

Project Title: Establishment of WBG Power Electronics Testing Facility for Education and Workforce Training Engaging PowerAmerica Industry Members.

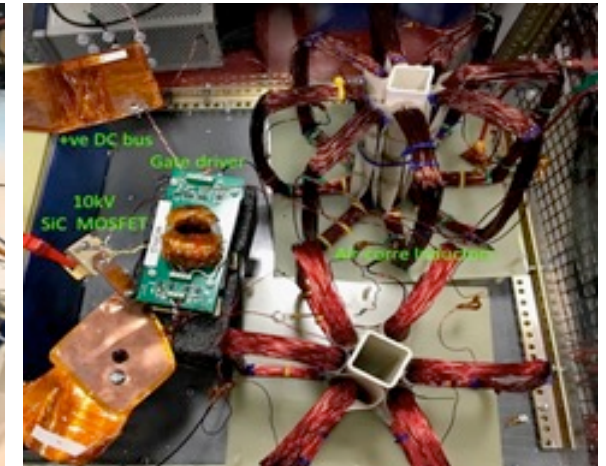
Objectives: The test facility will be developed especially for the new generation WBG devices with higher voltage and power ratings.

Task No. BP5-4.42 OIF

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WBG Technology Impact

- A comprehensive WBG power electronics testing facility will facilitate conducting the main characterization tests: Electro-Magnetics Interference (EMI), high power double pulse, Partial Discharge (PD), and reliability tests.
- The test facility is especially for the new generation WBG devices with higher voltage and power ratings. It will be used for both education and research.
- The WBG system testing facility will be capable of up to 200 kW for EMI testing, up to 40 kV applied voltage for partial discharge testing.

Accomplishments/Outcomes

Facility	Voltage	Applications
High-power EMI tester	800 V	200 kW SiC EV inverter, SiC grid-tied inverter, SiC charger
SiC double pulse tester	10 kV	From 650 V to 10 kV SiC power modules
Partial discharge tester	40 kV	Testing for 13.8 kV extremely fast dc charger, MV Solid State Transformer
Reliability tester	10 kV	Avalanche and short circuit testing