

# Areas of Concern with PV/Anti-islanding

	Area of Concern	Perceived Risk or Potential Effect	Mitigation or Comments
1	<b>Power Quality</b> <ul style="list-style-type: none"> <li>• Damage to loads</li> <li>• Degradation of power quality (high/low Voltage, Frequency, or harmonics)</li> <li>• Decrease in system stability</li> </ul>	<ul style="list-style-type: none"> <li>• Out of phase reclosing will cause damage to loads</li> <li>• Islanded systems will cause degraded power quality, damage to lightning arrestors, or customer loads</li> </ul>	<ul style="list-style-type: none"> <li>• Updated protection settings</li> <li>• Reclose blocking</li> <li>• PQ is covered under the current IEEE and UL standards.</li> <li>• Systems will maintain trip settings even in an island</li> <li>• Ground fault overvoltage is a concern that needs more study</li> </ul>
2	<b>Public &amp; Worker Safety</b> <ul style="list-style-type: none"> <li>• Increased public safety risk</li> </ul>	<ul style="list-style-type: none"> <li>• Downed wires connected to islanded PV</li> </ul>	<ul style="list-style-type: none"> <li>• Persistent island condition is unlikely,</li> <li>• Not confirmed as a high risk in the field</li> </ul>
3	<b>Malfunctioning Inverter</b> <ul style="list-style-type: none"> <li>• Loss of anti-islanding detection</li> <li>• Increase in non-detection zone</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple inverter scenarios</li> <li>• Antiquated passive anti-islanding algorithms</li> <li>• Lack of tests on 3-phase inverters</li> <li>• Inverter based + rotating generation on same section</li> </ul>	<ul style="list-style-type: none"> <li>• Inverter + rotating generation may require additional study based on lab tests</li> </ul>
4	<b>Changes to protection schemes</b> <ul style="list-style-type: none"> <li>• adjustments to instantaneous reclosing schemes</li> </ul>	<ul style="list-style-type: none"> <li>• Decrease in reliability - Duration of power bumps may increase due to changed recloser settings</li> </ul>	<ul style="list-style-type: none"> <li>• Impact to reliability should be minimal, may require additional investigation of revised settings and implementation practices</li> </ul>

# Clarifications Requested

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- (p9) aggregate non-UL1741-certified, inverter-based generation shall be less than 50kW
- (p9) 50kW – 1MW, 5kV class, min load <1MW
- (p10) Reclose blocking scheme implementation
- (p2,9) loop feed automatic switching