How Smart Grids enable consumers?

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What is a Smart Grid?

- Generation
- Transmission
- Transmission to Distribution
- Distribution Feeder
- Service Drop to Premise
What is a Smart Grid?

Transmission

Generations

Line Monitors

Circuit Reclosers

Capacitor Banks

AMI Meters

Smart Thermostats

Transmission to Distribution

Voltage Regulators

Distribution Feeder

Service Drop to Premise

AMI Meters

All communicating devices within the same network
The AMI Electric Meter

- Dozens of metrics captured and reported each day
- Key metrics captured every 5 to 15 minutes
- Home Area Network communication module (Zigbee)
- Wide Area Network communication module
- Hundreds of events and alerts reported in real time
- Can act like an edge sensor to support DA/SCADA solutions

Installed in over 70% of households in North America
The Smart Grid enters the home

- EV Charging
- AMI Meter
- LCS
- T-STAT
- HVAC
- Water Heater
- Irrigation Pump
- Pool Pump

Customer Portal

[Graph showing energy usage and consumption]
Case Study: Austin Energy

Project Overview

+ Multipurpose network for AMI and DA
+ Gridstream network deployed for AMI and DA
+ Landis+Gyr SCADA Center host system, integrated with existing DMS system
+ Gridstream radios pre-integrated and deployed with:
  - 4 line monitors; 11 capacitor banks
  - 5 reclosers; 39 air switches

About Austin Energy
Austin Energy is the nation’s 9th largest community-owned electric utility, serving more than 400,000 customers and a population of almost 1 million. Austin Energy provides electric service within the City of Austin, Travis County, and a small portion of Williamson County.

Reduced generation costs and improved outage restoration
Case Study: CSU - Targeting Circuits for Peak Reduction

http://youtu.be/lehA7AZAFwk
Utilities need to adapt to consumer requirements

• Consumers are investing more in Energy Management and Renewable Energy Resources – Energy cost reduction and enhanced power quality/reliability

• With this consumer trend, utilities still maintain their obligation to serve these customers

• The utility impact is operational challenges and financial risk

• Utilities are responding by requesting creative solutions that allow them to provide flexible energy options to their customer
Addressing Energy Users Is Key To Smart Community

Smart Grid
- Proven, scalable Metering/AMI/DA platform
- Smart Grid Services

Smart Utility
- Distribution Grid Management
- Advanced Load Management
- Smart Lighting | Analytics
- Data Management
- Advanced Services
- Energy Storage

Smart Community
- Enhancing Consumer Experience and Sustainable Communities through Balanced Energy Management Solutions and Services
Thank You!