

1 Minnesota Public Utilities Commission

2

3 Adopted Rules Governing Cogeneration and Small Power Production

4

5 Rules as Adopted

6 4 MCAR S 3.0450 Scope and purpose. The purpose of 4 MCAR SS
7 3.0450-3-0463 3.0462 is to implement certain provisions of Minn.
8 Stat. S 216B.164; the Public Utility Regulatory Policies Act of
9 1978, 16 United States Code, Section 824a-3 (Supplement III,
10 1979); and the Federal Energy Regulatory Commission regulations,
11 18 Code of Federal Regulations, Sections 292.101-292.602 (1981).
12 Nothing in 4 MCAR SS 3.0450-3-0463 3.0462 excuses any utility
13 from carrying out its responsibilities under these provisions of
14 state and federal law. Rules 4 MCAR SS 3.0450-3-0463 3.0462
15 shall at all times be applied in accordance with their intent to
16 give the maximum possible encouragement to cogeneration and
17 small power production consistent with protection of the
18 ratepayers and the public.

19 4 MCAR S 3.0451 Definitions.

20 A. Applicability. For purposes of 4 MCAR SS 3.0450-3-0463
21 3.0462, the following terms have the meanings given them.

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

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

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

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

3-31-83

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

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

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

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

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

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

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

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

1 qualifying facility as a nongenerating customer.

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

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

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

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

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

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

4 O- S. Qualifying facility. "Qualifying facility" means a
5 cogeneration or small power production facility which satisfies
6 the conditions established in 18 Code of Federal Regulations,
7 Section 292.101 (b) (1) (1981), as applied when interpreted in
8 accordance with the amendments to 18 Code of Federal
9 Regulations, Sections 292.201-292.207 adopted through 46 Federal
10 Register 33025-33027 (1981). The initial operation date or
11 initial installation date of a cogeneration or small power
12 production facility shall not prevent the facility from being
13 considered a qualifying facility for the purposes of 4 MCAR SS
14 3.0450-3-0463 3.0462 if it otherwise would satisfy all stated
15 conditions.

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

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

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

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

30 F- X. Utility. "Utility" means any public utility subject
31 to rate regulation by the commission engaged in the generation,
32 transmission, or distribution of electricity in Minnesota--The
33 term--includes, and any cooperative electric associations
34 association and municipally-owned electric utilities utility not
35 subject to rate regulation by the commission which becomes
36 interconnected with a qualifying facility.

1 4 MCAR S 3.0452 Filing requirements.

2 A. Filing dates. Within 60 days after the effective date of
 3 4 MCAR SS 3.0450-3-0463 3.0462, on January 1, ~~1983~~ 1984, and
 4 every 12 months thereafter, each utility shall file with the
 5 commission, for its review and approval, a cogeneration and
 6 small power production tariff which. The tariff for generating
 7 utilities shall contain Schedules A through F or, if applicable,
 8 Schedules A through D plus Schedules F and G, except that
 9 generating utilities with less than 500 million kilowatt-hour
 10 sales in the calendar year preceeding the filing may substitute
 11 their retail rate schedules for Schedules A and B. The tariff
 12 for nongenerating utilities shall contain Schedules C, D, F, and
 13 G, and may, at the option of the utility, contain Schedules A
 14 and B, using data from the utility's wholesale supplier.

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

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

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

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

1 next ten years, including:

2 a. Name of unit;

3 b. Nameplate rating;

4 c. Fuel type;

5 d. In-service date;

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

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

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

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

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

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

21 a. Year of the purchase;

22 b. Name of the seller;

23 c. Number of kilowatts of capacity to be purchased;

24 d. Capacity cost in dollars per kilowatt; and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1 utility offices during normal business hours.

2 4 MCAR S 3.0453 Reporting requirements.

3 A. General requirements. Each utility which is
4 interconnected with a qualifying facility shall provide the
5 commission with the following information on or before November
6 1, ~~1982, and at any other such times~~ 1983, on January 1, 1986,
7 and every two years thereafter, and in any such form as the
8 commission may require.

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

12 1. a summary of the total number of interconnected
13 qualifying facilities, the type of interconnected qualifying
14 facilities by energy source, and the name plate ratings of such
15 units;

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

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

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

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

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

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

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

1 facilities.

