the requirements of PURPA. Hence, in the absence of demonstrated need for subsidization of interconnection costs, the QF obtaining the benefits of such enhanced rates should bear the reasonable costs associated with its preferred status.

The testimony on behalf of the utilities uniformly recommended deletion of the availability of a free second meter for customers under net energy billing. (See, Pub. Ex. 4, Eicher, p.9; Pub. Ex. 5, Land O'Power Co-op., p.4;

Pub. Ex. 10, Minnesota Power Company, p.6; Pub. Ex. 31, City of Adrian, p. 5; Pub. Ex. 65, Ottertail Power Company, p.10; Pub. Ex. 88, Interstate Power Company, p.4; and Pub. Ex. 117, MMUA Reply Comments, p.11-13).

The only statement supporting the proposed rule other than that of the Commission contains no factual support for the necessity of providing a free second meter to a customer under net energy billing and does not consider the Commission's statutory authority to adopt such a requirement. (See, Pub. Ex. 16, Jacobs Wind Electric Co., p.11; Pub. Ex. 113, Jacobs Wind Electric Co., Reply Comments, p.9).

Therefore, on the basis of the record herein, the requirement of § 3.0454 I. that a utility provide a net energy billing customer with a free second meter has not been demonstrated to be reasonable and within the Commission's statutory authority.

To remedy the defect, the Commission should insert a period in the second sentence of the subsection after the word "cost" and strike the last sentence of § 3.0454 I. stricken p.12

77. Section 3.0454 J. allows the utility to discontinue service to a QF during a system emergency if not done on a discriminatory basis. This section is necessary to implement 18 C.F.R. § 292.037(b)(2).

It is reasonable in that a qualifying facility must be treated on a non-discriminatory basis in any load shedding program. (See Statement of Need and Reasonableness, p. 22; and Pub. Ex. 65, Ottertail Power Company, p.11).

While the proposed rule is both necessary and reasonable as presented, the Hearing Examiner suggests that the Commission consider adding language at the end of the subsection that a reconnection of service to the QF must also be done on a non-discriminatory basis. Although a discrimination against a QF as a customer of the utility may be subject to redress under other provisions of Minn. Stat. Ch. 216B (1980), and the Commission rules, the limited authority that the Commission possesses with respect to the service provided by a municipally-owned electric utility under Minn. Stat. § 216B.17 (1980), makes it appropriate for the Commission to consider including in this section of the proposed rules a prohibition against discriminatory delays in the resumption of service to a QF. Specific language to accomplish that end is suggested in Pub. Ex. 16, Jacobs Wind Electric Company, p.12. so added p.12

The addition of language prohibiting discrimination against a QF in the recommencement of electric service would not constitute a substantial change within the meaning of 9 MCAR § 2.111.

78. Section 3.0454 K. allows a utility to require the QF to submit an interconnection plan containing the technical specifications of the equipment, the proposed date of interconnection and the projection of net operative consumption by the QF prior to interconnection. No public testimony adverse to this provision was received. Since the interconnection of a QF will have an effect on the utility's system and the required information is readily available to the QF, § 3.0454 K. is both reasonable and necessary. (See Statement of Need and Reasonableness, p. 23; and Pub. Ex. 65, Ottertail Power Company, p. 11).

The Commission may consider the suggestion of Ottertail Power Company that language be inserted in this portion of the proposed rule requiring that

the information be supplied at least 30 days prior to the actual interconnection. Since the utility has need to know about the specific interconnection and the actions required of it prior to implementation, the inclusion of a reasonable lead time in the provision of the information prior to interconnection would be desirable. (See Pub. Ex. 65, Ottertail Power Company, p.11).

Requiring the submission of the interconnection plan not less than 30 days prior to the actual interconnection would not constitute a substantial change within the meaning of 9 MCAR § 2.111.

amended to read "not more than 30 days" see F&F p.51

4 MCAR § 3.0455 - Rates for Sales.

79. Section 3.0455 A. requires that a utility, except as otherwise specifically approved by the Commission, sell electricity to Qualifying Facilities under the utility's standard retail rates. This provision is necessary to assure QFs that the Commission, not the utility, will set the rates for energy purchases by the QF. It is reasonable in that it assures both QFs and other utility customers that neither will be discriminated against relative to the other. Moreover, this portion of the proposed rule is consistent with 18 C.F.R. § 292.305(a)(ii).

80. Section 3.0455 B. provides that either a QF or a utility may petition the Commission to establish a specific rate for supplementary, maintenance, backup, or interruptible power. The rule, as finally proposed, differs from the rule as initially drafted by allowing the utility the opportunity to petition the Commission for the establishment of such specific rates.

A number of public witnesses commented on the desirability of specifically allowing a utility to petition for the establishment of such rate. (See, e.g., Pub. Ex. 10, Minnesota Power, p.7; and Pub. Ex. 4, NSP, p.11).

Section 3.0455 B. is necessary in order to establish a mechanism to develop rates for the types of power that the utility must offer on request as a consequence of both the FERC Rules and § 3.0454 H. of the proposed rules.

It is reasonable in that either party to the interconnection may petition the Commission for the establishment of a specific rate. The option allowed a utility to so petition, as added by the amendment to the proposed rule, merely clarifies existing law. Since a regulated utility may already petition the Commission to establish rates for the provision of its electric service, the amendment merely clarifies the application of the rule.

So amended p.13

The amendment to the proposed rule allowing a utility to petition for the establishment of a specific rate for the provision of electric service to a QF is declaratory of existing law and, as such, is not a substantial change within the meaning of 9 MCAR § 2.111.

4 MCAR § 3.0456 - Standard Rates for Purchases.

81. Section 3.0456 A. describes the rate structure applicable to the sale of electric power by a QF to a utility. It initially provides that a QF of more than 100 kilowatts may negotiate a contract with the utility or be compensated under standard rates described in the remainder of § 3.0456, if the QF makes a commitment to provide Firm power. A utility must make available the three types of standard rates described in subsections B., C. and D. of the section. The QF must choose interconnection under one of the rates and specify its selection in the written contract. A credit to a QF must be timely remitted by the utility. Finally, a QF remains responsible for the monthly service charges and demand charges specified in the tariff under which the QF consumes electricity from the utility.

The provision that standard rates apply to a QF with a capacity of 100 kilowatts or less is necessary to implement 18 C.F.R. § 292.304(c). Some recognition in the rate paid to large cogeneration and small power production facilities of more than 100 kilowatts is necessary to allow the special circumstances of a large QF to be taken into account when rates for purchases are determined. The provision of the proposed rule requiring a QF to specify its choice of one of the three types of standard rates is necessary to ensure clear communication between the buyer and seller of the electric power. To ensure uniformity of treatment and timely payment of net credit to the QF, it is also necessary to specify the time within which payment will be made to the cogenerator or small power producer. Finally, the provision of this portion of the proposed rule that a QF continue to pay any monthly service charge and demand charge specified in the tariff under which it purchases electricity from the utility is necessary as a consequence of Minn. Stat. § 216B.164, subd. 8 (1981 Supp.).

The provisions of § 3.0456 A. distinguishing between QFs on the basis of their kilowatt capacity is reasonable as being required by governing law.

Since the Hearing Examiner hereinafter finds that, on the basis of the record presented, payment for avoided capacity costs without providing Firm power is only appropriate with respect to a QF using net energy billing, the requirement of subsection A. that there may be compensation under standard rates for a QF having a capacity of more than 100 kilowatts only if it commits to provide Firm power is reasonable as being in accordance with the statutory limitations on maximum payments. Moreover, since it is necessary that the QF elect the rates under which it will be compensated, it is reasonable that the election be contained in the contract between the QF and the utility required by the proposed rules. The requirement that a QF continue to pay any monthly service charge and demand charge specified in the tariff under which it purchases electricity from the utility is reasonable as being required by Minn. Stat. § 216B.164, subd. 8 (1981 Supp.). This is a reasonable requirement because these fixed charges are designed to recover all or part of those costs of providing service which do not vary with the consumption of electricity and which may not be avoided through the generation of electricity by the QF. If the QF did not pay such charges, the expense would be borne by the utility's ratepayers generally, a result prohibited by Minn. Stat. § 216.164, subd. 1, subd. 8 (1981 Supp.).

Hence, the Hearing Examiner finds that § 3.0456 A. of the proposed rules is both necessary and reasonable.

The deletion of the word "electric" in the phrase "firm electric power" as contained in the second sentence of 3 MCAR § 0456 A. is not a substantial change within the meaning of 9 MCAR § 2.111. The change is meant only to accommodate the phrase "Firm power" which is now a defined term in these rules. The deletion of the word "electric" has no substantive effect and only introduces clarity into the rule consistent with the new definition. 30 deleted p.13

Section 3.0456 B - Net Energy Billing Rate.

82. Section 3.0456 B.1. provides that the net energy billing rate is available only to a QF with capacity of 40 kilowatts or less which chooses not to offer electric power for sale on a time-of-day basis. A limitation on the availability of net energy billing, a substantially beneficial rate under the

structure adopted by the Commission, is necessary. The initial limitation of the availability of net energy billing to a QF with a capacity of 40 kilowatts or less is reasonable as being in accordance with Minn. Stat. § 216B.164, subd. 3 (1981 Supp.).

The statute, however, does not require that a QF of less than 40 kilowatts electing to offer electric power for sale on a time-of-day basis be excluded from net energy billing. The limitation on the availability of net energy billing to a QF of less than 40 kilowatts which chooses not to offer electric power for sale on a time-of-day basis is a reasonable accommodation of the need to make time-of-day rates available to small cogenerators and small power producers with the Commission's desire to encourage only cost-effective applications of the time-of-day purchase rates. (See Statement of Need and Reasonableness, p.25).

Section 3.0456 B.1. is both necessary and reasonable.

83. Section 3.0456 B.2. requires that a utility bill a QF for the excess of energy supplied by the utility above energy supplied by the QF according to the utility's applicable retail rate schedule. This provision is mandated by Minn. Stat. § 216B.164, subd. 4 (1981 Supp.). The provision is reasonable in that it treats a QF in the same manner as any of the other customers of the utility when the QF of less than 40 kilowatts has a net energy usage from the utility.

84. Section 3.0456 B.3. specifies the rate when the QF provides net energy to the utility. This provision of the rule requires that a QF with a capacity of 20 kilowatts or less be compensated for net energy supplied the utility at the utility's retail rate for the delivery of power to its customers. A QF with a capacity of between 20 and 40 kilowatts is to be compensated for net energy supplied in accordance with § 3.0456 C. of the proposed rules.

85. Specification of the rates to be paid a QF for the energy it provides a utility is required both by the FERC Rules and Minn. Stat. § 216B.164, subd. 3 (1981 Supp.).

86. The Commission, pursuant to Minn. Stat. § 216B.164, subd. 3 (1981 Supp.), has authority to fix a rate for net energy supplied by a QF subject to net energy billing in excess of the utility's avoided cost. Neither § 210(b) of PURPA, nor 18 C.F.R. § 292.304(a)(2) abrogates that authority the Commission possesses by virtue of state law. While Minn. Stat. § 216B.164, subd. 3 (1981 Supp.), defines the availability of net energy billing in terms of a capacity of 40 kilowatts or less, the statute does not require a single rate for net energy supplied applicable to all QFs with a capacity of 40 kilowatts or less. Minn. Stat. 216B.164, subd. 3 (1981 Supp.). The Commission has discretion to fix different rates for the net production of electricity by QFs subject to net energy billing as a consequence of the capacity of the QF.

87. It is reasonable to fix the rate for net deliveries to the utility by a QF with less than 20 kilowatts of capacity at the retail rate. The Hearing Examiner accepts the reasoning advanced by the Commission regarding payment of the retail rate. (See Statement of Need and Reasonableness, p. 27). The initial reason advanced by the Commission is that a QF of less than 20 kilowatts will be producing primarily to offset the energy needs of the QF rather than to provide surplus energy. Such small cogenerators and small power producers will be primarily homeowners and farmers. The net supply of energy by such

producers will be de minimis. Secondly, the Commission reasons that for such small QFs, the retail rate, when external costs are considered, will roughly approximate avoided costs. Moreover, in the calculation of avoided costs, certain intangible factors, such as the aggregate value of capacity from Qualifying Facilities to the utility's costs and the smaller capacity increments and shorter lead times available with additions of capacity from QFs are peculiarly true of QFs of less than 20 kilowatt capacity. Thirdly, the Commission reasons that, since QFs of less than 20 kilowatt capacity are likely to be owned by less sophisticated operators, the simplicity and customer understandability inherent in using the retail rate instead of avoided cost calculation justifies exceeding determined avoided costs. Finally, the Commission suggests that utilities within the state of Minnesota have great variation in their avoided costs. In an area in which a utility has no avoided capacity cost, no capacity payment would be available. A larger facility may transmit power to other utilities and obviate this difficulty. A small facility, however, is essentially limited to its interconnected utility for sales. Hence, use of the retail rate for QFs of less than 20 kilowatt capacity would encourage more balanced development and provide reasonably similar incentives to potential owners of QFs throughout the state. (Statement of Need and Reasonableness, p.27). Since QFs of more than 20 kilowatt capacity are designed to produce net electricity in a largely commercial setting rather than to offset usage, similar reasoning does not apply. (Statement of Need and Reasonableness, p.29). It is reasonable, therefore, to require that a utility subject to net energy billing having a capacity in excess of 20 kilowatts be compensated for net energy supplied to the utility solely on the basis of the utility's avoided cost.

DISCUSSION - STATUTORY AUTHORITY TO PAY RATE IN EXCESS OF AVOIDED COST.

Neither the Commission, nor those utilities opposed to the payment of the retail rate for net energy supplied by a utility subject to net energy billing specifically considered the statutory authority authorizing such a rate. The Commission cites Minn. Stat. § 216B.164, subd. 3 (1981 Supp.), without specifically treating the language of that subdivision in light of both § 210 of PURPA and the applicable FERC Rules. (Statement of Need and Reasonableness, p.25-26). Several utilities generally suggest that payment of the retail rate which exceeds avoided cost may be illegal without advancing specific legal argument for that position. (See, e.g., Pub. Ex. 108, United Power Reply Comments, p. 2).

Minn. Stat. § 216B.164, subd. 3 (1981 Supp.), authorizes the Commission to set a rate for net energy supplied by a utility subject to net energy billing in excess of the utility's avoided cost. That subdivision specifically describes the factors the Commission may consider in setting such a rate as follows:

> "Notwithstanding any other language to the contrary in this section, the commission shall set the rates for net input into the utility system based on avoided costs as defined in 18 C.F.R. Section 292.101(b)(6), the factors listed in 18 C.F.R. Section 292.304, and all other relevant factors. (Emphasis supplied).

It is clear from other provisions of the statute that when the rate is to be limited solely to avoided costs, the legislature has expressly so provided. See, e.g., Minn. Stat. § 216B.164, subd. 4(b), (c) (1981). Since the federal rules cited in the subdivision relate entirely to avoided costs, if the rate were limited to avoided costs, the language "and all other relevant factors" would be mere surplusage. The factors in addition to avoided costs considered by the Commission are "other relevant factors" within the meaning of 216B.164, subd. 3 (1981 Supp.). (See, Statement of Need and Reasonableness, pp. 26-27).

It could be argued that the construction of Minn. Stat. § 216B.164, subd. 3 (1981 Supp.), adopted by the Hearing Examiner results in a conflict between the subdivision and federal law. For purposes of the authority granted by both PURPA and the FERC Rules, compensation to a QF for net energy supplied is to be limited to avoided costs. See, PURPA § 210(b); 18 C.F.R. § 292.304(a)(2). Neither the federal statute nor the FERC Rules, however, specifically prohibit a state from exceeding the rate authorized as a consequence of federal authority if authorized to do so by state law. The independent grant of authority to set a rate for net energy supplied by QF in excess of the utility's avoided costs contained in Minn. Stat. § 216B.164, subd. 3 (1981 Supp.), sanctions this provision of the proposed rules unless the doctrine of pre-emption prohibits variant state standards.

In Northern States Power Company v. State of Minnesota, 447 F.2d 1143 (8th Cir. 1971), aff'd mem., 405 U.S.1035 (1972), the Court discussed the doctrine of pre-emption. The Court stated that there were three methods by which federal action could be deemed to have pre-empted the field so as to exclude states from asserting concurrent jurisdiction over the same subject matter. The first is whether compliance with both federal and state regulations is a physical impossibility. The second is when Congress has manifested an intent to displace coincident state regulations by unequivocally and expressly declaring federal authority to be exclusive. The third method is when pre-emption may be implied as a practical consequence through the application of the following four tests:

1. The aim and intent of Congress as revealed by the statute itself and its legislative history;

2. The pervasiveness of the Federal reguatory scheme as authorized and directed by the legislation and as carried into effect by the Federal administrative agency;

3. The nature of the subject matter regulated and whether it is one which demands exclusive federal regulation in order to achieve uniformity vital to national interests; and

4. Whether, under the circumstances of a particular case, state law stands as an obstacle to the accomplishment and execution of the full purpose and objectives of Congress.

The first test, that of physical impossibility or direct conflict does not apply to the instant case. While on cursory analysis, it may appear that the provisions of the statutes are in direct conflict, one authorizing what the other prohibits, the direct conflict test is meant to apply to situations in which the difference between the provisions results in a frustration of the federal purpose as a result of the dichotomy. Here, PURPA merely states that for purposes of federal regulatory authority, rates paid to a QF are limited to the utility's avoided costs. Compliance with a state statute which allows a more liberal rate, however, does not negate the federal provision.

More relevant to the instant facts are the second and third tests outlined. There is no statement in either PURPA or in the FERC Rules that coincident state regulation is prohibited. Nor is pre-emption required by application of the third test. There is no factual support for an argument that a rate authorized for purposes of federal regulation would frustrate an intent of Congress as revealed in the statute. The federal regulatory scheme, as authorized by both the legislation and the implementing FERC Rules is not pervasive; in fact, state commissions are the instruments of enforcing the federal authority. Nor is the subject matter of the regulation, the local production and consumption of electric power in a condition of energy surplus, one which demands exclusive federal regulation to achieve uniformity vital to the national interests. Finally, allowing the enhanced rates herein required by state rule would not be an insuperable obstacle to the achievement of the full purpose and objectives of Congress.

In summary, § 210 of PURPA and the FERC Rules do not pre-empt the state from adopting a standard of compensation for purposes of state law more liberal than the federal standard so as to render the proposed rule's use of the retail rate beyond the Commission's statutory authority.

Section 3.0456 C. - Simultaneous Purchase and Sale Billing Rate.

88. Section 3.0456 C. describes the rate to be paid a Qualifying facility with capacity of 40 kilowatts or less which chooses not to offer electric power for sale on a time-of-day basis.

As a consequence of both federal and state law, it is necessary for the Commission to determine the rate to be paid to a QF for the delivery of energy to a utility. See Minn. Stat. § 216B.164, subd. 3 (1981 Supp.); 18 C.F.R. § 292.304, 292.401.

89. Section 3.0456 C.1. limits the availability of the simultaneous purchase and sale rate to a QF with a capacity of 40 kilowatts or less which chooses not to offer electric power for sale on a time-of-day basis. The limitation of the availability of the simultaneous purchase and sale rate to QFs with a capacity of 40 kilowatts or less that chooses not to offer electric power for sale on a time-of-day basis is reasonable. In order for a QF to provide energy on a cost-effective basis to a utility under the time-of-day rates described in § 3.0456 D., a capacity factor of at least 40 kilowatts is necessary. (See Statement of Need and Reasonableness, pp. 30-31). This results from the requirement that time-of-day energy deliveries be accurately metered. The requisite meters are more expensive than standard watt-hour meters. The cost of such metering would be an interconnection cost to be borne by the QF. Since higher time-of-day rates would not generally be cost-effective unless a 40-kilowatt capacity is present, making the time-of-day rate mandatory for a QF with a capacity of less than 40 kilowatts would be unreasonable. Since 40 kilowatts is the appropriate level for imposition of mandatory time-of-day rates and the 20-kilowatt capacity factor is the appropriate limitation on the availability of compensation under net energy billing at the retail rate, fixing a capacity factor for purposes of the availability of the simultaneous purchase and sale rate of 40 kilowatts or less is reasonable. If a QF with a capacity factor of under 40 kilowatts that would otherwise receive rate treatment under the simultaneous purchase and sale alternative decides to incur the extra costs needed to qualify for the time-of-day rate structure stated in § 3.0456 D. of the proposed rules, however, it is reasonable to allow it to do so.

90. Section 3.0456 C.2. of the proposed rules provides that the Qualifying Facility shall be billed for all energy and capacity it consumes according to the utility's applicable retail rate schedule. Since this provision is mandated by Minn. Stat. § 216B.164, subd. 4 (1981 Supp.), it is reasonable.

91. Section 3.0456 C.3. requires that the utility "purchase all energy generated by the qualifying facility" and compensate the QF in accordance with the avoided costs of the utility.

Both federal and state law only require that the utility purchase any energy and capacity which is made available from a QF. There is no legal authority for the Commission to require a QF to sell all energy generated by it to a utility. In fact, such a result would conflict with one of the presumed purposes for establishing a QF, the availability of the power generated by the QF for satisfaction of its own internal energy needs. Hence, the requirement that a QF sell all energy generated to the utility is beyond the statutory authority of the Commission. For the reason hereinbefore enumerated, the requirement of § 3.0456 C.3. of the proposed rules is also unreasonable.

To correct the defect, the language "generated by the qualifying facility" contained in the first sentence of § 3.0456 C.3. must be deleted and language substantially similar to the following included:

> All energy and capacity which is made available to it by the qualifying facility. . . .

so amended & more -- p. 14 and see FoF p. 60

Such an amendment will not result in a substantial change within the meaning of 9 MCAR § 2.111.

92. Section 3.0456 C.3.a. describes the energy component of that portion of the rate applicable to the utility's avoided energy costs. Section 3.0456 C.3.a. has been amended to allow a Generating utility which has not filed Schedule A, as authorized by § 3.0452 A., to substitute the energy rate contained in its retail rate schedule for the avoided cost calculation contained in Schedule A. The new language contained in the final portion of § 3.0456 C.3.a. relative to a Non-generating utility involves the same language relative to calculation of the avoided energy cost as was contained in the rule as initially submitted.

so amended p. 14

As previously discussed, Minn. Stat. § 216B.164 (1981 Supp.), requires that a QF be compensated for energy supplied by it on the basis of the utility's full avoided cost. Moreover, compensation for the full avoided costs of the utility is not prohibited by federal law. (See, PURPA § 210; 18 C.F.R. § 292.304(a)(2). Hence, it is reasonable to compensate a QF for the utility's full avoided energy costs. Using for determination of such avoided energy costs the appropriate system average incremental energy costs shown on Schedule A for a Generating utility that has filed such Schedule, the energy rate of the retail rate schedule applicable to the QF for a Generating utility that has exercised its option not to file Schedules A and B, or the energy rate shown on Schedule G for a Non-generating utility most closely approximates the utility's true avoided energy costs. (See, Statement of Need and Reasonableness, pp. 7-8, 15, 29-30 and Agency Ex. J, Reply Comments, pp. 11-12).

Several distribution cooperatives argued that it is inappropriate to use the rate at which a Non-generating utility obtains wholesale power when the Non-generating utility itself owns the generation and transmission utility. (See, e.g., Pub. Ex. 4, Eicher; Pub. Ex. 14, United Power Association, p.2;

and Pub. Ex. 24, Cooperative Power Association, p.4). Such comments argued that, in that case, the appropriate rate is the avoided cost of the generation and transmission utility not the wholesale rate paid by the distribution utility. It is not reasonable, however, to make the amount of compensation to be received by a QF dependent on the random factor of the organizational nature of the utility to which it is interconnected. The result of such a recognition of business organization in the rate paid the QF could reasonably be an uneven geographic development of QFs in areas containing distribution co-ops which own the generating and transmission co-op.

The Hearing Examiner finds that Section 3.0456 C.3.a. is reasonable.

The amendments to § 3.0456 C.3.a. do not constitute a substantial change within the meaning of 9 MCAR § 2.111. The language of the subsection dealing with a Non-generating utility in all material respects relative to the calculation of the rate to be paid a QF is identical to the language as additionally proposed. Moreover, for the reasons enumerated in Finding 38, supra, the provision allowing a Generating utility which has not filed Schedule A to substitute the energy rate from its retail rate schedule does not constitute a substantial change which could adversely impact any interested person.

93. Section 3.0456 C.3.b. describes the capacity component to be included in the simultaneous purchase and sale rate. The Commission attempts herein to allow recovery of a capacity component which fully compensates the QF for the utility's avoided capacity costs. With respect to a QF that provides Firm power, calculation of the utility's avoided capacity cost based on the factors specifically enumerated in § 3.0456 C.3.b. reasonably approximates the avoided capacity cost to the utility. To the extent that § 3.0456 C.3.b. allows a capacity component in the rate paid a QF that does not provide Firm power, however, the calculation contained in this portion of the proposed rules may exceed the avoided capacity costs of the utility. There is no support in the record for the conclusion that, in the absence of the provision of Firm power, a utility experiences any avoided capacity costs. Since true avoided cost of the utility is the maximum determinant of the rate to be received by a QF not subject to net energy billing under the proposed rules and Minn. Stat. § 216B.164, subd. 2 (1981 Supp.), the Commission has not adduced facts on the record establishing either the requisite statutory authority or the reasonableness of reflecting in the rate paid a QF the capacity component authorized in § 3.0456 C.3.b. with respect to a QF not providing Firm power.

To correct the defect, the Commission has several options. It may add language in § 3.0456 C.3.b. limiting the availability of a capacity component under this provision to a QF providing Firm power. Inserting the words "If the qualifying facility provides firm power to the utility," at the beginning of subparagraph b. and the following sentence at the end of subparagraph b. would reasonably accomplish that result:

> If the qualifying facility does not provide Firm power to the utility, no capacity component shall be included in the compensation paid to the qualifying facility as a consequence of the simultaneous purchase and sale rate.

If the Commission concludes that a consideration of factors other than the provision of Firm power justifies a full avoided capacity payment to a QF even though it does not provide Firm power, it should reconvene the hearings to support that conclusion on the record.

Neither the amendment suggested, nor the new language contained in § 3.0456 C.3.b., legitimately describing the avoided costs of certain Generating utilities and all Non-generating utilities, constitutes a substantial change within the meaning of 9 MCAR § 2.111. (See, Findings 38 and 39, supra).

DISCUSSION, AVOIDED CAPACITY COMPONENT FOR NON-FIRM POWER.

There appears to be univeral acceptance of the proposition that compensation paid a QF not entitled to the benefit of an enhanced rate under Minn. Stat. § 216B.164, subd. 3 (1981 Supp.), should be limited to the true avoided capacity and energy costs of the utility to which it is interconnected. The payment of such true avoided costs, however, calculated, is the legal maximum of the permissible rate of compensation to a QF that does not qualify for enhanced compensation pursuant to the net energy rate authorized by Minn. Stat. § 216B.164, subd. 2 (1981 Supp.). Governing federal and state law explicitly so provide. See, PURPA § 210; 18 C.F.R. § 292.304(a)(2); and Minn. Stat. § 216B.164, subd. 4(b)(c) (1981 Supp.). Moreover, the Commission itself repeatedly recognizes in its Statement of Need and Reasonableness that, except for a QF entitled under state law to the benefit of an enhanced rate, the most reasonable balancing of the interests of ratepayers and cogenerators and small power producers limits the rate to be received by QF to the full avoided costs of the utility. The detailed calculations required to provide Schedules A and B are meant to most accurately approximate avoided costs.

A number of public witnesses commented that a utility experiences no avoided capacity cost unless the QF provides Firm power. (See, e.g., Pub. Ex. 6, NSP, p.12; Pub. Ex. 10, Minnesota Power, p.7; Pub. Ex. 118, NSP Reply Comments, p.6; Pub. Ex. 65, Ottertail Power Company, p.14; Pub. Ex. 88, Interstate Power, p.5; and Pub. Ex. 24, Cooperative Power Association, p.4). The reasoning expressed in such comments is that non-firm power, at most, merely delays the requirement of additional capacity. No cost is avoided, it is argued, unless the reliability factor inherent in the amount of power provided is sufficient to either reduce quantitatively or entirely eliminate the need for the acquisition of additional capacity by the utility.

The Hearing Examiner does not adopt the utilities' simplistic characterization of true avoided capacity costs as dependent solely on the availability of Firm power. That the determination of the appropriate avoided capacity cost involves the weighing of a number of factors, of which the reliability of the power supplied is merely one component, is apparent from the factors required by governing federal authority to be considered in the determination of true avoided capacity cost. (See, 18 C.F.R. § 292.304(e). Moreover, the Commission recognizes in its proposed rules that a number of factors, including the reliability of the power supplied, are to be balanced in determining true avoided cost. See, § 3.0457 B.. The Hearing Examiner does, however, consider the reliability of the power supplied, unless offset by other factors enumerated in 18 C.F.R. § 292.304(e), to be a determinant of true avoided capacity cost.

Unfortunately, nowhere in the record does the Commission address the pivotal argument of the utilities. It, apparently, merely assumes that even non-firm power will avoid the necessity for new generation facilities so as to justify a full avoided capacity payment.

The only evidence in the record responding to the argument of the utilities that non-firm power does not justify an avoided capacity payment was offered by Jacobs Wind Electric Company.

