CEDARBURG LIGHT & WATER COMMISSION

Parallel Generation (20 kW or less) -- Net Energy Billing

1. Effective In

   All territories served by the utility.

2. Availability

   Available for single-phase and three-phase customers where a part or all of the electrical requirements of the customer are supplied by the customer's generating facilities, where such facilities have a total generating capability of 20 kW or less, where such facilities are connected in parallel with the utility and where such facilities are approved by the utility.

3. Rate

   The customer shall be billed monthly on a net energy basis and shall pay the fixed charge and energy charge specified in the rate schedule under which he is served. If, in any month, the customer's bill has a credit balance of $25 or less, the amount shall be credited to subsequent bills until a debit balance is reestablished. If the credit balance is more than $25, the utility shall reimburse the customer by check upon request. Monthly credits shall be computed by taking the net excess kilowatt-hours produced times the sum of the applicable energy charge plus monthly power cost adjustment clause (PCAC).

4. Metering and Services Facilities

   A customer who is served under a regular rate schedule shall have any ratchet and/or other device removed from his meter to allow reverse power flow and measurement of net energy used. Customers eligible for net energy billing but with existing metering facilities equipped with ratchets or other devices preventing reverse registration (i.e. time-of-use metering facilities) may request that the utility install the necessary metering to permit such billing.

5. Customer Obligation

   See Pgs-2 Sections 10 and 11.

CEDARBURG LIGHT & WATER COMMISSION

Customer-Owned Generation Systems (Greater than 20 kW)

1. Effective In

   All territories served by the utility

2. Availability

   Available for single-phase and three-phase customers where a part or all of the electrical requirements of the customer are supplied by the customer's generating facilities, where such facilities have a total generating capability of greater than 20 kW and less than or equal to 100 kW, where such facilities are connected in parallel with the utility. Customers not desiring to sell energy under this rate have the right to negotiate a buy-back rate.

   The energy rate indicated below is the minimum for electrical energy. Customers with generating facilities greater than 100 kW can negotiate a buy-back rate. Should the utility be unwilling to pay the minimum rate for electrical energy, the utility shall agree to transport such electrical energy to another utility that will pay such minimum rate. The utility shall recover actual costs of such transportation from the generating customer.

3. Rate

   Customers shall receive monthly payments for all electricity delivered to the utility and shall be billed by the utility for metering and associated billing expenses specified in the latest rates of the wholesale supplier unless the latest rates of the wholesale supplier do not properly reflect avoided costs. In such event, the Commission, upon request, may determine appropriate rates. The utility shall have on file a copy of the latest customer-owned generation system rates for its wholesale supplier.

4. On-Peak and Off-Peak Hours and Holidays

   On-peak and off-peak hours and holidays are those specified in the wholesale suppliers latest rates.

5. Minimum Charge

   The monthly minimum charge paid by the customer shall be the customer charge.

6. Power Factor

   The customer shall operate on a net power factor of not less than 90 percent.

Customer-Owned Generation Systems (Greater than 20 kW) continued

7. Negotiated Rates

Customers with generation systems greater than 100 kW can negotiate a buy-back rate.

Customers with generation systems greater than 20 kW and less than or equal to 100 kW have the right to negotiate a buy-back rate. The buy-back rate cannot be greater than the full avoided cost.

The following are the required procedure guidelines:

a. The utility must respond to the customer-owned generating system within 30 days of the initial written receipt of the customer-owned generating system proposal and within 30 days of receipt of a subsequent customer-owned generating system proposal,

b. The utility's rejection of the customer-owned generating system proposal must be accompanied by a counter-offer relating to the specific subject matter of the customer-owned generating system proposal, and

c. If the utility is unable to respond to the customer-owned generating system proposal within 30 days it shall inform the customer-owned generating system of:

   1) Specific information needed to evaluate the customer-owned generating system proposal.

   2) The precise difficulty encountered in evaluating the customer-owned generating system proposal.

   3) The estimated date that it will respond to the customer-owned generating system proposal.

d. The Commission may become involved in the utility negotiations upon showing by either utility or the customer-owned generating system that a reasonable conclusion cannot be reached under the above guidelines. The Commission may provide a waiver to the guidelines and order new negotiation requirements so that a reasonable conclusion can be reached.

e. A copy of all negotiated buy-back rates shall be sent to the Commission. These rates shall not be effective until the contract is placed on file at the Commission.

8. Charges for Energy Supplied by the Utility

Energy supplied by the utility to the customer shall be billed in accordance with the standard applicable rate schedules of the utility.

CEDARBURG LIGHT & WATER COMMISSION

Customer-Owned Generation Systems (Greater than 20 kW) continued

9. Maintenance Rate

A customer-owned generation facility may be billed lower demand charges for energy purchased during scheduled maintenance provided written approval is obtained in advance from the utility. Demand charges other than "Customer Demand" shall be prorated if maintenance is scheduled such that the utility does not incur additional capacity costs. Said probation shall be the demand charge times the number of authorized days of scheduled maintenance divided by the number of days in the billing period.

