

SMART SOLID STATE TRANSFORMER (SST)

R&D PROJECT

INDUSTRY PARTNERS:

- > Texas Tech University

PROJECT TERM:

- > Ongoing

INDUSTRY PROBLEM:

- > Critical need to increase energy efficiency and safety
- > Due to the inherently dynamic nature of renewable energy, traditional monitoring schemes (e.g. SCADA) may not provide enough fidelity to adequately monitor generation

SOLUTION:

- > The smart SST is proposed as replacement for traditional 60 Hz magnetic transformers due to the following benefits:
 - Bi-directional flow of power as well as communication
 - Significant material reduction
 - Simultaneously provides power conditioning and power metering
 - SiC devices lower conduction losses in the system