The initial response was presented by Professor Neil Hamilton. He termed the requirement for Firm power a red herring on the basis of his aggregate reliability analysis. (See, Pub. Ex. 113, Jacobs Wind Electric Co., Reply Comments, Statement by Neil W. Hamilton, pp. 7-8). Professor Hamilton reasons that the combined production by geographically diverse QFs substitute for Firm power:

> "An array of small wind energy machines at different locations offer significant reliability of SWECS power output. It is this cumulative reliability that allows avoided costs due to the displacement of planned base plant."

Several comments substantiate the climactic conditions necessary to support Professor Hamilton's analysis. (See, Pub. Ex. 77, Wind Power Systems, Inc., p. 2; and Pub. Ex. 97, Rep. Earl Hauge, Attachment A).

As Ottertail Power Company points out, however, the stability of power resulting from a number of small geographically diverse QFs generating power is not a current reality. (Pub. Ex. 65, Ottertail Power Company, p.14). In fact, if a network of QFs currently existed so as to provide power reliable enough to substitute for Firm power in avoided cost calculations, it is likely that neither Minn. Stat. § 216B.164 (1981 Supp.), nor these proposed rules would exist. There is no evidence in the record of the current number of or location of existing QFs. Hence, in the absence of facts in the record supporting the current applicability of Professor Hamilton's aggregate production theory, the Hearing Examiner finds that it provides no rationale for allowing a full avoided cost component in the rate paid a QF in the absence of the provision of Firm power.

The second rationale advanced by Professor Hamilton in response to the utilities argument that the provision of Firm power should be a prerequisite to an avoided capacity cost component is that of avoided external costs. (See, Pub. Ex. 113, Jacobs Wind Electric Co., Reply Comments; Statement of Neil W. Hamilton, pp. 9-10). Such external costs, not recognized by the Commission in its calculation of avoided costs, include the following: elimination of adverse environmental impacts: reduction of reliance on foreign and interruptible sources of power; and avoidance of costs due to lack of flexibility when using nuclear and coal plants. Such costs, however, even as conceded by Professor Hamilton, are either unquantifiable or not reasonably quantified in the record. The Commission has recognized that such external benefits, while real, provide an insufficient basis for determining a specific rate. (See, Statement of Need and Reasonableness, p.27). The Hearing Examiner agrees with the Commission when it stated:

> "Since external costs are, by their very nature, unquantifiable, it is not appropriate to explicitly take them into account in the calculation of avoided cost based rates."

(Statement of Need and Reasonableness, p. 27)

The presence of unquantifiable external benefits, while supportive of a rate otherwise proven reasonable, provides no basis for determining a specific rate. Perhaps such benefits could be achieved through payment of a fraction of the capacity costs calculated by the Commission. On the other hand, achievement of

such benefits may require payment of a multiple of the substantiated avoided costs. The Hearing Examiner finds that the external benefit analysis suggested by Professor Hamilton provides no specific basis for concluding that the provision of non-firm power by a QF legitimately results in a capacity avoidance to the utility.

Irrespective of the lack of analysis of the need for delivery of Firm power, there is no evidence in the record that consideration of any other factor enumerated in 18 C.F.R. § 292.304(e) justifies the payment of an avoided capacity cost when non-firm power is provided. While the Commission, as stated in its Statement of Need and Reasonableness, may have carefully weighed all such factors in arriving at the current rate proposal, (See, Statement of Need and Reasonableness, p. 27), the factors upon which it apparently relied are not reflected in the hearing record. Minn. Stat. §§ 15.0412, subd. 4c, 15.052, subd. 3(4)(iii) (1980), require that the need and reasonableness of the proposed rules be demonstrated in the record by an affirmative presentation of facts. There is no factual support in the record for the apparent conclusion of the Commission that the non-firm power to be supplied by most QFs approximates Firm power in justifying the allowance of a full capacity component in the rate paid the QF. Nor are there facts in the record from which the Commission could logically conclude that factors enumerated in 18 C.F.R. § 292.304(e) outweigh the factor of reliability in allowing a full avoided capacity cost for non-firm power.

The definition of Firm power as 65% on-peak reliability in a given month was itself suggested by the Commission and uniformly supported in the record testimony. There is no evidence in the record which would justify the Hearing Examiner adopting a definition of Firm power relative to the energy provided by a QF for purposes of a calculation of avoided capacity other than the definition suggested by the Commission and uniformly supported in the record.

The Hearing Examiner does not find that the Commission may rationally only allow a full avoided capacity component in the compensation paid to a QF when Firm power as defined in the rules is provided. Additional testimony may provide facts to support a finding either that non-firm power provided by QFs is a substitute for Firm power in the avoided capacity cost calculation, or that a rational balancing of the factors enumerated in 18 C.F.R. § 292.304(e) makes appropriate the payment of an avoided capacity component for the provision of non-firm power.

On the basis of governing law and the record presented, however, the Hearing Examiner is constrained to find that the propriety of payment of an avoided capacity cost for non-firm power has not been demonstrated by facts adduced in the record. Moreover, compensating a QF for more than its interconnected utility's avoided energy and capacity costs, except as authorized by Minn. Stat. § 216B.164, subd. 3 (1981 Supp.), is not within the statutory authority of the Commission. The Commission must either demonstrate that non-firm power provided by a QF not subject to net energy billing results in a full avoided capacity cost to the utility or seek a change in the governing legal requirements.

Section 3.0456 D. - Time-of-Day Purchase Rates.

94. Section 3.0456 D. details the time-of-day purchase rate applicable to Qualifying Facilities with a capacity greater than 40 kilowatts and less than or equal to 100 kilowatts. Such rate is also optional for a QF with a capacity greater than 100 kilowatts if the QF provides Firm power.

It is necessary that the Commission specify a rate to be paid a QF of less than 100-kilowatt capacity for the energy it supplies to an interconnected utility. See, Minn. Stat. § 216B.164 subd. 4 (1981 Supp.).

95. Making mandatory time-of-day rates applicable to a QF with a capacity of between 40 and 100 kilowatts and optional for a QF with a capacity greater than 100 kilowatts if it provides Firm power is reasonable. Minn. Stat. § 216B.164, subds. 3 and 4 (1981 Supp.), use the 40-kilowatt capacity factor as a means of distinguishing the rates to be paid a QF. Moreover, as previously discussed, payment for the additional metering required to receive compensation on the basis of time-of-day rates is usually cost-effective only for a QF with a capacity of greater than 40 kw. (See Statement of Need and Reasonableness, pp. 30-31). It is reasonable that the 40-kilowatt limit be applied in a mandatory fashion so that QFs will not only be compensated for appropriate avoided costs, but also be given the necessary production incentives. Requiring time-of-day-production will not place unreasonable burden on a QF with a capacity between 40 kilowatts and 100 kilowatts. In addition, it is reasonable that qualifying facilities with a capacity greater than 100 kilowatts have an option to sell energy on a time-of-day basis to ensure that these qualifying facilities are treated fairly in comparison with other QFs. It is necessary to make the eligibility for this rate by a QF with a capacity in excess of 100 kw optional in order to protect the financial condition of the utility and to protect its ratepayers.

The Hearing Examiner finds that § 3.0456 D.1. is reasonable.

Although the rule, as drafted, is both necessary and reasonable, the Hearing Examiner suggests that, in the final line of § 3.0456 D.1., the word "electric" be stricken from the phrase "firm electric power". As a consequence of an amendment to the rules which the Hearing Examiner has approved as necessary and reasonable, the term "Firm power" is now a defined phrase. To leave the word "electric" in such phrase unnecessarily introduces an element of uncertainty and vagueness. stricken p. 15.

96. Section 3.0456 D.2. requires that a QF be billed for the energy and capacity it consumes on the same basis as other customers of the utility in the same rate class through application of the utility's retail rate schedule. As previously discussed, it is reasonable to treat a QF for purposes of its power consumption the same as any other customer of the utility in the same rate class. (See Finding 90, supra).

The provision of § 3.0456 D.2. that a rate regulated utility may require a QF that sells power to it on a time-of-day basis to also purchase its power on a time-of-day basis is necessary and reasonable. The provision will allow the utility to more appropriately price electric service to the QF and the QF's interests will be protected by representation before the Commission. (See, Statement of Need and Reasonableness, p. 32).

97. Section 3.0456 D.3. requires that a utility purchase all energy generated by the Qualifying Facility and compensate the QF for the utility's avoided

energy and capacity costs as described in (a) and (b) this provision. For the reasons stated in Finding 91, supra, the requirement in § 3.0456 D.3. that the utility purchase all energy generated by the Qualifying Facility exceeds the statutory authority of the Commission and hence, is neither necessary nor reasonable.

To correct the defect, the Commission must amend § 3.0456 D.3. by striking "generated by" and inserting in lieu thereof "made available to it" in the first sentence of this subsection.

The amendment suggested, since it is mandated by Minn. Stat. § 216B.164, subd. 4 (1981 Supp.), does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

98. Section 3.0456 D.3.a. states that the avoided energy component shall be the appropriate on-peak and off-peak system incremental costs shown on Schedule A if the utility is a Generating utility that has filed Schedule A, the energy rate of the retail rate schedule applicable to the QF filed in lieu of Schedules A and B if the utility is a Generating utility having the option under § 3.0452 to substitute its retail rate schedule for Schedules A and B, or the energy rate shown on Schedule G if the utility is a Non-generating utility that has not filed Schedule A. The calculation of the avoided energy costs of the utility for purposes of the time-of-day rate, as stated in § 3.0456 D.3.a. of the proposed rules is a realistic approximation of the utility's avoided energy costs. As such, it is reasonable.

For the reasons stated in Findings 38 and 39, supra, the amendments to § 3.0456 D.3.a. do not constitute substantial changes within the meaning of 9 MCAR § 2.111.

99. Section 3.0456 D.3.b. is a description of the avoided capacity cost to be paid a QF selling energy on a time-of-day basis. For the reasons stated in Finding 93, supra, and the accompanying Discussion, § 3.0456 D.3.b., as applied to a QF providing Firm power is reasonable. With respect to a QF not providing Firm power to the utility, for the reasons stated in the Discussion following Finding 93, supra, the Commission has not demonstrated that the payment of a full avoided capacity component to a QF not providing Firm power is reasonable by an affirmative presentation of facts.

To correct the defect, the Commission may make the availability of an avoided capacity component contingent upon the provision of Firm power by the QF. Such a result could reasonably be accomplished by inserting in this provision an amendment similar to that suggested with respect to § 3.0456 C.3.b. of the proposed rules in Finding 93, supra. In the alternative, the Commission may reconvene the hearing to substantiate in the record the propriety of a full avoided cost payment in the absence of the QF providing Firm power.

For the reasons stated in Findings 38 and 39, supra, the amendment to § 3.0456 D.3.b. does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

100. MinnKota Power Cooperative, Inc., a generation and transmission cooperative which furnishes bulk wholesale electric power to twelve distribution cooperatives, commented that the requirement of § 3.0456 D., time-of-day purchase rates, as applied to it and member cooperatives was unreasonable. MinnKota testified that it has established a highly successful load management program which virtually eliminates high-system winter peaks. (Pub. Ex. 57, Minn-

Kota Power Cooperative, Inc., p.3). It was determined that without load management practices being utilized, the true peak of MinnKota's system in February of 1982 would have been 495 megawatts. The actual peak experienced was 380 megawatts. (Pub. Ex. 57, MinnKota Power Cooperative, Inc., p.5). Hence, use of the load management system eliminated 115 megawatts from the MinnKota system peak load requirements. In terms of percentages, approximately 23% of the total peak load in the MinnKota system was eliminated due to modern load management practices. Because of their load management program, MinnKota's associated distribution cooperatives have not established time-of-day rates. (Pub. Ex. 57, MinnKota Power Cooperative, Inc., p.5). The member distribution co-ops consider it unnecessary to establish a special rate for on-peak power use, since their load management program in place can adequately handle on-peak situations. They argue, therefore, that the requirement that the utility establish time-of-day rates for compensation to QFs and, as a consequence, offset the rates paid a QF with on-peak rates for delivery of energy to its customers, is unnecessary as applied to a utility that has established a workable and effective peak load management program.

The Hearing Examiner finds that § 3.0456 D., as applied to a utility having the load management program described by MinnKota Power Cooperative, Inc., is neither unnecessary nor unreasonable. There has been no demonstration that the application of time-of-day rates for a utility that has established a load management program would prejudice the utility. The term "on-peak hours" for a utility means hours which are either defined as on-peak for retail rate-making, or, with respect to non-rate regulated utilities, those hours for which typical loads are at least 85% of its average maximum monthly loads. MinnKota Power Cooperative, Inc., however, did not substantiate in the record that the application of the time-of-day rate schedule contained in § 3.0456 D. of the proposed rules would result in substantial adverse consequences to it. There is, for example, no discussion of how a payment based on rates established under § 3.0456 D. by a utility with an effective load management program would result in an overstatement of its avoided capacity costs. Moreover, there is no evidence in the record that the time-of-day rate paid to a QF by a utility with an effective load management program would result in a financial loss to the utility. To the extent that additional hours are considered on-peak as a result of the flattening of the system maximum demands, even if an enhanced rate resulted to a QF, that payment could be offset by a countervailing charge to the QF during those periods of time in which the definition of on-peak hours contained in § 3.0451 Q. occurred. Moreover, MinnKota Power Cooperative, Inc., suggests no specific amendment that either the Hearing Examiner or the Commission should consider in order to alleviate its disagreement with the proposed rules.

Although the Hearing Examiner has determined that § 3.0456 D. of the proposed rules, even as applied to a utility that has instituted a load management program, is both necessary and reasonable, the Commission may wish to consider the issue raised by MinnKota Power Cooperative, Inc., and provide some stated alternative to time-of-day rates when a utility has established an effective load management program. Any amendment to the proposed rules as a result thereof, must be adequately supported by facts appearing in the record and must not result in a substantial change within the meaning of 9 MCAR § 2.111.

MMUA Suggested Municipal Rate Structure.

101. The MMUA has suggested that a rate structure different than that contained in § 3.0456 of the proposed rules should apply to a municipally-owned utility. (Pub. Ex. 117, pp. 14-18). MMUA offers no justification for limiting its suggestion to a municipal utility. Presumably, a small municipal utility is, for purposes of these rules, no different than a small investor-owned utility. The argument advanced by MMUA really goes to the integrity of compensating a QF of less than 20 kw capacity on the basis of the retail rate for excess power supplied and a QF with between 20 and 100 kw capacity at full avoided cost. Moreover, the rules, as finally proposed, do allow an option to a utility which qualifies to substitute its retail rate for Schedules A and B to avoid calculations of avoided cost.

MMUA suggests that, with respect to a QF of less than 100-kw capacity, the municipal utility have the option of paying two-thirds of its retail rate for net energy supplied. It is argued that two-thirds of its retail rate accurately represents the avoided cost of the municipal utility. Initially, it should be recognized that, with respect to a QF of less than 20-kw capacity, Minn. Stat. § 216B.164, subd. 3 (1981 Supp.), authorizes a rate which may exceed the utility's true avoided cost. This statutory option has been implemented by the Commission in order to promote small QFs that are likely to offset the operator's power demands. Moreover, the evidence relied upon by the MMUA to substantiate its assertion that two-thirds of the retail rate would compensate QFs for the utility's true avoided costs relies on a small sampling, uses, in most instances, estimated and projected numbers from NSP's wholesale rates and otherwise provides an inadequate basis for the departure from the retail rate required by the Commission as an alternative to the calculation of Schedules A and B. Finally, the option contained in the proposed rules to allow a small utility to pay a retail rate and avoid the calculation of Schedules A and B was designed for those instances in which the calculation of such cost savings would be not cost-effective to the utility. It was not meant as a blanket incentive to the avoidance of true cost calculations. It is important, to achieve the statutory purpose, that rates be set at avoided costs. Payment of more than avoided costs ultimately burdens the ratepayer. Payment of less than avoided costs discourages cogeneration and small power production. The Commission has stricken a balance between the interests of the ratepayers and the cogenerators and small power producers consistent with the maximum public benefit. Only when the calculation of such costs is not rational should the determination of true avoided costs be approximated. Establishment of a flat percentage of the retail rate at the lowest end of approximated true avoided costs provides an incentive to the utility to avoid the calculation of such costs. That incentive is contrary to the purpose of both the proposed rules and Minn. Stat. § 216B.164 (1981 Supp.).

The delegation to the governing body of each municipal utility of the authority to set rates does not comport with the Commission's duty under Minn. Stat. § 216B.164, subd. 3 (1981 Supp.), to fix and determine rates applicable to QFs with specified capacities. Since the municipal utility is the party ultimately responsible for paying the rate to the QF, the wisdom of allowing a peculiarly interested party to determine the rate is also questionable.

Section 3.0456 is not rendered unreasonable or unnecessary as a result of the comments of the municipal utilities or their association.

4 MCAR § 3.0457 - Negotiated Rate for Purchases.

102. Section 3.0457 provides that a Qualifying Facility with a capacity of 100 or more kilowatts may interconnect at the standard rates for energy made available on a time-of-day basis if it commits to providing Firm power. If such a QF does not qualify for interconnection under standard rates, it must negotiate a contract with the utility designed to compensate the QF for avoided energy and capacity costs.

103. Section 3.0457, specifying a means for compensating a QF with a capacity of 100 kilowatts or greater for the energy supplied, is necessary as a result of both federal and state law. See, 18 C.F.R. §§ 292.401 and 292.304(c)(2); Minn. Stat. § 216B.164, subd. 4(b) (1981 Supp.).

104. Section 3.0457 A. states that a QF with a capacity greater than 100 kilowatts may negotiate by contract with its interconnected utility for the payment of avoided capacity and energy costs. The rule is reasonable, initially, because the availability of deviating from standard rates through a contract is an option recognized in both governing federal regulations and state law. 18 C.F.R. § 292.304(c)(2); Minn. Stat. § 216B.164, subd.4(b). Additionally, it is likely that the design characteristics of a large QF may increase the avoided costs of the utility to which it is interconnected beyond those costs as recognized in the standard rates. (See, Statement of Need and Reasonableness, pp. 32-33). Hence, § 3.0457 A. of the proposed rules is reasonable.

While the Hearing Examiner has concluded that § 3.0457 A. is reasonable as drafted, several witnesses testified that the language of § 3.0457 A. contradicts the earlier provision of the rules requiring each QF to negotiate an interconnection contract with the utility. (See, Pub. Ex. 10, Minnesota Power, p.8; Pub. Ex. 65, Ottertail Power Company, p. 16). For purposes of clarity and to avoid a conflict with an earlier provision of the rules, the Commission may wish to redraft § 3.0457 A. in substantially the following language:

> Except as provided in D., a Qualifying Facility with capacity greater than 100 kilowatts shall provide by contract with the utility the applicable rates for payment to the qualifying facility for avoided capacity and energy costs.

similar language p. 16

105. Section 3.0457 B. states that the QF of a capacity greater than 100 kilowatts shall be compensated for capacity cost savings of the utility through consideration of nine enumerated factors. The factors enumerated in § 3.0457 B. are reasonable since each of the factors mentioned affects either the amount of capacity, in kilowatts, which the QF causes the utility to avoid, or the cost, per kilowatt, of capacity avoided due to the delivery of power by the QF. (Statement of Need and Reasonableness, p.33).

The Hearing Examiner finds that § 3.0457 B. is reasonable.

While the Hearing Examiner has found § 3.0457 B. to be reasonable as drafted, several representatives of larger QFs suggested that the absence in § 3.0457 B. of a statement that the Qualifying Facility is entitled to the utility's full avoided capacity costs as determined through the contractual negotiation allows a utility to legitimately bargain for a capacity payment of less than its avoided capacity costs. A review of the Statement of Need and

Reasonableness suggests that such was not the intent of the Commission. Moreover, that result would be prohibited by the requirements of Minn. Stat. § 216B.164, subd. 4(b) (1981 Supp.). To clarify any ambiguity in the final rules, however, the Commission may consider adding to § 3.0457 B., after the heading of the section, language substantially similar to the following:

"The qualifying facility shall be entitled to the full avoided capacity costs of the utility."

added p.17

Both the amendment suggested by the Hearing Examiner and the addition of the word "capacity" as qualifying the word "payments" in § 3.0457 B. do not constitute substantial changes within the meaning of 9 MCAR § 2.111. That the section relates to capacity payments was implicit in the rule as initially drafted. The word was merely added to avoid any ambiguity. The change suggested by the Hearing Examiner was likewise implicit in the language as initially drafted and is merely declaratory of existing law.

106. Section 3.0457 C. requires that the Qualifying Facility be paid the full avoided energy costs of the utility adjusted as appropriate to reflect line losses. Section 3.0457 C. is both necessary and reasonable as a result of Minn. Stat. § 216B.164, subd. 4 (1981 Supp.), which requires that a QF be paid the utility's full avoided energy and capacity costs. Adjusting such avoided costs for line losses is likewise both necessary and reasonable to prevent the overstatement of such avoided costs.

107. Section 3.0457 D. allows a QF with a capacity of greater than a 100 kilowatts to be interconnected to a utility at the utility's standard rates. Subsection D. must be read in conjunction with § 3.0456 D.1. which conditions the availability of the standard rate to a QF with a capacity in excess of 100 kilowatts when it provides Firm power on a time-of-day basis.

Since one of the options available to a QF with a capacity in excess of 100 kw is to interconnect with a utility at standard rates, this section is reasonable since it simply allows that result to occur. It would be unreasonable to provide first that a QF with a capacity in excess of 100 kilowatts may interconnect under standard rates, and then to negate that result by application of § 3.0457 A.

4 MCAR § 3.0458 - Utility Treatment of Costs.

108. Section 3.0458 requires that all purchases from a QF with capacity of 100 kilowatts or less and purchase of energy from Qualifying Facilities with a capacity of over 100 kilowatts be considered an energy cost in calculating the utility's fuel adjustment clause. This provision is necessary to ensure that utility purchases of electricity from QF are properly accounted for. The rule is reasonable in that it flows these costs through to ratepayers in the same manner that costs of purchases from other energy suppliers are flowed through to the ratepayers as a result of Minn. Reg. PSC 392.

The Hearing Examiner finds that § 3.0458 is both necessary and reasonable.

4 MCAR § 3.0459 - Wheeling and Exchange Agreements.

109. Section 3.0459 requires that for Qualifying Facilities with a capacity of at least 30 kilowatts, the utility, at the option of the QF shall wheel the output of the QF to any other Minnesota utility that would experience

avoided capacity costs as a result of receiving the wheeled power. The procedure for compensating the QF for its power wheeled requires the utility to initially pay the wheeling charges from the recipient utility and transmit to the QF, upon timely payment by the recipient utility of its full avoided and capacity costs to the wheeling utility, the payment it has received for the wheeled power less its own reasonable costs and the charge imposed by the recipient utility.

Section 3.0459, insofar as it requires the availability of wheeling for a QF with a capacity of 30 kilowatts or greater, is a restatement of Minn. Stat. § 216B.164, subd. 4(c) (1981 Supp.). It is therefore both necessary and reasonable. Minn. Stat. § 216B.164, subd. 4(c) (1981 Supp.), also requires the Commission to establish the methods and procedure for the reimbursement to the QF for the power wheeled. It is reasonable to require the QF to bear the charges associated with wheeling, both because Minn. Stat. § 216B.164, subd. 4 (1981 Supp.), requires that result and because a different allocation of costs would require the utility to bear expenses in excess of the full avoided costs of the recipient utility. It is the purpose of PURPA, the FERC Rules, and Minn. Stat. § 216B.164, subd. 4 (1981 Supp.), that the expense occasioned to a utility as a result of interconnection not exceed true avoided costs of the utility ultimately using the power. The governing law balances the interests of the utility's ratepayers and the cogenerators and small power producers in favor of compensation for full avoided costs. Under such a balance, the ratepayer pays no more for power than would be paid for that delivered from conventional sources.

Hence, § 3.0459 is both necessary and reasonable.

110. Ottertail Power Company argues that wheeling should be limited to energy in excess of 1,000 kilowatts. It asserts that it is currently impractical to wheel power of less than 1,000 kw. Moreover, it suggests that any QF that can deliver more than 1,000 kilowatts of power does not need the intermediary of a utility in its dealings for wheeling of power. (See, Pub. Ex. 65, Ottertail Power Company, p. 17). The Hearing Examiner finds that a limitation on the availability of wheeling to increments of 1,000 kilowatts would serve no useful purpose. If Ottertail Power Company is correct that it is impractical to wheel power in increments less than 1,000 kilowatts, under § 3.0459, as proposed, the utility could legitimately refuse wheeling. Both Minn. Stat. § 216B.164, subd. 4(c) (1981 Supp.), and § 3.0459 condition the availability of wheeling upon the existence of practicable wheeling conditions. The suggestion by Ottertail Power Company, therefore, adds nothing to the proposed rule and may introduce a totally undesirable element of rigidity.

111. Actaeon Corporation suggests that the use of the subjective phrase "whenever practicable" is unreasonable in that it could be used to deny wheeling and impede the development of QFs. The phrase, however, is taken directly from Minn. Stat. § 216B.164, subd. 4(c) (1981 Supp.). As such, it is presumptively necessary and reasonable. Further, it would be decidedly impractical to specify fully all conditions under which wheeling should not be available. Since, pursuant to § 3.060 of the proposed rules, all parties have available to them the Commission to resolve disputes, the use of § 3.0459 as an element of oppression by a utility is not a likely occurrence.

112. Froedtert Malt Corporation suggests that the recipient utilities not be limited to a Minnesota utility. (Pub. Ex. 13, Froedtert Malt Corporation, p. 1). The limitation of required wheeling to another Minnesota utility, however, is expressly stated in Minn. Stat. § 216B.164, subd. 4(c) (1981 Supp.). Additionally, since the calculation of avoided capacity and energy costs contained in the proposed rules, of necessity, only applies to a Minnesota utility that is subject to the jurisdiction of the Commission, extending recipient utilities under § 3.0459 to other than Minnesota utilities would serve no useful function.

4 MCAR § 3.0460 - Disputes.

113. Section 3.0460 requires that the Commission be available to resolve either a dispute or an impasse in the contractual negotiations between a QF and a utility. It also provides that the burden of proof in such proceedings is on the utility. Section 3.0460 is an exact restatement of Minn. Stat. § 216B.164, subd. 5 (1981 Supp.). Since the obligations imposed by this section are statutorily required, § 3.0460 is both necessary and reasonable.

114. The County of Hennepin suggests a lengthy amendment to § 3.0460 to first allow informal staff resolution, an appeal to the Commission of the staff decision, and the ultimate possibility of a contested case procedure under normal Commission rules. The County also advocates specific time limits applicable to each stage of the conflict resolution. (See, Pub. Ex. 106, p. 12). The County of Hennepin has demonstrated no need, however, to depart from the established rules of the Commission in resolving conflicts with regard to the application of its cogeneration and small power production rules. In the absence of a specification of a procedure applicable to the dispute resolution hereunder, the existing rules of the Commission relating to the resolution of disputes and the availability of a contested case procedure would apply.

To resolve any ambiguity, however, the Commission may wish to specifically reference in a new second sentence of § 3.0460 those provisions of its existing rules which would apply to the resolution of cogeneration and small power production disputes. Such an amendment would not result in a substantial change within the meaning of 9 MCAR § 2.111.

115. Ottertail Power Company suggests that the burden of proof should be on a utility in such proceedings only with respect to a small QF. (Pub. Ex. 65, Ottertail Power Company, p. 17). The suggestion of Ottertail Power Company, however, is contrary to the explicit provisions of Minn. Stat. § 216B.164, subd. 5 (1981 Supp.).

116. Finally, the MMUA argues that, with respect to a municipal utility, the initial hearing on the dispute should be held by the local governing body with discretionary review in the Commission. In the review by the Commission, the findings of the local governing body would enjoy a presumption of reasonableness if supported by evidence in the record. (Pub. Ex. 117, MMUA, Reply Comments, p. 21). For the reasons stated in the Discussion following Finding 22, supra, it would be unreasonable to allow one of the principally interested parties to be the trier of fact. The attempt by the MMUA to afford a presumption of reasonableness to the findings of the local governing body would also impermissibly vary the burden of proof stated in Minn. Stat. § 216B.164, subd. 5 (1981 Supp.).

117. While the Hearing Examiner has found that § 3.0460 is both necessary and reasonable, the Commission should consider deleting the word "electric" as modifying the word "utility" in the first sentence of § 3.0460. Since the term "Utility" is a defined term, consistent usage of the term without elaboration would be desirable.

deleted p. 18

4 MCAR § 3.0461 - Notification to Customers.

118. Section 3.0461 A. requires that the utility periodically furnish to its customers notice regarding the following aspects of the Commission's cogeneration and small power production rules: that the utility must both interconnect and purchase the electricity produced by a QF; that the utility must provide the customer information specified in B. of this section to all interested persons free of charge upon request; and that any disputes arising as a result of application of the Commission's cogeneration and small power production rules are subject to resolution by the Commission.

The purpose of the Commission's proposed rules and of Minn. Stat. § 216B.164 (1981 Supp.), is to encourage cogeneration and small power production. That end can only be achieved if potentially interested parties are aware of the existence and minimal requirements of such rules. Including in the material provided to a utility's customers a minimal notice designed to acquaint such customers with the basics of the Commission's cogeneration and small power production rules is the least expensive, most reasonable method of accomplishing that objective. The only comment received relating to § 3.0461 A. of the proposed rules favored the provision. (See, Pub. Ex. 4, Eicher, p. 15).

