I&M gridSMARTSM Project

Indiana Utility Regulatory Commission Update

June 3, 2008
I&M gridSMART<sup>sm</sup> initiative

We are pursuing a set of integrated programs and technology initiatives that can improve energy control, customer service and utility operations.

**Key Components**

- Advanced, two-way communication infrastructure coupled with smart meters and automated distribution devices
  - Customer programs and new technologies that provide customers better usage control and savings opportunities
  - Distribution automation with automated circuit reconfiguration and enhanced customer notification and operational control

- Distributed resources - generation and storage devices - that respond to local energy needs

- Customer and internal demand side management and energy efficiency programs

- Integrated back office systems that enable streamlined work processes and enhanced customer service
I&M envisions an advanced system leveraging a two-way communications infrastructure and intelligent devices to benefit our customers and our operations.
gridSMART™ Capabilities

I&M envisions a comprehensive set of technologies and programs that can transform utility operations and shift customer behavior.

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<th>Advanced Metering Infrastructure</th>
<th>Distribution Automation</th>
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<td>“Smart” meters for every customer</td>
<td>Automated outage and restoration detection and reporting</td>
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<td>Enhanced Time-of-Use rates</td>
<td>Automated outage and restoration communication</td>
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<td>Direct load control via programmable communicating thermostat</td>
<td>Distribution grid monitoring &amp; control – circuit breakers, reclosers, capacitor banks</td>
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<td>Prepay metering using in-home display</td>
<td>Remote meter voltage check (ping)</td>
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<td>Remote meter reading with hourly interval data</td>
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<td>Remote connect and disconnect</td>
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<td>Enhanced customer care options</td>
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<td>Customer portal for enhanced energy monitoring, management and analysis</td>
<td>Real-time load flow analysis</td>
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Two-Way Communication Infrastructure

Back Office Enhancements and Integration

Our South Bend Smart Metering Pilot Project will test many of these capabilities
Utility Process Impacts

With a full implementation, the gridSMART<sup>SM</sup> technologies will fundamentally change core customer services and distribution business functions

**Reduce**
- Outage response/restoration times
- Customer calls
- Billing exceptions
- Field residential disconnect/ reconnect orders
- Field inspection costs
- Energy theft and use on inactive accounts

**Eliminate**
- Manual meter reading
- Field check reads and re-reads
- Response to non-interruption calls

**Increase**
- Support for new gridSMART<sup>SM</sup> components
- Expanded SCADA Support
- Engineering and analytical support for distribution planning & operations

**Enable**
- Proactive identification of reliability issues
- Reduced system losses
- Focused capital spend
- Automatic system reconfigurations
Customer Benefits

Customers will experience significant service enhancements that should lead to more control over their energy consumption and higher satisfaction.

Key Customer Benefits

- Improve reliability – power will go out less often and be restored faster
- Reduce bill estimations leading to more accurate bills
- Enhance energy consumption information
  - Detailed consumption on bill
  - Customer web portal
- Better control of energy consumption
  - Direct load control
  - Prepay for consumption
- Enabling tools to permit future services:
  - Proactive notification when power goes out/restored
  - Billing notifications
  - Consumption alerts
  - Bill date flexibility
Current Goals & Initiatives

A coordinated set of goals will provide our customers greater energy usage control as well as improving our operational and environmental performance.

### Key Initiatives & Goals

#### Advanced Metering Infrastructure
- Complete South Bend Pilot Project (10,000 meters) in 2008
- File for implementation of ~1M smart meters in Texas
- Identify two city-scale deployment of 100,000 customers each in 2008
- Smart meters to all 5M+ customers by 2015

#### Distributed Energy Resources
- Implement 6MW NaS batteries in Ohio, Indiana, and West Virginia
- Implement first 2MW commercial-scale fuel cell in Columbus, OH
- Install 25MW of NaS capacity by 2010

#### Demand Side Management/Energy Efficiency
- Achieve 1,000 MW demand reduction from customers and internal sources by 2012