

General:

The IIRG's Energy Storage Subgroup has conducted all work possible on the specific substantive topic described in this submission. This written narrative summarizes the subject substantive topic including a description of group activity on the topic, group recommendations, and requested procedural guidance by the Department, if any.

There is some consensus on this topic and some disagreement for which the IIRG does not believe it can make any additional progress without Department intervention.

Definition

When using Power Control Systems (PCS) as a means to manage import and/or export of a facility, the equipment inherently carries accuracy constraints. This topic reviewed the Open Loop Response Time (OLRT) potential of the PCS to effectuate action at the facility. The OLRT reflects the time to action of the facility and therefore affects the potential risk exposure to the EPS.

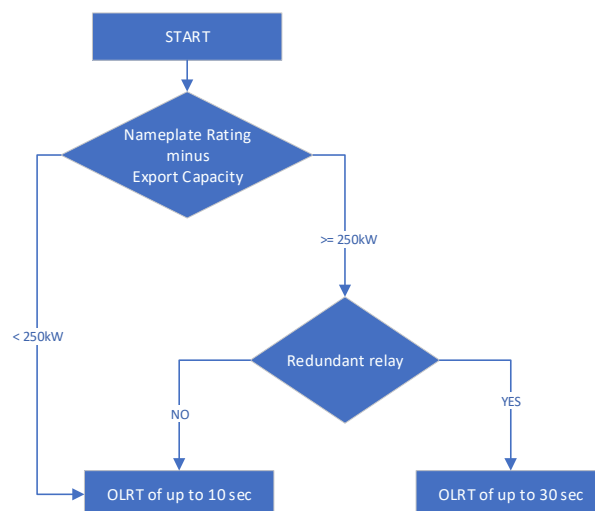
Group Activity:

The group met for two (2) virtual sessions to discuss the subject topic. The following is a summary of the general discussion topics:

- OLRT risk exposure to the grid, potentially effecting longevity of grid assets, protective device coordination, damage to grid assets, and effect on surrounding customers on the EPS
- Discussed reasonable timing for OLRT given commercial availability
- Differentiating OLRT requirements based on facility sizing
- Alignment with UL1741 CRD and UL3141
- Redundant relaying requirements to reduce risk of OLRT exposure

Consensus:

The EDCs feel that extended OLRT on customer owned Power Control Systems (PCS) carries potential risks to safety and reliability of the grid as well as potential long term impacts to equipment performance and/or asset degradation on the grid. Because the severity of these risks may vary depending on local grid conditions, size of the DER controlled by the PCS, and site specific design conditions, the EDCs open to following considerations based on facility nameplate rating and inclusion of redundant relaying:



Substantive Topic 02 Summary: Open Loop Response Time

- A. The PCS must be certified to UL3141. Customer is responsible for providing associated manufacturer documentation that plainly states equipment alignment to UL3141 and plainly states the OLRT duration (10sec, 30sec, etc). This documentation may be in the form of manufacturer equipment cut sheets or may be in the form of a letter from the manufacturer on their letterhead.
 - 1. It is the EDC's understanding from industry members in this subgroup that PCS's with and OLRT of 10 seconds are readily available on the market, and therefore has been accepted here as a reasonable compromise for acceptable threshold as shown in the diagram.
 - 2. The reference to OLRT at a maximum of 30 seconds for conditions shown in the diagram is based on the maximum OLRT currently called out for PCS in UL3141, and therefore no devices should be permitted to have an OLRT in excess of this.
- B. Redundant relaying as referenced in the above diagram must be included in the customer design with a 32 element set to mimic the maximum import and export values programmed to the PCS, as measured at the PCC. Relaying shall be designed to remove the DER facility from the grid, which may be accomplished by tripping the DER breaker or tripping the customer's main breaker near the PCC.

The collective body of the subgroup has reviewed the above and found it generally acceptable as consensus on this topic moving forward. Resulting agreement on this topic will be memorialized in the meeting minutes reported to the IIRG membership, as well as within the Common Technical Standards of the TSRG.

Industry supports this position, and thanks the EDC's for the collaborative effort to resolve this important topic.

Requested DPU Action:

No action is requested of the DPU based on the outcome of discussions on this topic.