Section 3.0461 A., therefore, is both necessary and reasonable.

119. Section 3.0461 B. requires that the utility publish and make available to all interested persons upon request free of charge certain information from which the cost effectivenes of the establishment of a QF could be determined by a potentially interested party. As indicated in the previous Finding, the purpose of both the Commission's proposed rules and Minn. Stat. § 216B.164 (1981 Supp.), is to encourage cogeneration and small power production to the maximum extent consistent with the interests of the utility's ratepayers. Since the information required by § 3.0461 B. would be readily available to the utility and its dissemination upon request would not pose an economic burden on the utility, § 3.0461 B. is both necessary and reasonable.

120. Ottertail Power Company suggests that the word "persons" contained in the first sentence of § 3.0461 B. be stricken and the word "customers" inserted. (Pub. Ex. 65, Ottertail Power Company, p.17). The effects of such a change would be to require the utility to provide the information free of charge only to its current customers. Such a limitation on the free availability of information conflicts with the entire purpose of both § 3.0461 and Minn. Stat. § 216B.164 (1981 Supp.). There is no reason to believe that interest in the establishment of a QF within a particular utility's service territory would be limited to its current customers. It is just as reasonable to assume that persons outside of the service territory of the utility may have an interest in establishing a QF within its service territory. If it is desirable to encourage cogeneration and small power production consistent with the interests of the utility's ratepayers, such information should reasonably be available to

any person, whether a current customer of the particular utility or not. Ottertail Power Company asserts a burden to the utility on supplying information to persons other than its current customers. The utility would have to generate the information in standard form even if its free availability were limited to its customers. Provision of the material to additional parties upon request has not been documented in the record to be likely to result in a substantial financial burden to the utility.

121. While the Hearing Examiner has found that § 3.0461 B. is both reasonable and necessary as drafted, to avoid ambiguity in the application of subsection B. and, consistent with the interpretation of subsection B. adopted by the Hearing Examiner, the Commission should consider striking the word "customer" as it modifies the word "information" where the phrase appears in § 3.0461 A.2. and in § 3.0461 B. The word "customer" in the context identified adds nothing to the proper interpretation of the rule and, in fact, introduces an unnecessary element of confusion.

added p. 18, 19

4 MCAR § 3.0462 - Interconnection Guidelines.

122. Section 3.0462 A. provides that a utility may refuse to interconnect with a QF only until the QF has applied for interconnection pursuant to § 3.0454 K. and the application is approved by the utility. The utility may withhold approval of the application only for failure to comply with applicable utility or governmental laws. Finally, the utility is authorized to include in its contract reasonable technical connections and operating specifications for the QF.

As a consequence of both Federal and State law, a utility is required to interconnect with a QF that offers to sell it power. The interconnection of a QF may, however, result in service problems to both the utility and its customers as a result of interconnected operations. Whether such problems develop, depends upon the degree to which the QF and the utility, through their joint planning efforts, are able to resolve potentials for disruption of the utility's service. It is, therefore, both necessary and reasonable that interconnection not occur until the utility has approved an application for interconnection made pursuant to § 3.0454 K. of the proposed rules. Moreover, the QF is reasonably protected by specifying the conditions on the ability of the utility to deny the interconnection application. A denial of the application is reasonably conditioned only on the failure of the QF to comply with applicable rules or laws.

The Hearing Examiner finds that § 3.0462 A. is both necessary and reasonble.

123. Several witnesses commented that the failure to include in § 3.0462 A. an affirmative statement regarding the duty of the utility to interconnect with a QF introduces an element of uncertainty into the relationship between a utility and a QF. The Hearing Examiner finds that both the requirements of existing Federal and State law and the language of § 3.0462 of the proposed rules does require an interconnection except as otherwise specifically provided in § 3.0462 A. To avoid any uncertainty, however, the Commission may wish to insert in § 3.0462 A., after the title of subsection A., language substantially similar to the following:

> Except as hereinafter expressly provided, a utility shall interconnect to a qualifying facility that offers to make available to the utility energy or capacity.

similar language p. 19 inserted.

124. Jacobs Wind Electric Company asserts that the proposed rule is unreasonable in that it allows a utility rule to serve as a basis for denying interconnection. (Pub. Ex. 16, Jacobs Wind Electric Co., p. 14). Apparently, Jacobs Wind Electric Company posits the use of a utility rule as a means potentially employable by a utility in preventing interconnection. The Hearing Examiner finds that the proposed rules contain adequate safeguards to prevent such a result.

125. Although the Hearing Examiner finds that the rule is both reasonable and necessary as proposed, in order to remove ambiguity, and for purposes of clarity, the Commission may wish to insert in § 3.0462 A. after the word "utility" and before the word "or" language substantially similar to the following: "rules not prohibited by 9 MCAR §§ 3.0450 - 3.0463". inserted p. 19

126. Section 3.0462 B. requires that the utility, as early as practicable, notify affected telephone and cable television companies of a prospective interconnection.

Since the interconnection of a QF may result in increases in harmonics on the utility lines and resulting disruption to the service of both telephone and cable television firms, it is necessary that such firms be notified of the interconnection of a QF prior to its actual in-service date. It is reasonable that the burden be placed on the utility rather than on the QF since administrative burdens will be reduced and the utility has developed coordination with such firms previously in the normal conduct of the utility's business.

The Hearing Examiner finds that § 3.0462 B. is both necessary and reasonable.

127. Section 3.0462 C. allows a utility to require that a QF have a separate distribution transformer if necessary "either to protect the safety of employees or the public or to keep service to other customers within prescribed limits". It also provides that such a requirement will not ordinarily be necessary for an induction-type generator with a capacity of five kilowatts or less, or for other units with a capacity of ten kilowatts or less that utilize line-commutated inverters.

The Commission suggests that the rule is necessary for two reasons. First, some installations using inverters may require a separate transformer to provide proper grounding for safety. Second, a separate distribution transformer may be necessary to prevent service problems such as excessive light flicker or equipment operating problems caused by voltage variations experienced by nearby utility customers. (See, Statement of Need and Reasonableness, pp. 38, 39). Since such service problems may be caused by a generating unit feeding into a common distribution transformer, it is reasonable, if such problems are likely to occur, to require a separate distribution transformer for the QF. A separate distribution transformer to the QF could mitigate the voltage variations caused by the use of a common distribution transformer. The first sentence of § 3.0462 C. is, therefore, both necessary and reasonable.

The Commission has attempted to detail the types of QFs that "ordinarily" shouldn't require a separate distribution transformer. The Commission states:

> "The section reasonably limits the ordinary requirements of its equipment to those units of size and operating characteristics where such problems might be expected to arise."

(Statement of Need and Reasonableness, p. 39).

Minn. Stat. § 15.0411, subd. 3 (1980), however, requires that a rule have some regulatory effect. The requirement of a separate distribution transformer for a QF can only be imposed if it is necessary either to protect the safety of employees or the public or to keep service to other customers within prescribed limits. There is no "ordinary" application of the requirement. The condition for its application must be demonstrated by the utility irrespective of the size or operating characteristics of the QF. Hence, the hortatory statement in the second sentence of § 3.0462 C. is unreasonable in that it serves no regulatory purpose not adequately expressed in the first sentence of that subdivision.

To correct the defect, the Commission should delete the last sentence of § 3.0462 C. Since the last sentence of § 3.0462 C. is mere surplusage serving no legitimate regulatory purpose, its deletion would not result in a substantial change within the meaning of 9 MCAR § 2.111.

deleted p. 20

128. Section 3.0462 D. allows the utility to limit the capacity and operating characteristics of a single-phase generator in a way consistent with the utility limitations for single-phase motors when the limitation is necessary to avoid "the likelihood that a qualifying facility would cause problems with the service of other customers".

This provision is necessary to protect the integrity of the utility service received by other utility customers. (Statement of Need and Reasonableness, p. 39.). It is reasonable because it places no burden on a QF which is different from the burden placed on a similar, non-generating customer. Section 3.0462 D., therefore, is necessary and reasonable.

The Commission has stricken from the proposed rule the following language:

> Ordinarily, single-phase generators should be limited to a capacity of ten kilowatts.

stricken p. 20

The deletion was made in response to a number of public comments received. (See, e.g., Pub. Ex. 16, Jacobs Wind Electric Co., p. 16; Pub. Ex. 66, Daryl Jorud, p. 2; Pub. Ex. 67, Russell C. Sletmoen, p. 1; Pub. Ex. 68, Daryl Nelson; and Pub. Ex. 77, Wind Power Systems, Inc., p. 1). For the reasons enumerated in the previous Finding, the Hearing Examiner finds that the language stricken was mere surplusage not qualifying as a general statement of future regulatory effect. Minn. Stat. § 15.0411, subd. 3 (1980). The deletion of surplus language which introduces no change in the test for application of the subsection previously stated does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

129. Section 3.0462 E. authorizes a utility to require a QF to have a system for automatically isolating the generator from the utility's system upon loss of the utility's supply, or a lockable, manual disconnect switch readily accessible to the utility. The language regarding the option of requiring a lockable, manual disconnect switch is an amendment to the rule as initially proposed.

The Commission asserts that some method of isolating the generator from the utility's system upon loss of the utility's supply is necessary for the safety of the utility's personnel and to prevent damage to the utility's system. (Agency Ex. J, p. 13). As recognized in Finding 72, supra, the supply of electricity by a QF may, under certain circumstances, pose a peculiar safety

hazard. Jacobs Wind Electric Company testified that all of its manufactured equipment has a triple method of generator isolation, both manual and automatic, that renders the requirement of any further disconnect apparatus unnecessary. (See, Pub. Ex. 113, Jacobs Wind Electric Co., p. 9). As the Commission recognizes, however, the use of automatic disconnect devices poses a hazard not associated with manual devices. (See, Agency Ex. J., p. 13). Moreover, there is no assurance that all manufactured equipment will contain internal automatic disconnect devices. (See, Pub. Ex. 44, Wright-Hennepin Electric Association, p. 1).

A number of witnesses testified that a manual disconnect switch was necessary and reasonable for safety reasons. (See, Pub. Ex. 10, Minnesota Power, p. 9; Pub. Ex. 4, Eicher, p. 15; Pub. Ex. 5, Land O'Power Co-op., p. 7; Pub. Ex. 6, NSP, p. 19; Pub. Ex. 39, Owatonna Public Utilities Commission, p. 7; Pub. Ex. 44, Wright-Hennepin Electric Association, p. 1; Pub. Ex. 65, Ottertail Power Company, p. 18; Pub. Ex. 88, Interstate Power Company, p. 6; Pub. Ex. 117, MMUA Reply Comments, p. 22; and Pub. Ex. 118, NSP Reply Comments, p. 4).

In addition to the uncontradicted testimony regarding the general need for a manual disconnect switch advanced by the utilities, at least with respect to equipment not manufactured by Jacobs Wind Electric Company, the Hearing Examiner finds that a lockable manual disconnect switch is required of QFs by governmental safety requirements. Initially, the National Electric Code Handbook of 1981 requires a visual disconnect. (See Pub. Ex. 39, Owatonna Public Utilities Commission, p. 7). Moreover, a visual disconnect is also specified in Volume 1 of the Safety Manual adopted by the State of Minnesota Joint Training and Safety Commission. (Pub. Ex. 39, Owatonna Public Utilities Commission, p. 7). Finally, and most importantly, the 1981 National Electric Code has been determined by the State Board of Electricity to apply to QFs. (See, Pub. Ex. 78, State Board of Electricity, p. 2). The State Board has advised its inspectors and supervisors that the 1981 electric code requires that a QF meet the following condition: "A lockable disconnecting means shall be provided between the cogeneration equipment and the utility source." (Pub. Ex. 78, Minnesota Board of Electricity, Office Memorandum dated 9/16/81). An automatic isolation source is not lockable. Hence, the presence in the QF's equipment of an automatic disconnect would not satisfy the requirements of the State Board of Electricity.

The Hearing Examiner finds that the requirement of a means of isolating the QF's generator from the utility's sytem, including the availability of a manual lockable disconnect switch, is necessary.

For the reasons hereinafter enumerated, the Hearing Examiner finds, however, that § 3.0462 E., is not a reasonable response to the need supported in the record.

The availability of some form of isolation of the QF's generator from the utility's system is not mandatory but is optional with a utility. If the utility decides to require some method of isolating the QF's generator from its system, under the provision as drafted, it may require either an internal automatic isolating system or a manual lockable disconnect switch. The option of which method of protection to require is solely with the utility. That such an option is unreasonable may be demonstrated by consideration of the following

example. If non-Jacobs Wind Electric Company equipment that does not possess an automatic system of isolating the QF's generator is proposed to be installed, the utility could frustrate the interconnection by merely requiring the system to have an internal mechanism for automatically isolating the generator of the QF. It need not select the presumably easier and less expensive alternative of requiring the QF to install a lockable, manual disconnect switch. Solely by exercising the options available to it under § 3.0462 E., it may dictate, in fact, additional technical requirements of a QF or exclude from the possibility of interconnection specific brands of equipment. Certainly, it was not the intent of the Commission to authorize such a result. Since the Commission found peculiar hazard even with an internal system for automatic isolation of the generator of the QF which is not present with a lockable, manual disconnect switch, it would be reasonable first to eliminate the option now possessed by the utility to require design specifications not necessary for safety, and second, require that every QF have a lockable-manual disconnect switch readily accessible to the utility.

The Hearing Examiner finds that the reasonableness of § 3.0462 E., has not been supported in the record by an affirmative presentation of facts.

To correct the defect, the Commission should amend § 3.0462 E. in language substantially similar to the following:

> Each qualifying facility shall have a lockable, manual disconnect switch capable of isolating its generator from the utility's system readily accessible to the utility.

amended to similar language p. 20

The amendment suggested by the Hearing Examiner does not constitute a substantial change within the meaning of 9 MCAR § 2.111.

As previously noted, the important test of substantial change is the presence of reasonable notice to potentially affected persons. American Iron & Steel Institute v. EPA, 568 F.2d 284, 293 (3d Cir., 1977); International Harvester Co. v. Ruckelshaus, 478 F.2d 615, 632, n. 51 (D.C. Cir. 1973); South Terminal Corp. v. EPA, 504 F.2d 646, 659 (1st Cir. 1974). The Notice of Hearing reasonably raised the question of mandated methods of isolation of the QF's generator. Moreover, the Statement of Need and Reasonableness specifically discussed the subject of the manual disconnect switch. Statement of Need and Reasonableness, pp. 39-40). The issue of requiring a lockable, manual disconnect switch was thoroughly debated at the hearings. To find that a substantial change results in the change of position by the Commission would lead to the conclusion that an Agency can learn from the comments on its proposals only at the peril of instituting a new rulemaking proceeding. International Harvester Co. v. Ruckelshaus, supra. The change ultimately adopted by the Commission allowing a manual, lockable disconnect switch is a logical "outgrowth" of the rulemaking proceeding. South Terminal Corp. v. EPA, supra. Finally, the amendment suggested by the Hearing Examiner is already required by the State Board of Electricity. (See, Pub. Ex. 78, State Board of Electricity).

logical outgrowth - basis for no subs. chge

130. Section 3.0462 F. allows the utility to require a QF to discontinue parallel generation operation when necessary for system safety. No comments opposed to § 3.0462 F. were received. For the reasons discussed in the previous Finding, this provision of the proposed rules is both necessary and reasonable.

131. Section 3.0462 G. requires a Qualifying Facility to make equipment available and permit entry by "electric and communication utility personnel" to test isolation and protective equipment. Such tests would be conducted to evaluate the quality of power delivered to the utility and to determine whether the QF is responsible for any service problems experienced by the customers of a utility or communication system.

The Commission asserts that this section is necessary to afford the utility and affected communication companies a reasonable opportunity to assure safe and effective operation of their systems in conjunction with the parallel electric generation of the QF. (Statement of Need and Reasonableness, p. 40). The Commission also asserts that the section reasonably limits the reasons for such entry and the times at which it may occur. (Statement of Need and Reasonableness, p. 40).

A number of utilities testified that allowing entry for purposes of inspection and testing by utility personnel is necessary for the safety of all parties and the proper functioning of the interconnected utility. (See, e.g., Pub. Ex. 65, Ottertail Power Company, p. 19).

The cogenerators and small power producers, however, asserted a need to limit the application of subsection G. Jacobs Wind Electric Company, for example, pointed out that utility personnel are exempt from the State Board of Electricity requirements which apply to the QF's side of the interconnection. (Pub. Ex. 113, Jacobs Wind Electric Co., p. 11; Pub. Ex. 78, State Board of Electricity, p. 1). Further, there is no evidence that the normal electric and communication utility personnel will either be familiar with the equipment used by the QF or qualified to inspect and adjust it. (See, Pub. Ex. 113, Jacobs Wind Electric Co., Reply Comments, p. 11).

The Hearing Examiner finds that § 3.0462 G. is both necessary and reasonable. The concern expressed by Jacobs Wind Electric Company is not a likely occurrence. In the event that unqualified personnel attempt to make an entry, the QF could refuse to allow such personnel to test or adjust the equipment and resolve their reasonableness in doing so under the Commission's complaint procedure. Also, if unqualified personnel damaged the QF's equipment or otherwise interfered with the production of electricity by the QF as a result of their own lack of knowledge and training, the utility affected and the person accomplishing entry would be liable to the QF for damages in tort.

Although the Hearing Examiner has found that § 3.0462 G. is both necessary and reasonable, for purposes of clarity and to avoid misconstruction, the Commission may consider inserting in the second line of G., after the word "permit", and before the word "electric", the word "qualified".

Such an amendment is implicit in § 3.0462 G. and would not constitute a substantial change within the meaning of 9 MCAR § 2.111.

132. Section 3.0462 H. requires the QF to maintain its power output in such a manner that frequency and voltage produced are compatible with the utility's normal service and do not cause the prohibited degradation of such service.

Section 3.0462 H. is both necessary and reasonable since a balancing of the interests of the customers of the utility and the QF require that the service to the customer not be degraded as a result of interconnection. The only comment received on this section of the proposed rules suggested that the

word "standard" contained in the fifth line of § 3.0462 H. should be deleted as being unduly vague because standard limitations on service do not exist in the utility industry. (See, Pub. Ex. 16, Jacobs Wind Electric Co., p. 17). It is suggested that the word "customary" be inserted in lieu of the word "standard" in the rule. The Hearing Examiner finds that the two words are synonyms and that the inclusion of the word "standard" in the rule does not render it impermissibly vague.

133. Section 3.0462 I. requires that a Qualifying Facility be operated so that variations from "acceptable voltage levels and other service-impairing disturbances" do not adversely affect other utility customers and so that the facility does not produce "undesirable levels of harmonics" in the utility's power supply.

The Commission asserts that § 3.0462 I. is both reasonable and necessary for the reasons discussed in the previous Finding.

A number of utilities suggested embellishment of the language to insert additional operating characteristics on the quality of power provided by the QF. (See, Pub. Ex. 6, NSP, p.19; Pub. Ex. 10, Minnesota Power, p. 10; and Pub. Ex. 117, MMUA Reply Comments, p. 23).

Jacobs Wind Electric Company testified that the word "undesirable" as modifying levels of harmonics in § 3.0462 I. is impermissibly vague and may be used by a utility as a method of oppression.

The Hearing Examiner finds that the subsection is necessary to establish the responsibility of the QF for the safe operation of its generating capacity in harmony with the electric service provided by the utility to its customers. Such a balancing of interests is inherent in Minn. Stat. § 216B.164, subd. 1 (1981 Supp.).

The comment of Jacobs Wind Electric Company that the word "undesirable" is impermissibly vague and may be used by a utility to discourage cogeneration and small power production is persuasive. There is no standard in the proposed rule governing when or at what level harmonics became "undesirable". Further, the party that determines undesirability is not identified. What is undesirable to the utility may not be undesirable to another customer or even the Commission. Hence, § 3.0462 I. is unreasonable.

To correct the defect, the Commission should strike the word "undesirable" in the second to last line of § 3.0462 I. and substituted after the word "harmonics" in the same line language substantially similar to the following language suggested by Jacobs Wind Electric Company:

> which exceed the prescribed limits of Commission rules or other levels customarily accepted.

so amended p. 121

(See Pub. Ex. 16, Jacobs Wind Electric Co., p. 17).

134. Section 3.0462 J. states that a Qualifying Facility shall be responsible for operating its equipment in adherence to all applicable national, state and local codes. The section adds the following advisory statement:

> The design and configuration of certain cogeneration and small power production equipment might require an isolation transformer as part of the qualifying facility's installation for safety and protection of the qualifying facility equipment.

The Commission asserts that this subsection is necessary to fix the responsibility for safety and protection of equipment owned by the QF. It

states that the section is reasonable in that it places the burden for the protection and maintenance of the equipment on the owner of the equipment who has created any additional resulting risk. Such an allocation of responsibilities is inherent in the legislative intent expressed in Minn. Stat. § 216B.164, subd. 1 (1981 Supp.).

The Hearing Examiner finds that, for the reasons relied upon by the Commission in its Statement of Need and Reasonableness, the first sentence of § 3.0462 J. is both necessary and reasonable. (See, Statement of Need and Reasonableness, p. 40).

For the reasons stated in Finding 127, supra, however, the Hearing Examiner finds that the advisory statement contained in the second sentence of § 3.0462 J. is either mere surplusage or, if an additional requirement beyond that expressed in the first sentence is meant to be imposed, is impermissibly vague. It contains no statement of conditions under which an isolation transformer may be required of a QF for reasons of safety. The reasonableness of the second sentence of § 3.0462 J. of the proposed rules, therefore, has not been demonstrated by an affirmative presentation of facts in the record.

To correct the defect, the Commission should delete the second sentence of § 3.0462 J. deleted p. 21

135. Section 3.0462 K. allows the Qualifying Facility to appeal to the Commission if it considers the technical requirements for interconnection imposed by the utility to be unreasonable. Section 3.0462 K. is both necessary and reasonable as a consequence of Minn. Stat. § 216B.164, subd. 5 (1981 Supp.), and as a more specific statement of the Commission's dispute resolution authority contained in § 3.0460.

4 MCAR § 3.0463 - Existing Contracts.

136. Section 3.0463 allows either party to an interconnection contract executed prior to the effective date of the proposed rules to cancel the contract and require the renegotiation of an interconnection contract under the proposed rules. Section 3.0463 does not only apply to contracts or portions of contracts in conflict with the proposed rules.

The Commission suggests that this section is both necessary and reasonable because it would be unreasonable to have two classes of contracts applicable to interconnected activities, those drafted prior to the proposed rules, presumably not reflecting their conditions, and those signed subsequently, fully reflecting the requirements of the rules. (See, Statement of Need and Reasonableness, p. 41). The Commission also asserts that it is reasonable to permit either party to reopen a pre-rule contract since the provisions of a contract executed in accordance with the rules is as likely to favor one party as the other. The Commission cites its precedent as authority to vitiate contracts found to be contrary to Commission rules or the provisions of Minn. Stat. Ch. 216B (1980). Although invited in writing by the Hearing Examiner on the record to discuss its ability to adopt retroactive rules potentially negating pre-existing contracts, the Commission offered no additional substantiation for its legal authority to adopt § 3.0463.

137. While a number of utilities expressed doubt about the legal authority of the Commission to adopt retroactive rules abrogating existing contracts, the record contains no discussion of the applicable legal limitations.

138. The Commission has authority to adopt retroactive rules by virtue of the general rulemaking authority contained in Minn. Stat. § 216B.164, subd. 6 (1981 Supp.).

139. For the reasons hereinafter discussed, however, § 3.0463 violates the prohibition in the Minnesota and Federal Constitutions against a state adopting a law impairing an existing contract.

140. To correct the defect, the Commission should either strike from the proposed rules, § 3.0463 or reconvene the hearings to provide a record that would support a redrafted provision providing for the retroactive application of the rules to existing contracts consistent with constitutional limitations.

stricken p. 21

DISCUSSION - IMPAIRMENT OF EXISTING CONTRACTS

Section 3.0463 allows any party to a pre-existing interconnection contract to avoid its contractual obligations and renegotiate the contract. While several commentators generally questioned the legal authority of the Commission to apply its proposed rules in such a retroactive manner, the record contains no specific discussion of both the constitutional and statutory limitations on such authority. Although specifically requested to do so by the Hearing Examiner on the record, the Commission did not expand on its reliance on several of its precedents negating utility contracts specifically found to conflict with Minn. Stat. Ch. 216B. (1980). (Statement of Need and Reasonableness, p. 41).

For the reasons hereinafter discussed, the Hearing Examiner finds that, while the Commission has legislative authority to adopt rules having retroactive effect, the Constitutional prohibition against laws which impair the obligations of contracts renders § 3.0463 beyond the Commission's legal authority.

A determination of whether the Commission has legal authority to adopt § 3.0463 of the proposed rules involves two distinct questions: Whether, in general, it has statutory authority to adopt any retroactive rule; and, if so, whether the rule, as drafted, amounts to a constitutionally prohibited abrogation of an existing contract.

Minnesota Statutes, § 216B.164 (1981 Supp.), does not specifically authorize the Commission to give retroactive effect to its cogeneration and small power production rules and no such authority can be derived from either PURPA or the FERC Rules. See, 18 C.F.R. § 292.301(b)(2); Bates Fabrics, Inc. v. Public Utilities Commission, 447 A.2d 1211, 1214 (Me. 1982). Further, Minn. Stat. § 645.21 (1980), creates a general presumption against retroactive application of a statute.

Statutory authority for an agency to promulgate a retroactive rule, however, does not depend on a specific grant of such authority in the enabling legislation. Minn. Stat. § 15.0413 (1981 Supp.), provides that a rule adopted by an agency acting within the scope of its authority has the force and effect of law. An act of an administrative agency which is legislative in character and has the force of a statute is subject to the same tests as to its validity as an act of the Legislature intended to accomplish the same purpose. See, 2 Am. Jur. 2d, Administrative Law, § 298. Since the intention of the Commission to make its proposed rules retroactive is clearly expressed in § 3.0463 of the proposed rules, Minn. Stat. § 645.21 (1980), does not limit the authority of the Commission to accomplish retroactivity.

The courts have recognized that an administrative agency acting within the scope of its delegated authority possesses power coterminous with that of the Legislature and may make rules retroactive, absent constitutional impediments, if it is reasonable to do so.

In Mason v. Farmers Insurance Companies, 281 N.W.2d 344, 348 (Minn. 1979), the Court stated:

> Prior to July 1, 1975, Minn. St. 15.0413 provided that every rule '. . . shall have the force and effect of law upon its publication in the State Register and upon its further filing in the office of the Commissioner of Administration.' In principle, rules may be made retroactive if it is reasonable to do so. See, Summit Nursing Home, Inc. v. United States, 572 F.2d 737 (Ct.Cl 1978).

Moreover, the Court, in Ashbourne School v. Commonwealth Department of Education, 403 A.2d 161, 165 (Tenn. 1979), held:

> Agencies may, of course, adopt retroactive regulations so long as they do not disturb vested rights, the impairment of contracts, or the principles relating to due process. Jenkins vs. Unemployment Compensation Board of Review, 162 Pa. Super. 49, 52 A.2d 686 (1948).

The Hearing Examiner finds that general retroactive application of the rules is reasonable under the circumstances for the same reasons stated with respect to the definition of a Qualifying facility. (See, Finding 27, supra.

Although the Commission has statutory authority to apply its proposed rules retroactively to existing contracts, § 3.0463, may not be sustained under the contract clauses of both the Federal and Minnesota Constitutions.

Article I, § 10, cl. 1 of the United States Constitution and Article I, § 11 of the Minnesota Constitution prohibit the enactment of a law impairing the obligation of contract. An administrative rule is a law within the meaning of the constitutional provisions. See 2 Am. Jur. 2d, Administrative Law § 298. Moreover, the obligation of an existing contract is impaired when a party is deprived of the benefits of his contract or when the enactment takes from the party his whole contract and all the rights which it was intended to confer. Northern Pacific Railway Co. v. Minnesota, 208 U.S. 582, 28 S.Ct. 341, 52 L.Ed. 630, (1908); Poindexter v. Greenhow, 114 U.S.301, 5 S.Ct. 903, 962, 29 L.Ed. 185 (1885); Home Building & Loan Association v. Blaisdell, 290 U.S. 398, 54 S.Ct. 231, 78 L.Ed. 413, 88 A.L.R. 1481 (1934).

In a number of early decisions, the United States Supreme Court stringently applied the contract clause of the Federal Constitution to void state legislation which had the effect of negating prior contracts. However, in modern times, the United States Supreme Court, expressly or by necessary implication, has repudiated the strict interpretation of the contract clause and has recognized instead that states are not necessarily precluded from enacting valid measures to preserve the order, health, morals, and economic well-being of the community, by the fact that such measures might impair the obligations of existing private contractual arrangements. See, Annotation, State's Exercise of Police Power as Constituting Impairment of Obligation of Contract-Supreme Court Decisions, 57 L.Ed. 1279, 1285 (1979).