10. Contract Required

A contract is required between the utility and the customer-owned generation facility. The contract shall specify safety, system protection, and power quality rules that generators must comply with. The contract shall require a minimum of $100,000 liability insurance or proof of financial responsibility for the customer-owned generation system. Contracts with customer-owned generation facilities selling energy under the standard (non-negotiated) rate have no specific term or length. Contracts with customer-owned generation facilities selling energy under a negotiated rate shall contain performance requirements and be of sufficient length to ensure the utility avoids the costs for which the customer-owned generation facility has been paid.

11. Customer Obligation

a. Metering Facilities

The customer shall furnish, install and wire the necessary service entrance equipment, meter sockets, meter enclosure cabinets, or meter connection cabinets that may be required by the utility to properly meter usage and sales to the utility.

b. Interconnection Costs

The owner of the generating facility shall be required to pay all interconnection costs, including metering, incurred by the utility. The owner shall pay said costs, including financing costs, within two years of the installation date of the interconnection facilities.

c. Liability Insurance

The owner of the generating facility shall be required to have liability insurance on the generating facility of at least $100,000 or be able to prove financial responsibility.

CEDARBURG LIGHT & WATER COMMISSION

Customer-Owned Generation Systems (Greater than 20 kW) continued

d. Interconnection and Operation (Safety and Power Quality) Requirements

Electric Service to a customer-owned electric generation installation may be disconnected for failure to comply with these requirements.

1) Interconnection of a generating facility with the utility system shall not be permitted until application has been made to and approval received from the electric utility. The utility may withhold approval only for good reason such as failure to comply with applicable utility or governmental rules or laws. The utility shall require a contract specifying reasonable technical connection and operating aspects for the parallel generating facility.

2) The utility may require that for each generating facility there is provided between the generator or generators and the utility system, a lockable load-break disconnect switch. For installations interconnected at greater 600 volts a fused cutout switch may be substituted, where practicable. The switches shall be accessible to the utility for the purpose of isolating the parallel generating facility from the utility system when necessary.

3) The utility shall require a separate distribution transformer for a customer having a generating facility where necessary, for reasons of public and employee safety or where the potential exists for the generating facility causing problems with the service of other customers. Ordinarily the requirement should not be necessary for an induction-type generator with a capacity of 5 kW or less, or other generating units of 10 kW or less that utilize line-connected inverters.

4) Where necessary, to avoid the potential for a facility causing problems with the service of other customers, the utility should limit the capacity and operating characteristics of single-phase motors. Ordinarily single-phase generators should be limited to a capacity of 10 kW or less.

5) The utility shall require that each generating facility have a system for automatically isolating the generator from the utility's system upon loss of the utility supply, unless the utility desires that the local generation be continued to supply isolated load. For synchronous and induction generators such protection against continued operation when isolated from the utility system will ordinarily consist of over-current protection, fuse or circuit breaker, plus a voltage or frequency controlled contractor which would automatically disconnect the unit whenever its output voltage or frequency drifted outside predetermined limits, such as plus or minus 10 percent of the rated values.

Customer-Owned Generation Systems (Greater than 20 kW) continued

Other suitable protective systems against abnormal voltages of frequencies may be accepted by the utility.

6) The utility shall require that the customer discontinue parallel generation operation when it so requests and the utility may isolate the generating installation from its system at times:

   a) When considered necessary to facilitate maintenance or repair of utility facilities.

   b) When considered necessary during system emergencies.

   c) When considered necessary during such times as the generating facility is operating in a hazardous manner, or is operating such that it adversely affects service to other customers or to nearby communication systems or circuits.

7) The owner of the generating facility shall be required to make the equipment available and permit entry upon the property by electric and communication utility personnel at reasonable times for the purposes of testing isolation and protective equipment, and evaluating the quality of power delivered to the utility's system; and testing to determine whether the local generating facility is the source of any electric service or communication systems problems.

8) The power output of the generating facility shall be maintained such that the frequency and voltage are compatible with normal utility service and do not cause that utility service to fall outside the prescribed limits of Commission rules and other standard limitations.

9) The generating facility shall be operated so that variations from acceptable voltage levels and other service impairing disturbances do not result in adverse effects on the service or equipment of other customers, and in a manner that does not produce undesirable levels of harmonics in the utility power supply.

10) The owner of the generating facility shall be responsible for providing protection for the owner's installation equipment and for adhering to all applicable national, state and local codes. The design and configuration of certain generating equipment such as that utilizing line-commutated inverters sometimes requires an isolation transformer as part of the generating installation for safety and for protection of generating facilities.

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Customer-Owned Generation Systems (Greater than 20 kW) continued

12. Utility Obligation

    a. Metering Facilities

    The utility shall install appropriate metering facilities to record all flows of energy necessary to bill in accordance with the charges and credits of the rate schedule.

    b. Notice to Communication Firms

    Each electric utility shall notify telephone utility and cable television firms in the area when it knows that customer-owned generating facility is to be interconnected with its system. This notification shall be as early as practicable to permit coordinated analysis and testing in advance of interconnection, if considered necessary by the electric or telephone utility or cable television firm.

13. Right to Appeal

    The owner of the generating facility interconnected or proposed to be interconnected with a utility system may appeal to the Commission should any requirement of the utility service rules filed in accordance with the provisions of Wis. Admin. Code § PSC 113.70, or the required contract be considered to be excessive or unreasonable. Such appeal will be reviewed and the customer notified of the Commission's determination.