

Electric Reliability and Resiliency in the Modern Grid



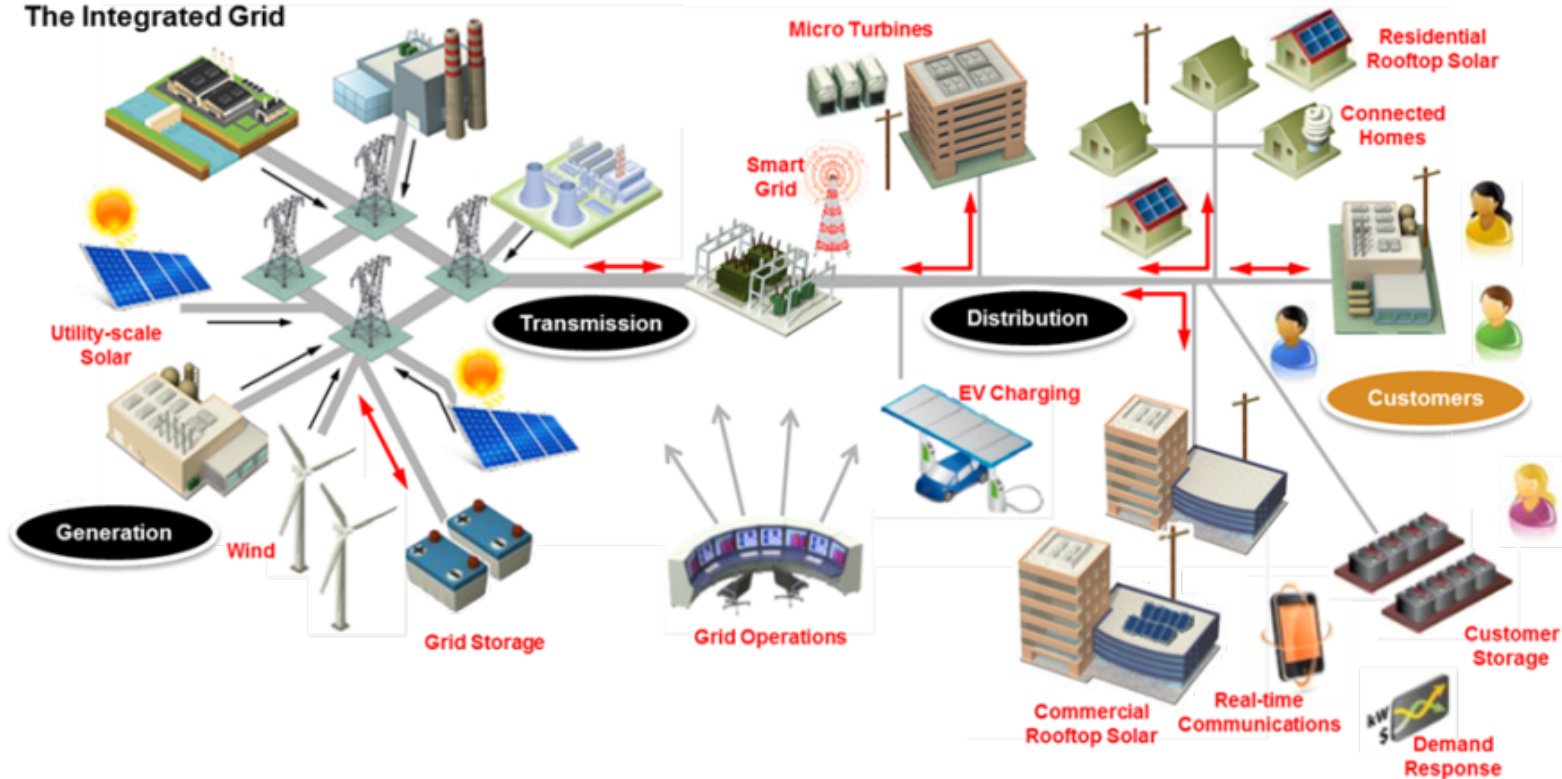
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Tomorrow's Grid

The Integrated Grid



Source: EPRI



Improving Grid Reliability

In late 2011, the Illinois Legislature passed the “Smart Grid” law, enabling Ameren Illinois to invest an additional estimated \$643 million in our electric distribution system.

Projects Ameren Illinois is undertaking to strengthen the grid include:

- Installation of two way “Smart Meters”
- Advanced Distribution Management Systems (ADMS)
- Automated Switches

Improving Grid Reliability

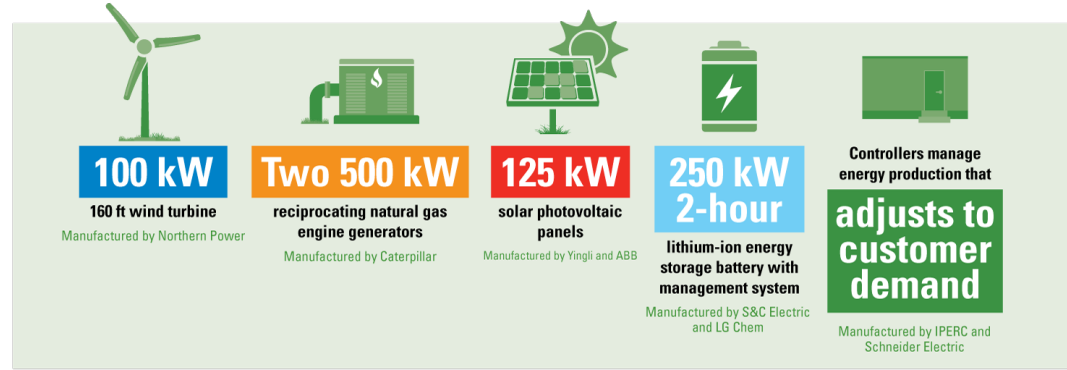
Additional Ameren Illinois Projects

- Storm Hardening
- Additional Sensors
- Communications systems upgrades
- Distributed Energy Resources
- Microgrids
- Undergrounding

As a result, we have seen an overall **17%** increase in reliability and saved customers an estimated **\$45** million each year.

Ameren Microgrid: Distributed Energy Resource Integration (DER)

- One of only a few in the world operating at utility scale voltages
- Seamless switching between grid and islanded operation modes.
- Project approval received March of 2016 with expectation to be completed by end of 2016. Six months of engineer-procure, two months of construction.



The microgrid serves nearly