Interdiction of statutes impairing the obligation of contracts does not prevent the state from exercising such powers as are vested in it for the promotion of the commonweal, or necessary for the general good of the public, although contracts previously entered into between individuals may thereby be

affected. Manigault v. Springs, 199 U.S.473, 26 S.Ct. 127, 50 L.Ed. 274 (1905). Such power, which in its various ramifications is known as the police power, is an exercise of the sovereign right of the government to protect the lives and welfare of the people and is paramount to individual contractual rights.

Similarly, recognizing the need for harmonizing the contract clause with the necessary residual and state police power, the Court, in Home Building & Loan Association v. Blaisdell, 290 U.S. 398, 54 S.Ct. 231, 78 L.Ed. 413 (1934), sanctioned legislation appropriate to a legitimate public end even if it has the result of modifying or abrogating private contracts already in effect. Such contracts are to be regarded as having been made subject to the future exercise of the constitutional power of the state, and the reservation of essential attributes of sovereign power must be read into contracts as a postulate of the legal order.

In order for the State's police power not to affect the obligations of existing private contracts without violating the contract clause, however, the enactment must be reasonable and necessary to a legitimate public purpose. United States Trust Co. v. New Jersey, 431 U.S. 1, 97 S.Ct. 1505, 52 L.Ed. 2d 92 (1977); Allied Structural Steel Co. v. Spannaus, 438 U.S. 234, 98 S.Ct. 2716, 57 L.Ed. 2d 727 (1978); Annotation, State's Exercise of Police Power as Constituting Impairment of Obligation of Contract - Supreme Court Decisions, supra.

Hence, in determining whether a state enactment violates the contract clause of the Federal Constitution as respects private agreements, the key question is whether the legislation is addressed to a legitimate end and the measures taken are reasonable and appropriate to that specific end. Home Building & Loan Association v. Blaisdell, supra.

In two recent decisions, the United States Supreme Court has reaffirmed the vitality of the contract clauses and declared that private contracts are not subject to unlimited modification under the police power, and that laws intended to regulate existing contractual relationships must serve a legitimate public purpose and be limited to those provisions necessary to achieve that purpose. Allied Structural Steel v. Spannaus, supra; United States Trust Co. v. New Jersey, supra.

The general principles applicable to an exercise of the police power abrogating existing contracts apply equally to pre-existing utility contracts.

The United States Supreme Court has specifically held that a public utility commission may vary the contractual rates established by pre-existing contracts by general order or rule. In Union Dry Goods Co. v. Georgia Public Service Corp., 248 U.S.372, 39 S.Ct. 117, 63 L.Ed.309 (1919), the the Court held that a public service commission could abrogate an existing contractual rate between a utility and its customer by appropriate regulation. The Court, after reviewing all applicable decisions relative to the exercise of the police power, stated:

> These decisions, a few from many to like effect should suffice to satisfy the most skeptical or belated investigator that the right of private contract must yield to the exigencies of the public welfare when determined in an appropriate manner by the authority of the state . . . .

248 U.S. at 250, 39 S.Ct. at 119.

Similarly, in Midland Realty Co. v. Kansas City Power and Light Co., 300 U.S. 109, 57 S.Ct. 345, 81 L.Ed. 540 (1937), the Court held that the State Public Service Commission could abrogate a utility contract executed prior to the creation of the Commission by appropriate order. The Court stated:

> There is here involved no question as to the validity of the rates prior to the passage of the statute. Without expression of opinion, we assume that the then parties were bound by the contracts. But the state has power to annul and supersede rates previously established by contract between utilities and customers. It has power to require service at non-discriminatory rates, to prohibit service at rates too low to yield the costs readily attributed to it, and to require utilities to publish their rates and adhere to them.

300 U.S. at 113, 57 S.Ct. at 346-47.

The Florida court recently restated the general principle allowing a public utilities commission to abrogate an existing contract in the following language:

> The Commission's decision was based upon the well-settled principle that contracts for public utilities are made subject to the reserved authority of the state, under the police power of express statutory or constitutional authority, to modify the contract in the interests of the public welfare without unconstitutional impairment of contracts." Midland Realty Co. v. Kansas City Power & Light Co., 300 U.S. 109, 57 S.Ct. 345, 81 L.Ed. 540 (1937); City of Plantation v. Utilities Operating Co., 156 So.2d. 842 (Fla. 1963); Miami Bridge Co. v. Railroad Commission, 155 Fla. 366, 20 So.2d. 346 (1944). (See, also, 14 A.L.R. 249; 11 A.L.R. 454; 9 A.L.R. 1420; 64 Am. Jur. Public Utilities, §§ 81, 83).

H. Miller & Sons, Inc. v. Hawkins, 373 So.2d. 913, 914 (Fla. 1979).

The holding of the Florida Court expressly reflects the modern decisional law. See, Aker v. Public Service Commission of Oklahoma, 606 P.2d 567 (Okla. 1980; Wilfong v. Indiana Gas Co., Inc., 399 N.E.2d 788 (Ind. App. 1980); State ex rel Utilities Commission v. Virginia Electric Light & Power Co., 206 S.E.2d 283, 290 (N.C. 1974); Houston Light & Power Co. v. Railroad Commission of Texas, 529 S.W.2d 763 (Tex. 1975); Preston County Light & Power Co. v. Renick, 113 S.E.2d 378 (W.Va. 1960); Annotation, Power of State to Change Private Contract Rates for Public Utilities, 9 A.L.R. 2d 1423 (1920); Annotation, Imposition of Natural Gas Priorities, 84 A.L.R. 3rd 541, § 5(a) (1978).

Minnesota, in an early decision, recognized the authority of a regulatory agency when acting in the discharge of its delegated authority to abrogate existing contracts. Seaman v. Minneapolis & R.R.Ry. Co., 127 Minn. 180, 149 N.W. 134 (1914).

A state regulatory authority, however, must exercise its ability to abrogate pre-existing utility contracts in accordance with the limitations on the exercise of such authority established by the Supreme Court with respect to private contracts generally. To avoid constitutional prohibitions, the retroactive application abrogating an existing contract must be made upon reasonable conditions and be of a character appropriate to the public purpose justifying its adoption. Allied Structural Steel Co. v. Spannaus, supra; United States Trust Co. v. New Jersey, supra.

For the reasons hereinafter discussed, the Hearing Examiner finds that § 3.0463 of the proposed rules is not reasonably related to the accomplishment of a valid public purpose documented on the hearing record.

Initially, it should be noted that § 3.0463 flatly negates any interconnection contract negotiated prior to the effective date of the Commission's rules. It is not limited to contractual provisions which conflict with such rules and, presumably, would allow the renegotiation of contractual provisions which are fully in accord with 9 MCAR §§ 3.0450-3.0463, or not even regulated by the provisions of the proposed rules. While several commentators have suggested that § 3.0463 be redrafted to limit its application to those portions of pre-existing interconnection contracts which conflict with the proposed rules, that modification would not resolve the constitutional infirmity.

There is no documentation on the record of the public purpose the Commission is attempting to achieve by the blanket retroactivity of its rules. The Commission merely states that it would be unreasonable to have two types of cogeneration and small power production contracts, those drafted prior to the passage of the rules and those drafted after their effective date. (Statement of Need and Reasonableness, p. 41). It is not apparent to the Hearing Examiner, however, why allowing two vintages of interconnection contracts would be per se unreasonable. Moreover, in the absence of an enunciated public purpose, the Hearing Examiner is unable to determine whether the retroactive application of all portions of the proposed rules is both necessary and reasonable within the constitutional prohibitions previously discussed.

The Commission may consider the balance between the rights of cogenerator and small power producers and utilities expressed in the rules to be of such import to ratepayers that retroactive application of all portions of the proposed rules is justified.

If exact implementation of the balance struck between the competing interests in the proposed rules is the public purpose justifying § 3.0463, however, that section is not appropriate to achieve the public purpose. Section 3.0463 is merely optional. If it is in the public interest to apply the rules retroactively in order to achieve maximum encouragement to small power production and cogeneration consistent with ratepayer protection, the optional character of § 3.0463 is inappropriate. Achievement of such a public purpose should not depend upon the action of an individual contractual party. The abrogation of inconsistent contractual provisions under such a rationale should be mandatory.

As should be apparent, the constitutional prohibitions against the impairment of contracts do not provide a mechanical vehicle for a priori direction to the Commission. At a minimum, if the Commission desires to make its rules retroactive, the provision should be limited to those pre-existing contractual provisions which conflict with the portions of the proposed rules that the Commission considers appropriate for retroactive application to serve a legitimate public purpose documented in the record. Finally, any such retroactive application to existing contracts should be mandatory.

It is neither the responsibility nor the intention of the Hearing Examiner to redraft § 3.0463. Since, in the opinion of the Hearing Examiner, the record contains no documented public purpose against which the constitutional propriety of any suggested revision of § 3.0463 can be measured, the Hearing Examiner recommends that the Commission either strike § 3.0463 or, if it feels that consideration of the question of retroactive application to pre-existing contracts is necessary, reconvene the hearing to generate a record which would support a provision drafted in compliance with constitutional limitations.

Miscellaneous Findings

141. The MMUA suggests that the rules contain a detailed variance provision. (Pub. Ex. 117, MMUA Reply Comments). The existing rules of the Commission do not contain a general variance provision. While the Hearing Examiner considers the existence of a variance provision to be desirable, the absence of a variance procedure does not render the rules unnecessary or unreasonable. Moreover, there is no evidence in the record from which a variance provision consistent with Minn. Stat. Ch. 15, (1980), could be drafted. The variance provision suggested by the MMUA is not consistent with existing law in that it allows unfettered discretion to the Commission to grant a variance. Such unfettered discretion in agency rules has been consistently rejected as being either void for vagueness or offending due process. See Papachristou v. City of Jacksonville, 405 U.S. 156 (1972); Holmes v. New York City Housing Authority, 398 F.2d 262, 265 (2d Cir. 1968).

142. While not affecting the need or reasonableness of the proposed rules, the Hearing Examiner suggests that whenever a defined term is used in the rules that it be capitalized in accordance with the capitalization of the defined term contained in § 3.0452. Capitalization of defined terms avoids ambiguity and unnecessary confusion.

Based upon the foregoing Findings of Fact, the Hearing Examiner makes the following:

C O N C L U S I O N S

1. That the Minnesota Public Utilities Commission gave proper notice of the hearing in this matter.

2. That the Minnesota Public Utilities Commission has fulfilled the procedural requirements of Minn. Stat. § 15.0412, subd. 4-4f (1980), and all the procedural requirements of law or rule.

3. That the Minnesota Public Utilities Commission has demonstrated its statutory authority to adopt the proposed rules and has fulfilled all other substantive requirements of law or rule within the meaning of Minn. Stat. §§ 15.0412, subd. 4e, and 15.052, subd. 3(4)(i)(ii) (1980), except as noted at Findings of Fact Nos. 20, 29, 76, 91, 97 and 139.

4. That the Minnesota Public Utilities Commission has documented the need for and reasonableness of its proposed rules with an affirmative presentation of facts in the record within the meaning of Minn. Stat. § 15.0412, subd. 4c (1980), except as noted at Findings of Fact Nos. 25, 37, 68, 71, 72, 76, 91, 93, 97, 99, 127, 129, 133 and 134.

5. That the amendments and additions to the proposed rules which are suggested by the Minnesota Public Utilities Commission after publication of the proposed rules in the State Register do not result in rules which are substantially different from the proposed rules as published in the State Register within the meaning of Minn. Stat. § 15.0412, subd. 4d (1980), and 9 MCAR §§ 2.110 A. and 2.111 (1980 ed.).

6. That the Hearing Examiner has suggested action to correct the defects cited in Conclusions 3 and 4 as noted at Findings of Fact Nos. 26, 29, 37, 68, 71, 72, 76, 91, 93, 97, 99, 127, 129, 134 and 140.

7. That due to Conclusions Nos. 3 and 4, this Report has been submitted to the Chief Hearing Examiner for his approval pursuant to Minn. Stat. §§ 15.0412, subd. 4d (1980).

Miscellaneous Findings

141. The MMUA suggests that the rules contain a detailed variance provision. (Pub. Ex. 117, MMUA Reply Comments). The existing rules of the Commission do not contain a general variance provision. While the Hearing Examiner considers the existence of a variance provision to be desirable, the absence of a variance procedure does not render the rules unnecessary or unreasonable. Moreover, there is no evidence in the record from which a variance provision consistent with Minn. Stat. Ch. 15, (1980), could be drafted. The variance provision suggested by the MMUA is not consistent with existing law in that it allows unfettered discretion to the Commission to grant a variance. Such unfettered discretion in agency rules has been consistently rejected as being either void for vagueness or offending due process. See Papachristou v. City of Jacksonville, 405 U.S. 156 (1972); Holmes v. New York City Housing Authority, 398 F.2d 262, 265 (2d Cir. 1968).

142. While not affecting the need or reasonableness of the proposed rules, the Hearing Examiner suggests that whenever a defined term is used in the rules that it be capitalized in accordance with the capitalization of the defined term contained in § 3.0452. Capitalization of defined terms avoids ambiguity and unnecessary confusion.

Based upon the foregoing Findings of Fact, the Hearing Examiner makes the following:

C O N C L U S I O N S

1. That the Minnesota Public Utilities Commission gave proper notice of the hearing in this matter.

2. That the Minnesota Public Utilities Commission has fulfilled the procedural requirements of Minn. Stat. § 15.0412, subd. 4-4f (1980), and all the procedural requirements of law or rule.

3. That the Minnesota Public Utilities Commission has demonstrated its statutory authority to adopt the proposed rules and has fulfilled all other substantive requirements of law or rule within the meaning of Minn. Stat. §§ 15.0412, subd. 4e, and 15.052, subd. 3(4)(i)(ii) (1980), except as noted at Findings of Fact Nos. 20, 29, 76, 91, 97 and 139.

4. That the Minnesota Public Utilities Commission has documented the need for and reasonableness of its proposed rules with an affirmative presentation of facts in the record within the meaning of Minn. Stat. § 15.0412, subd. 4c (1980), except as noted at Findings of Fact Nos. 25, 37, 68, 71, 72, 76, 91, 93, 97, 99, 127, 129, 133 and 134.

5. That the amendments and additions to the proposed rules which are suggested by the Minnesota Public Utilities Commission after publication of the proposed rules in the State Register do not result in rules which are substantially different from the proposed rules as published in the State Register within the meaning of Minn. Stat. § 15.0412, subd. 4d (1980), and 9 MCAR §§ 2.110 A. and 2.111 (1980 ed.).

6. That the Hearing Examiner has suggested action to correct the defects cited in Conclusions 3 and 4 as noted at Findings of Fact Nos. 26, 29, 37, 68, 71, 72, 76, 91, 93, 97, 99, 127, 129, 133, 134 and 140.

7. That due to Conclusions Nos. 3 and 4, this Report has been submitted to the Chief Hearing Examiner for his approval pursuant to Minn. Stat. §§ 15.0412, subd. 4d (1980).

8. That any Findings which might properly be termed Conclusions, and any Conclusions which might properly be termed Findings are hereby expressly adopted as such.

9. That a Finding or Conclusion of need and reasonableness in regard to any particular rule or portion of the proposed rules does not preclude and should not discourage the Minnesota Public Utilities Commission from further modification of the proposed rules based upon an examination of the public comments, provided that the rules finally adopted are supported by facts appearing in this rule hearing record and that no substantial change is made from the proposed rules as originally published within the meaning of Minn. Stat. § 15.0412, subd. 4d (1980), and 9 MCAR §§ 2.110 A. and 2.111 (1980).

Based upon the foregoing Conclusions, the Hearing Examiner makes the following:

RECOMMENDATION

IT IS HEREBY RECOMMENDED that the proposed rules be adopted except where specifically otherwise indicated in the previous Conclusions.

Dated this 30 day of December, 1982.

Bruce D. Campbell

BRUCE D. CAMPBELL
Hearing Examiner

E-999/R-80-560

PUC-82-063-BC

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of the Proposed Adoption of New Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production.

ORDER OF THE CHIEF HEARING EXAMINER

WHEREAS, hearings were held on September 7-8 and 13-17, 1983 before Bruce D. Campbell, a Hearing Examiner of the State Office of Administrative Hearings, on the above-entitled matter in compliance with the rule-making provisions of Minn. Stat. Ch. 14 (1982); and

WHEREAS, the Report of Hearing Examiner made pursuant to Minn. Stat. § 14.50, was issued to the Public Utilities Commission and;

WHEREAS, the Public Utilities Commission has now determined to adopt rules; and

WHEREAS, the Public Utilities Commission has submitted said rules to the Chief Hearing Examiner for review pursuant to Minn. Stat. §§ 14.16, 14.51, and 9 MCAR § 2.111; and

WHEREAS, the Chief Hearing Examiner finds that, with the exception discussed in the Memorandum to this Order, the final proposed rules are not substantially different from those proposed at the public hearing and that the has cured the defects in the rule as required.

NOW, THEREFORE, upon receipt of this Order, the Public Utilities Commission has the responsibility of submitting the complete hearing record and the rules as adopted by the Public Utilities Commission to the Attorney General and to publish in the State Register if approved by the Attorney General.

Dated: March 8, 1983.

DUANE R. HARVES
Chief Hearing Examiner

MEMORANDUM

The purpose of the Chief Hearing Examiner's review at this state of the rulemaking process is to see that the agency has corrected defects in the rule as discussed in the previously issued Reports of the Hearing Examiner and the Chief Hearing Examiner. A second purpose is to review changes or modifications made to the rules which were not previously reviewed by the Hearing Examiner or the Chief Hearing Examiner. In the latter instance, the review is to determine whether the modifications are sufficiently substantial so as to

require a new hearing. This Order speaks only to those changes and is not addressed to the question of "substantial change" discussed in the Chief Hearing Examiner's Order dated January 3, 1983. The change discussed in that Order was approved by the Hearing Examiner thereby removing it from the jurisdiction of the Chief Hearing Examiner. My opinion expressed at that time remains the same.

D.R.H.

In the Matter of the Proposed Adoption of Rules of the Minnesota Public Utilities Commision Governing Cogeneration and Small Power Production

CERTIFICATE OF COMMISSION'S RESOLUTION ADOPTING RULES

DOCKET NO. E-999/R-80-560

I, Randall D. Young, do hereby certify that I am the Executive Secretary of the Minnesota Public Utilities Commission (the Commission), a board duly authorized under the laws of the State of Minnesota, and that the following is a true, complete, and correct copy of a resolution adopted at a meeting of the Commission, duly and properly called and held on the 2nd day of March, 1983, that a quorum was present at said meeting, that a majority of those present voted for the resolution, and that said resolution is set forth in the minutes of said meeting and has not been rescinded or modified.

> "RESOLVED, that the rules relating to Cogeneration and Small Power Production, 4 MCAR § 3.0450 - 3.0462, be and they hereby are approved and adopted, pursuant to authority vested in us by the Minnesota Statutes § 216B.164, subd. 6, and that Randall D. Young, the Executive Secretary of the Commission, be and hereby is authorized to sign an order adopting these rules and further is authorized to perform the necessary acts to provide that these rules shall have the force and effect of law."

IN WITNESS WHEREOF, I have hereunto subscribed my name this 9th day of March, 1983.

RD Young

Randall D. Young
Executive Secretary

ATTEST BY: Terry Hoffman
Terry Hoffman, Chairman

PUC Exhibit No. E 894
File No. PUC-82-063BC
Bde Date 8-12-82

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Lillian Warren-Lazenberry	Chairman
Leo G. Adams	Commissioner
Roger L. Hanson	Commissioner
Terry Hoffman	Commissioner
Juanita R. Satterlee	Commissioner

In the Matter of the Proposed Adoption of Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production.	STATEMENT OF NEED AND REASONABLENESS DOCKET NO. E-999/R-80-560 H. E. DOCKET NO. PUC-82-063-BC

I. INTRODUCTION.

The Minnesota Public Utilities Commission (the Commission) has drafted this Statement of Need and Reasonableness to support and accompany the Commission's Proposed Rules governing cogeneration and small power production through the public hearing process.

Cogeneration is the sequential use of the heat of combustion both to generate electricity and to perform other useful work (such as heating a building). Small power production is the generation of electricity from renewable resources (hydro, wind, solar, biomass, etc.).

The Proposed Rules are intended to encourage the development of cogeneration and small power production, consistent with protection of electric utility ratepayers and the general public. They are responsive to both federal and state laws which recognize that cogeneration and small power production can help reduce our dependence on foreign sources of energy, conserve scarce fossil fuels, be more efficient in our use of energy, and protect the environment.

For administrative purposes, the Commission's proposal is organized into 14 separate Proposed Rules:

4 MCAR § 3.0450	Scope and Purpose
4 MCAR § 3.0451	Definitions
4 MCAR § 3.0452	Filing Requirements
4 MCAR § 3.0453	Reporting Requirements
4 MCAR § 3.0454	Conditions of Service
4 MCAR § 3.0455	Rates for Sales
4 MCAR § 3.0456	Standard Rates for Purchases
	A. Net Energy Billing
	B. Simultaneous Purchase and Sale
	C. Time of Day Purchase Rates
4 MCAR § 3.0457	Negotiated Rates for Purchases
4 MCAR § 3.0458	Utility Treatment of Costs
4 MCAR § 3.0459	Wheeling and Exchange Agreements
4 MCAR § 3.0460	Disputes
4 MCAR § 3.0461	Notification to Customers
4 MCAR § 3.0462	Interconnection Guidelines
4 MCAR § 3.0463	Existing Contracts

The rules on Scope and Purpose and Definitions apply to all the other rules. The rule on Filing Requirements sets up the avoided cost calculations which are to be used in Standard Rates for Purchases and Negotiated Rates for Purchases. The Filing Requirements section also relates to Conditions of Service, Notification to Customers, and Interconnection Guidelines. The rule on Reporting Requirements covers data which utilities are required to report to the Commission. The Conditions of Service, and Interconnection Guidelines rules cover the interconnectioon arrangements apart from actual rates for purchases and sales. Rates are covered in the Rates for Sales, Standard Rates for Purchases, Negotiated Rates for Purchases, and Existing Contracts rules. The appropriate ratemaking treatment of utility purchases from qualifying facilities is covered in Utility Treatment of Costs. The rule on Wheeling and Exchange Agreements takes care of cases in which the qualifying facility sells electricity to a utility with which it is not interconnected. The Disputes rule sets forth the Commission's obligation to resolve disputes over application of these rules, and the Notification to Customers section sets

forth the utilities' obligation to inform their customers about these rules. The 14 proposed rules thus form a unified, integrated approach to cogeneration and small power production.

This Statement follows the numerical organization of the Proposed Rules. In all cases, the actual rule language is reproduced, followed by the Commission's discussion of why that language is necessary and reasonable.

This Statement of Need and Reasonableness is designed to comply with 9 MCAR § 2.104. It contains a summary of the evidence and argument which the Minnesota Public Utilities Commission (the Commission) intends to present and rely upon at the hearings on the proposed rules.

In the Commission's opinion, this Statement supports the need for the proposed rules and the reasonableness thereof.

II. DISCUSSION OF RULE PROVISIONS.

4 MCAR § 3.0450 Scope and purpose. The purpose of 4 MCAR §§ 3.0450-3.0463 is to implement certain provisions of M.S. § 216B.164; the Public Utility Regulatory Policies Act of 1978, 16 United States Code, Sections 2601-2645 (Supplement III, 1979); and the Federal Energy Regulatory Commission regulations, 18 Code of Federal Regulations, Sections 292.101-292.602 (1981). Nothing in 4 MCAR §§ 3.0450-3.0463 excuses any utility from carrying out its responsibilities under these provisions of state and federal law. Rules 4 MCAR § 3.0450-3.0463 shall at all times be applied in accordance with their intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public.

In the 1981 session, the Minnesota Legislature added a new section to the Public Utilities Act. That section, codified as M.S. § 216B.164, established a statutory framework for the development of cogeneration and small power production in Minnesota. M.S. § 216B.164 sets forth certain specific standards for utility purchases of the output of cogeneration and small power production facilities (subd. 3), for wheeling of that power among utilities (subd. 4), for resolution of disputes (subd. 5), for reports to the legislature (subd. 7), and for the treatment of certain costs (subd. 8). In addition, M.S. § 216B.164, subd. 6 states, "the [Public Utilities] Commission shall promulgate rules to implement the provision of this section." These proposed rules are designed to comply with the directive of M.S. § 216B.164, subd. 6.

The Commission has general rulemaking authority under M.S. § 216A.05, subd. 1. In addition, the Commission is empowered to regulate public utilities generally under M.S. § 216B.08. That regulation extends to setting reasonable rates (M.S. §§ 216B.03 and 216B.16), ensuring that utilities provide safe, adequate, efficient, and reasonable service (M.S. § 216B.04), prohibiting unreasonable preferences, advantages, prejudices, or disadvantages through utility rates or services (M.S. § 216B.07), and fixing just and reasonable standards, regulations, and practices for public utilities (M.S. § 216B.09). In addition, the Commission has been granted investigatory (M.S. § 216B.14) and complaint authority (M.S. § 216B.17).

As part of the National Energy Act of 1978, the United States Congress passed the Public Utility Regulatory Policies Act (PURPA), Pub. L. 95-617. A portion of PURPA, codified as 16 U.S.C. § 843a-3, amends the Federal Power Act and governs cogeneration and small power production. 16 USC § 843a-3(a) requires the Federal Energy Regulatory Commission (FERC) to promulgate rules as necessary to encourage cogeneration and small power production, which rules are to require electric utilities to offer to sell electric energy to and purchase electric energy from cogeneration and small power production facilities. 16 USC § 824a-3(f) requires state regulatory authorities (including the Commission) to implement the cogeneration and small power production rules which the FERC promulgates under PURPA.

The FERC subsequently put rules into place which implemented the cogeneration provisions of PURPA. 18 CFR § 292.401 requires state regulatory authorities, not later than one year after the FERC rules take effect, to commence implementation of 18 CFR §§ 292.301 and 292.303-.308. The FERC indicated that the state implementation could be by the issuance of regulations, by resolution of disputes between utilities and qualifying facilities, or by any other action reasonably designed to implement the FERC

rules.

The proposed rules are thus generally necessary to comply with the direction of M.S. § 216B.164, subd. 6, as well as to fulfill the Commission's obligations under Federal law and FERC regulations. As will be discussed hereinafter, the provisions of the proposed rules are reasonable to carry out the intent of the state and federal legislation and regulations.

M.S. § 216B.164, subd. 1, states, "This section shall at all times be construed in accordance with its intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public." The Commission has adopted the identical standard as the general intent of the proposed rules. The Commission believes it is necessary to be consistent with state law, and is reasonable to adopt the clear and unambiguous statutory language.

The Commission considers the inclusion of a Scope and Purpose section to be of importance. It is recognized that the proposed rules are complex. This section is intended to act as an introductory section to assist the reader in determining the origin, the general purpose, and intent of the rules, as well as their overall effect.

4 MCAR § 3.0451 Definitions.

A. Applicability. For purposes of 4 MCAR §§ 3.0450-3.0463, the following terms have the meanings given them.

It is necessary to define these terms so they have consistent meanings throughout these rules.

B. Average annual fuel savings. "Average annual fuel savings" means the annualized difference between the system fuel costs that the utility would have incurred without the additional generation facility and the system fuel costs the utility is expected to incur with the additional generation facility.

This term is defined so it may be used in the calculation of avoided costs. It is applicable to a utility which intends to build new generating capacity.

One reason for building new capacity is to reduce system fuel costs. This can happen, for example, when a baseload unit replaces a peaking unit or purchased power in providing large amounts of electric energy. It can also happen when a new, efficient unit replaces an old, inefficient unit. The definition reasonably calls for a comparison of the system fuel costs to meet the expected annual load with and without the planned new unit. The difference is the average annual fuel savings.

C. Backup power. "Backup power" means electric energy or capacity supplied by the utility to replace energy ordinarily generated by a qualifying facility's own generation equipment during an unscheduled outage of the facility.

This definition and the definitions for Interruptible power, Maintenance power and Standby power, are necessary because they are used in the rule to indicate which types of power are to be offered by the utility. The definitions are reasonable because they are consistent with standard industry usage of the terms. Furthermore, the four definitions correspond with the four classifications of power to be sold to qualifying facilities as established by the FERC. The rule appropriately distinguishes each type of power from the others. This is necessary because the cost of providing one type may differ from the cost of providing another. For example, a utility supplying Interruptible power may curtail sales to the qualifying facility at the time of system peak, and in so doing may conserve capacity and reduce capacity costs. In contrast, a utility supplying Backup power must allow for the possibility that the qualifying facility will suddenly begin to take power at the time of system peak, and it must incur some of the cost consequences of this contingency even if no power is actually drawn. It may be possible for a qualifying facility to arrange scheduled maintenance to coincide with a time when the utility has excess reserves; if so, the cost of providing it as maintenance power (and its price to the qualifying facility) may be low. Likewise, Supplementary power, which is routinely provided to the qualifying facility, carries its own distinct cost consequences. The cost differences,

therefore, make it necessary to establish these classifications and demonstrate their reasonableness.

The definition of each type of power is reasonable in that it is consistent in meaning and application with the FERC rules. Such consistency will tend to avoid confusion and ambiguity. It will also promote harmony between the State and Federal rules thus alleviating the burdens of interpreting conflicting or inconsistent provisions by interested persons. By reducing confusion and ambiguity, a more favorable climate is established for encouraging cogeneration and small power production.

