



Modernizing Energy Networks for Growth

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Smart Grid: A nationwide **GREEN** initiative

- Creating a smarter grid significantly reduces the need for additional generating facilities (typically nuclear, coal, & natural gas)
- Smart Metering is a necessary first step in the transition to a smart electricity grid
- 2005 Utility Survey indicated that over 41% of utilities are in "active" planning phase for an Advanced Metering initiative – closer to 80-90% in 2007

Smart Metering: Strong Fundamentals

- Less than 5% of North American meter population is considered smart (approximately 290mm meters)
- Strong balance sheets and capital spending plans at most utilities
- An estimated 40-50 million smart meters to be purchased in North America during next 5-7 years (>\$6 billion)
- Smart metering also being deployed in Europe, Australia, and Asia

What is a Smart Meter?

- Electric meter with communications intelligence
- Measures energy consumption by interval (5,15,30 or 60 minute)
- Deliver real time reads when needed
 - Every 15 minutes, hourly, or daily
- Enables effective demand response programs by providing usage data to utility and consumers
- Settles transactions between consumers and utilities for distributed generation (solar cells, fuel cells, wind turbines, gas turbines)
- Perform scheduled billing reads and remote demand resets
 - Schedules can be changed over-the-air
- Supports real time outage / restoration notification
- Provides ability to determine system losses on the grid
- Monitors voltage for smart grid applications

SmartSynch Technology

Meter
Base

SmartSynch
Wireless
Module

Meter
Module



100 % Under-the Glass

SmartSynch Technology



... just plug it in™.

Net Metering Example

- Florida Power & Light and Publix
- Publix doesn't want to lose food after the next hurricane
- Over 320 stores with local diesel power generation installed
- Publix also needs to run generators periodically for maintenance, training, and readiness



Net Metering Example

- Widespread perception is that net metering costs thousands of dollars per installation (>\$8000)
- New tech such as ours make it possible for less than \$1000
- Big advantage for our product is that the communications network (AT&T/Cingular) already exists
- A first for FP&L and for Publix



Smart Meters = Smart Devices = Smart Grid

- Smart meters are one genre of smart devices
- Two-way communication
- Proactive alarms & alerts
 - Any device triggers
 - Sensor troubleshooting
- Remotely re-programmable
- Gateways to other devices
- SmartSynch already operates 100,000 vital smart devices, all over the continent, every day





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