

# POWER DENSE CONVERTER ELECTRONICS FOR GRID TIED ENERGY STORAGE CONTAINERS

Increased electricity demand amid infrastructure development restrictions continues to foster innovation for distributed generation. However, advances in power converter efficiency, power density, and flexibility are required to enable competitive distributed generation methods to be realized.

Wide Band Gap semiconductor devices offer benefits of increased efficiency, higher power density, and simplified thermal management at utility power levels. We aim to use these emerging devices to greatly improve the value proposition of energy storage based distributed generation by increasing power density and eliminating 60 Hz magnetics as well as liquid cooling.

Creare is in the process of developing a full-scale, containerized grid tie energy storage system with greater than twice the power density over existing converters. This technology will find immediate commercial application to distributed electrical power generation equipment. Features include elimination of 60 Hz magnetics and allowance for interface with renewable energy sources, which provide benefits of reduced cost, greater revenue potential, increased source flexibility, and improved efficiency.