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

5 F. Effectiveness. The utility ~~shall~~ may provide a statement
6 of the effectiveness of Minn. Stat. S 216B.164 and 4 MCAR SS
7 3.0450-3-~~0463~~ 3.0462 in encouraging cogeneration and small power
8 production, as observed by the utility.

9 4 MCAR S 3.0454 Conditions of service.

10 A. Requirement to purchase. The utility shall purchase
11 energy ~~or~~ and capacity from any qualifying facility which offers
12 to sell energy to the utility and agrees to the conditions set
13 forth in 4 MCAR SS 3.0450-3-~~0463~~ 3.0462.

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

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

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

30 E. Liability insurance. A utility or qualifying facility
31 ~~shall not~~ may require proof of coverage or the procurement of a
32 reasonable amount of liability insurance up to \$300,000 as a
33 condition of service.

34 F. Legal status not affected. Nothing in 4 MCAR SS 3.0450-
35 3-~~0463~~ 3.0462 affects the responsibility, liability, or legal
36 rights of any party under applicable law or statutes. No party

1 shall require the execution of an indemnity clause or hold
 2 harmless clause in the written contract as a condition of
 3 service.

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

- 7 1. be made at the time the costs are incurred; or
- 8 2. ~~be amortized over the life of the contract; or~~
- 9 3. be made according to any schedule agreed upon by the
 10 qualifying facility and the utility.

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

14 I. Metering. The utility shall meter the qualifying
 15 facility to obtain the data necessary to fulfill its reporting
 16 requirements to the commission as specified in 4 MCAR S 3.0453.
 17 The qualifying facility shall pay for the requisite metering as
 18 an interconnection cost ~~unless the qualifying facility is~~
 19 ~~operating under net energy billing; in that case, the utility~~
 20 ~~shall provide the second meter without cost to the qualifying~~
 21 ~~facility.~~

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

26 K. Interconnection plan. The utility may, ~~prior to~~
 27 ~~interconnection,~~ require the qualifying facility to submit an
 28 interconnection plan not more than 30 days prior to
 29 interconnection in order to facilitate interconnection
 30 arrangements. If such a plan is required, it shall include no
 31 more than:

- 32 1. technical specifications of equipment;
- 33 2. proposed date of interconnection; and
- 34 3. projection of net output or consumption by the
 35 qualifying facility when available.

36 4 MCAR S 3.0455 Rates for sales.

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

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

10 4 MCAR S 3.0456 Standard rates for purchases.

11 A. General. For qualifying facilities with capacity of 100
12 kilowatts or less, standard rates apply. Qualifying facilities
13 with capacity of more than 100 kilowatts may negotiate contracts
14 with the utility or may be compensated under standard rates if
15 they make commitments to provide firm electric power. The
16 utility shall make available three types of standard rates,
17 described in B., C., and D. The qualifying facility shall
18 choose interconnection under one of these rates, and shall
19 specify its choice in the written contract required in 4 MCAR S
20 3.0454 B. Any net credit to the qualifying facility shall, at
21 its option, be credited to its account with the utility or
22 returned by check within 15 days of the billing date. The
23 option chosen shall be specified in the written contract
24 required in 4 MCAR S 3.0454 B. Qualifying facilities remain
25 responsible for any monthly service charges and demand charges
26 specified in the tariff under which they consume electricity
27 from the utility.

28 B. Net energy billing rate.

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

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

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

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

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

15 C. Simultaneous purchase and sale billing rate.

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

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

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

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

1 shown on Schedule G;

2 b. If the qualifying facility provides firm power to
3 the utility, the capacity component shall be the utility's net
4 annual avoided capacity cost per kilowatt-hour averaged over all
5 hours as calculated according to 4-MCAR-S-3:0452-C.4.-or-C.5.-as
6 appropriate; or if the purchasing utility is nongenerating, the
7 capacity component shall be the capacity cost per kilowatt shown
8 on Schedule G, divided by the number of hours in the billing
9 period shown on Schedule B; or if the generating utility has not
10 filed Schedule B, the capacity component shall be the demand
11 charge per kilowatt (if any) of the retail rate schedule,
12 applicable to the qualifying facility, filed in lieu of
13 Schedules A and B, divided by the number of hours in the billing
14 period; or if the nongenerating utility has not filed Schedule
15 B, the capacity component shall be the capacity cost per
16 kilowatt shown on Schedule G, divided by the number of hours in
17 the billing period. If the qualifying facility does not provide
18 firm power to the utility, no capacity component shall be
19 included in the compensation paid to the qualifying facility.