D. Capacity. "Capacity" means the capability to produce, transmit, or deliver electric energy.

Capacity is one of two elements (the other is energy) which together make up electric service. It is necessary to define capacity because qualifying facilities may enable a utility to avoid acquiring capacity of its own. If they do, they are eligible for compensation. The definition is reasonable in that it is consistent with general use of the term in the electric utility industry.

E. Capacity costs. "Capacity costs" means the costs associated with providing the capability to deliver energy. They consist of the capital costs of facilities used to generate, transmit, and distribute electricity and the fixed operating and maintenance costs of these facilities.

A definition of capacity costs is needed because qualifying facilities which provide capacity to utilities are entitled to be paid the costs of the capacity avoided by the utilities. The definition is reasonable because it is consistent with the general use of the term in the electric utility industry.

F. Commission. "Commission" means the Minnesota Public Utilities Commission.

This term is self-explanatory.

G. Energy. "Energy" means electric energy, measured in kilowatt-hours.

It is necessary to define energy because qualifying facilities are to be compensated for energy supplied to utilities. The definition is reasonable because it includes electric energy and excludes all other forms of energy. The utility is only required to purchase electric energy.

H. Energy costs. "Energy costs" means the variable costs associated with the production of electric energy. They consist of fuel costs and variable operating and maintenance expenses.

Energy costs must be defined because compensation to qualifying facilities for energy they supply is based on the costs utilities would incur if qualifying facilities did not supply them. Those costs are energy costs. The definition is reasonable because it is consistent with the way the term is used generally in the electic utility industry.

I. Interconnection costs. "Interconnection costs" means the reasonable costs of connection, switching, metering, transmission, distribution, safety provisions, and administrative costs incurred by the utility that are directly related to installing and maintaining the physical facilities necessary to permit interconnected operations with a qualifying facility. Costs are considered interconnection costs only to the extent that they exceed the corresponding costs which the utility would have incurred if it had not engaged in interconnected operations, but instead generated from its own facilities or purchased from other sources an equivalent amount of electric energy or capacity. Costs are considered interconnection costs only to the extent that they exceed the costs the utility would incur in selling electricity to the qualifying facility as a nongenerating customer.

It is necessary to define interconnection costs because these costs are explicitly assigned to qualifying facilities by both the FERC rules (18 CFR § 292.101 (b)(7)) and Minnesota law (M.S. § 216B.164, subd. 8). Interconnection costs are costs which would not be incurred if the utility did not engage in interconnected operations with cogenerators and small power

producers. The definition above is reasonable. Except for the last sentence, it is substantially the FERC definition, with only minor wording changes. The Commission has added the provision that only costs in excess of the costs of connecting nongenerating customers of the same class be considered interconnection costs. This provision is necessary and reasonable because often part or all of the costs it excludes are recovered by the utility in fixed charges as part of retail rates. Under Minnesota law and these rules, qualifying facilities must pay any fixed charges in the tariff under which they consume electricity. Therefore, without this provision, the qualifying facility could be discriminated against relative to other members of its class. Both the discrimination and the result of paying the utility twice for the same costs would be unreasonable.

J. Interruptible power. "Interruptible power" means electric energy or capacity supplied by the utility to a qualifying facility subject to interruption under certain specified conditions.

K. Maintenance power. "Maintenance power" means electric energy or capacity supplied by a utility during scheduled outages of the qualifying facility.

The necessity for and reasonableness of the definitions of these two items are established in the discussion of "Backup power," 4 MCAR § 3.0451(C).

L. Marginal capital carrying charge rate. "Marginal capital carrying charge rate" means the percentage factor by which the amount of a new capital investment in a generating unit would have to be multiplied to obtain an amount equal to the total additional annual amounts for the cost of equity and debt capital, income taxes, property and other taxes, tax credits, depreciation, and insurance which would be associated with the new capital investment.

It is necessary to define marginal capital carrying charge rate because the term is used in calculating a utility's avoidable capacity costs. When a utility avoids installing a generating unit, it also avoids costs related to the cost of capital, taxes, depreciation, and insurance. This definition is reasonable because it includes these factors, puts them on an annual basis, and relates them to the cost of the generating unit as a percentage. Thus the marginal capital carrying charge rate, as defined, may be used directly in the calculation of annual avoidable capacity costs.

M. On-peak hours. "On-peak hours" means, for utilities whose rates are regulated by the Commission, those hours which are defined as on-peak for retail ratemaking. For any other utility, on-peak hours are either those hours formally designated by the utility as on-peak for ratemaking purposes or those hours for which its typical loads are at least 85 percent of its average maximum monthly loads.

A definition of on-peak hours is needed because utility costs, and utility avoidable costs, vary between on-peak hours and off-peak hours. Since compensation to qualifying facilities is based on costs utilities can avoid, it is essential to have some determination of which hours are on-peak.

The proposed definition accepts determinations of on-peak periods made by the Commission or by the utility when the utility has defined on-peak hours for retemaking. Since many utilities have already determined on-peak and off-peak periods, this will tend to eliminate duplication of work on the part of the utility and will provide for appropriate time periods because existing rates and rating periods can be presumed to be reasonable. At the same time, a non-regulated utility that has not yet designated on-peak periods may choose to examine its load characteristics and determine which hours will most appropriately be included in the on-peak hours. If such a utility is unable or unwilling to perform a comprehensive and possibly time consuming examination, the rule provides for a simple method to determine on-peak periods which will minimize the amount of analysis required and at the same time will produce on-peak periods which will span the hours during which the utility is most likely to experience its system peak. A rule of thumb such as the 85 percent rule of thumb employed in the rule was used to establish on-peak periods for at least two of the utilities regulated by the Commission (i.e., Minnesota Power and Light Company, Docket No. E-015/GR-80-76 and Interstate Power Company, Docket No. E-001/GR-78-1065).

Thus, this general approach has been relied upon for larger utilities

and there is no reason to believe that this approach would not be reliable when applied by smaller utilities. Based upon its experience, the Commission has determined that an 85 percent level would be appropriate because it would provide an additional level of certainty that the peak demand experienced by the utility would fall in the on-peak period. Consequently, the proposed definition is reasonable.

N. Purchase. "Purchase" means the purchase of electric energy or capacity or both from a qualifying facility by a utility.

This term is self-explanatory.

O. Qualifying facility. "Qualifying facility" means a cogeneration or small power production facility which satisfies the conditions established in 18 Code of Federal Regulations, Sections 292.201-292.207 adopted through 46 Federal Register 33025-33027 (1981). The initial operation date or initial installation date of a cogeneration or small power production facility shall not prevent the facility from being considered a qualifying facility for the purposes of 4 MCAR §§ 3.0450-3.0463 if it otherwise would satisfy all stated conditions.

A definition of qualifying facilities is necessary because these rules are all about interconnections between qualifying facilities and utilities. Section 201 of PURPA amended Section 3 of the Federal Power Act to add definitions of, among other things, small power production facilities and cogeneration facilities. It also required the FERC to promulgate rules further defining qualifying small power production facilities and qualifying cogeneration facilities. The cites in the proposed definition are to the FERC rules defining qualifying facilities. It is reasonable to use the FERC definitions, since the FERC rules were based on extensive public participation and apply nationally. Furthermore, all persons commenting to the Commission during the solicitations of comment and opinion which underlie these proposed rules assumed the Commission's definition would correspond with the FERC's.

There is nevertheless one difference between the two definitions. In promulgating its rules, the FERC reasoned that facilities already in existence did not need the incentive of PURPA and its rules; they were already engaged in cogeneration or small power production. Consequently, the FERC authorized State regulatory authorities to treat such facilities differently (and less favorably) than qualifying facilities coming on line, presumably, because of the incentives of PURPA and the FERC rules. In proposing this definition, the Commission determined it would be unreasonable to take advantage of such authority. As a practical matter, the Commission would have to determine that a rate lower than that applicable to other qualifying facilities was nevertheless sufficient to encourage cogeneration and small power production. Making such a determination would likely be time consuming and not cost beneficial. As a matter of equity, the Commission thinks it would be unreasonable to provide less compensation to one of two facilities, each of which allowed the utility to avoid similar costs, simply because that facility was in operation or had been installed prior to some arbitrary date.

P. Sale. "Sale" means the sale of electric energy or capacity or both by an electric utility to a qualifying facility.

This term is self-explanatory.

Q. Supplementary power. "Supplementary power" means electric energy or capacity supplied by the utility which is regularly used by a qualifying facility in addition to that which the facility generates itself.

The necessity for and reasonableness of the definition of this item is established in the discussion of "Backup power" at 4 MCAR § 3.0451 (C).

R. System emergency. "System emergency" means a condition on a utility's system which is imminently likely to result in significant disruption of service to customers or to endanger life or property.

The proposed rules have specific provisions governing utility treatment of qualifying facilities during system emergencies, as called for in the FERC rules, so it is necessary to define system emergency. The definition used corresponds with the one used by the FERC in 18 CFR § 292.101 (b)(4), and is, therefore, reasonable for use in this application.

S. System incremental energy costs. "System incremental energy costs" means amounts representing the hourly energy costs associated with the utility generating the next kilowatt-hour of load during each hour.

This term needs definition because it lies at the heart of the calculation to determine a utility's avoidable energy costs. The proposed definition is reasonable in light of two considerations. First, the definition is consistent with the way the term is used in the electric utility industry, and will, therefore, be easily understood by utilities seeking to follow the procedures established by these rules. Second, the definition may be seen as summing the variable costs of generating an additional kilowatt-hour at any time. The system incremental energy costs thus represent costs which may be saved if the utility does not generate that additional kilowatt-hour. These costs are clearly avoidable costs, and are reasonably used in determinations of avoided costs of utilities.

T. Utility. "Utility" means any public utility engaged in the generation, transmission, or distribution of electricity in Minnesota. The term includes cooperative electric associations and municipally-owned electric utilities.

These proposed rules place many demands on utilities, so it is necessary to define utility to know which entities are required to act. The definition includes only electric utilities, which is reasonable because qualifying facilities will not be interconnecting with any utilities other than electric utilities. The definition includes cooperative and municipal utilities which, in general, are not subject to rate regulation by the Commission. This inclusion is reasonable in that the Minnesota Legislature specifically determined in M.S. § 216B.164, subd. 2, that the Commission's rules on this matter were to apply to all Minnesota electric utilities, including cooperative electric associations and municipal electric utilities.

4 MCAR § 3.0452 Filing Requirements.

A. Filing dates. Within 60 days after the effective date of 4 MCAR §§ 3.0450-3.0463, on January 1, 1983, and every 12 months thereafter, each utility shall file with the Commission, for its review and approval, a cogeneration and small power production tariff which shall contain Schedules A through F or, if applicable, Schedules A through D plus Schedules F and G.

It is necessary that the covered utilities file timely cost information so that the cogeneration and small power production tariffs will reflect up-to-date avoided costs as required by M.S. § 216B.164, subd. 3. At the same time, the Commission wishes to minimize the administrative burden on the reporting utility. Accordingly, it is reasonable that the cogeneration and small power production tariff be filed every 12 months. The initial filing will be required within 60 days of the effective date of this rule to allow the covered utility adequate time to prepare the tariff filings.

B. Schedule A. Schedule A shall contain the estimated system average incremental energy costs by seasonal peak and off-peak periods for each of the next five years. For each seasonal period, system incremental energy costs shall be averaged during system daily peak hours, system daily off-peak hours, and all hours in the season. Schedule A shall describe in detail the method used to determine the on-peak and off-peak hours and seasonal periods and shall show the resulting on-peak and off-peak and seasonal hours selected.

The hourly incremental energy costs are the direct fuel and variable operation and maintenance costs incurred by a utility when an additional kilowatt-hour is produced. As such, the incremental energy cost is the direct cost that will be avoided by the utility if a qualifying facility generates that kilowatt-hour instead of the utility. It has been the Commission's experience that incremental energy costs exhibit significant diurnal and seasonal variation. Each utility will have a unique set of hourly incremental energy costs due to such things as its generation mix and its load pattern. Consequently, this information is necessary for the computation of the utilities' avoided costs and it is reasonable to expect these costs to be peculiar to each utility. It is necessary for these incremental energy costs to be projected and reported for the next five years to enable potential qualifying facilities to evaluate the probable benefits of installing electric generation equipment. If the projection were made only for the coming year,

there would be insufficient information for the qualifying facility to determine likely energy payments, because there could be no trends established. On the other hand, projection of these costs over a period of, for example, 10 years, would undoubtedly be costly, and the results of projections that far in the future could hardly be relied on. The choice of a 5 year projection is thus a reasonable compromise which yields useful results without extraordinary costs.

The utilities are required to file their method of determining daily peak and off-peak and seasonal hours in order to provide interested parties an opportunity to review the methods and make judgments as to their reasonableness. This is necessary to insure that appropriate avoided cost rates are computed and to insure that the time periods selected are reasonable.

C. Schedule B. Schedule B shall contain the information listed in 1.-5.

1. Schedule B shall contain a description of all planned utility generating facility additions anticipated during the next ten years, including:

a. Name of unit;

b. Nameplate rating;

c. Fuel type;

d. In-service date;

e. Completed cost in dollars per kilowatt in the year in which the plant is expected to be put in service, including allowance for funds used during construction;

f. Anticipated average annual fixed operating and maintenance costs in dollars per kilowatt;

g. Energy costs associated with the unit, including fuel costs and variable operating and maintenance costs;

h. Projected average number of kilowatt hours per year the plant will generate during its useful life; and

i. Average annual fuel savings resulting from the addition of this generating facility, stated in dollars per kilowatt.

Information regarding the operational characteristics of all planned utility generating facilities is necessary so that the Commission and any interested party can effectively make comparisons of utilities' generation plans and make judgments concerning the reasonableness of these plans. The costs associated with the planned generation facility are estimated future costs. As such, it is reasonable that the Commission be provided with at least a minimal description of the facility to be constructed. A disclosure of the name of the unit, its nameplate rating, the fuel type, energy costs and projected number of kilowatt-hours to be produced by the plant will provide a barebones sketch of the most important operating characteristics of the unit. It is reasonable to expect that any utility planning a major expenditure of this nature would have this basic information readily available. The in-service date, the completed cost per kilowatt, anticipated average annual fixed operation and maintenance cost in dollars per kilowatt, and the annual fuel savings are all required in order for the avoided capacity related generation costs to be calculated in 4 MCAR § 3.0452 (B)(4).

2. Schedule B shall contain a description of all planned firm capacity purchases, other than from qualifying facilities, during the next ten years, including:

a. Year of the purchase;

b. Name of the seller;

c. Number of kilowatts of capacity to be purchased;

d. Capacity cost in dollars per kilowatt; and

e. Associated energy cost in cents per kilowatt-hour.

Planned firm capacity purchases are capacity purchases the utility intends to make to supplement its own generation or its present purchases, either indefinitely, or until it can bring its own new generation facilities on line. These purchases may be distinguished from capacity purchases to replace generation facilities during maintenance, and from unplanned purchases executed to take advantage of transitory economies. Planned firm capacity purchases would appear in generation capacity expansion plans, and would be marked by identification of a specific kilowatt or megawatt purchase size.

In the event that a utility does not have any generation facilities planned for construction in the next 10 years, the computation of the utility's avoided capacity costs will be based on its planned firm capacity purchases, excluding any purchases from qualifying facilities, during the next 10 years. The capacity cost and energy cost components of the rates paid by the utilities for such purchases are an integral part of the calculation of the avoided cost rates for sales by qualifying facilities. Consequently, the reporting of these figures is necessary in order for these calculations to be made. A utility exercising sound judgment would be likely to have this information readily available since it would be an important factor in its decision to purchase power rather than build an additional power plant. Hence, this reporting requirement is reasonable. In addition, the characteristics of the proposed purchase, the year of the purchase, the name of the seller and the number of kilowatt-hours purchased is information that would be readily available to the utility and is needed to evaluate the nature of the avoidable costs.

3. Schedule B shall contain the utility's overall average percentage of line losses due to the distribution, transmission, and transformation of electric energy.

The overall average percent of line losses must be reported because it is used in the calculation of the utilities' avoided costs in 4 MCAR § 3.0452 (4)(g). An explanation of its necessity and reasonableness is provided there.

4. Schedule B shall contain the utility's net annual avoided capacity cost stated in dollars per kilowatt-hour averaged over the on-peak hours and the utility's net annual avoided capacity cost stated in dollars per kilowatt-hour averaged over all hours. These figures shall be calculated as follows:

The rates paid to qualifying facilities will be determined, in part, by the capacity cost that the utility will avoid due to the electric energy deliveries from qualifying facilities, so the avoided capacity cost must be measured. Once it is measured it will be expressed in two ways: cost per on-peak kilowatt-hour and cost per kilowatt-hour averaged over all hours. Qualifying facilities choosing to sell power based upon time of delivery would be compensated for the utilities' avoided capacity cost based upon the qualifying facility's on-peak deliveries. The qualifying facility would only receive compensation for deliveries of energy during off-peak hours. Qualifying facilities not choosing the time-of-day option would receive compensation for avoided capacity costs based upon total kilowatt-hour deliveries. It is shown below that such a division between on-peak capacity rates and all-hours capacity rates is necessary to appropriately compensate qualifying facilities and at the same time it is reasonable because it facilitates a system that minimized administrative costs.

a. The completed cost per kilowatt of the utility's next major generating facility addition, as reported in Schedule B, shall be multiplied by the utility's marginal capital carrying charge rate. If the utility is unable to determine this carrying charge rate as specified, the rate of 15 percent shall be used.

Since a utility's electric generating plant will be in service for longer than a one year period, its costs must be spread out over a period of time representative of its expected useful life. This is accomplished by determining an appropriate marginal capital carrying charge rate, as discussed in the definition section earlier, and applying it to the investment cost of the new generation facility. The Commission is aware that some utilities may have difficulty determining the marginal capital carrying charge rate, which

requires a complex calculation, so a default value of 15 percent has been established. This rate is reasonably close to comparable figures presented in recent electric utility rate case proceedings before this Commission. Such cases include Minnesota Power and Light, Docket No. E-015/GR-80-76 and Interstate Power Company, Docket No. E-001/GR-78-1065. Consequently, this figure may be used as a practical alternative for a utility that is unable to determine such a rate. This section of the proposed rule is necessary and reasonable because it provides for a reasonable estimate of the utility's avoided cost.

b. The dollar amount resulting from the calculation set forth in a. shall be discounted to present value, as of the midpoint of the reporting year, from the in-service date of the generating unit. The discount rate used shall be the most recent overall rate of return authorized by the Commission for the reporting utility. If the reporting utility is not rate regulated by the Commission or is regulated but has not yet had an overall rate of return established by the Commission, the utility shall use the overall rate of return most recently authorized for the largest electric utility, measured by annual Minnesota revenues, in the Commission's jurisdiction.

It is important that the dollar amounts used in calculating the avoided cost based rates are stated in dollars of the year in which the rates are applicable. Due to inflation and the time preference for money, a dollar spent a few years from today is not as valuable as a dollar spent today. In order to compare dollars to be spent in the future with dollars spent today, future dollars must be discounted. An appropriate discount factor is the overall rate of return authorized by the Commission for each utility. This figure, which is a reasonable approximation of the cost of capital to the individual utility, captures the effects of inflation and investors' time preference for money. Obviously, if the utility is not rate regulated by the Commission, an overall rate of return will not be established by the Commission. In such a case, the overall rate of return most recently authorized by the Commission for the largest electric utility in the Commission's jurisdiction is a reasonable approximation of the appropriate discount rate. Also, such a figure is readily available. This entire section of the proposed rule is a necessary and reasonable step in the computation of the utilities' avoided costs.

c. The figure for average annual fuel savings per kilowatt described in 1.i. shall be discounted to present value using the procedure of b.

d. The number resulting from the calculation in c. shall be subtracted from the number resulting from the calculation in b. This is the net annual avoided capacity cost stated in dollars per kilowatt at present value.

A utility planning to build additional generation capacity must decide to build one of two basic types of plants: a baseload plant (e.g., a coal fired plant) or a peaking plant (e.g., a combustion turbine). A baseload plant is characterized by high capital costs and low running costs. Conversely, a peaking plant is characterized by low capital costs but high running costs. The utility, in its attempt to minimize total system costs, will choose between the alternative plants based upon the number of hours that each would be expected to be "on-line." It would only be economic to install a peaking plant if it was expected to be "on-line" for a relatively small number of hours. A baseload plant would be installed only if it was expected to be put "on-line" for a substantial number of hours in the year. Since a new baseload plant is likely to be much less expensive to run than many of the utility's existing plants, which are likely to be older, less fuel efficient plants, the utility could reduce fuel costs by installing and running a baseload unit. Consequently, the utility may be incurring capital costs in order to reduce its energy costs. Thus, the total increase in capital costs should be reduced by the fuel savings resulting from the installation of this plant in order to properly reflect the net additional cost resulting from the addition of this plant. This net figure represents the avoided capacity cost, i.e., the cost the utility avoids by virtue of not having to install the plant at all or by delaying the building of the plant for a year. It is important that the fuel savings be discounted to present value so that this cost will be on a comparable basis with the investment cost of a new plant, which also is discounted to present value. The calculation required by this portion of the proposed rule is necessary and reasonable in order to accurately compute the avoided costs of the utility resulting from a qualifying facility's delivery of electric energy.

e. The net annual avoided capacity cost calculated in d. shall be multiplied by 1.15 to recognize a reserve margin.

Each utility must have a certain amount of reserve capacity available to meet system emergencies. The reserve margin for utilities belonging to the Mid Continent Area Power Pool is 15%. This means that for every kilowatt of coincident peak demand the utility must build or have available to it 1.15 kilowatts of capacity. Conversely, if a customer's peak demand is reduced by 1 kilowatt and the utility's demand is reduced by 1 kilowatt, the utility needs to build 1.15 kilowatts less than it otherwise would have built. Every kilowatt delivered by a qualifying facility reduces the load that is required from the utililty by 1 kilowatt. The reduction in load of 1 kilowatt means that the utility will be responsible for providing 1.15 kilowatts less of capacity than otherwise. Therefore, in order to accurately compute the cost avoided due to the qualifying facility's production, the reserve margin must be taken into account. Consequently, this section of the proposed rule is necessary and reasonable.

f. The figure determined from the calculation of e. shall be increased by the amount of the anticipated average annual fixed operating and maintenance costs as reported in 1. f.

When an electric utility installs a new generation plant it will incur fixed operation and maintenance costs, on an annual basis, which result from the installation of this plant. If this generation plant is not installed those costs will be avoided. Clearly, it is necessary and reasonable that those costs be included in the amount representing avoided capacity costs.

g. The figure determined from the calculation of f. shall be increased by the percentage amount of the average system line losses as shown on Schedule B.

Utilities typically generate electricity at centralized generation stations, step up power to transmission level voltage, transport it via transmission and subtransmission facilities to load centers, step down the power to distribution level and deliver it, via distribution facilities, to customers' locations. In the process of transforming and delivering power to load centers and to individual locations, significant amounts of electric power are lost. Since the output from qualifying facilities will typically be located near load centers, the amount of line losses from qualifying facility delivered power may be negligible. Consequently, for each kilowatt-hour produced by qualifying facilities, the utility will be able to avoid more than 1 kilowatt-hour of electric generation. For example, if the utility's reported average system line losses are 10%, the utility would avoid the producton of 1.1 kilowatt-hours for every kilowatt-hour delivered by a qualifying facility. In order for the qualifying facility to be appropriately compensated for the avoided cost of the utility, consideration of the line loss is necessary and reasonable.

h. The annual dollar per kilowatt figure, as calculated in accordance with g., shall be divided by the annual number of hours in the on-peak period as specified in Schedule A. The resulting figure is the utility's net annual on-peak avoided capacity cost in dollars per kilowatt-hour.

Up to this point in the calculation of the capacity related avoided generation costs, all costs have been expressed in terms of dollars per kilowatt. However, rates paid to qualifying facilities will be based upon kilowatt-hour deliveries, not kilowatt deliveries. Therefore, the cost per kilowatt must be converted to cost per kilowatt-hour. In fact, there must be two separate conversions. In this section of the proposed rule, the cost per kilowatt is converted to cost per on-peak kilowatt-hour. In this way customers providing on-peak power will be compensated for their proportionate share of the generation costs which are avoided.

The following example illustrates this point. First, assume that the avoided generation capacity cost is $129.60 per kilowatt per year. This is equivalent to $10.80 per kilowatt per month. Second, assume that the on-peak hours make up 50% of the total number of hours. Since there are 720 hours in the typical month, there would be 360 on-peak hours in a month. The capacity

component of the rate paid to a qualifying facility in this example would be $10.80 ÷ 360 hours = 3.0¢/kwh.

In order to show how this rate would be applied to an individual qualifying facility, the example can be extended. Assume that the qualifying facility provides a peak output of 50 kilowatts and that this 50 kilowatts is generated continuously over the on-peak period. The capacity component of the compensation to the qualifying facility would be:

50 kw x 360 hours = 18,000 kwh
18,000 kwh x 3.0¢/kwh = $540.00

Since $540 ÷ 50 kw = $10.80 per kw, the qualifying facility would be compensated appropriately.

If the same customer was generating at peak output during only 80% of the on-peak hours, compensation would be proportionately less:

50 kw x (360 hours x .8) = 14,400 kwh
14,400 kwh x 3.0¢/kwh = $432.00

Since $432 is 80% of $540 this qualifying facility would be paid proportionately less because it generated proportionately fewer kilowatt-hours during the on-peak period.

This is similar to the way that retail tariffs are applied to non-demand metered customers of utilities. The demand or capacity costs are averaged into the kilowatt-hour rate. This has been traditionally accepted because there is a strong relationship between kilowatt-hours consumed by individual customers and the amount of capacity needed by the utility.

This section of the proposed rule is necessary and reasonable because it requires utilities to compensate qualifying facilities for delivered capacity on an appropriate basis.

i. The annual dollar per kilowatt figure resulting from the calculation specified in g. shall be divided by the total number of hours in the year. The resulting figure is the utility's net annual avoided capacity cost in dollars per kilowatt-hour averaged over all hours.

For qualifying facilities not choosing to sell power on a time-of-day basis, the capacity costs must be averaged over all hours instead of just on-peak hours. In the example stated above, the monthly rate per kilowatt-hour would be computed as follows:

$10.80 ÷ 720 hours = 1.5¢/kwh

Although this rate is only 50% of the on-peak rate it is available to qualifying facilities for twice as many hours during the month. A qualifying facility with a peak capacity of 50 kilowatts that operates at 100% load factor in the month would receive compensation as follows:

50 kw x 720 hours = 36,000 kwh
36,000 kwh x 1.5¢/kwh = $540.00

This is the same amount that would be paid to the qualifying facility under the time-of-day rate option.

This calculation of avoided costs is a reasonable calculation because it shows that, on average, a qualifying facility would be appropriately compensated because the purchase rates reflect avoided costs. In addition, this method of calculation is similar to the methods used by utilities in computing their retail rates. It is reasonable to employ the same methods where applicable, in the computation of purchase rates.

5. If the utility has no planned generating facility additions for the ensuing ten years, Schedule 8 shall contain its net annual avoided capacity cost stated in dollars per kilowatt-hour averaged over the on-peak hours and the utility's net annual avoided capacity costs stated in dollars per kilowatt-hour averaged over all hours. These shall be calculated as follows:

a. The annual capacity purchase amount, in dollars per kilowatt, for

the utility's next planned capacity purchase, other than from a qualifying facility, shall be discounted to present value as of the midpoint of the reporting year, from the year of the planned capacity purchase. The discount rate used shall be determined in the manner described in 4.b.

If the utility has no planned generation facility additions for the ensuing 10 years, generation of electric energy by qualifying facilities will not help the utility avoid any generation capacity costs. Hence, under this condition, it would not be reasonable for the purchase rates to be based on avoided generation capacity costs.

Even if the utility has no planned generation facilities, it may have planned capacity purchases. It is reasonable to assume that the utility can decrease these planned purchases if qualifying facilities deliver energy and capacity to the utility. The avoided cost to the utility would be the cost of the planned capacity purchase which would not have to be made. The cost of the planned purchase shall be expressed in current year dollars by applying an appropriate discount rate. In this way, qualifying facilities will be compensated on the basis of current year dollars. It is necessary and reasonable that rates accurately reflect the time period of expenditure because the value of the dollar changes over time.

b. The net annual avoided capacity cost shall be computed by applying the figure determined in a. to the steps enumerated in 4.d.-4.i., excluding 4.g.

There is a minor error in this section of the proposed rule. It should read:

> "The net annual avoided capacity cost shall be computed by applying the figure determined in a. to the steps enumerated in 4.e.-4.i., excluding 4.f."

With this change, Schedule B will reflect the avoided costs of the utility. Since this section of the rule is applicable only to utilities with no planned generating facilities it is not appropriate to take into account the annual fixed operation and maintenance expenses associated with a new generating facility.

Adjustments for a reserve margin and line losses are required in the same manner as in the previous section. In addition, the avoided costs are expressed on a kilowatt-hour basis in the same manner as in the previous sections. As previously discussed, those calculations are both necessary and reasonable.

D. Schedule C. Schedule C shall contain all standard contracts to be used with qualifying facilities, containing applicable terms and conditions.

