



SYSTEM APPLICATIONS



DER CONTROL



OPTIMAL POWER FLOW



VOLT/VAR CONTROL



FREQUENCY CONTROL



POWER QUALITY



ADMS INTEGRATION



ISLAND TRANSITION



ISLAND MODE



GRID-TIED MODE



GRID-TIED TRANSITION



DEMAND RESPONSE



PEAK SHAVING



EV INTEGRATION



ECONOMIC DISPATCH

CUSTOMER CHALLENGE

Ameren Company is a large-scale utility that serves 2.4 million electricity customers. Ameren Illinois sought to build a microgrid to support both the Technology Applications Center at the University of Illinois campus and a residential load in Champaign, IL.

Ameren's primary goals were to learn more about integrating Distributed Energy Resources into its distribution system, while enhancing power reliability and resiliency.

AMEREN MICROGRID

1.5

Megawatt



Controls



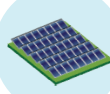
Gen Sets
1.0 MW



Wind
100 kW



Storage
250 kW



Solar
150 kW



EV
Load Only

OUR CONTROLS

IPERC's GridMaster Microgrid Control System is the conductor behind the Ameren microgrid. The integrated hardware/software system has a distributed control architecture, which enhances the resiliency of the installation, as there is no single point of failure.

The GridMaster is built from the ground up to adhere to IPERC's Defense in Depth cybersecurity protocol. It is the only control system to hold an Authorization to Operate accreditation from the Department of Defense.