

PSC NO: 220 ELECTRICITY
 NIAGARA MOHAWK POWER CORPORATION
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GENERAL INFORMATION

53. STANDARDIZED INTERCONNECTION REQUIREMENTS AND APPLICATION PROCESS FOR NEW DISTRIBUTED GENERATORS 2 MW OR LESS CONNECTED IN PARALLEL TO UTILITY DISTRIBUTION SYSTEMS (Continued)

As a result, protection requirements can not be standardized according to any single criteria.

Minimum protective function requirements shall be as detailed in the table below. ANSI C37.2, Electric Power System Device Function Numbers, are listed with each function.

| Synchronous Generators | Induction Generators | Inverters |
|--|--|--|
| Over/Under Voltage (Function 27/59) | Over/Under Voltage (Function 27/59) | Over/Under Voltage (Function 27/59) |
| Over/Under Frequency (Function 81O/81U) | Over/Under Frequency (Function 81O/81U) | Over/Under Frequency (Function 81O/81U) |
| | | Anti-Islanding Protection |

The need for additional protective functions shall be determined by the utility on a case-by-case basis. If the utility determines a need for additional functions, it shall notify the generator-owner in writing of the requirements. The notice shall include a description of the specific aspects of the utility system that necessitate the addition, and an explicit justification for the necessity of the enhanced capability. The utility shall specify and provide settings for those functions that the utility designates as being required to satisfy protection practices. Any protective equipment or setting specified by the utility shall not be changed or modified at any time by the generator-owner without written consent from the utility.

The generator-owner shall be responsible for ongoing compliance with all applicable local, state, and federal codes and standardized interconnection requirements as they pertain to the interconnection of the generating equipment. Protective devices shall utilize their own current transformers and potential transformers and not share electrical equipment associated with utility revenue metering.

A failure of the generator-owner's protective devices, including loss of control power, shall open the automatic disconnect device, thus disconnecting the generation from the utility system. A generator-owner's protection equipment shall utilize a non-volatile memory design such that a loss of internal or external control power, including batteries, will not cause a loss of interconnection protection functions or loss of protection set points.

All interface protection and control equipment shall operate as specified independent of the calendar date.

6. Metering

The need for additional revenue metering or modifications to existing metering will be reviewed on a case-by-case basis and shall be consistent with metering requirements adopted by the Commission.

Any incremental metering costs are included in interconnection costs that may be required of an applicant. (As described in Section C, Step 6, net metered Solar, Farm Waste, Farm Wind (25 kW or Less) and Residential-Wind customer-generators are only required to contribute to the cost of dedicated transformer(s) and other safety equipment, and Farm Wind and Non-Residential Wind customer-generators with systems of 25 kW and larger are only responsible for payment of one-half of interconnection costs other than dedicated transformer(s) and other safety equipment).

Issued by Thomas B. King, President, Syracuse, New York