

PSC No: 20 - Electricity  
Rochester Gas and Electric Corporation  
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## GENERAL INFORMATION

### 14. DISTRIBUTED GENERATION INTERCONNECTION REQUIREMENTS (cont'd)

#### E. Power Quality

The maximum harmonic limits for electrical equipment shall be in accordance with IEEE 519. The objective of IEEE 519 is to limit the maximum individual frequency voltage harmonic to 3% of the fundamental frequency and the voltage Total Harmonic Distortion (THD) to 5% on the utility side of the PCC. In addition, any voltage fluctuation resulting from the connection of the customer's energy producing equipment to the utility system must not exceed the limits defined by the maximum permissible voltage fluctuations border line of visibility curve, Figure 10.3 identified in IEEE 519. This requirement is necessary to minimize the adverse voltage effect upon other customers on the utility system.

#### F. Power Factor

If the average power factor, as measured at the PCC, is less than 0.9 (leading or lagging), the method of power factor correction necessitated by the installation of the generator will be negotiated with the utility as a commercial item.

Induction power generators may be provided VAR capacity from the utility system at the generator-owner's expense. The installation of VAR correction equipment by the generator-owner on the generator-owner's side of the PCC must be reviewed and approved by the interconnecting utility prior to installation.

#### G. Islanding

Generation interconnection systems must be designed and operated so that islanding is not sustained on utility distribution circuits. The requirements listed in this document are designed and intended to prevent islanding.

#### H. Test Requirements

This section describes two separate and distinct tests, which together constitute the necessary and sufficient SIR testing requirements. The first test is the design test and the second is the verification test. The purpose of the design test is to ensure that devices and systems used in a proposed application meet the necessary technical and functional requirements. The purpose of the verification test is to ensure that the devices and systems, which have displayed conformance with the design testing requirements, have been properly installed and are operating properly following installation at the site.

Two paths are possible to the achievement of an accepted installation. The first path requires that the design test and verification test methodologies be reviewed and accepted by the utility. The second path allows the design test and the verification test procedure to be reviewed and conducted by an independent testing laboratory. The second path is referred to as type testing. Type testing is performed or witnessed once by a nationally recognized independent testing laboratory for a specific protection device or system and the results recorded in the document included as Appendix A. Once the device or system meets the type test criteria described in this section, the design and verification test procedure is accepted by all New York State utilities. If any changes are made to the hardware, software, firmware, or the verification test procedure, the manufacturer must notify the independent testing laboratory to determine what, if any, parts of the type-testing must be repeated (this includes modifications to devices already in service). Failure of the manufacturer to notify the independent test laboratory of changes may result in withdrawal of approval and disconnection of units installed since the change was made. Utility grade relays, as defined in the Glossary of Terms, need not be type tested per the requirements of this section. Manufacturers may elect to have systems comprised of

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