**Engineering Innovation at Work**

**What is a smart grid?**

To meet the needs for the 21st century, the next-generation grid needs to be more resilient and flexible than the grid developed in the previous century. The grid of the future will need to accommodate a wider mix of more intermittent generating sources, such as wind and distributed solar photovoltaics, while improving reliability and incorporating secure communications and information technology to generate and deliver electrical energy.

The mission of the Smart Grid Center is to form a competitive learning environment to advance efficient use of electric energy and modernization of the electricity grid, as well as to promote the creation of multidisciplinary research teams to solve problems and deliver innovative and effective smart grid solutions.

**THE CENTER’S SPECIFIC GOALS ARE TO:**

- Conduct transformational research to generate new concepts, technologies and integrated solutions for the 21st century grid.
- Assist in expanding the government and private sector vision of the smart grid.
- Implement production type testbeds that are not only used for the validation of new research outcomes, but also the new products.
- Utilize the testbeds as a “sandbox” for students, faculty, research sponsors and other interested parties to collaborate in demonstrating and experiencing the innovation at work.
- Train engineering students and professionals to become leaders in advanced electric energy-related concepts and technologies.

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