



# **MLGW's Smart Journey to Improve Customer Satisfaction**

MLGW Board of Commissioners

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# 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







# 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

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



# 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