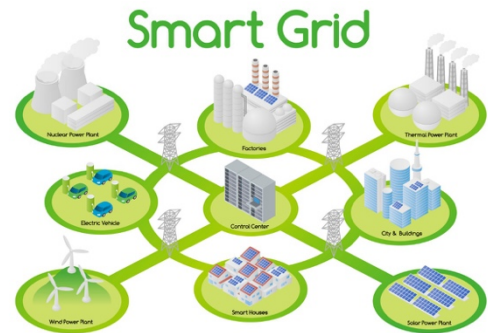


Smart Grids and Energy Infrastructures

What is a Smart Grid?

A smart grid is an electricity network enabling a two-way flow of electricity and data with digital communications technology. The grid can detect, react and pro-act to changes in usage and multiple issues. Smart grids have self-healing capabilities and enable electricity customers to become active participants.



A Self-Healing Grid

A key advantage to having a smart grid is its ability to “self-heal”. A smart grid is able to automatically work around power failures by detecting and isolated outages, then rerouting electricity in order to meet demand. This is a key feature to help minimize the effects of blackouts and outages caused by natural disasters such as hurricanes.

Energy Savings

As renewable energy becomes cheaper to produce as well as start to make up the larger portion of the energy picture in the U.S, smart grids are able to integrate and transmit this energy across the power grid. Smart grids are able to run more efficiently by monitoring and controlling appliances that have a wireless connection to the grid.



Smart Grid Benefits

- More efficient transmission of electricity
- Quicker restoration after power disruptions
- Lower price for utility costs for consumers
- Reduced peak demand of energy
- Increased integration of renewable energy systems

Related Companies



FAU Courses

- EEL 4220 - Electric Power Systems
- EEL 4281 - Photovoltaic Power Systems
- EEL 6291 - Smart Grid