It is necessary and reasonable that all interested parties have available to them the standard contracts which a utility will use with qualifying facilities. This will allow qualifying facilities the opportunity to analyze the contracts and will give them an opportunity to either accept the contract or pursue a course of action whereby changes could be made in the contract. In addition, the requirement that all standard contracts be filed will help insure that all qualifying facilities are treated equally and fairly by the utility. Thus, this is a necessary provision since the Commission must implement fair and reasonable rates. It is reasonable because the utilities will have these documents readily available.

E. Schedule D. Schedule D shall contain the utility's safety standards, required operating procedures for interconnected operations, and the functions to be performed by any control and protective apparatus. These standards and procedures shall not be more restrictive than the interconnection guidelines listed in 4 MCAR § 3.0462. The utility may include in Schedule D suggested types of equipment to perform the specified functions. No standard or procedure shall be established to discourage cogeneration or small power production.

It is necessary that the utility file its safety standards, required operating procedures for interconnection operations and the functions to be performed by any control and protective apparatus in order to facilitate communication between the utility and the qualifying facility. A clear understanding of the technical requirements will help the qualifying

facilities minimize their cost of interconnection equipment and will minimize safety related problems. An explicit publicized statement of the utility's operating procedures will help the parties coordinate their activities. The rule provides that the utility may not make requirements of a qualifying facility that are overly restrictive or that are established to discourage cogeneration and small power production. This is both necessary and reasonable since it is consistent with the intent of M.S. § 216B.164, to give the maximum possible encouragement to cogeneration and small power production. Anything more restrictive would not be consistent with the intent of the state law. On the other hand, each utility is allowed to require the qualifying facility to install all necessary control and protective apparatus as specified in 4 MCAR § 3.0462. Consequently, the proposed rule is consistent with the protection of the ratepayer and the public, as required by M.S. § 216B.164, subd. 1, and is necessary and reasonable.

F. Schedule E. Schedule E shall contain procedures for notifying affected qualifying facilities of any periods of time when the utility will not purchase electric energy or capacity because of extraordinary operational circumstances which would make the costs of purchases during those periods greater than the costs of internal generation.

18 CFR § 292.304(f) provides that any electric utility which seeks to cease purchasing from qualifying facilities must notify each affected qualifying facility prior to the occurrence of such a period, in time for the qualifying facility to cease delivery of energy or capacity to the electric utility. It further provides that this notification can be accomplished in any reasonable manner determined by the State regulatory authority. Schedule E in the proposed rule implements this requirement by simply requiring each utility to state the procedures it would use for notifying affected qualifying facilities of any periods of time when the utility will not purchase electric energy or capacity. The reasonableness of these procedures may then be reviewed by the Commission and other interested parties.

The only time that a utility may refuse to purchase power from a qualifying facility is when a utility is experiencing an extraordinary operational circumstance, i.e., during a light loading period. Such a period was described by the FERC in an explanation of its rules at 45 Fed. Reg. 38,12227:

> If a utility operating only base load units during these periods were forced to cut back output from the units in order to accommodate purchases from qualifying facilities, these base load units might not be able to increase their output level rapidly when the system demand later increased. As a result, the utility would be required to utilize less efficient, higher cost units with faster start-up to meet the demand that would have been supplied by the less expensive base load unit had it been permitted to operate at a constant output. The result of such a transaction would be that rather than avoiding costs as a result of the purchase from a qualifying facility, the purchasing electric utility would incur greater costs than it would have had it not purchased energy or capacity from the qualifying facility.

The Commission believes that an extraordinary operational circumstance would indeed be an unusual occurrence. The proposed rule is necessary and reasonable because it implements federal law, it is consistent with purchase rates set at avoided cost and it does not discourage cogeneration and small power production.

It is necessary that the Commission and all interested parties have an opportunity to review the notification procedures to be used by the utility when the utility will not purchase electric energy or capacity due to extraordinary operational circumstances. Without such an opportunity the Commission would not be able to judge whether or not the utility acted in a reasonable and non-discriminatory manner as required by state law. Thus it is necessary and reasonable. There is no reason to expect that such a filing requirement would place an unreasonable burden on the utilities.

G. Schedule F. Schedule F shall contain and describe all computations made by the utility in determining Schedules A and B.

This filing requirement is necessary in order for the Commission and

all interested parties to review the reasonableness of the utilities' computational methods. Such a review may be necessary to determine whether or not the utilities' filings conform with the requirements of the rule. This requirement is reasonable since the Commission is responsible for the enforcement of the rule.

H. Schedule G. Special rule for nongenerating utilities. An electric utility which purchases all the power it sells shall obtain the data for Schedule A and Schedule B from its supplying utility. The nongenerating utility shall file this data as Schedule A and Schedule B. In addition, the nongenerating utility shall file Schedules C, D, F, and Schedule G. Schedule G shall list the rates at which the nongenerating utility currently purchases energy and capacity.

Schedule G applies to utilities that purchase all of their power for resale. Such a nongenerating utility is required to file Schedules A-G excluding E. The information for Schedules A and B are to be determined from cost information provided by the utility's suppliers since the nongenerating utility would have no such information pertaining to its own system. This information will be necessary for the Commission and other interested parties to compare the generation costs of all utilities and this will provide potential qualifying facilities with information that will help them estimate the likely future avoided cost payments from the utility. Schedules C, D and F are necesssary and reasonable for the reasons stated above. Schedule E is not needed because the conditions assumed thereunder do not apply to nongenerating utilities. Schedule G is necessary because the rates for purchase of power delivered by qualifying facilities will be based on the rates paid by the utility for power from its normal supplier. The reasonableness of this basis for the avoided cost computation will be discussed in this statement under the explanation of 4 MCAR § 3.0455.

1. Availability of filings. All filings required by A.-H. shall be made with the Commission and shall be maintained at the utility's general office and any other offices of the utility where rate case fillings are kept. These filings shall be available for public inspection at the Commission and at the utility offices during normal business hours.

It is necessary that all tariff filings concerning purchase rates be made readily available so that the Commission, all qualifying facilities, and any potential qualifying facility can estimate present and future avoided cost based purchase rates. Access to filings will allow interested parties an opportunity to make a judgment as to the reasonableness of all computations and an opportunity to understand their responsibilities as sellers of energy to a utility. Restricting access to the filed information would serve to frustrate the purpose of M.S. § 216B.164 by discouraging cogeneration and small power production and would be unreasonable.

4 MCAR § 3.0453 Reporting requirements.

A. General requirements. Each utility shall provide the Commission with the following information on or before November 1, 1982, and at any other such times and in any form as the Commission may require.

B. Net energy billed qualifying facilities. For qualifying facilities under net energy billing, the utility shall provide the Commission with the following information:

1. A summary of the total number of interconnected qualifying facilities, the type of interconnected qualifying facilities, and the name plate ratings of such units;

2. For each qualifying facility type, the total kilowatt-hours delivered per month to the utility by all net energy billed qualifying facilities;

3. For each qualifying facility type, the total kilowatt-hours delivered per month by the utility to all net energy billed qualifying facilities; and

4. For each qualifying facility type, the total net energy delivered per month to the utility by net energy billed qualifying facilities.

C. Other qualifying facilities. For all qualifying facilities not under net energy billing, the utility shall provide the Commission with the following information:

1. A summary of the total number of interconnected qualifying facilities, the type of interconnected qualifying facilities, and the nameplate ratings of such units; and

2. For each qualifying facility type, the total kilowatt-hours delivered per month to the utility, reported by on-peak and off-peak periods to the extent that data is available.

D. Wheeling. The utility shall provide a summary of all wheeling activities.

E. Major impacts. The utility shall provide a statement of any major impacts that cogeneration or small power production has had on the utility's system.

F. Effectiveness. The utility shall provide a statement of the effectiveness of Minn. Stat. § 216B.164 and 4 MCAR §§3.0450-3.0463 in encouraging cogeneration and small power production, as observed by the utility.

Pursuant to M.S. § 216B.164, subd. 7, the Commission is required to submit a report to the Legislature on Jan. 1, 1983.

Such a report must address at a minimum, the following issues:

1) The location, type, and output of cogenerators and small power producers in the state;

2) Whether cogeneration and small power production has resulted in any major impacts on the utility system; and

3) The effectiveness of the provisions of the state law and the Commission's rules in encouraging cogeneration and small power production.

Because of this statutory requirement, the Commission must obtain reliable and accurate information from which a report may be compiled. The Commission believes that such a reporting requirement is necessary and reasonable, because in most cases only the utility will have possession of the needed data or access thereto. In addition, the Commission does not possess the resources necessary to adequately collect and assemble the essential information.

One of the basic premises underlying the cogeneration and small power production portions of PURPA was to alleviate as many burdens on the qualifying facility as possible and to provide it with a favorable climate in which to operate. To impose the reporting requirements on the individual qualifying facility, over which the Commission does not have general regulatory jurisdiction, would place a burden on the qualifying facility which would be contrary to the intent of the FERC rules as well as pertinent portions of PURPA. Such a reporting requirement may be more appropriately placed on the utilities which are within the scope of traditional regulatory jurisdiction.

In order for the Commission to accurately assess and report on the output of interconnected qualifying facilities as required by M.S. § 216B.164, it is necessary for the Commission to require the utilities to submit a summary of the following where applicable:

1. Total number of interconnected qualifying facilities.

Such information is needed for the Commission to determine the extent of interconnected qualifying facilities as well as to evaluate the distribution of qualifying facilities within the respective service areas throughout the state.

2. Nameplate ratings.

The nameplate ratings are necessary to appraise the apparent addition of capacity through the interconnection of qualifying facilities.

3. Type of interconnected qualifying facilities.

By distinguishing qualifying facilities by type (e.g., wind, photovoltaic, hydro, etc.), the Commission will be able to determine what technologies are in fact being utilized as well as providing public information with repect to the use and contribution of various technologies.

4. For each qualifying facility type, the total Kwh delivered per month to the utility.

This information is needed to effectively evaluate the amount of energy generated by small power production and cogeneration units in Minnesota. Such information is of great public importance also, as it may indicate the viability of alternative means of energy generation in the future. By segregating the information into unit types, the Commission will be able to appraise the relative effectiveness and contribution of energy to the system by different types of qualifying facilities, as well as to determine which technologies are capable of significant current contributions to the utility's system.

5. For each qualifying facility type, the total Kwh delivered per month by the utility.

This information is needed to evaluate the total impact of qualifying facilities on the utility system. Such information will allow the Commission to determine what effect, if any, interconnection of qualifying facilities will have on the system load.

6. For each qualifying facility type, the net energy delivered per month to the utility.

This data is needed to analyze the net impact of cogeneration and small power production units on the system as well as to assess the potential benefit to be gained from alternative means of energy production.

7. For each qualifying facility type, the total Kwh delivered per month to the utility, reported by on-peak and off-peak periods.

This information will allow the Commission to review the total amount of energy generated by those qualifying facilities not under the net billing option. By distinguishing between on-peak and off-peak deliveries, it will be possible to determine whether or not qualifying facilities are providing energy during crucial on-peak demand periods. This information will also allow the Commission to accurately describe and detail the output of those qualifying facilities utilizing the time-of-day classification.

The utilities are also required to submit a summary of all wheeling activities. Such information is needed to determine the extent of the wheeling of energy generated by qualifying facilities and to evaluate the attendent problems or concerns thereof by all interested parties.

The utilities are also required to include in their reports:

A) A statement of any major impacts that cogenerators and small power production has had on the utility system; and

B) A statement of the effectiveness of M.S. § 216B.164 and the Commission's rules in encouraging cogeneration and small power production.

Both statements present an opportunity for the Commission to receive comments and information concerning cogeneration and small power production, as well as an opportunity for the utilities to submit their concerns, observations and subjective evaluations to the Commission for its consideration and evaluation.

The November 1, 1982 date was selected and is needed to provide the Commission with sufficient time to review and evaluate the submitted information and to prepare an accurate and comprehensive report to be delivered to the Legislature on January 1, 1983.

The Commission has also reserved the right to require utilities to comply with the reporting requirements in the future should the need to prepare additional reports or other similar data compilations arise.

The Commission recognizes the possibility that the legislature may direct the Commission to submit additional reports. In response to such a contingency, the Commission has reserved the right to require utilities to comply with the reporting requirements should the need to prepare additional reports or other similar data compilations for the legislature arise. It is anticipated that the Commission will utilize such a provision only when so directed by the legislature.

An alternative proposal which was considered but rejected was one requiring utilities to submit annual reports to the Commission. Such an option would have provided the Commission with the means to obtain the necessary information but with little or no flexibility. By requiring the submission of reports only when the need arises, all parties concerned are relieved of an unyielding burden.

The future reporting provision is necessary as well as reasonable in that it is a legitimate means by which the Commission could receive accurate and timely information from which future reports may be compiled should the need to do so arise.

4 MCAR § 3.0454 Conditions of service.

This proposed rule establishes the conditions which must be met by both the utility and the qualifying facility for engaging in interconnected operations. It is necessary because established conditions enable each party to know in advance what is expected of it and the other party. That knowledge greatly reduces uncertainty. It is reasonable to expect that reduction of uncertainty will encourage cogeneration and small power production. In addition, established conditions ensure uniform treatment of qualifying facilities by utilities, and provide a basis for resolving disputes. This proposed rule is reasonable because it fairly assigns responsibility for meeting conditions between the utility and the qualifying facility.

A. Requirement to purchase. The utility shall purchase energy or capacity from any qualifying facility which offers to sell energy to the utility and agrees to the conditions set forth in 4 MCAR §§ 3.0450-3.0463.

This section requires the utility to purchase electricity from any qualifying facility agreeing to the conditions. The requirement to purchase is necessary because a utility which refused to purchase could leave the qualifying facility without a market for its power. A possible result could be that more efficient generation (by the qualifying facility) would be foregone for less efficient generation (by the utility). Such a result would be contrary to the most basic reason for encouraging cogeneration and small power production: promoting efficient use of resources. The requirement for utilities to purchase from qualifying facilities is part of both PURPA (Section 210 (a)) and the FERC rules (18 CFR § 292.303(a)). This section is reasonable in that it also requires qualifying facilities to agree to the conditions established in this rule.

B. Written contract. A written contract shall be executed between the qualifying facility and the utility.

Interconnection implies the purchase and sale of energy and capacity by the utility and the qualifying facility over substantial periods of time. Neither the transactions nor the physical equipment necessary to accomplish the transactions are simple. It is both necessary and reasonable, therefore, that the parties to the transactions state their understanding of the terms and conditions in writing. This statement will prevent disputes from arising and will aid in the resolution of disputes.

Some persons have argued that requiring a contract would be in itself a significant discouragement to potential owners of qualifying facilities. The argument suggests both that unnecessary costs of legal review would be incurred and that utilities would unilaterally make unfair requirements of qualifying facilities in such contracts.

The Commission believes this argument is without merit. First, a written contract is a reviewable document. It, therefore, discourages unreasonable demands which might otherwise be made in oral agreements. Second, a written contract tends to make each party explicitly aware of its rights and obligations. Third, written contracts better enable the Commission to ensure uniform treatment of qualifying facilities by utilities. Fourth, standard written contracts, especially for small qualifying facilities, will effect significant administrative cost savings, as the contract need not be redrawn each time a qualifying facility applies for interconnection.

C. Compliance with national electrical safety code. The interconnection between the qualifying facility and the utility shall comply with the requirements of the 'National Electrical Safety Code,' 1981 edition, issued by the Institute of Electrical and Electronics Engineers as American National Standards Institute Standard C2 (New York, 1980).

Safe handling of electricity is vital to qualifying facilities, to utilities, and to the general public. In an early draft submitted for comment the Commission proposed to require the qualifying facility to comply with the National Electrical Safety Code. One manufacturer of small power production equipment objected that adherance to the Code could damage his equipment. The Commission has determined, therefore, that a reasonable requirement would be for the interconnection to meet Code specifications. The Commission notes that the Minnesota State Board of Electricity has asserted its jurisdiction over safe wiring of qualifying facilities.

D. Responsibility for apparatus. The qualifying facility, without cost to the utility, shall furnish, install, operate, and maintain in good order and repair any apparatus the qualifying facility needs in order to operate in accordance with Schedule D. At the request of the qualifying facility, the utility shall furnish, install, operate and maintain all or any portion of the apparatus and bill the qualifying facility for the equipment and service at cost.

This section requires qualifying facilities to install, operate, and maintain equipment required for safe and reliable generation in parallel with the utility, or, in the alternative, to pay the utility to install, operate, and maintain the equipment. It is a necessary condition that the qualifying facility pay for interconnection costs. This is a requirement of state law (M.S. § 216B.164, subd. 8) and of the FERC regulations (18 CFR § 292.306), and is logically consistent with the purpose behind requiring utilities to pay full avoided cost to qualifying facilities. Payment of full avoided cost ensures that, in a "frictionless" world, all cogeneration and small power production which is more efficient (i.e., cheaper) than marginal utility production will come into being. All incremental efficiency gains are manifested as profits of qualifying facilities. The utility ratepayer then pays exactly as much for electricity generated by qualifying facilities as he would have if the utility had generated it all. He is thus economically indifferent between the sources. If, however, he were required, through his utility, to pay interconnection costs as well as full avoided costs, he would no longer be indifferent, but would be better off if the utility generated all its electricity and purchased none from qualifying facilities. It is, therefore, reasonable that the qualifying facility be responsible for this interconnection equipment.

The utility may nevertheless have knowledge and expertise about interconnections which it would not be cost effective for the owner of the qualifying facility to acquire. The utility may also be able to purchase interconnection equipment at lower prices than may be available to individuals. Consequently, it is reasonable to require the utility to install, operate, and maintain interconnection equipment if requested by the qualifying facility, provided the utility is reimbursed for its costs.

E. Liability insurance. A utility or qualifying facility shall not require the procurement of liability insurance as a condition of service.

F. Legal status not affected. Nothing in 4 MCAR §§ 3.0450-3.0463 affects the responsibility, liability, or legal rights of any party under applicable law or statutes.

In the development of these proposed rules, few issues have generated as much controversy as has the question of whether utilities may require

qualifying facilities to hold liability insurance.

Utilities have generally taken the view that the nature of their business makes them prime targets for persons seeking liability damage awards. In their view, interconnecton with cogenerators and small power producers reduces the utility's control over its transmission and distribution system, and may, therefore, increase its exposure for liability. At the same time, utilities have feared that even if a qualifying facility is clearly at fault, it is the utility which will be sued, both because of the direct physical connection with the utility and because of the greater certainty of payment if damages are awarded. Utilities have, therefore, often demanded that qualifying facilities purchase liability insurance - usually in amounts of $500,000 to $1 million - as a condition of interconnection.

Owners and manufacturers of qualifying facilities, on the other hand, have taken the position that the real reason for requiring liability insurance is to discourage and inhibit cogeneration and small power production. They have argued either that such insurance is simply not available, or is available at a cost which is prohibitively high. The result in either case, they have said, is the same as having the utility simply refuse to interconnect and purchase power.

The Commission observes that there is little practical experience of the effects of interconnected cogenerators and small power producers on utility power supply systems. Consequently, there is no information of which the Commission is aware on how often interconnected operations cause damage (if ever), or on the size of claims won because of such damages. It is, therefore, impossible for the Commission to determine how much liability insurance would be appropriate if insurance were required.

The Commission believes that a prudent person, engaging in a business venture to supply a product as potentially dangerous as electricity, would want to secure liability protection. Nevertheless, the Commission feels it is appropriate for each owner of a qualifying facility to make his own judgement on this issue. It is likely that if an uninsured qualifying facility were successfully sued, the news would get out to other qualifying facilities, and might influence those without protection to seek it.

The Commission concludes, therefore, that it would be both unnecessary and unreasonable to require liability insurance as a condition of service. Section E. of this proposd rule makes this clear. Section F. is a necessary and reasonable warning of the fact that the absence of an insurance requirement does not remove responsibility or liability from any party.

G. Payments for interconnection costs. Payments for interconnection costs may, at the option of the qualifying facility:

1. Be made at the time the costs are incurred;

2. Be amortized over the life of the contract; or

3. Be made according to any schedule agreed upon by the qualifying facility and the utility.

Interconnection costs could, in some circumstances, amount to a very considerable sum. Because qualifying facilities may already be experiencing large capital requirements prior to beginning operations, the requirement to pay interconnection costs "up front" as well could cause a potential owner of a qualifying facility to decide not to proceed with the project. In that case, cogeneration and small power production would have been discouraged simply through the timing of payments. The FERC recognized this possibility and gave State regulatory authorities responsibility for determining the manner of payments for interconnection costs, expressly including the possibility of reimbursement over a reasonable period of time (18 CFR § 292.306 (h)). The Commission believes that a period equal to the time covered by the contract between the utility and the qualifying facility is a reasonable period, as all other rates, terms, and conditions are covered over the same period.

Some qualifying facilities may nevertheless find it advantageous, perhaps for tax purposes, to pay all interconnection costs as they are incurred. It is, therefore, reasonable to do as this section of the proposed

rule has done, and offer the qualifying facility its choice of the two possibilities. Because it is not possible for the Commission to foresee the circumstances of all qualifying facilities and utilities facing interconnection under these rules, it is also reasonable to allow both parties to agree to some payment schedule other than the two specific ones the qualifying facility is entitled to.

Whenever payments for interconnection costs are spread over a period of time, an additional cost - the cost of capital - is incurred. This cost would not exist without the interconnection and the qualifying facility's election not to pay all interconnection costs at once. Consequently, this cost of capital is appropriately classified as an interconnection cost, and is the responsibility of the qualifying facility. The proposed rule is reasonable because it does not prohibit the utility from recovering this cost through charges to the qualifying facility.

H. Types of power to be offered. The utility shall offer maintenance, interruptible, supplementary, and back-up power to the qualifying facility upon request.

The FERC rules (18 CFR § 292.305 (b)) require utilities to offer maintenance, interruptible, supplementary, and back-up power to qualifying facilities upon request. The availability of these types of power may affect the economics of qualifying facilities such that it is necessary to provide them to encourage cogeneration and small power production. There is no requirement to provide these services below cost, so this condition is reasonable. It is also reasonable to only require these services to be offered on request. They are needed primarily by large cogeneration facilities. Many utilities, who will never interconnect with this kind of qualifying facility, or who will do so only several years from now, can save the time and expense of immediately establishing these services and charges if there is no blanket requirement.

I. Metering. The utility shall meter the qualifying facility to obtain the data necessary to fulfill its reporting requirements to the Commission as specified in 4MCAR § 3.0453. The qualifying facility shall pay for the requisite metering as an interconnection cost unless the qualifying facility is operating under net energy billing. In that case, the utility shall provide the second meter without cost to the qualifying facility.

Metering is another very controversial issue. Much, but not all, of the controversy centers on cost. There is also controversy over the ownership and control of information made available through metering.

To understand the nature of the cost controversy and the Commission's proposed resolution of the issue, it is helpful to keep the following points in mind: 1. Meter costs are interconnection costs and by the logic of the FERC rules are the responsibility of the qualifying facility. 2. Although metering costs tend to be greater for larger, more sophisticated facilities, those costs are a more significant proportion of total interconnection costs for smaller, less sophisticated facilities. 3. Metering costs are far larger, relative to potential revenues, for small qualifying facilities than for large qualifying facilities. 4. Some owners of qualifying facilities intend to make money selling electricity to utilities. 5. Some owners of qualifying facilities simply want to reduce their dependence on utilities and reduce their electric bills.

In enacting M.S. § 216B.164, the Legislature made a special provision for qualifying facilities having capacity less than 40 kilowatts. That provision, known as "net energy billing," makes the net flow of electricity between the qualifying facility and the utility during a billing period the basis of the bill calculation. A single watt-hour meter, capable of running accurately forward and backward, would be sufficient to measure the net flow of electricity, in both direction and magnitude. Most classes of utility customers are already metered for sales by the utility. Hence, if only a single meter were required, its cost would not exceed the cost the utility would incur in selling electricity to the qualifying facility as a nongenerating customer, and would, therefore, not be an interconnection cost. The result would be that the qualifying facility would not have to pay an explicit metering charge. (The cost of the meter, or some part of it, may already be reflected in the monthly service charge for which the qualifying facility remains responsible). The Commission believes it is reasonable to

infer that the Legislature wanted to remove metering cost disincentives from small potential cogenerators and small power producers.

The Legislature nevertheless required the Commission to report "[t]he location, type and output of cogenerators and small power producers in the state . . ." Although "output" could mean a measure of capacity, in kilowatts, the Commission believes it would be more meaningful as a measure of energy, in kilowatt-hours. A single meter running forward and backward could not measure output in this sense, as it could not distinguish between two qualifying facilities, one of which purchased 400 kilowatt-hours and sold 600, and the other of which purchased 20,000 kilowatt-hours and sold 20,200. In either case, the meter would show a net flow of 200 kilwatt-hours to the utility. The effects of the two qualifying facilities on the utility's system could, however, be drastically different. The Commission believes it is reasonable, therefore, both to meet its narrow reporting requirement and to provide information relative to utility planning and broad public policy questions, to require metering which will measure total deliveries to and receipts from the utility system.

Several persons observed that a full measure of "output" can only be achieved by metering the generator of the qualifying facility, because there may be load between the generator and the interconnection with the utility. Some suggested that the Commission's rules should permit the utility to install a third meter, at its own expense, if it wanted to monitor generator output.

Several owners and at least one manufacturer of qualifying facilities urged rejection of this suggestion. They claimed that the information sought was proprietary, and no one's business but theirs. They also feared utilities would make selective use of such information to discourage potential cogenerators and small power producers.

The Commission believes the information needed for utility planning, public policy, and its own reporting requirements is that information detailing the interaction of qualifying facilities and utilities. It is, therefore, not necessary to gather information on the output of the generator; energy flows at the point of interconnection will do. Nothing in the proposed rule prevents a utility from installing a third meter, either at its own expense or at the expense of the qualifying facility, if it is agreeable with the qualifying facility.

This section of the proposed rule requires the utility to meter the qualifying facility to obtain the data it must report to the Commission. It requires the qualifying facility to pay for the metering unless the qualifying facility is operating under net energy billing, in which case the utility must provide the additional metering without cost to the qualifying facility.

This section is both necessary and reasonable. Even if there were no reporting requirements, and no public policy needs for the information, metering would still be necessary to document the transactions between qualifying facilities and utilities. The proposal fairly apportions those costs to qualifying facilities except where those costs, as recognized by legislative action, would put an undue burden on small qualifying facilities, and thus discourage small-scale cogeneration and small power production. The Commission believes that the possible effect of a limited increase in rates to other consumers who, ultimately, must pay those costs, would be counterbalanced by the benefits, including externalities, of encouraging cogeneration and small power production.

J. Discontinuing sales during emergency. The utility may discontinue sales to the qualifying facility during a system emergency, if the discontinuance is not discriminatory.

This section is necessary to implement 18 CFR § 292.307 (b) (2). It is reasonable in that a qualifying facility must be treated on a nondiscriminatory basis in any load shedding program - i.e., on the same basis that other customers of a similar class with similar load characteristics are treated with regard to interruption of service.

K. Interconnection plan. The utility may, prior to interconnection, require the qualifying facility to submit an interconnection plan in order to facilitate interconnection arrangements. If such a plan is required, it shall include no more than:

1. Technical specifications of equipment;

2. Proposed date of interconnection; and

3. Projection of net output or consumption by the qualifying facility when available.

Some owners and manufacturers of small qualifying facilities have maintained that there is no need to inform the utility that a small qualifying facility is coming on line. In their view, the physical effect of a small generator beginning to feed into the distribution system is the same as the effect felt when an electric motor of the same size is shut off. One is not required to tell the utility about the disposal of an appliance with an electric motor, so there should be no requirement to inform the utility about the acquisition of a small qualifying facility. These owners and manufacturers also admit to a revenue effect on the utility: as the qualifying facility generator takes part of the customer's load from the utility, the customer's bill and utility revenues fall. They argue that a person who replaces an electric water heater with a solar water heater causes the same effect, and does not have to inform the utility.

The Commission has considered these arguments, and has decided that the utility may require an interconnection plan. There are a number of reasons why the Commission believes this section of the proposed rule is necessary and reasonable. First, although the effects of very small qualifying facilities on the utility's system may be very small, these rules cover interconnections with qualifying facilities of all sizes. Interconnection with some of these will certainly require substantial modification of distribution systems, and perhaps transmission systems as well, and these modifications should be planned for. Second, as discussed above, the Commission has determined that it is both necessary and reasonable to collect data which is not available when a single meter runs both forward and backward. Consequently, the utility, which is responsible for gathering the information, must be told in advance that the interconnection will take place. The utility also needs to know the nature of the qualifying facility to anticipate its interconnection requirements. Finally, the Commission believes there is a fundamental difference between a retail utility customer and a qualifying facility which necessitates that the utility be informed in advance. That difference is that the qualifying facility injects power into the utility's system; the retail customer does not. Because the utility is responsible for providing power of a certain quality from its system to its users on demand, it has a legitimate need to know when someone other than itself is energizing its system.

This section of the proposed rule is reasonable as well as necessary. The interconnection plan which may be required is simple and straightforward, and will not be an undue burden on qualifying facilities. At the same time, it will provide the utility with the information it will need to arrange the interconnection smoothly.

4 MCAR § 3.0455 Rates for sales.

A. Rates to be governed by tariff. Except as otherwise provided in B., rates for sales to a qualifying facility shall be governed by the applicable tariff for the class of electric utility customers to which the qualifying facility would belong were it not a qualifying facility.

