

Center for Microgrid Research

2023 RDA Legislative Request:

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March 13, 2023



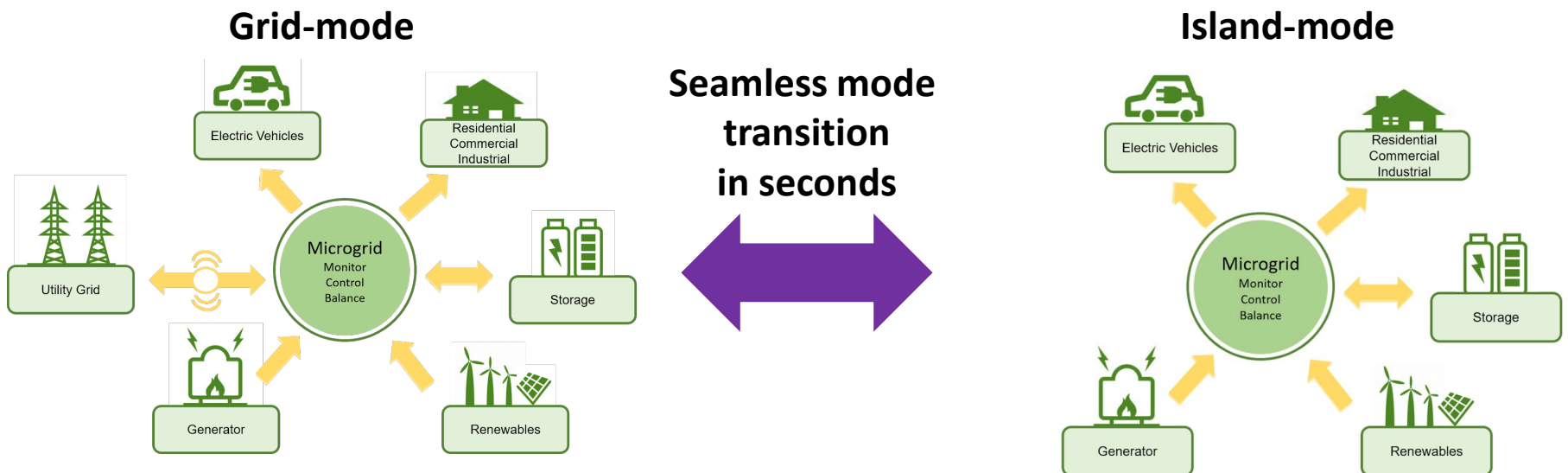
RDA Funding Success!



1. **Expand the center's operational infrastructure and equipment to be unique national-level asset** that allows industry partners to test near-commercial microgrid products on a real-world scale.
2. **Connect microgrid research center** to south campus buildings at a scale which will attract national-level research partners.
3. **Expand hands-on educational opportunities** to electrical professionals, undergraduate and graduate electrical engineering students and partnerships with community colleges.

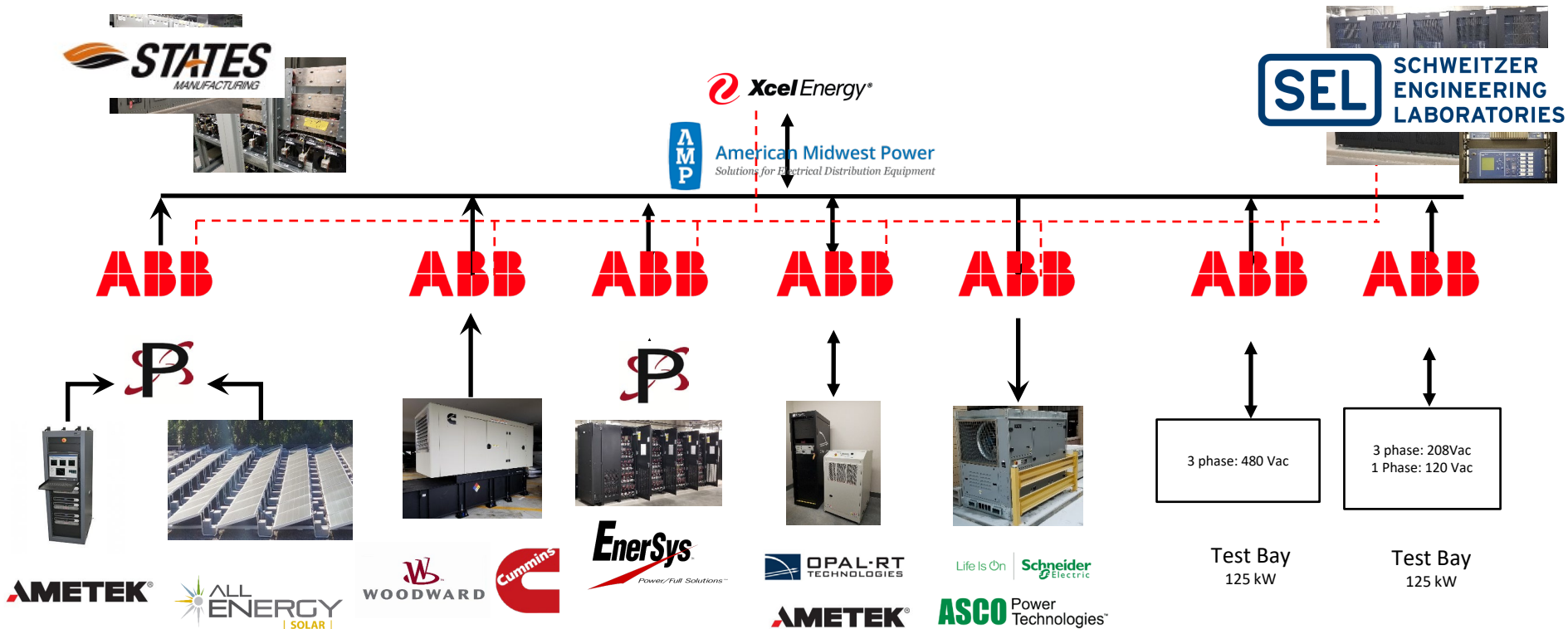
What is a microgrid?

