MLGW’s Smart Journey to Improve Customer Satisfaction

MLGW Board of Commissioners
5/1/2015
MLGW’s Journey to Smart Meters

• 15+ years of researching advanced meter technology, applicability to MLGW operations and customer benefits
• 1,000-meter Smart Grid Demo, 2010-12
• 60,000-meter project, 2013 (phase 1)
• Full smart meter deployment by 2020 (phase 2)
Smart Grid Demo, 2010-2012

• 1,000 electric smart meters with cellular communications
• Residential volunteers only
• Demonstrated: technology, accuracy, data integration with MLGW systems, customer data presentation, customer awareness and conservation, Time-of-Use pilot, In Home Display pilot
• Results:
  – 2.3% reduction in electricity use for average participant (compared to baseline)
  – 5.6% reduction in electricity use for average TOU rate participant
  – 95% would recommend smart meters to a friend
Phase 1: 60,000 meters

• Electric, gas and water smart meters installed at residential customer sites in zones across Shelby County
• Telecommunications wireless network installed to support smart meters in phase 1 zones
• Excellent daily read rates
Phase 1: Early Success Stories

- **Electricity**
  - Tamper alerts have resulted in significant drop in meter tampering and theft of utilities
  - Voltage alerts have notified MLGW of emerging issues at customer sites before customers are aware

- **Water leaks**
  - Smart meters have identified water leaks on customer-side of meter at approx one-third of sites, enabling customer notification/awareness
Smart Meter Vision

- Deliver the operational and customer benefits of smart meter technology to all MLGW customers
  - Integrated outage management
  - Reduced labor and transportation costs
  - Improved safety and security
  - Virtually eliminate estimated readings
  - Improved service capabilities (connections, leak detection)
  - Voluntary dynamic rate and billing options (Time-of-Use, PrePay)
  - Increased customer awareness and conservation
  - Customer savings
  - Future applications (automated switches)
Additional Customer Benefits

- **Reduced fees**
  - Lower fees for utility service connection
  - No fee for electric service reconnection

- **Faster service**
  - 24/7 electric service reconnection (coming 2016)

- **Pre-Pay option**
  - No deposits
  - No late fees
  - No electric reconnect fee
  - 24/7 payment and service reconnection
  - Pay off existing account’s balance over time while maintaining service connection (debt recovery)
Industry Facts

• JD Power survey results show that customers with smart meters report higher satisfaction with their utilities
  – Residential: 43 points higher
  – Business: 85 points higher
  – Customers who are aware of their utilities’ smart meter plans also report higher satisfaction

• The Edison Foundation reports more than 50 million electric smart meters installed in the U.S., as of July 2014.
  – approx 43% of U.S. households already have smart meters
Smart Meter Deployments by State

Note: Figure 2 shows the extent of smart meter deployments by state by 2015 that are either completed, underway, or planned. This map does not include automatic meter reading (AMR) installations.

Source: The Edison Foundation, Institute for Electric Innovation, September 2014
High Level Contract Overview

Vendor Selection
- Request for Proposals (RFP) issued
- Five proposals received
- Three vendors made presentations
- Elster Solutions selected based on scope of work, experience and cost
- Approx $240 million contract, including $12 million in contingency
  - 26% of annual capital expenditures budget

Major Milestones
- Meter delivery beginning October, 2015
- All telecom infrastructure installed by 8/31/2016
- Fully operational by 12/31/2020; averaging 50,000 meters installed per quarter
# Most Likely Savings Scenario

<table>
<thead>
<tr>
<th>MLGW OPERATIONAL SAVINGS</th>
<th>Annual Savings</th>
<th>Notes/Assumptions</th>
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</thead>
<tbody>
<tr>
<td>Labor and benefits</td>
<td>$14 million</td>
<td>175 positions eliminated through attrition</td>
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<tr>
<td>Meter exchange program</td>
<td>$10 million</td>
<td>MLGW can eliminate annual capital budget for replacing meters due to age</td>
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<td>Utility theft</td>
<td>$3 million</td>
<td>11,000 known cases annually; actual theft is probably double the known cases</td>
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<tr>
<td>System losses</td>
<td>$2 million</td>
<td>MLGW can reduce overall E, G, W system losses by 0.2%</td>
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<tr>
<td>Net write-offs</td>
<td>$2 million</td>
<td>MLGW can reduce net write-offs by 18%</td>
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<tr>
<td>Total MLGW Operational Savings</td>
<td>$31 million</td>
<td></td>
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</tbody>
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<tr>
<th>CUSTOMER RESPONSE SAVINGS</th>
<th>Annual Savings</th>
<th>Notes/Assumptions</th>
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<tbody>
<tr>
<td>Customer Savings (Energy efficiency/conservation)</td>
<td>$16 million</td>
<td>Using demonstration results, customers can reduce consumption by average 2%</td>
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<tr>
<td>TVA to MLGW to Customer Savings (Load shifting)</td>
<td>$4 million</td>
<td>By shifting some usage to off-peak hours, customers can reduce MLGW wholesale demand charges by 1.7%</td>
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<tr>
<td>Total Customer Response Savings</td>
<td>$20 million</td>
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| TOTAL SAVINGS, ANNUAL                    | $51 million    | Annual savings from both MLGW actions and customer response activities            |
Smart Meter 2020 Vision

• Do what is in the best interest of MLGW’s customers as a whole
  – Lower the cost of utilities to MLGW customers
  – Enhance the delivery and maintenance of MLGW services
  – Offer more options to meet customers’ varying needs
  – Reduce our community’s carbon footprint

• Smart meters will help us on this journey