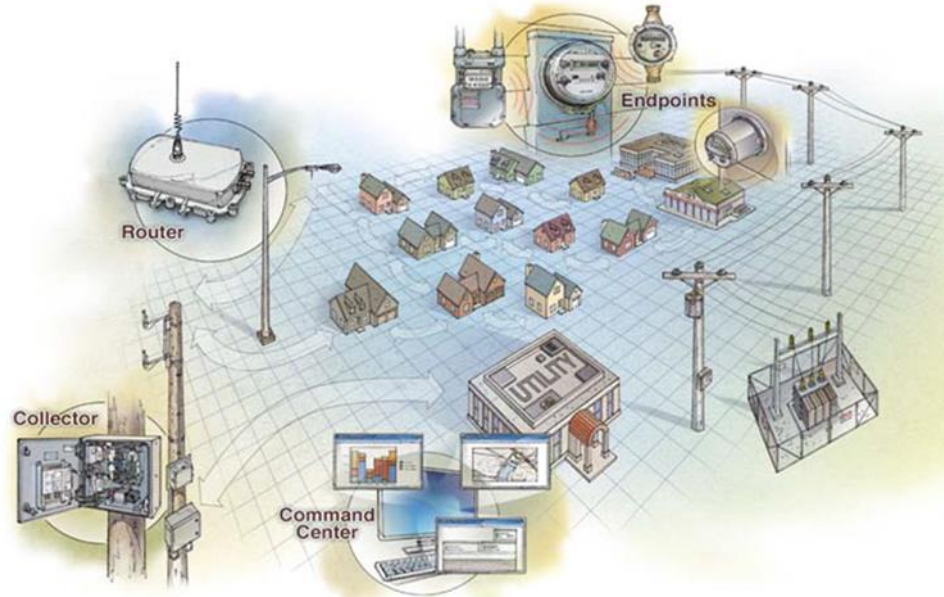# Ameren Illinois Advanced Metering Infrastructure (AMI)

2020 Annual Update

March 2020

Agenda

- AMI Program Overview

- 2019 Accomplishments

- Electric AMI Capital Expenditures

- Appendices

  - EIMA Metrics

AMI Meter Deployment Overview

ILLINOIS

	2014	2015	2016	2017	2018	2019
Electric	4%	17%	32%	56%	80%	100%
Natural Gas	3%	11%	26%	42%	68%	100%

Visit **AmerenIllinois.com**

AMI deployment target expanded to 100% by Illinois Commerce Commission order on September 22, 2016
- 1.2M electric (100%)

Deployment Schedule
- Complete 100% Electric AMI by the end of 2019

Note: 100% complete excludes Non-Standard metering customers and customer premise access issues.

3

Original Functionality Implementation Plan

Stage 0	Stage 1	Stage 2	Stage 3
Install foundational meter data management system and AMI system	Process and Bill Residential and Commercial/Industrial customers	Upgrade processes and system to support remote connect/disconnect	Peak Time Rewards Program
Prepare systems and processes for installation of 2-way communication network	Integrate AMI and MDM systems and prepare for billing Transfer AMI interval data to Retail Energy Suppliers	Revenue Protection Analytics	Event processing such as outage notification
Manage Asset Information	Customer Web Portal Green Button	Provide Non Billing Interval Data to RES	
Q2 2014 - Complete ✓	Q4 2014 – Complete ✓	Q2 2015 – Complete ✓	Q4 2015– Complete ✓

Ameren ILLINOIS

2017 Additional AMI Functionality Implementation Plan

2016 Release #1	2016 Release #2	2017 Release #1	2017 Release #2
Manual Registration of Home Area Network (HAN) Devices	Automated Registration of HAN Devices	Provide Bill Quality Interval Data to Retail Electric Suppliers	Green Button Connect My Data Residential Only
Q1 2016 ✓	Q2 2016 ✓	Q2 2017 ✓	Q3 2017 ✓

2018 Additional AMI Functionality Implementation Plan

2018 Release #1	2019 Release #1
Small Commercial & Industrial	Residential Web Portal Upgrade
Voltage Data Collection from AMI	
Q4 2018 ✔	Q4 2019 ✔

2019 Accomplishments

Achieved 2019 AMI Meter Deployment Target

	2019 Cumulative Total Commitment	**2019 Cumulative Total Installed**	**Difference**
AMI Electric Meters	1,244,865	1,242,017	(2,848)

Note: The variance for electric meter installs are due to two reasons: Non-standard metering customers and access issues.

Ameren
ILLINOIS

Achieved Planned Route Conversion to AMI

2019 Route Cutover		
Operating Center	**Division**	**Total Routes**
Eastern	1	96
Pekin	1	91
Alton	5	123
Mattoon	3	123
Paris	1	59
Carbondale	6	113
Springfield	3	<u>79</u>
	Total	**684**

[1]A Customer Service Pilot (Choose Your Due Date Option) required additional routes to be created
[2]Cutover started in 2016, amount listed in "Total Routes" remain to be cutover

9

Realized Operational Benefits from Data Analytics

Reduction of Nuisance Truck Rolls: Unnecessary service orders generated to check issues that are not truly issues

Reduced Back Office: Analytics leads which reduce human interaction in solving billing exceptions

Theft: Improve Ameren Illinois identification of theft and diversion.

Faster Identification of Dead Meters: Analytic leads which identify meters that are no longer communicating to the network or are not effectively metering the electric or gas service.

