

DER and Inverter-based Resources Subcommittee WebEx Only August 3, 2020 1:00 p.m. – 4:00 p.m. ET

Administration (1:00-1:30)

- 1. Scott Baker, chair, opened the meeting and reviewed the agenda.
- 2. Hamad Ahmed, secretary, reviewed the meeting participation guidelines and other important administrative material.
- 3. Scott Baker reviewed the DIRS Charter that was approved at the July 8, 2020 Market Implementation Committee meeting.
 - Scott Baker stated that the mission of the subcommittee is to provide stakeholders the forum to discuss and resolve specific issues/procedures related to DER and inverter based-resources.
 - Scott also stated that this is a non-voting subcommittee and after a resolution, the matter will be taken to the MIC where MIC will take a definitive action.
- 4. Scott Baker reviewed the DIRS work plan.
 - Scott Baker stated that the DER aggregation issue has been postponed but the Utility Microgrids and Hybrid Resources are active. Scott Baker iterated that the work on hybrid resources might go past December 2020 considering there are two phases to this effort (see Issue Charge, Key Work Activity #4).

Hybrid Resources (1:30-3:00)

- 5. Scott Baker reviewed the Hybrid Resources Issue Charge that was approved at the June 3, 2020 MIC.
 - Scott Baker reviewed key work activities and scope. Scott Baker stated that the scope will primarily
 focus on clarifying where and how existing requirements for Solar generation, Intermittent Resources
 and Energy Storage Resources do or do not apply to the various categories of inverter-based solarbattery hybrids. In certain areas, modification of existing rules may also be needed.
 - Scott Baker stated that the initial focus would be on the Solar/Battery Hybrid and subsequently, other combinations will be discussed in the later phase. An expected deliverable would be an FAQ document.
- 6. Awais Ghayas provided education on hybrid resources currently in the interconnection queue.
 - Awais Ghayas highlighted that there is 16,124 MFO of solar-battery in the PJM queue and about 90% of it is in pre-ISA phase.



- 7. Jerry Bell provided education on the existing rules for establishing the Capacity Interconnection Rights of hybrid resources.
 - Jerry Bell discussed status quo for DC and AC coupled hybrids along with an example demonstrating how CIRs for solar-battery hybrids are calculated.
- 8. Andrew Levitt provided initial education on hybrid resource configurations, status quo for market participation, as well as proposed approaches to modeling hybrid resources for capacity capability using Effective Load Carrying Capability.
 - Andrew Levitt discussed different configuration for four types of solar-storage hybrids along with status quo for Hybrid Market Participation and Telemetry. Andrew Levitt also discussed the ELCC model for hybrids along with an example.
- 9. Stakeholders had an opportunity to request additional education items to be presented at the next meeting.
 - Stakeholders showed interest in more in-depth education on the status quo for different configurations for solar- battery hybrid including interconnection and market participation issues. Stakeholders also showed interest on VAR impacts when a hybrid resources is connected to the distribution system.
 - Stakeholders also wanted to know if the proposed in-service date for hybrids is public information.

Public Distribution Microgrids (*carryover item from the DER Subcommittee) (3:00-3:45)

- 10. Natalie Tacka provided background on the Public Distribution Microgrid issue and a status update on the PJM proposal that was discussed at the last DER Subcommittee meeting.
 - Natalie Tacka provided education around Public Distribution Microgrid, islanding concept, Telemetry, PDM generator and voluntary PDM operator guideline in PJM manual.
 - Natalie Tacka also discussed Wholesale-islanded PDM generator and Retail-islanded PDM generator.
 - There was a stakeholder request to coordinate with the Settlements Subcommittee on the issue of wholesale vs. retail settlements of load and generation when a microgrid is islanded.
- 11. Scott Baker reviewed the CBIR matrix associated with this item and discussed next steps.
 - Scott Baker, on a high level, discussed the structure of the CBIR matrix and the existing packages. The goal is to have a single, recommended package by the next meeting and advance that package to the MIC after the next meeting (Sept 10th).

Action items and next meeting agenda (3:45-4:00)

12. Hamad Ahmed reviewed action items from the meeting and took requests for future agenda items.



Hamad Ahmed recapped the action items, potential topics and dates for future meetings.

Future Meeting Dates

September, 10, 2020 October 02, 2020 November 02, 2020 December 07, 2020 9:00 a.m. – 12:00 p.m. 1:00 p.m. – 4:00 p.m. 1:00 p.m. – 4:00 p.m. 1:00 p.m. – 4:00 p.m. PJM Conference & Training Center/ WebEx PJM Conference & Training Center/ WebEx PJM Conference & Training Center/ WebEx PJM Conference & Training Center/ WebEx

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