Tactical Microgrid Standard 2025 Task Force Meeting Notes

Task Force: Revision

Meeting Date: 5 June 2025

Prepared by

U.S. Army

Combat Capabilities Development Command (DEVCOM) C5ISR Center

and MIT Lincoln Laboratory

June 2025

Organizations in Attendance:

C5ISR Center, MIT LL, Parsons, USACE CERL, ATSE, LLC, Chariot Defense, Cummins Inc, Diverse IT, Eaton Corporation, Hyperion Technology Group, Leonardo DRS, Northrop Grumman Corporation, Object Computing, Inc., SCATR Corp, SEL

Agenda:

- First working meeting
- Issue triage and first steps

Summary of Discussion:

- Meeting began at 1100
- Reviewed the kickoff slides. Confirmed understanding and acceptance of Terms of Participation and guidelines.
- Reviewed issues spreadsheet format.
- Discussed TMS-131, TMS-377, TMS-383, TMS-881, and TMS-909
- Assigned TMS-131
- Closing remarks
- Meeting ended at 1200

Motions and Voting: None

Action items:

- Send and review materials related to TMS-131
- Review other issues and discuss as appropriate

Issue Discussion Notes

TMS-131, Power port synchronization status:

- Should identify and review relevant design features already in TMS (B.17 switch state, B.18 power measurements, …)

- Two separate concepts are needed — waiting to close (failure to achieve sync) and failure to close (OOPS after close, switch malfunction on close attempt, …)

- These issues mostly affect "complex" electrical topologies, but they can be as simple as two DERs at opposite ends of a long line.

- Affects SRC, STOR, DIST, and CONV in different ways.

- Discussed some use cases — SRC or STOR internal, microgrid bus out of spec, DIST/PCC, …

- What are the roles of power devices, the microgrid bus, and the supervisory controls in these use cases?

- IEEE 2030.8 may provide more use cases or related ideas

- Suggested paper: Fundamentals of Microgrid Dead Bus Arbitration, https://ieeexplore.ieee.org/document/10414332

TMS-377, "RequestLock":

- Option 1: Re-use an existing topic related to the device controller state. Did not find appropriate timing or QoS in immediately relevant topics.

- Option 2: Change the QoS and/or timing for one of these topics to fit this need. For example, "Periodic 10 s or On Change, with RELIABLE delivery".

- Option 3: Re-use ActiveDiagnostics and add a well-known SPN. Similar to 3585 = "Emergency Shutdown Switch". Should appear naturally on a microgrid dashboard.

Option 3 seems promising.