

**Additions, changes and clarifications from IEEE Standard 1547**

	<u>0 – 2 MW</u>	<u>2-10 MW Radial</u>	<u>2-10 MW Network</u>
4.1.1	Voltage Regulation	None.	None
4.1.2	Integration with Area EPS Grounding	<p><b><u>AP, PPL and UGI Exception:</u></b> AP, PP&amp;L and UGI require a wye-grounded connection on the T.O. side of the DG step up transformer for all new installations. Other T.O.s within PJM will accept a delta or ungrounded wye connection provided that adequate protection is provided by the DG to detect a ground and limit any overvoltage to an acceptable level on the T.O system. This protection requires voltage monitoring on the high side of the DG transformer using phase to ground connected PTs.</p> <p>Also see <b>Note</b><sup>2</sup> for AEP additional requirement for isolating device.</p>	

4.1.3	Synchronization	None.		
4.1.4.1	Distribution Secondary Grid Networks (Under development)	See <b>Note</b> <sup>1</sup> Interconnection to Distribution Secondary Grid Networks only allowed on an exception basis or where state commission regulations specify requirements.		
4.1.4.2	Distribution Secondary Spot Networks	Interconnection to Distribution Secondary spot Networks only allowed on an exception basis or where state commission regulations specify requirements.		
4.1.5	Inadvertent Energization of the Area EPS	None	None	None

4.1.6

Monitoring

Local monitoring provisions are acceptable to meet 4.1.6 requirements. In addition see 4.1.2 additions and the following additions:

- (1) PJM requires real-time telemetering for ~~Capacity~~ Generating Resources able to set LMP.
- (2) Pepco and Conectiv require revenue quality metering with dial-up capability for all generators at 2 of the 3 locations as depicted on the single line drawing in Notes item #3. For facilities with multiple supplies and for generators less than 1MW, the requirements for metering will be determined on a case-by-case basis.
- (3) Conectiv may require real-time telemetering for certain interconnections above 1 MW.
- (4) PSEG may require real-time telemetering for any interconnection depending on location.

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4.1.7	Isolation Device	None.	None.	None.
4.1.8.1	Protection from EMI	None.	None.	None.
4.1.8.2	Surge Withstand Performance	None.	None.	None.
4.1.8.3	Paralleling Device Withstand	None <sup>2</sup>	None.	None.
4.2.1	Area EPS Faults	None <sup>3</sup>		
4.2.2	Area EPS Reclosing Coordination	None		
4.2.3	Voltage	None	None.	None.

4.2.4	Frequency	None		
4.2.5	Loss of Synchronism	None	None.	None.
4.2.6	Reconnection to Area EPS	<b>Clarification:</b> In cases where the DG interface is via an ungrounded transformer connection at the PCC, the voltage sensing must be done on the T.O. side of the transformer. This voltage sensing must be Ph -Gnd. connected and be on all three phases.		
	(a) Voltage Requirement	None	None.	None.
	(b) Frequency Requirement	None	None.	None.
4.3.1	Limitation of DC Injection	None.	None.	None.

4.3.2	Limitation of Flicker induced by the DR	None	None.	None.
4.3.4	Harmonics	None	None.	None.
4.4.1	Unintentional Islanding	None		
5.1	Design Test	None	None.	None.
5.2	Production Tests	None <sup>4</sup>	None <sup>4</sup>	None <sup>4</sup>
5.3	Interconnection Installation Evaluation	<b>Addition to IEEE 1547 Requirement<sup>5</sup></b>	<b>Addition to IEEE 1547 Requirement<sup>5</sup></b>	<b>Addition to IEEE 1547 Requirement<sup>5</sup></b>
5.4	Commissioning Tests	<b>See Note<sup>6</sup></b>	<b>See Note<sup>6</sup></b>	<b>See Note<sup>6</sup></b>

5.5	Periodic Tests See Attachment A <u><b>Exception for all:</b></u> – Periodic Testing is covered by PJM Tariff 55.1, 55.4, and ISA standard T&Cs which include the same PJM Tariff paragraphs.	See Attachment A <u><b>Exception</b></u> <u><b>for all:</b></u> – Periodic Testing is covered by PJM Tariff 55.1, 55.4, and ISA standard T&Cs which include the same PJM Tariff paragraphs.	See Attachment A <u><b>Exception</b></u> <u><b>for all:</b></u> – Periodic Testing is covered by PJM Tariff 55.1, 55.4, and ISA standard T&Cs which include the same PJM Tariff paragraphs.
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