

PSC No: 20 - Electricity
Rochester Gas and Electric Corporation
Initial Effective Date: June 1, 2003

Leaf No. 137
Revision: 0
Superseding Revision:

GENERAL INFORMATION

14. DISTRIBUTED GENERATION INTERCONNECTION REQUIREMENTS (cont'd)

Waveform 2: A 100% of rated voltage (120 V rms) 60 Hz sinusoidal that drops in voltage to 88 % of rated (105 V rms) for 120 cycles beginning and ending at a zero crossing and resuming to 100% of rated voltage (120 V rms) for five minutes.

Waveform 3: A 100% of rated voltage (120 V rms) 60 Hz sinusoidal that rises in voltage to 111% of rated (133 V rms) for 120 cycles beginning and ending at a zero crossing and resuming to 100% of rated voltage (120 V rms) for five minutes.

Waveform 4: A 100% of rated voltage (120 V rms) 60 Hz sinusoidal that rises in voltage to 138 % of rated (166 volts) for two (2) cycles beginning and ending at a zero crossing and resuming to 100% of rated voltage (120 V rms) for five minutes.

Waveform 5: A 100% of rated voltage (120 V rms) 60 Hz sinusoidal that drops in frequency at a rate of 0.2 Hz/second to 59.2 Hz for six (6) cycles beginning and ending at a zero crossing and then returning to 60 Hz at a rate of 0.2 Hz/second for five minutes.

Waveform 6: A 100% of rated voltage (120 V rms) 60 Hz sinusoidal that rises in frequency at a rate of 0.2 Hz/second to 60.5 Hz for six (6) cycles beginning and ending at a zero crossing and then returning to 60 Hz at a rate of 0.2 Hz/second for five minutes.

b. Three-Phase Inverters and Relays

Non-Volatile Memory Test: Prior to waveform testing, all batteries shall be disconnected or removed for a minimum of ten (10) minutes. If the system requires no battery, then the device shall be disconnected from its source of power for a minimum of ten (10) minutes. This test is to verify the system has a non-volatile memory and that the protection settings are not lost. A test shall also be performed to determine that failure of any battery used in the power conversion and control process and not used to supply trip power will result in an automatic shutdown.

Waveform Testing: Each three-phase waveform test shall be repeated ten (10) times. Failure to trip for any one run constitutes failure of the test.

Reset Timer Test: These tests shall also verify the inverter or power producing facility shall not automatically reconnect to the waveform generator until after five (5) minutes of continuous normal voltage and frequency. The manufacturer may supply a special production sample with the five-minute reset timer disabled to eliminate waiting time during type testing. At least three tests must be performed on a sample with a five minute reset timer to verify the function and accuracy of the timer. The test will be considered a failure if, in any one of the tests, the inverter automatically reconnects to the utility system prior to the required five-minute time interval

ISSUED BY: James A. Lahtinen, Vice President Rates and Regulatory Economics, Rochester, New York