20 D. Time-of-day purchase rates.

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

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

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

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

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

12 b. If the qualifying facility provides firm power to
13 the utility, the capacity component shall be the utility's net
14 annual avoided capacity cost per kilowatt-hour averaged over the
15 on-peak hours as calculated-according-to-4-MCAR-S-3.0452-E.4--or
16 E.5--as-appropriate shown on Schedule B; or if the purchasing
17 utility-is-nongenerating,--the-capacity-cost-per-kilowatt-shown
18 on-Schedule-G,--divided-by-the-number-of-hours-in-the-billing
19 period generating utility has not filed Schedule B, the capacity
20 component shall be the demand charge per kilowatt (if any) of
21 the retail rate schedule, applicable to the qualifying facility,
22 filed in lieu of Schedules A and B, divided by the number of
23 on-peak hours in the billing period; or if the nongenerating
24 utility has not filed Schedule B, the capacity component shall
25 be the capacity cost per kilowatt shown on Schedule G, divided
26 by the number of on-peak hours in the billing period. The
27 capacity component shall apply only to deliveries during on-peak
28 hours. If the qualifying facility does not provide firm power
29 to the utility, no capacity component shall be included in the
30 compensation paid to the qualifying facility.

31 4 MCAR S 3.0457 Negotiated rate for purchases.

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

1 energy costs.

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

6 1. The capacity factor of the qualifying facility;

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

8 3. The length of the contract term;

9 4. Reasonable scheduling of maintenance;

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

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

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

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

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

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

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

29 4 MCAR S 3.0458 Utility treatment of costs. All purchases from
30 qualifying facilities with capacity of 100 kilowatts or less,
31 and purchases of energy from qualifying facilities with capacity
32 of over 100 kilowatts shall be considered an energy cost in
33 calculating an electric utility's fuel adjustment clause.

34 4 MCAR S 3.0459 Wheeling and exchange agreements. For all
35 qualifying facilities with capacity of 30 kilowatts or greater,

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

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

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

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

22 4 MCAR S 3.0460 Disputes. In case of a dispute between an
23 electric a utility and a qualifying facility or an impasse in
24 the negotiations between them, either party may request the
25 commission to determine the issue. When the commission makes
26 the determination, the burden of proof shall be on the utility.

27 4 MCAR S 3.0461 Notification to customers.

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

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

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

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

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

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

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

12 2. A statement of technical requirements;

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

15 4. Pertinent rate schedules;

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

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

22 4 MCAR S 3.0462 Interconnection guidelines.

23 A. Denial of interconnection application. Except as
24 hereinafter provided, a utility shall interconnect with a
25 qualifying facility that offers to make energy or capacity
26 available to the utility. The utility may refuse to
27 interconnect a qualifying facility with its power system until
28 the qualifying facility has properly applied under 4 MCAR S
29 3.0454 K. and has received approval from the utility. The
30 utility shall withhold approval only for failure to comply with
31 applicable utility rules not prohibited by 4 MCAR SS
32 3.0480-3.0562, or governmental rules or laws. The utility shall
33 be permitted to include in its contract reasonable technical
34 connection and operating specifications for the qualifying
35 facility.

36 B. Notification of telephone utility and cable television

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

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

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

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

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

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

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

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

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

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

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

27 ~~4-MCAR-S-3.0463-Existing-contracts.--Any-interconnection~~
28 ~~contracts-executed-between-a-utility-and-a-qualifying-facility~~
29 ~~before-the-effective-date-of-4-MCAR-SS-3.0450-3.0463-may,-at-the~~
30 ~~option-of-either-party,-be-canceled-and-replaced-by~~
31 ~~interconnection-contracts-under-4-MCAR-SS-3.0450-3.0463.~~