



December 30, 2024

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China

Subject: Evidence of inverter support for IEEE 2030.5/Rule 21 CSIP Phase 2 and Phase 3 Function 1 and 8 Functionality

Dear Ye Yu,

This letter confirms that (SunSpec ATL) witnessed the Appendix C testing listed in Resolution E-5000 from the California Public Utilities Commission Draft dated July 11, 2019 (as modified by Resolution E-5036) under the CSA project 80232398. The Resolution requires the verification of five test cases for inverters that do not directly implement IEEE 2030.5 client functionality. During the tests, the inverter is to be connected to a SunSpec Certified IEEE 2030.5/CSIP gateway. The five tests are listed below and specified in the SunSpec IEEE 2030.5/CSIP test procedures:

- Inverter Status (BASIC-028)
- Inverter Meter Reading (BASIC-029)
- Basic Inverter Control – Volt/Var (BASIC-006)
- Basic Inverter Control – Fixed Power Factor (BASIC-008)
- Basic Inverter Control – Volt-Watt (BASIC-011)

The tests were performed on the Utility Interactive Inverter on April 24 to April 25, 2024, with the HYXiPOWER Cloud (<https://sunspec.org/wp-content/uploads/2023/12/Hyxi-Certification-CS000072.pdf>) aggregator to connected to Grid Support Utility Interactive Inverter model number HYX-M500-SW bearing the serial number 69001231100111 which is used to represent the inverter models below:

Zhejiang Hyxi Technology Co., Ltd. Model Numbers:



Inverter Description	Model Number
Grid Support Utility Interactive PV Microinverter, high frequency isolated	HYX-M500-S-NA, HYX-M500-SW-NA, HYX-M500-S, HYX-M500-SW, HYX-M450-S-NA, HYX-M450-SW-NA, HYX-M450-S, HYX-M450-SW, HYX-M400-S-NA, HYX-M400-SW-NA, HYX-M400-S, HYX-M400-SW, HYX-M350-S-NA, HYX-M350-SW-NA, HYX-M350-S, HYX-M350-SW, HYX-M300-S-NA, HYX-M300-SW-NA, HYX-M300-S, HYX-M300-SW

The inverter under test was subjected to testing conditions as follows:

- The inverter was operating during test harness verification procedure.
- HYXiPOWER Cloud was given stimuli in the form of IEEE 2030.5 commands (Inverter Status, Inverter Meter Reading, Volt/VAR, Fixed Power Factor, and Volt/Watt) sent from an IEEE 2030.5 server that were subsequently translated to signals understood by the inverter.
- The inverter parameters were verified: a) to change during the test cases for Volt-VAR, Fixed Power Factor, and Volt-Watt and b) report monitored data during the test cases for Inverter Status and Inverter Meter Reading. Based on this procedure, the requirements from Appendix C of the resolution were verified.

Very truly yours,

Tested By,

Test Engineer Name: *Anson Du*

Test Engineer Title: Certifier

SunSpec ATL name: CSA Group