- A microgrid is a localized energy system and is greater than the sum of its parts
- A microgrid can operate with the grid or without the grid and seamlessly transition between those two “modes”
- A microgrid enables the integration of all types of energy sources to maximize the benefits of each energy technology
- A microgrid enables a more resilient, robust, and stable grid via an active and safe interaction with the grid



Microgrids: Integration and Seamless Operation

- The challenge with microgrids is the integration of different technologies (new and legacy) to operate safely and reliably together and in different modes
- Lessons learned are transferable to the macro-grid as the grid gets reimaged and reengineered
- For example, the current microgrid at St Thomas includes equipment from 11 different manufacturers.



Larger Vision for the St. Thomas Center for Microgrid Research

Minnesota can be a national leader in the design, development, and operation of robust, resilient microgrid facilities.



Camp Ripley



Center for
Microgrid Research



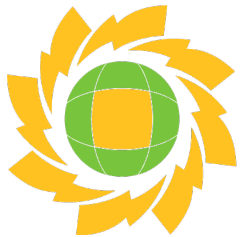
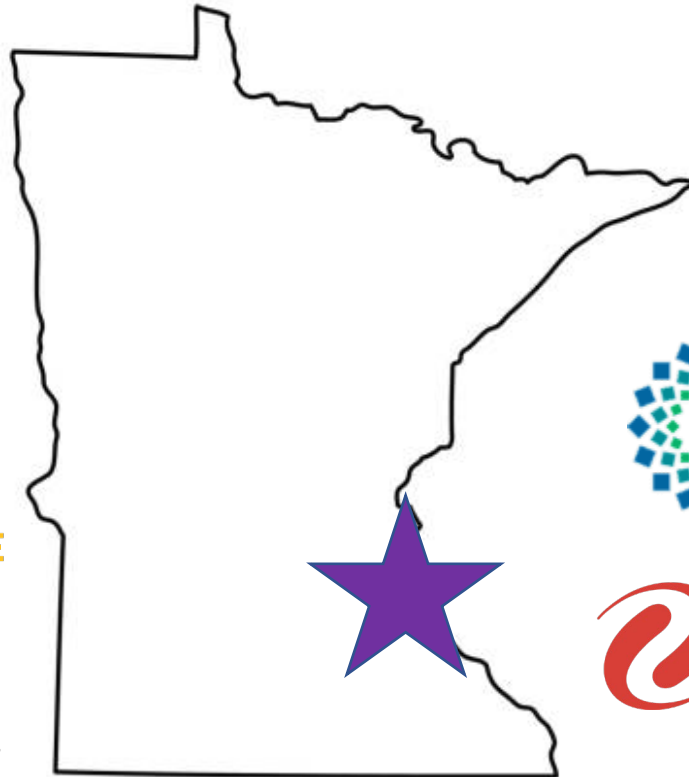
2023 Goal: Make the University of St. Thomas a national center for urban-microgrid resiliency and Camp Ripley a DoD worldwide lead model for secure, resilient, microgrid military base operations.

Through our work with the DoD, we strongly believe that with **additional RDA** investment in the St. Thomas Center for Microgrid Research, we can attract additional **Tens of Millions** of federal research funds to Minnesota, including an investment of a parallel microgrid facility at Camp Ripley. This would make Minnesota a true national leader in advanced microgrid deployment and research.

Active Partnerships in Minnesota!



Camp Ripley



RENEWABLE
ENERGY
PARTNERS

North Minneapolis Training Center



Minneapolis Resiliency Hub

Center for
Microgrid Research : UNIVERSITY OF
St. Thomas®

Active Partnerships w/ Top National Universities



Supporting an Ecosystem of Innovation, Access, & Workforce development in Minnesota!



Camp Ripley



North Minneapolis Training Center



And many others....



Center for Microgrid Research : UNIVERSITY OF St. Thomas.

Location of the Center on the St. Thomas Campus



Original Design and Expansion of St. Thomas Microgrid

Over 400,000 SF of building electrical infrastructure connected to Microgrid
 But we need more RDA investment in the microgrid for both inflation and expanded vision

