

PSC NO: 119 ELECTRICITY  
NEW YORK STATE ELECTRIC & GAS CORPORATION  
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### GENERAL INFORMATION

9. Distributed Generation Interconnection Requirements (Cont'd.)
- F. II. Interconnection Requirements for New Distributed Generators 300 kVA or Less, or Farm Waste Generators of 400 kW or Less, Connected to Radial Distribution Lines (Cont'd.)
- b. **Three-Phase Inverters and Relays (Cont'd.)**

**Waveform 6:** A three-phase sinusoidal operating at 60 Hz and 100% of rated voltage (120 V rms) interrupted by phase A voltage increased to 138% of rated (166 V rms) for two cycles beginning and ending at a zero crossing while B and C phases are decreased to 83% of rated voltage (100 V rms) beginning and ending at the same point of discontinuity. Repeat the same test with B phases increased and A and C phases decreased and for C phase increased and A and B phases decreased to the same levels and for the same duration.

**Waveform 7:** A three phase sinusoidal operating at 60 Hz and 100% of rated voltage (120 V rms) ramped to 59.2 Hz at 0.2 Hz/second, held for six cycles and ramped back to 60 Hz at 0.2 Hz/second beginning and ending at the zero crossing on A phase (or the phase on which the device frequency trip measurements).

**Waveform 8:** A three-phase sinusoidal operating at 60 Hz and 100% of rated voltage (120 V rms) ramped to 59.3 Hz at 0.2 Hz/second, held for six cycles and ramped back to 60 Hz at 0.2 Hz/second beginning and ending at the zero crossing on B phase. At the same time, A and C phase voltages are to be ramped down to 58% of rated (70 V rms) at a rate of at least 10 volts per cycle and held at that depressed voltage during the six cycles when the frequency on B phase is at 59.3 Hz before ramping back to normal voltage.

**Waveform 9:** A three-phase sinusoidal operating at 60 Hz and 100% of rated voltage (120 V rms) ramped to 60.6 Hz at 0.2 Hz/second, held for six cycles and ramped back to 60 Hz at 0.2 Hz/second beginning and ending at the zero crossing on A phase (or the phase on which the device performs frequency trip measurements).

Recognizing that the waveform testing method may not be practical for larger inverters, alternate testing methods will be acceptable if it can be demonstrated that the alternate methods verify the test points and time delays of the interconnection functions prescribed in the SIR interconnection requirements. The independent testing laboratory will be responsible to determine if the alternate testing method sufficiently verifies the interconnection functions and can be used as a replacement for the waveform testing method.

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