

RULE NO. 22

**COGENERATION AND SMALL POWER PRODUCTION
INTERCONNECTION STANDARDS**

- A. General. This rule sets forth requirements and conditions for interconnected non-City-owned generation where such generation may be connected for (1) parallel operation with the service of the City or (2) isolated operation with standby or breakdown service provided by the City. For purposes of this rule, the interconnecting entity shall be designated the Producer.
- B. Conditions.
1. A Contract executed by the City and the Producer shall be required for interconnected service. Terms for the purchase of power by the City if applicable, shall be included therein.
 2. Interconnection with the City's system shall not be made until and unless the City has determined that the interconnection complies with the design and operating requirements set forth herein.
 3. Where interconnection protective equipment is owned, operated and/or maintained by the Producer, the Producer shall be responsible for damages to the City and/or to others arising from the misoperation or malfunction of the Producer-owned equipment.
 4. The Producer is solely responsible for providing adequate protection for the Producer's facilities interconnected with the City's system.
- C. Design and Operating Requirements. Each generation facility which is or can be connected to the City's electric system shall be designed and operated so as to prevent or protect against the following adverse conditions on the City's system. These conditions can cause harm to persons, equipment damage, or electric service degradation:
1. Inadvertent and unwanted reenergizing of a utility dead line or bus.
 2. Interconnection while out of synchronization.
 3. Overcurrent.
 4. Utility system load imbalance.
 5. Ground faults.
 6. Generated alternating current frequency outside permitted safe limits.
 7. Voltage generated outside permitted limits.

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8. Poor power factor.
9. Harmful wave forms.

The necessary protective equipment (relays, switchgear, transformers, etc.) shall be provided by the Producer or by the City at the Producer's expense.

Explanatory information, operating rules and guidelines for meeting the above requirements for Qualifying Facilities 100 kilowatts or less and Qualifying Facilities between 100 and 1000 kilowatts are contained in the City's Non-Firm Energy Contract and Non-Firm Capacity and Energy Contract. Qualifying Facilities larger than 1000 kilowatt will have operating rules and interconnection standards as determined by the City when the Producer submits plans and specifications to the City. Copies of said Contracts are available from the City.

D. Interconnection Facilities.

1. Interconnection facilities include all required means, and apparatus installed, to interconnect the Producer's generation with the City's system. Where the Producer desires to sell power to the City, interconnection facilities include all required means, and apparatus installed, to enable the City to receive power deliveries from the Producer. Interconnection facilities may include, but are not limited to:
 - a. Connections, transformations, switching, communications, control, protective and safety equipment, accessible visual disconnects; and
 - b. Any necessary reinforcements and additions to the City's system by the City at the Producer's cost.
2. Where interconnection facilities are to be installed for the Producer's use as added facilities, the Producer shall advance to the City the installed cost of the added facilities. At the Producer's option, and where such Producer's generation is a qualifying facility (as defined by the Public Utilities Regulatory Policies Act of 1978) and the Producer has established credit worthiness to the City's satisfaction, the City shall finance those added facilities it deems to be removable and reusable equipment. Such equipment shall include, but not be limited to, transformation, disconnection, and metering equipment. Added facilities provided under either of the foregoing arrangements are subject to the monthly charge as set forth in Section I of the City's Rule No. 2, Description of Service.

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3. When a Producer wishes to reserve facilities paid for by the Producer, but idled by an energy sale conversion, the City shall impose a special facilities charge reimbursing the City for costs related to its operation and maintenance of the facility. When a Producer no longer needs facilities for which it has paid, the Producer shall, at a minimum, receive from the City credit for the net salvage value of the facilities dedicated to City use. If the City is able to make use of these facilities to serve other customers, the Producer shall receive the fair market value of the facilities determined as of the date the Producer either decides no longer to use the facilities or fails to pay the required maintenance fee.
 4. The Producer shall be responsible for all costs for all of the feasibility studies for any interconnection project with the City system, including reasonable advance charges imposed by the City for such feasibility studies.
 5. An interconnection line study for any Producer shall take no more than one year to complete by the City.
 6. The Producer shall be responsible for costs of telemetering and safety checks except to the extent that, under the City's effective tariffs, a comparable customer would not be similarly charged.
 7. The City shall, upon request, give the Producer a binding estimate for line extension and interconnection costs; however, such estimates shall be in effect for a period not to exceed one year from the date provided. A reasonable breakdown of cost estimates shall also be provided in a form sufficiently detailed and understandable by the Producer.
 8. The City shall have the right to inspect the Producer's interconnection facilities prior to the commencement of parallel operations and require modifications as necessary.
 9. The site of interconnection facilities shall be accessible to City personnel.
- E. Interconnection Reinforcement and/or Additions. The City's effective tariffs governing interconnection costs and added or special facilities agreements shall be applied to line and system reinforcement and/or additions. In addition, the following shall apply:
1. A Producer shall pay for new or additional line capacity if necessary for the City to receive the Producer's power.

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2. For two or more Producers seeking to use an existing line, a first come, first served approach shall be used. This approach shall require that the first Producer to request an interconnection shall, pursuant to written agreement, have the right to use the existing line and shall incur no obligation for costs associated with future line capacity needed to accommodate other Producers or customers. The Producer's application for cogeneration facilities and interconnection to the City's facilities shall specify the date by which the Producer must begin construction. If that date passes and construction has not commenced, the Producer shall be given 30 days to correct the deficiency after receiving a reminder from the City that the construction start-up date has passed. If construction has not commenced after the 30-day corrective period, the City shall have the right to withdraw its commitment to the first Producer and offer the right to interconnect on the existing line to the next Producer in order. If two Producers establish the right of first-in-time simultaneously, the two Producers shall share the costs of any additional line capacity necessary to facilitate their cumulative capacity requirements. Costs shall be shared based on the relative proportion of capacity each Producer will add to the line.
3. The Producer shall be responsible for the costs of only those future system alterations which are necessary to maintain the interconnection standards for the Producer's particular interconnection facilities. The relevant interconnection standards shall be those in effect at the time the contract is signed. Should such alterations not be directly required by, or beneficial to the Producer, the Producer shall be treated like any other customer on the City's system.

F. Metering.

1. If the Producer desires to sell electric power to the City, the City shall provide, own and maintain at the Producer's expense all necessary meters and associated equipment to be utilized for the measurement of energy and capacity for determining the City's payment to the Producer pursuant to an applicable contract.
2. For purposes of monitoring generator operation and determination of standby charges, the City shall have the right to install generation metering at the Producer's expense. Where the Producer's generation is 1 MW or greater, telemetering equipment may also be required at the Producer's expense.
3. The Producer shall provide, at no expense to the City, a suitable location for all meters and associated equipment in accordance with Rule No. 16.

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4. Where necessary the City and the Producer shall agree on an appropriate compensation method for transformer losses as specified in the contract.
5. The City shall install a ratchet device or equivalent so as to prevent reverse operation on the meter(s) recording power provided by the City, and where appropriate in each of the following cases on, (i) the meter(s) recording reactive demand imposed on the City's electric system, and (ii) the meter(s) recording power purchased by the City.
6. Provision for meter tests and adjustments of bills or payments to the Producer for meter error shall be consistent with Rule No. 17.