This section requires utilities to sell electricity to qualifying facilities under standard retail tariffs. It is necessary to assure qualifying facilities that the Commission, not the utility, will set the rates for their purchases. It is reasonable in that it assures both qualifying facilities and other utility customers that neither group will be discriminated against relative to the other. It is also consistent with 18 CFR § 292.305 (a) (ii).

B. Petition for specific rates. Any qualifying facility may petition the Commission for establishment of specific rates for supplementary, maintenance, backup, or interruptible power.

This section enables any qualifying facility to petition the Commission to establish specific rates for supplementary, maintenance, interruptible, or backup power. It is necessary to establish a mechanism to

develop rates for these types of power, which the utility must offer, on request, under 4 MCAR § 304.54 H. It is reasonable in that the initiative remains with the qualifying facility and in that the determination of an appropriate rate by the Commission need not necessarily await a general rate case for the utility.

4 MCAR § 3.0456 Standard rates for purchases.

A. General. For qualifying facilities with capacity of 100 kilowatts or less, standard rates apply. Qualifying facilities with capacity of more than 100 kilowatts may negotiate contracts with the utility or may be compensated under standard rates if they make commitments to provide firm electric power. The utility shall make available three types of standard rates, described in B., C., and D. The qualifying facility shall choose interconnection under one of these rates, and shall specify its choice in the written contract required in 4 MCAR § 3.0454 B. Any net credit to the qualifying facility shall, at its option, be credited to its account with the utility or returned by check within 15 days of the billing date. The option chosen shall be specified in the written contract required in 4 MCAR § 3.0454 B. Qualifying facilities remain responsible for any monthly service charges and demand charges specified in the tariff under which they consume electricity from the utility.

18 CFR § 292.304 (c) provides that standard rates will apply for qualifying facilities with capacity of 100 kilowatts or less. This will eliminate the administrative burden that would exist if all rates were negotiated separately. Furthermore, this will insure that rates for purchase are made available on a nondiscriminatory basis to all qualifying facilities selling to a particular utility. The existence of a simple standardized rate schedule for purchases of energy by utilities will serve to encourage cogeneration and small power production by making relevant information available to potential qualifying facilities.

Qualifying facilities with capacity of more than 100 kilowatts may negotiate contracts with the utility. This will allow the special circumstances of a large qualifying facility to be taken into account when rates for purchase are determined. This will not be unreasonably burdensome to the utilities because it can be expected that there will be a relatively smaller number of those types of qualifying facilities.

The standard rates may be considered a floor price for qualifying facilities with capacity of more than 100 kilowatts provided they make commitments to provide firm electric power. In this sense, large qualifying facilities will be treated the same as smaller qualifying facilities. The requirement that large qualifying facilities provide firm electric power is necessary because the likelihood of diversity of load among large qualifying facilities is lower than the likelihood of diversity among smaller qualifying facilities. In addition, there would be a larger negative impact upon the utilities if the larger qualifying facility did not provide firm power (or a group of large qualifying facilities did not provide firm power, on average, after considering diversity) than if smaller qualifying facilities (taken as a whole with recognition of diversity) did not provide firm power because of the absolute size of the facilities.

It is necessary that the qualifying facility specify its choice of one of the three types of standard rates in the written contract to insure clear communication between the parties involved. It is necessary that compensation to the qualifying facility be made either through a credit to its account with the utility or through direct payment by check. It is reasonable for the qualifying facility to have the option to choose the method of compensation since the qualifying facility is, in effect, the seller of electricity and it is common business practice that the seller prescribe the terms of sale. It is desirable that both parties have a clear understanding of the chosen arrangement. Thus, it is reasonable that the option chosen be specified in the written agreement.

Finally, this section proposes that qualifying facilities continue to pay any monthly service charges and demand charges specified in the tariff under which they purchase electricity from the utility. This provision implements part of M.S. § 216B.164, subd. 8. It is a reasonable requirement because these fixed charges are designed to recover all or part of those costs of providing service which do not vary with the consumption of electricity, and which may not be avoided through the generation of electricity by the

qualifying facility. If the qualifying facility were not required to pay these charges, the costs would have to be borne by the utility's other ratepayers through higher utility rates. This result would violate the Commission's mandate from the Legislature that cogeneration and small power production be encouraged consistent with protection of the ratepayers.

B. Net energy billing rate.

1. The net energy billing rate is available only to qualifying facilities with capacity of 40 kilowatts or less which choose not to offer electric power for sale on a time-of-day basis.

M.S. § 216B.164 provides that net energy billing be available to qualifying facilities with capacity of 40 kilowatts or less. This section of the proposed rule does just that. In addition, this section restricts availability of the net energy option to customers not choosing to sell power on a time-of-day basis. The net energy billing option is designed for smaller scale cogeneration and small power production that wish to minimize their metering costs and sell as much energy as can be efficiently produced. On the other hand, the purpose of the time-of-day option, which is discussed in a following section of this statement, is to encourage cogenerators and small power producers to provide substantial amounts of on-peak power. However, the time-of-day option requires much more expensive metering which should be paid for by the qualifying facility. A large amount of on-peak power relative to off-peak power would have to be generated by the qualifying facility in order to pay for the more expensive metering. Since it is the Commission's purpose to only encourage cost-effective applications of the time-of-day purchase rates, this provision is efficacious.

2. The utility shall bill the qualifying facility for the excess of energy supplied by the utility above energy supplied by the qualifying facility during each billing period according to the utility's applicable retail rate schedule.

This section is necessary in order to implement M.S. § 217B.164, subd. 4 which states the following:

> "For qualifying facilities having less than 40 kilowatts capacity, the customer shall be billed for the net energy supplied by the utility according to the applicable rate schedule for sales to that class of customer."

This provision is reasonable because it treats qualifying facilities in the same way that it treats the utility's other customers.

3. When the energy generated by the qualifying facility exceeds that supplied by the utility during a billing period, the utility shall compensate the qualifying facility for the excess energy under a. or b.

a. For a qualifying facility with capacity of 20 kilowatts or less, compensation shall be at the energy rate of the rate schedule applicable to sales to the qualifying facility. If the rate schedule consists of more than one block, the lowest per kilowatt-hour rate shall apply. The compensation shall reflect changes to the energy rate due to the operation of the utility's fuel adjustment clause.

This section of the proposed rule provides that payments for excess energy delivered to the utility by a net energy billed qualifying facility of 20 kilowatts or less shall be at the energy rate of the utility's retail rate schedule for serving the facility. If the utility charges its customers 5¢ per kilowatt-hour on that schedule, the utility would pay 5¢ per kilowatt-hour for energy delivered by the qualifying facility in excess of energy offsetting the qualifying facility's consumption from the utility. This section also provides that if the utility has a blocked rate schedule (a fixed number of kilowatt-hours at one rate, more at a different rate), the lowest priced block shall apply.

It is necessary for the Commission to set the rates for payments to net energy billed qualifying facilities. M.S. § 216B.164, subd. 3, establishes net energy billing for qualifying facilities of less than 40

kilowatts. It includes this language:

> In the case of net input into the utility system by the qualifying facility, compensation to the customer shall be at a per kilowatt-hour rate set by the Commission. In setting these rates, the Commission shall consider the fixed distribution costs to the utility not otherwise accounted for in the basic monthly charge and shall ensure that the costs charged to the qualifying facility are not discriminatory in relation to the costs charged to other customers of the utility. Notwithstanding any other language to the contrary in this section, the Commission shall set the rates for net input into the utility system based on avoided costs as defined in 18 C.F.R. Section 292.101 (b)(6), the factors listed in 18 C.F.R. Section 292.304, and all other relevant factors.

It is clear that the Commission must set the rates, that the rates must have a basis in avoided costs, and that the Commission must consider the utility's fixed distribution costs both with respect to the monthly fixed charge and with respect to the utility's other customers. In this statement, the Commission will first discuss fixed distribution costs and will then explain the avoided cost basis of its proposal.

The costs of providing electric utility service are often assigned to one of three categories: customer related costs, demand related costs, and energy related costs. Customer related costs vary not with usage, but with the number of customers on the system. The costs of meters, meter reading, and billing are usually classified as customer related costs. Demand related costs are costs which vary with the rate at which energy is consumed, and they are important both at the individual customer level, and across the whole system. Electric utility systems must be designed to meet maximum demands of individual customers as well as the maximum demand of the entire system (system peak). Energy related costs vary with the amount of energy consumed. In the short run, energy related costs tend to be variable, while demand and customer related costs are relatively fixed.

Rate schedules for residential consumption typically establish a two-part rate: a fixed monthly charge and one or more energy block rates. Under these schedules, a customer's bill is computed by multiplying his consumption by the energy rate and adding the fixed charge.

Often the fixed charge does not cover the full amount of the average fixed costs (demand and customer related) allocated to residential customers. When this is the case, the energy charge is raised from where it otherwise would be, so that the utility can collect its total costs. Sometimes this is done only in the initial block or blocks of consumption. The result is the familiar "declining block" rate structure, in which the charge for consuming an additional kilowatt-hour declines as consumption increases beyond set levels. In other cases, the rates are designed such that the energy charge per kilowatt-hour is constant at all levels of consumption.

In the short run, generation by qualifying facilities enables utilities to avoid energy related variable costs, but not customer related and demand related fixed costs. As has been discussed above, state law and these proposed rules require qualifying facilities to pay any monthly fixed charges which are assessed to similar nongenerating customers.

The Commission has considered "the fixed distribution costs to the utility not otherwise accounted for in the basic monthly charge." The Commission believes that if this were its only requirement it would be reasonable in many cases to assess qualifying facilities an additional fixed charge to recover fixed distribution costs which other customers pay through consumption of energy at elevated energy rates. However, the Commission must also "ensure that the costs charged to the qualifying facility are not also discriminatory in relation to the costs charged to other customers of the utility." If a nongenerating customer reduces his consumption to zero, he must pay only the monthly fixed charges. Consequently, the Commission believes it would be discriminatory to require a qualifying facility to pay more than the standard monthly fixed charge.

The analysis above does show that if compensation for energy provided by a qualifying facility is to be at the retail energy rate, the lowest priced block in a blocked rate is the appropriate rate to choose. That lowest priced block is most closely related to costs the utility can avoid.

The Commission believes that it is appropriate to set the rate for net deliveries to the utility by this group of qualifying facilities at the retail energy rate. The Commission has reached this belief after consideration of a number of factors.

One of the factors was the level of retail rates relative to avoided cost rates. In most cases, the Commission anticipates retail rates will be higher than rates set at full avoided energy and capacity costs as calculated elsewhere in these rules. This is primarily because utilities cannot avoid all their costs, but their retail rates must collect enough revenues to cover total costs. The discussion above pointed out that utilities do not avoid fixed transmission and distribution costs. Some utilities also have costs like those associated with energy audits under the Minnesota Energy Conservation Service program which are not avoidable but which are recovered through retail rates.

While the Commission anticipates that the retail rate will in most cases be higher than the avoided cost rates calculated elsewhere in these rules, the Commission cannot be certain that the retail rate will be higher than the sum of the actual avoided cost of the utility and the external costs (e.g., acid rain caused by coal fired power plants) to the public. Although the Commission has attempted to balance the interests of qualifying facilities, utilities, ratepayers, and the general public with great care in developing the avoided cost calculation, that calculation is not perfect. One reason for this is that the Commission's calculated avoided cost rates excludes external costs. Since external costs are, by their very nature, unquantifiable, it is not appropriate to explicitly take them into account in the calculation of avoided cost based rates. Nevertheless, the Commission believes that it is appropriate to take them into account in a judgemental way when setting purchase rates for qualifying facilities with capacity of less than 20 kilowatts. It is possible, therefore, that the retail rate may approximate avoided costs for these smaller facilities.

A related consideration taken into account in developing these proposed rules was the unquantifiable nature of some of the factors the Commission was directed to weigh. Examples of these are the aggregate value of capacity from qualifying facilities on the utility system, and the smaller capacity increments and shorter lead times available with additions of capacity from qualifying facilities. These both serve to increase the value of qualifying facilities, and are particularly applicable to the smaller facilities under discussion here. Yet neither lends itself to quantification in an avoided cost calculation.

A third factor the Commission considered was the advantage in simplicity and customer understandability of using retail rates instead of the avoided cost calculation. The retail rate is a readily available number which the potential owner of a qualifying facility can use to determine the feasibility of an investment without having to work through the complexities of the avoided cost calculation. Thus the use of the retail rate should encourage cogeneration and small power production by these small facilities, which are likely to be less sophisticated than larger facilities.

The Commission's fourth consideration was the effect of this proposal on the development and small power production throughout the state. Each utility has its own cost structure and its own plan for generation expansion. Consequently, there is great variation in the avoided costs of Minnesota utilities. This could lead to encouragement of cogeneration and small power production in some areas, and discouragement in others. Larger facilities may be able to wheel (transmit) power to other utilities, and thereby get around this problem, but small facilities are essentially limited to the utility to which they are interconnected. Use of retail rates should encourage more balanced development, and provide reasonably similar incentives to potential owners of qualifying facilities throughout the state.

Finally, the Commission considered legislative intent. In February of 1981, the Commission published and gave wide distribution to a proposed rule concerning cogeneration and small power production. In that document the Commission proposed to compensate small qualifying facilities for net deliveries at retail rates. That proposal was well known to House and Senate sponsors of H.F. 473, the bill which eventually was enacted as M.S. § 2168.164. The Commission received generally favorable comments on the proposed rule from those legislators. Representative Earl Hauge, chief House

author of the bill wrote, "I think your proposed rules are excellent and will implement the intent of H.F. 473 and the PURPA regulations." Senator Gregory Dahl wrote:

> I want to emphasize at the outset that I did not author the cogeneration and small power production legislation because I was dissatisfied with the Commission's actions in this area previously. Quite to the contrary. The Commission is to be strongly commended for the admirable job it has done in implementing PURPA 210 and the FERC rules in the face of a myriad of novel and complex issues.
>
> Nearly all legislators supporting enactment of H.F. 473 were strong supporters of the Commission's proposed rule (although some wished higher purchase rates for small power production) and wanted to ensure that the Commission's rule and jurisdiction in this area would apply statewide, rather than merely to investor-owned utilities. Accordingly, in assessing the impact of H.F. 473 as enacted on the Commission's previously proposed cogeneration and small production rule, the Commission should keep in central focus that the Legislature's intent with this legislation was not to displace the Commission's proposed rule, but rather to expand and supplement the Commission's power to act in this area.

In light of these considerations, the Commission asserts that its proposal to compensate qualifying facilities of 20 kilowatts or less for energy delivered to the utility in excess of their consumption at the energy component of the retail rate is both necessary and reasonable.

Finally, it is necessary that the rates for purchase reflect changes to the energy rate due to the operation of the utility's fuel adjustment clause because as the utility's cost of fuel increases, its avoided cost will also increase. This is a convenient and reasonable way to track changes in avoided costs from year to year and month to month.

b. For a qualifying facility with capacity of more than 20 kilowatts but not greater than 40 kilowatts, compensation shall be a specified under C.3.

This part of the proposed rule sets payment for excess energy deliveries of net energy billed qualifying facilities larger than 20 kilowatts at full avoided energy and capacity costs, as calculated through application of these rules.

The Commission believes it is necessary and reasonable to distinguish between smaller and larger net energy billed qualifying facilities. Such a distinction results in a more equitable balance between encouragement of cogeneration and small power production and protection of ratepayers.

In its discussion in the previous section, the Commission observed that retail rates may approximate avoided costs, particularly when externalities and unquantifiable concepts are taken into account. The Commission nevertheless thinks that its calculation of avoided cost is in most cases a better approximation of real avoided costs. The Commission also thinks the conditions which make the retail rate appropriate for qualifying facilities of 20 kilowatts or less do not apply to larger units.

If rates were set precisely at avoided costs, rates paid by utility customers would always be the same whether the utility purchased from qualifying facilities or generated all of its own electricity. If rates were set below avoided costs, ratepayers would probably be somewhat better off if the utility purchased from qualifying facilities. On the other hand, if rates for purchases from qualifying facilities were set above avoided cost, rates paid by utility customers would be higher with purchases from qualifying facilities. The ideal balance of encouraging cogeneration and small power production consistent with protection of ratepayers is achieved by setting rates equal to avoided costs.

Unfortunately, it is not possible to set rates precisely equal to avoided costs. The best that can be done is to approximate avoided costs. In developing its avoided cost calculation, the Commission has exerted every effort to achieve a reasonable approximation of real avoided costs. Nevertheless, judgments had to be made, and in exercising its judgement the Commission preferred to err on the side of encouraging cogeneration and small power production. To that extent, it is reasonable to expect one result of

implementation of these rules to be a tendency to push utility rates slightly higher than they otherwise would be. This result will be tolerable if, as expected, the increase is very small, and cogeneration and small power production lead to expected benefits to the general public.

If the analysis above is correct, and the calculated avoided costs are in fact above the real avoided costs, by however small a margin, then it follows that purchase rates equal to retail rates, which are above calculated avoided costs, are also above real avoided costs, and by a greater margin. Compensating qualifying facilities at the retail rate thus presents a greater risk to the ratepayer than compensating them at calculated avoided costs.

The Commission believes that the increased risk is justified when the qualifying facility is 20 kilowatts or less, but not when it is larger. A 20 kilowatt generator is the largest unit which would reasonably be installed to simply replace utility power with self-generated power for the typical residential or farm customer. Any larger unit would be installed by one of these customers for the purpose of making net sales to the utility.

When the unit is installed simply to offset consumption from the utility, net deliveries to the utility will presumably be both random and small. Under these conditions, the Commission believes the additional risk and possible cost to the ratepayers will be kept under reasonable bounds, and will be justified by the additional encouragement given to cogeneration and small power production.

When the unit is installed to make net sales to the utility, however, the possible cost to the ratepayer increases substantially. Under these conditions, the Commission believes the better balance is struck by paying the larger qualifying facility at the calculated avoided cost rate. The cutoff level of 20 kilowatts is reasonable because that is the largest unit which would reasonably be installed simply to meet the individual needs of a typical residential or farm consumer.

C. Simultaneous purchase and sale billing rate.

1. The simultaneous purchase and sale rate is available only to qualifying facilities with capacity of 40 kilowatts or less which choose not to offer electric power for sale on a time-of-day basis.

The Commission believes it is necessary to allow a qualifying facility to sell all its output to a utility and at the same time purchase all its needs from the utility in order to encourage cogeneration and small power production. If purchase rates, as calculated under this rule and based on avoided costs, are greater than retail rates, this provision will encourage potential qualifying facilities to deliver energy to the system. Without this provision the maximum compensation to the qualifying facility for the initial kilowatt-hours generated would be the retail rate and consequently, because the purchased rates were greater than the retail rate, the qualifying facility would be compensated at a rate below the utility's avoided cost.

All qualifying facilities with capacity of greater than 40 kilowatts are covered in later sections of the proposed rule. Also, any qualifying facility of 40 kilowatts or less may choose to sell power on a time-of-day basis or on a net energy basis. Such a qualifying facility would not be covered under this section. The purpose of this section of the proposed rule is to simply describe which qualifying facilities are covered under this section.

2. The qualifying facility shall be billed for all energy and capacity it consumes during a billing period according to the utility's applicable retail rate schedule.

3. The utility shall purchase all energy generated by the qualifying facility. Compensation to the qualifying facility shall be the sum of a. and b.

a. The energy component shall be the appropriate system average incremental energy costs shown on Schedule A; or if the purchasing utility is nongenerating, the energy rate shown on Schedule G;

b. The capacity component shall be the utility's net annual avoided capacity cost per kilowatt-hour averaged over all hours as calculated

according to 4 MCAR § 2.0452 C.4 or C.5. as appropriate; or if the purchasing utility is nongenerating, the capacity component shall be the capacity cost per kilowatt shown on Schedule G, divided by the number of hours in the billing period.

Qualifying facilities choosing to sell power under the simultaneous purchase and sale billing rate agree to consider their purchases and sales as separate economic transactions. These sections provide that purchases of energy and capacity by the qualifying facility shall be billed according to the utility's applicable retail rate schedule, just as all other customers of the utility are treated. By the same token all purchases of energy by the utility shall be set at appropriate rates, based upon the calculated avoided costs of the utility. It is necessary and reasonable to give qualifying facilities this purchase/sale option. In the event that avoided cost rates are higher than the applicable retail rate this option would compensate the qualifying facility based upon the utility's avoided cost. The qualifying facility would be paid less than avoided cost under this condition if it did not have this option and sold power on the basis of net energy billing. Because M.S. § 216B.164 requires that the purchase rates be based upon avoided cost, it is both necessary and reasonable that this option be provided.

The sum of paragraphs (a) and (b) is the utility's calculated avoided energy and avoided capacity costs per kilowatt hour averaged over the on-peak and off-peak periods. This section simply directs the utility to sum the avoided energy and avoided capacity costs pertaining to either generating or nongenerating utilities as calculated in an earlier section of the proposed rule to determine the appropriate purchase rate. It was shown earlier in this statement that those amounts are appropriate estimates of the utility's avoided energy and avoided capacity costs. Since the utility avoids both energy related costs and capacity related costs this section is necessary and reasonable if the qualifying facilities are to be compensated at avoided cost, as required by state law.

D. Time-of-day purchase rates.

1. Time-of-day rates are required for qualifying facilities with capacity greater than 40 kilowatts and less than or equal to 100 kilowatts, and they are optional for qualifying facilities with capacity less than or equal to 40 kilowatts. Time-of-day rates are also optional for qualifying facilities with capacity greater than 100 kilowatts if these qualifying facilities provide firm electric power.

Purchase or buy back rates based upon the time-of-day of energy deliveries have several advantages over non-time differentiated rates. First, since the utilities' incurred costs vary by the time of day so do the utilities' avoided costs vary by the time of day. In short, a kilowatt-hour delivered to a utility during on-peak hours is more valuable than a kilowatt-hour delivered during off-peak hours because it is more expensive for the utility to generate electricity in the on-peak hours. Consequently, the utility's avoided costs are higher in the on-peak period than in off-peak periods and so to the extent that purchase rates are based upon time-of-day energy deliveries those purchase rates will be more accurate estimates of the utility's avoided costs.

In addition, purchase rates based upon the time of day of energy deliveries will give qualifying facilities appropriate incentives to deliver as much on-peak energy as is economically possible. Under this pricing scheme, the qualifying facilities will be paid higher rates for on-peak energy deliveries and so they are likely to deliver more energy during on-peak hours than they otherwise would.

The disadvantage of time-of-day purchase rates is the higher metering cost that will be incurred in order to implement this method of pricing. The qualifying facility will have to finance a time-of-day meter. These meters are more expensive than standard watt-hour meters. The cost of these meters is the reason that time-of-day purchase rates are not being implemented on a mandatory basis for qualifying facilities with capacity of less than 40 kilowatts.

It is the Commission's judgement that 40 kilowatts is an appropriate and reasonable cutoff point for the implementation of mandatory time-of-day purchase rates. Clearly, at some point the advantages previously discussed

begin to outweigh the disadvantage of slightly higher metering costs. It is likely that the 40 kilowatt level is a conservative estimate of this balancing point and hence is a reasonable level.

An example may illustrate the appropriateness of the chosen cutoff level. Assume the following:

1. The standard purchase rate is 3¢/kwh.
2. The on-peak purchase rate is 4¢/kwh.
3. The off-peak purchase rate is 2¢/kwh.
4. 50% of all hours are on-peak and 50% are off-peak hours.
5. $4.60/month is a reasonable estimate of the monthly carrying cost of one time-of-day meter (this is the fixed monthly charge which Northern States Power Company bills its General Service Time-of-Day customers).

Given these assumptions, a qualifying facility with generating capacity of 40 kilowatts and an average monthly load factor of 80 percent would generate (40 kwh x 720 hours x .8 = 23,040 kwh) 23,040 kilowatt-hours in one month. If we further assume that such a qualifying facility would respond to time-of-day purchase rates by shifting some production of energy from off-peak to on-peak hours the benefit to the qualifying facility can be measured. If, after the switch, the qualifying facility generated energy at 100% of capacity on-peak and at 60% of capacity off-peak, a comparison of the before and after payments is as follows:

Payment under standard rate

23,040 kwh x 3.0¢ = $691.20

Payment under time-of-day rate

on-peak kwh = 40 kw x 360 hours x 1.0 =			14,400
off-peak kwh = 40 kw x 360 hours x .6 =			8,640
on-peak:	14,400 kwh x 4.0¢ =	$576.00	
	8,640 kwh x 2.0¢ =	172.80	
	23,040	$748.80	

payment under time-of-day rate =	$748.80
payment under standard rate =	691.20
difference (per month)	$ 57.60
less: monthly cost of one time-of-day meter	4.60
net gain to qualifying facility	$ 53.00

This example shows that it would be cost effective for a qualifying facility with the operating characteristics shown to sell energy on a time-of-day basis.

For the above reasons the proposed rule would be effective at encouraging cogeneration and small power production and would more accurately compensate qualifying facilities for the utilities' avoided costs. Consequently, this section of the proposed rule is both necessary and reasonable.

It is necesssary and reasonable that the 40 kilowatt limit be applied in a mandatory fashion so that qualifying facilities will be compensated appropriately and given the proper production incentives. This will not place an unreasonable burden on these qualifying facilities. At the same time, it is reasonable that any qualifying facilities with capacity less than 40 kilowatts that are willing to pay the additional metering costs should be allowed to sell energy on a time-of-day basis.

In addition, it is necessary and reasonable that qualifying facilities with capacity greater than 100 kilowatts also have the option to sell energy on a time-of-day basis to insure that these qualifying facilities are not treated unfairly in comparison with other qualifying facilities. At the same time, however, it is necessary to make eligibility for this rate conditional upon the delivery of firm power to protect the financial condition of the utility and to protect the utility's ratepayers. The protection of the utility and its ratepayers is a serious concern when considering the rate for purchase applicable to qualifying facilities with capacity greater than 100 kilowatts because these qualifying facilities may not necessarily be generating during the utility's peak load hours whereas a large number of

smaller qualifying facilities will on average be generating a consistent proportion of energy during those peak hours. Therefore, due to this potential lack of diversity, the utility may need some guarantee that the qualifying facility with capacity greater than 100 kilowatts will provide firm power during peak hours in order to meet the utility's peak demand.

2. The qualifying facility may be billed for all energy and capacity it consumes during such billing period according to the utility's applicable retail rate schedule. Any utility rate-regulated by the Commission may propose time-of-day retail rate tariffs which require qualifying facilities that choose to sell power on a time-of-day basis to also purchase power on a time-of-day basis.

This section of the proposed rule requires that the qualifying facility will not be billed on a net energy basis if it chooses to sell power on a time-of-day basis. Any appropriately sized qualifying facility wishing to sell energy on a net energy basis may do so under 4 MCAR § 3.0456 (B) so it is unnecessary to duplicate that option here. Further, since the qualifying facility shall be billed according to the retail rate schedule it will be treated in a nondiscriminatory fashion, compared to the utility's other ratepayers.

If it were not for the high cost of metering, it is safe to assume that most utility rates would be based upon time-of-day, i.e., time-of-day rates would be the standard instead of the exception. This proposed rule provides that if a qualifying facility has time-of-day metering installed and if the utility to which the qualifying facility is connected is rate regulated by this Commission, the utility may petition to require the qualifying facility to buy energy as well as sell energy on a time-of-day basis. This is necessary and reasonable because it will allow the utility to more appropriately price the electric service to the qualifying facility. At the same time, the qualifying facility's interests will be protected by representation before the Commission.

3. The utility shall purchase all energy generated by the qualifying facility. Compensation to the qualifying facility shall be the sum of a. and b.

a. The energy component shall be the appropriate on-peak and off-peak system incremental costs shown on Schedule A; or if the purchasing utility is nongenerating, the energy rate shown on Schedule G.

b. The capacity component shall be the utility's net annual avoided capacity cost per kilowatt-hour averaged over the on-peak hours as calculated according to 4 MCAR § 3.0452 C.4. or C.5. as appropriate; or if the purchasing utility is nongenerating, the capacity cost per kilowatt shown on Schedule G, divided by the number of hours in the billing period.

There is a typographical error in the proposed rule. It should read:

> "The capacity component shall be the utility's net annual avoided capacity cost per kilowatt-hour averaged over the on-peak hours as calculated according to 4 MCAR § 2.0452 C.4. or C.5. as appropriate; or if the purchasing utility is nongenerating, the capacity cost per kilowatt shown on Schedule G, divided by the number of on-peak hours in the billing period."

With this change, the qualifying facilities will be appropriately compensated based upon the time-of-day of their energy deliveries.

This section of the proposed rule is identical to Section C.3. and it is necessary and reasonable for the same reasons stated in the applicable Section of this statement.

4 MCAR § 3.0457 Negotiated rate for purchases.

A. Contracts negotiated by customer. For qualifying facilities with capacity greater than 100 kilowatts, the customer may negotiate a contract with the utility. The contract shall set the applicable rates for payments to the customer of avoided capacity and energy costs.

Under the FERC regulations (18 CFR § 292.304 (c)), utilities must offer to purchase from qualifying facilities of 100 kilowatts or less on the

basis of standard rates. There are several advantages to using established standard rates. Among the advantages are the assurance of non-discriminatory treatment, the ability to plan construction and interconnection of a qualifying facility more easily because rates, terms, and conditions already exist, and a reduced administrative burden on both the qualifying facility and the utility. These advantages make standard rates particularly appealing for smaller qualifying facilities.

