PJM Ad-Hoc DER Ride-through Implementation Process: Report Out on Feb 28 Trial Workshop

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PJM Support for Technical Consensus on Requirements

Feb 28: Preliminary trial workshop w/ 4 utilities (T and D)

March: Report out on trial workshop

Summer: Workshop covering all of PJM utilities

2018: Ongoing collaboration

2019: Final Documentation of Consensus Ride Through and Trip Parameters

PJM Rules

Distribution Utility Discussions under Local Regulation
• No trust consensus on dependability of anti-islanding algorithms.
• Risk of arc-flash shock and burn for lineman hot work increase with increasing ride-through DER deployment.
• Frequency ride through must address catastrophic wide-area transmission islanding/system separation.
## Primary Concerns on Under-Voltage Ride Through

<table>
<thead>
<tr>
<th></th>
<th>Arc-flash</th>
<th>Reclosing</th>
<th>Dist. Protection</th>
<th>BPS Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>UV1</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>UV2</td>
<td></td>
<td></td>
<td>X→Momentary cessation</td>
<td>X→Increase clearing time</td>
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</tbody>
</table>
Changes to “Straw Proposal” for DER Voltage Ride Through

Pre-workshop: IEEE 1547-2018
“Category II” with default settings

Post-workshop modifications:

a) UV1 increased → 2 – 5 seconds and volts increased → 88% for arc-flash and recloser concerns.

b) UV2 time decreased → 1.1 seconds for delayed transmission fault clearing.

c) “Permissive Operation” range and severe low voltage “may trip” range is specified to “Mandatory Operation” for V > 0.50 and “Momentary Cessation” for V < 0.50.
• Chatham House rule is helpful for achieving consensus.
• Anticipating longer, 1.5-day workshop end of summer
• Anticipating significant webinar training for attendees
• Small break-out groups → productive approach
“Flexibility” framework

• Need to specify intended “flexibility” framework in applying the technical consensus”. Options:
  1. A PJM statement on a few “no go” zones and then PJM steps back (most flexible);
  2. A single agreed set of preferred parameters that are only to be adjusted per-utility basis;
  3. … adjusted on a per-local-area basis;
  4. …adjusted on a per-unit basis (least flexible)