

D9. Parallel Generation-Rules**PGXM**PARALLEL GENERATION RULES

The following rules shall apply to all customer owned generation facilities that are interconnected with the company's power supply:

1. Interconnection of a generating facility with the company shall not be permitted until application has been made to and approval received from the company. The company may withhold approval for good reason such as failure to comply with applicable utility or governmental rules or laws. The company shall require a contract specifying reasonable technical connection and operating aspects for the parallel generating facility.
2. The company may require that for each generating facility there be provided between the generator or generators and the company system a lockable load-break disconnect switch. For installations interconnected at greater than 600 volts a fused cutout switch may be substituted, where practicable. The switches shall be accessible to the company for the purpose of isolating the parallel generating facility from the company system when necessary.
3. The company shall require a separate distribution transformer for a customer having a generating facility where necessary, for reasons of public or employee safety or where the potential exists for the generating facility causing problems with the service of other customers. Ordinarily this 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-commutated inverters.
4. Where necessary, to avoid the potential for a facility causing problems with the service of other customers, the company shall limit the capacity and operating characteristics of single-phase generators in a manner consistent with its existing limitations for single-phase motors. Ordinarily single-phase generators should be limited to a capacity of 10 Kw or less.
5. The company shall require that each generating facility have a system for automatically isolating the generator from the company's system upon loss of the company supply, unless the company 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 company system will ordinarily consist of overcurrent protection, fuse or circuit breaker, plus a voltage or frequency controlled contactor which would automatically disconnect the unit whenever its output voltage or frequency drifted outside predetermined limits, such as plus or minus 10% of the rated values. Other suitable protective systems against abnormal voltages or frequencies may be accepted by the company.

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6. The company shall require that the customer discontinue parallel generation operation when it so requests and the company may isolate the generating installation from its system at times:
 - a. When considered necessary to facilitate maintenance or repair of company 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 company 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 company'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 frequency and voltage are compatible with normal company service and do not cause that company 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 which does not produce undesirable levels of harmonics in the company power supply.
10. The owner of the generating facility shall be responsible for providing protection for the owner's installed 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 the generating facilities.

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11. The owner of a generating facility interconnected or proposed to be interconnected with the company system may appeal to the commission should any requirement of the company service rules filed in accordance with the provisions of PSC 113.70 be considered to be excessive or unreasonable. Such appeal will be reviewed and the customer notified of the commission's determination.
12. The company will 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. The owner of the generating facility shall be required to pay all interconnection costs, including any metering transformers, incurred by the company. Said costs, including financing costs, shall be paid by the owner within two years of the installation date of the interconnection facilities.
14. 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.
15. Electric service to a customer owned electric generation installation may be disconnected for failure to comply with these parallel generation rules.

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