There are nevertheless disadvantages to standard rates. When all are treated alike, individual differences are not taken into account. One qualifying facility may employ a unique technology or operating practice which is particularly suited to helping its interconnected utility to avoid costs. If the qualifying facility is interconnected under standard rates, it may lose payment for some of those avoided costs. Worse, the standard rates may operate to deter development of such technologies or practices.

The inability to account for special circumstances becomes a greater disadvantage as the capacity of the qualifying facility increases. Also, because more resources are invested in the qualifying facility and its effects on the utility are greater, it becomes more cost effective to devote administrative efforts towards addressing challenges and opportunities involved as the capacity of the qualifying facility increases.

The FERC recognized these phenomena in requiring standard rates for qualifying facilities of 100 kilowatts and under, and making them an option above that capacity. The Commission also believes that recognition is necessary and reasonable.

B. Amount of payments; considerations. The amount of such payments shall be determined through consideration of:

1. The capacity factor of the qualifying facility;

2. The cost of the utility's avoidable capacity;

3. The length of the contract term;

4. Reasonable scheduling of maintenance;

5. The willingness and ability of the qualifying facility to provide firm power during system emergencies;

6. The willingness and ability of the qualifying facility to allow the utility to dispatch its generated energy;

7. The willingness and ability of the qualifying facility to provide firm capacity during system peaks;

8. The sanctions for noncompliance with any contract term; and

9. The smaller capacity increments and the shorter lead times available when capacity is added from qualifying facilities.

A number of factors may offset the costs avoided by the utility as a result of the qualifying facility's energy output. It is necessary and reasonable that each of these factors is listed in the proposed rule to insure that these relevant factors are considered by the parties in their negotiation. Each of the factors affects either the amount of capacity, in kilowatts, which the qualifying facility causes the utility to avoid or they affect the cost, per kilowatt, of the capacity avoided due to the delivery of power by the qualifying facility. The capacity factor of the qualifying facility, the length of the contract term, the scheduling of maintenance, the willingness and ability of the qualifying facility to provide firm power or capacity during system emergencies or system peaks and its willingness to allow the utility to dispatch its generated energy are all factors which, together with the rates capacity of the qualifying facility, may determine the amount of capacity, measured in kilowatts, which the qualifying facility is causing the utility to avoid. Obviously, the cost of the utility's avoidable capacity is the cost, per kilowatt, of the capacity avoided due to the delivery of power by the qualifying facility. Any sanctions for noncompliance with contract terms and the smaller capacity increments and the shorter lead times available when capacity is added from qualifying facilities are factors

which may affect, in a general sense, the costs which a qualifying facility causes the utility to avoid.

C. Full avoided energy costs. The qualifying facility shall be entitled to the full avoided energy costs of the utility. The costs shall be adjusted as appropriate to reflect line losses.

The energy output from the qualifying facility with capacity greater than 100 kilowatts will cause the utility to avoid incremental energy costs in the same way that the output from smaller qualifying facilities cause the utility to avoid energy costs. Consequently, in order to base purchase rates on avoided cost it is necessary and reasonable to insure that qualifying facilities are compensated for the full avoided energy costs adjusted for line losses as described earlier in this statement.

D. Qualifying facilities of greater than 100 kilowatts. Nothing in A.-C. prevents a utility from connecting qualifying facilities of greater than 100 kilowatts under its standard rates.

Upon mutual agreement of the qualifying facility and a utility, a utility may simply connect the qualifying facility according to the standard rates applicable to all other customers. However, since these qualifying facilities have capacity of greater than 40 kilowatts (in fact greater than 100 kilowatts) the only standard rate to which these qualifying facilities would be eligible is the time-of-day rate tariff. This provision is necessary and reasonable since it simply allows one possible outcome of the negotiation process (the connection of the qualifying facility at standard rates) to occur.

4 MCAR § 3.0458 Utility treatment of costs. All purchases from qualifying facilities with capacity of 100 kilowatts or less, and purchases of energy from qualifying facilities with capacity of over 100 kilowatts shall be considered an energy cost in calculating an electric utility's fuel adjustment clause.

This rule is needed to insure that utility purchases of electricity from qualifying facilities are properly accounted for. It is reasonable in that it flows these costs through to ratepayers in the same manner that costs of purchases from other energy suppliers (i.e., other utilities) are flowed through via Minn. Reg. PSC 392.

4 MCAR § 3.0459 Wheeling and exchange agreements. For all qualifying facilities with capacity of 30 kilowatts or greater, the utility shall, at the qualifying facility's request or with its consent, provide wheeling or exchange agreements whenever practicable to sell the qualifying facility's output to any other Minnesota utility that anticipates or plans generation expansion in the ensuing ten years. The following provisions apply unless the qualifying facility and the utility to which it is interconnected agree otherwise.

Wheeling is simply the transmission of electric power from one utility to another. M.S. § 216B.164, subd. 4(c), requires the utility to wheel a qualifying facility's output to another utility if the qualifying facility requests such wheeling, provided that the qualifying facility is at least 30 kilowatts and provided that the wheeling is practicable.

This rule is needed to encourage cogeneration and small power production throughout the state. Because electric utilities have exclusive franchises to serve in particular areas, most potential cogenerators and small power producers can interconnect with just one utility. Different utilities, though, have different cost structures and different load growth expectations. In theory, a utility with no plans to build or purchase capacity for at least 10 years has no avoidable capacity costs. Because utilities are required to pay only their full avoided costs, payments to qualifying facilities from this utility would be correspondingly less than payments from a utility with a great deal of generation expansion planned, and hence large avoidable capacity costs. The wheeling provision enables the qualifying facility to sell to whatever utility is offering the best price, no matter where the utility is located in Minnesota, as long as wheeling is practicable. Looked at from another angle, the wheeling provision encourages power produced from cogenerators and small power producers throughout the state to flow to those utilities with the greatest need for it. This provision is needed to provide the greatest substitution of power produced

from cogenerators and small power producers for power produced from utility central generating stations.

A. Inter-utility payment; wheeling. The utility to which the qualifying facility is interconnected shall pay any reasonable wheeling charges from other utilities arising from the sale of the qualifying facility's output.

B. Inter-utility payment; energy and capacity. Within 30 days of receipt, the utility ultimately receiving the qualifying facility's output shall pay its resulting full avoided capacity and energy costs by remittance to the utility with which the qualifying facility is interconnected.

C. Payment to qualifying facility. Within 15 days of receiving payment under B., the utility with which the qualifying facility is interconnected shall send the qualifying facility the payment it has received less the total charges it has incurred under A. and its own reasonable wheeling costs.

These sections provide a reasonable means of accomplishing the wheeling provision. The utility to which the power is wheeled pays exactly its full avoided costs. The payment is made to the utility to which the qualifying facility is interconnected. That utility pays the wheeling charges which have been incurred. It subtracts these payments and its own wheeling costs from the amount it was paid by the receiving utility. The difference is the payment to the qualifying facility. Line losses and transformation losses are automatically accounted for, since the receiving utility pays only for power delivered. The qualifying facility pays for the wheeling, as contemplated in both Minnesota law and the FERC regulations. Finally, the qualifying facility is not burdened with the necessity to deal directly with more than its own local utility.

4 MCAR § 3.0460 Disputes. In case of a dispute between an electric utility and a qualifying facility or an impasse in the negotiations between them, either party may request the Commission to determine the issue. When the Commission makes the determination, the burden of proof shall be on the utility.

The Commission has jurisdiction generally to resolve disputes between utilities and their customers under M.S. § 216B.17, and has promulgated Minn. Reg. PSC 507 and 508 to establish procedures for handling informal and formal customer complaints. This section of the proposed rules is needed to clearly indicate the Commission's ability and intent to resolve disputes over rule-related issues.

In addition, M.S. § 216B.164, subd. 5 contains essentially the same language as this section of the proposed rules. It is reasonable for the Commission to adopt the same scope of jurisdiction and burden of proof as are required by the enabling legislation.

4 MCAR § 3.0461 Notification to customers.

A. Contents of written notice. Within 60 days following each annual filing required by 4 MCAR § 3.0452, every electric utility shall furnish written notice to each of its customers:

1. That the utility is obligated to interconnect with and purchase electricity from cogenerators and small power producers;

2. That the utility is obligated to provide customer information to all interested persons free of charge upon request; and

3. That any disputes over interconnection, sales, and purchases are subject to resolution by the Commission upon complaint.

The notice shall be in language and form approved by the Commission.

B. Customer information. Each utility shall publish customer information that shall be available to all interested persons free of charge upon request. Such customer information shall include at least the following:

1. A statement of rates, terms, and conditions of interconnections;

2. A statement of technical requirements;

3. A sample contract containing the applicable terms and conditions;

4. Pertinent rate schedules;

5. The title, address, and telephone number of the department of the utility to which inquiries should be directed; and

6. The statement: "The Minnesota Public Utilities Commission is available to resolve disputes upon written request," and the address and telephone number of the Commission.

This rule imposes a duty upon the appropriate utilities to provide notice to their respective customers of:

1) the utility's obligation to interconnect with and purchase electricity from cogenerators and small power producers;

2) the utility's obligation to provide customer information concerning cogeneration and small power production to all interested persons free of charge upon request; and

3) that any disputes concerning interconnection, sales and purchases are subject to resolution by the Commission upon complaint.

This notification requirement is intended to annually inform the utility's customers of the existence of rules concerning cogeneration and small power production in addition to identifying some of the very basic provisions of the rules (i.e., utility's obligation to interconnect with and purchase from a qualifying facility).

Another important aspect of this rule is the notification portion with respect to the availability of free customer information upon request. It is the Commission's position that to effectively encourage cogeneration and small power production, the public must know that there is conveniently accessible information available for their examination and review. Such information is to be available without charge to encourage the unrestricted dissemination and the continuous flow of information to the public.

The required notice is also designed to insure that the public is aware that there is a governmental agency with the capacity to resolve disputes that may be utilized upon proper complaint procedures.

All notices are to be approved in form and content by the Commission to insure clarity and understandability.

In addition to the notice requirement, this rule also imposes an obligation on the utility to publish and make available customer information without charge. The Commission recognizes that there is a need to have customer information available for interested persons to inspect.

At a minimum, such customer information must include:

1. A statement of rates, terms and conditions of interconnection;

This information is necessary to provide accurate information from which a prospective cogenerator or small power producer may make an informed and prudent decision. Such information will allow an individual to determine the approximate cost of interconnection as well as the attending obligations and implications thereof.

2. A statement of technical requirements;

Such information is needed to allow a prospective cogenerator or small power producer to determine the appropriate technical specifications to be complied with as well as to select and install the equipment necessary for safe and proper interconnection.

3. A sample contract containing the applicable terms and conditions;

A sample of the contract is needed to allow the prospective cogenerator or small power producer to review, understand and become familiar with the obligations, duties, rights and responsibilities that may be involved

by the execution of such a contract.

It is only reasonable and prudent that an individual contemplating the execution of a document be furnished with the document to become familiar with it in order to fully comprehend the implications and obligations thereof.

4. Pertinent Rate Schedules;

This information is intended to provide an accurate foundation for a cogenerator or small power producer to calculate the approximate value of actual or projected output. Such information may be invaluable to an individual contemplating interconnection as it will allow him to evaluate the economic feasibility of such a venture.

5. The title, address and telephone number of the department of the utility to which inquiries should be directed;

This provision is intended to provide a means by which a utility may be contacted to answer questions or to supply additional information. It is an attempt to enhance the flow of information and stimulate communication between potential qualifying facilities and the utilities.

6. This statement: "The Minnesota Public Utilities Commission is available to resolve disputes upon written request," and the address and telephone numbers of the Commission.

This provision is intended and is needed to provide information to any interested person concerning the availability of the Commission to assist in the resolution of any disputes that may arise in addition to providing the public with an address and telephone number by which the Commission may be contacted.

4 MCAR § 3.0462 Interconnection guidelines.

The Commission believes a rule covering interconnection guidelines is necessary to achieve two broad objectives. The first of these is to insure the reliability and safety of electric utility service; the second is to encourage cogeneration and small power production.

Electric utilities must furnish continuous reliable service to their customers - service at a fixed frequency with voltages maintained within prescribed limits. Further, their systems must be constructed and operated to be safe for their employees and the general public. Different systems may vary considerably in the physical plant and electrical characteristics employed to deliver electric service safely.

Like utility systems themselves, the generating units used by qualifying facilities may be of many different types. They will probably come in a broad range of capacities and may exhibit markedly different operating characteristics. Their effect on any particular distribution system may vary with both their location on the system and the concentration of qualifying facilities on the system.

There is a potential for problems to develop on the utility system when a utility engages in interconnected operations with a qualifying facility. Whether such problems actually occur depends on the specific electrical characteristics and capacity of the qualifying facility, its location and the concentration of such units on the utility system, the characteristics of the distribution system, and the interaction of these factors with each other. In general, interconnected operations will be successful to the extent these potential problems are anticipated and resolved.

Each of the interconnection guidelines in this proposed rule is designed to prevent one or more of the following potential problems:

1. Safety hazards resulting from a qualifying facility energizing a portion of a distribution system which has been deenergized because of an outage or to enable utility personnel to perform maintenance.

2. Improper operation of equipment installed to protect and regulate the distribution system because qualifying facilities have changed the nature of power flows on the system.

3. Damage to or improper operation of customer-owned equipment due to irregularities in frequency or voltage, or both, or due to excessive harmonics, resulting from interconnected operations with qualifying facilities.

4. Interference with communications circuits caused by excessive levels of harmonic frequencies which may be produced by some qualifying facilities.

These problems point out the need for interconnection guidelines to insure safe and reliable electric service. The Commission believes the proposed rule on interconnection guidelines is also necessary to encourage cogeneration and small power production.

The Commission notes that uncertainty concerning required interconnection equipment may deter potential qualifying facilities. If interconnection guidelines are established by rule, a great deal of uncertainty is eliminated or reduced. In turn, planning becomes simpler and feasibility calculations more accurate. Further, reasonable guidelines established by rule prevent utilities from making unreasonable demands on qualifying facilities. Utilities which did not want to encourage cogeneration and small power production might make such demands in the absence of a rule.

A. Denial of interconnection application. The utility may refuse to interconnect a qualifying facility with its power system until the qualifying facility has properly applied under 4 MCAR § 3.0454 K. and has received approval from the utility. The utility shall withhold approval only for failure to comply with applicable utility or governmental rules or laws. The utility shall be permitted to include in its contract reasonable technical connection and operating specifications for the qualifying facility.

The rule as proposed needs to have the word "without" inserted in the headnote between "interconnection" and "application."

This section is necessary in that it provides the utility with advance notice prior to interconnection. The utility and the qualifying facility may then together work out any potential problems before electricity flows and damage is done. It reasonably prohibits the utility from denying interconnection for reasons other than noncompliance with applicable laws or regulations.

B. Notification of telephone utility and cable television firm. The electric utility shall notify the appropriate telephone utility and cable television firm when a qualifying facility is to be interconnected with its system. This notification shall be as early as practicable to permit coordinated analysis and testing before interconnection, if considered necessary.

This section makes the electric utility responsible for notifying communications companies of an impending interconnection with a qualifying facility. The notification is necessary to prevent potential communications problems due to possible increases in harmonics in the utility lines. There are two reasons for the utility, rather than the qualifying facility, to take this responsibility. First, it is reasonable to minimize the administrative burden on the qualifying facility in order to encourage cogeneration and small power production. Second, the utility has had to cooperate with telephone and cable firms in the historical development of its system. This implies that coordination has already been established among the appropriate personnel. It is more efficient to make use of this established coordination than to require each qualifying facility to try to find the right people to talk to.

C. Separate distribution transformer; when required. The utility may require a separate distribution transformer for the qualifying facility if necessary either to protect the safety of employees or the public or to keep service to other customers within prescribed limits. Ordinarily, this requirement should not be necessary for an induction-type generator with a capacity of five kilowatts or less or other units with a capacity of ten kilowatts or less that utilize line-commutated inverters.

This section is necessary for two reasons. First, some installations using inverters may require a transformer to provide proper grounding for safety. Second, a separate distribution transformer may be necessary to prevent service problems such as excessive light flicker or equipment operating problems caused by voltage variations experienced by nearby utility

customers. These problems may be caused by the starting, stopping, or irregular operations of a generating unit feeding into a common distribution transformer. A separate distribution transformer for the qualifying facility should largely mitigate these voltage variations. The section reasonably limits the ordinary requirement of this equipment to those units of size and operating characteristics where such problems might be expected to arise.

D. Limiting capacity of single-phase generators; when permitted. If necessary, to avoid the likelihood that a qualifying facility will cause problems with the service of other customers, the utility may limit the capacity and operating characteristics of single-phase generators in a way consistent with the utility limitations for single-phase motors. Ordinarily, single-phase generators should be limited to a capacity of ten kilowatts or less.

Utility distribution circuits are generally three-phase or single-phase. Three-phase power is more effective in supplying larger electrical loads than is single-phase. Single-phase distribution circuits are generally supplied from three-phase circuits. In a balanced three-phase circuit, each conductor, or phase, supplies approximately the same amount of power, and the voltage conditions on each phase are approximately equal. If one phase carries considerably more electrical load, or if single-phase generators connected to that phase supply considerably more power than the other two phases, then higher losses or voltage regulation problems, or both, may result.

To protect other customers from voltage and service problems, utilities have for years limited the maximum size, starting, and operating characteristics of single-phase motors which may be served from their system. Some generating units are operated as motors in starting up to reach the necessary rpm. Other single-phase generators are also expected to affect local voltage levels in the same way as single-phase motors.

This section is necessary, therefore, to protect service to other customers, just as their service is protected by limitations on motors. It is reasonable because it places no burden on qualifying facilities which are different from the burdens of similar, but nongenerating, customers.

E. Automatic isolation of generator. The utility may require that the qualifying facility have a system for automatically isolating the generator from the utility's system upon loss of the utility's supply.

This section of the proposed rule addresses another point of extremely intense controversy: disconnection of the qualifying facility from the utility when the utility line is deenergized.

The need for disconnection is acknowledged by all. Maintenance, such as restoring a line after an outage, must be carried out while the line is deenergized. The generation which comes from a qualifying facility can shock just as severely as the utility's own generation.

The utility's system is designed, through use of devices such as circuit breakers, to automatically isolate a line, or a portion of a line, from the utility's generation when a fault occurs on the line.

Utility work rules require repair crews to open and tag a manual disconnect switch on either side of the fault before beginning work on the line. In addition, the crews are supposed to ground the line on each side of the fault. Utilities have maintained that the safety of their employees requires each qualifying facility to have a manual disconnect switch which is accessible to the utility at all times and which the utility may lock open while performing maintenance.

Qualifying facilities may employ any of several different generating and interconnection technologies. Some of these require an electric signal to be present in the electric utility system in order to operate, while others will generate regardless of whether the utility system is energized.

Some owners and manufacturers of qualifying facilities which use technologies requiring input from the utility system have maintained that a lockable manual disconnect switch should not be required. Because their generator would automatically shut down on the loss of the utility signal,

they say, a manual disconnect would be an unnecessary additional expense. They also object to giving the utility unlimited access to their property and ultimate control over their generator. They have recommended instead that a postive disconnect on loss of utility signal be the only feature required.

Utilities have voiced a concern that under certain conditions of load and operation of qualifying facilities on portions of a distribution system it would be possible for several facilities to excite each other and continue to energize the line even after the loss of utility power. The reponse of owners and manufacturers to this concern has been that the probability of exactly the right conditions occurring is so remote as to be completely negligible, and that without the utility's fixed frequency signal, even if the conditions did occur, generation could not continue beyond a few seconds after loss of utility power.

The Commission believes this section of the proposed rule is reasonable. If a utility requires a qualifying facility to disconnect automatically on loss of utility supply, and if the utility employee properly grounds both sides of the fault before working on it, utility personnel will not be endangered. At the same time, the qualifying facility will not be subjected to needless expense and possible utility harrassment.

F. Discontinuing parallel operation. The utility may require that the qualifying facility discontinue parallel generation operation when necessary for system safety.

This section is necessary and reasonable for the reasons given in the previous section.

G. Permitting entry. The qualifying facility shall make equipment available and permit electric and communication utility personnel to enter the property at reasonable times to test isolation and protective equipment, to evaluate the quality of power delivered to the utility's system, and to test to determine whether the qualifying facility's generating system is the source of any electric service or communication systems problems.

This section is necessary to afford the utility and affected communications companies a reasonable opportunity to assure safe and effective operations of their systems in conjunction with parallel electric generation by qualifying facilities. It reasonably limits the reasons for entry and the times at which entry may be gained. Specifically, entry may occur only during reasonable hours, and only for purposes of evaluating the qualifying facility's impact on system safety and quality of service.

H. Maintaining power output. The power output of the qualifying facility shall be maintained so that frequency and voltage are compatible with normal utility service and to not cause that service to fall outside the prescribed limits of Commission rules and other standard limitations.

I. Varying voltage levels. The qualifying facility shall be operated so that variations from acceptable voltage levels and other service-impairing disturbances do not adversely affect the service or equipment of other customers, and so that the facility does not produce undesirable levels of harmonics in the utility power supply.

These two sections establish a necessary and reasonable requirement that operations of the qualifying facility not disturb the quality of service to other customers through frequency or voltage variations or through introduction of undesirable levels of harmonics. This requirement conforms to the legislative intent that encouragement of cogeneration and small power production be consistent with protection of the ratepayers and the public.

J. Safety. The qualifying facility shall be responsible for providing protection for the installed equipment and shall adhere to all applicable national, state, and local codes. The design and configuration of certain cogeneration and small power production equipment might require an isolation transformer as part of the qualifying facility installation for safety and protection of the qualifying facility equipment.

This section is necessary to establish the location of responsibility for safety and protection of equipment owned by the qualifying facility. It reasonably places that responsibility with the qualifying facility, not the

utility. It warns a potential owner of the responsibility and suggests investigation of a particular piece of equipment which may be necessary.

K. Right of appeal for excessive technical requirements. The qualifying facility has the right of appeal to the Commission when it considers individual technical requirements excessive.

The purpose of this provision is to protect the qualifying facility against unreasonable demands of the utility where such demands have the effect of discouraging cogeneration and small power production, and where such demands are not warranted to insure safety, protection of equipment, quality of service, or protection of ratepayers. This provision is necessary to carry out the legislative mandate that disputes must be determined by the Commission.

4 MCAR § 3.0463 Existing contracts. Any interconnection contracts executed between a utility and a qualifying facility before the effective date of 4 MCAR §§ 3.0450-3.0463 may, at the option of either party, be cancelled and replaced by interconnection contracts under 4 MCAR §§ 3.0450-3.0463.

The Commission is aware that qualifying facilities have begun interconnected operations with utilities around the state, and is aware that contracts have been executed between qualifying facilities and utilities in conjunction with these operations. The Commission has to date received two formal complaints (Docket No. E-002/C-82-117 and E-148/C-81-5486) concerning the terms and conditions of the contracts being offered by the utilities.

All utilities covered by the proposed rules will be required, under 4 MCAR § 3.0452 (D) to file for Commission review and approval all their standard contracts. The Commission will thus approve the form of all contracts to be executed between utilities and qualifying facilities.

The Commission believes it would be unreasonable to create, through inaction, two classes of qualifying facilities: one with unreviewed and unapproved contracts, the other with reviewed and approved contracts. The Commission has previously found that its jurisdicton extends to the provisions of contracts which were privately negotiated between an electric utility and its retail customers. Anoka Electric Cooperative, Docket No. U-75-103 (February 24, 1977). The Commission has scrutinized contractual rate provisions and abrogated provisions it has found to be unlawfully discriminatory, Minnesota Power and Light Company, Docket No. E-015/GR-76-408 (December 18, 1976), or preferential, Minnesota Power and Light Company, Docket No. E-015/GR-77-360 (February 3, 1978).

On appeal of the latter case, the St. Louis County District Court upheld the Commission's right to investigate and, after notice, to abrogate contracts. This provision of the proposed rules is necessary to provide notice to utilities and qualifying facilities that contracts drawn and executed before the effective date of the proposed rules may be replaced with a standard, approved contract under the proposed rules.

It is reasonable to permit either party to reopen a pre-rule contract, since the provisions of the standard, approved contract are as likely to work in favor of one party as the other.

In the Matter of the Proposed Adoption of Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production

STATEMENT OF COMPLIANCE WITH RULEMAKING PROCEDURES

DOCKET NO. E-999/R-80-560

I, Karl W. Sonneman, do hereby declare that I have examined the rules and all related documents and that, based on my examination and my personal familiarity with the applicable procedures, the Administrative Procedure Act, the rules of the Office of Administrative Hearings, and the rules of theAttorney General have been followed. Any exceptions are noted below.

Karl W. Sonneman
Special Assistant Attorney General

Dated: March 9, 1983

In the Matter of the Proposed
Adoption of Rules of the Minnesota
Public Utilities Commission
Governing Cogeneration and
Small Power Production

AFFIDAVIT OF MAILING
NOTICE OF SUBMISSION TO THE
ATTORNEY GENERAL

DOCKET NO. E-000/R-80-560

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

Christopher K. Sandberg, being first duly sworn, deposes and says:

That on the 9th day of March, 1983, in the City of St. Paul, County of Ramsey, State of Minnesota, he served the attached Notice of Submission to the Attorney General by depositing in the State of Minnesota Central Mail System for United States mailing at said City of St. Paul, a copy thereof, properly enveloped, with postage prepaid, on all persons and associations who requested notice that the rules in the above-entitled matter have been submitted to the Attorney General.

Christopher K. Sandberg

Subscribed and sworn to before me
this 9th day of March, 1983.

Cecilia J. Loughrey

CECILIA J. LOUGHREY
NOTARY PUBLIC—MINNESOTA
RAMSEY COUNTY
My Comm. Expires July 18, 1987

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Terry Hoffman	Chairman
Leo G. Adams	Commissioner
Roger L. Hanson	Commissioner
Juanita R. Satterlee	Commissioner
Lillian Warren-Lazenberry	Commissioner

In the Matter of the Proposed Adoption of Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production	NOTICE OF SUBMISSION TO THE ATTORNEY GENERAL DOCKET NO. E-999/R-80-560

Pursuant to your request and in accordance with Minnesota Statutes, section 14.16:

PLEASE TAKE NOTICE that the above captioned rules have been submitted to the Office of the Attorney General on this date, March 9 , 1983, for review as to form and legality. Pursuant to 1 MCAR § 1.206 B., the Attorney General will not approve the rules for at least 10 calendar days after receipt to allow any person or association time to comment on the legality of the rules, after which that Office will complete its review. If you desire to comment on the legality of the above-captioned rules, you should direct your comments to the Office of the Attorney General, G-25 State Administration Building, 50 Sherburne Avenue, Saint Paul, Minnesota 55155, telephone (612) 296-7030. Please note that the above-cited rule of the Attorney General also provides that a copy of any written comments submitted to the Attorney General must be submitted simultaneously to this agency.

If you are interested in determining what changes, if any, were made in the proposed rules after the hearing and before submission to the Attorney General, you may contact Christopher K. Sandberg, at the Commission's office, 780 American Center Building, Kellogg and Robert Streets, Saint Paul, Minnesota 55101 or by telephone at (612) 296-2357.

The Commission has also issued an Order Adopting the Rules, which may be inspected during regular business hours at the Commission's office or may be purchased at a price of 25¢ a page for a total of $21.75 by contacting Mr. Sandberg.

Randall D. Young
Executive Secretary

MAR 9 1983

RDY:CKS:ST

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BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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Roger L. Hanson	Commissioner
Juanita R. Satterlee	Commissioner
Lillian Warren-Lazenberry	Commissioner

In the Matter of the Proposed Adoption of Rules of the Minnesota Public Utilities Commission Governing Cogeneration and Small Power Production	NOTICE OF SUBMISSION TO THE ATTORNEY GENERAL DOCKET NO. E-999/R-80-560

Pursuant to your request and in accordance with Minnesota Statutes, section 14.16:

PLEASE TAKE NOTICE that the above captioned rules have been submitted to the Office of the Attorney General on this date, March 9 , 1983, for review as to form and legality. Pursuant to 1 MCAR § 1.206 B., the Attorney General will not approve the rules for at least 10 calendar days after receipt to allow any person or association time to comment on the legality of the rules, after which that Office will complete its review. If you desire to comment on the legality of the above-captioned rules, you should direct your comments to the Office of the Attorney General, G-25 State Administration Building, 50 Sherburne Avenue, Saint Paul, Minnesota 55155, telephone (612) 296-7030. Please note that the above-cited rule of the Attorney General also provides that a copy of any written comments submitted to the Attorney General must be submitted simultaneously to this agency.

If you are interested in determining what changes, if any, were made in the proposed rules after the hearing and before submission to the Attorney General, you may contact Christopher K. Sandberg, at the Commission's office, 780 American Center Building, Kellogg and Robert Streets, Saint Paul, Minnesota 55101 or by telephone at (612) 296-2357.

The Commission has also issued an Order Adopting the Rules, which may be inspected during regular business hours at the Commission's office or may be purchased at a price of 25¢ a page for a total of $21.75 by contacting Mr. Sandberg.

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MAR 9 1983

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