2019 BENEFITS/COST SAVINGS	
Reduction of Nuisance Truck Rolls	$83,498
Reduced Back Office Work	$342,405
Faster ID of Dead Meters	$900,337
Theft Detection and Reduction	$0
Total	**$1,326,240**

Continued the Peak Time Rewards (PTR) Program

September 10, 2019	
Active Participants	99,180
Participants Receiving Credit	61,475
Percentage Successful	62%
Total Credits Earned	$11,364
Average Credit per Participant	$0.11
Average Credit per Successful Participant	$0.18
Total Gross Savings (kWh)	118,624
Participants > $5 Credit	1
Maximum Credit	$7.61

Turn up AC thermostat   Unplug unused electronics   Delay laundry   Delay cooking or using the oven

Ameren
ILLINOIS

Tested and Enhanced AMI Architecture for Cybersecurity **Draft and Confidential**

- Conducted two enterprise wide tabletop cybersecurity controls assessments which included the AMI solution

- Performed a third party compromise assessment of the enterprise

  ➢ No indicators of breach on any control or corporate system were identified

- Changes were made to enhance application and change control. Continued to monitor additional threat prevention for viruses and malware, as well as, Host Intrusion Prevention System (HIPS) to detect and alert Ameren IT of any suspicious events within the Ameren IT environments.

Attained 2019 Remote Service Order Goals

	Forecasted for 2019	Actuals for 2019
Remote Service Orders	315,000	463,000

Remote Service Orders:
- ➢ Operate Switch for Cut Out/Cut In
- ➢ Operate Switch for Move Out/Move In
- ➢ Off Cycle Meter Reads for Same Day Move Out/Move In
- ➢ Off Cycle Meter Reads to address billing exceptions and customer issues

Ameren
ILLINOIS

Every Customer Touched

After Meter Installed, Benefit Mailer Arrived

Encouraged energy management using features that were inspired by AMI or smart meters.

- Create an online account to manage usage and costs
- Sign up for Cost and Usage Alerts to manage at home or on-the-go
- Enroll in Peak Time Rewards – earn a bill credit by reducing energy usage during high demand times

Social Media: Ebbs and Flows of Life. Connecting Energy with lifestyle and changes in life.

Weekend Warrior, College Break, Empty Nester

Social Media Insights

- While Empty Nester led overall, both in the testing and rollout phase, each creative approach outperformed Facebook averages.

- Retargeting saw an above-average click-through rate as well as continued to help educate our video viewers on energy use management.

- Paid search captured users intending to search for energy management.

- General audience performed well (or, in some cases, better).

- This strategy validated our hypothesis that these moments in life helped to contextualize energy management in tangible and relatable ways across a wide variety of key customers.

Customer Education:
Smart meters: Incentive Launched

02/03/2020			
EE Flag	Target	Control	Remainder
Percent	3.93%	3.76%	3.65%
# Enrolled	654	433	571
Total	16649	11860	15202

Incorporating Broadcast for the first time in 2019

YouTube: https://www.youtube.com/watch?v=gq XfXx8xQyM
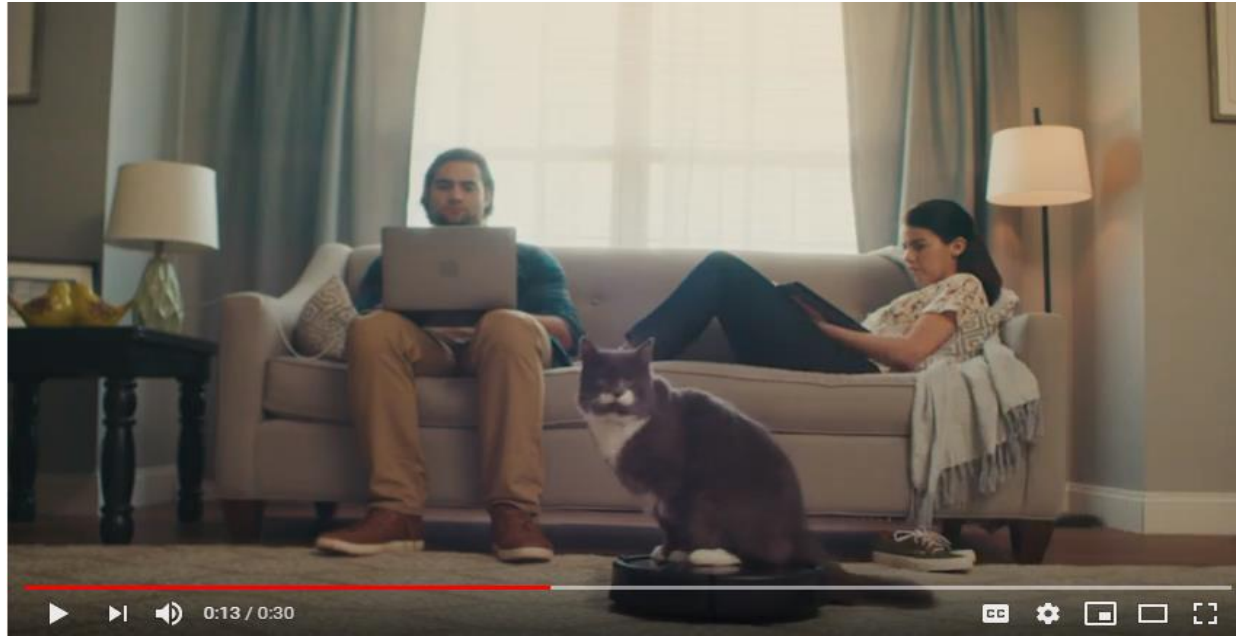
Year over Year, Enrollment Goals Met

- Goal for 2019 enrollment – 11%

- 2019 enrollment – 102,405 out of 938,000 eligible

  ➢ 11% enrollment rate

- Ameren Illinois will bid in the Peak Time Rewards aggregate capacity into the Midcontinent Independent System Operator's capacity auction in April 2020.

- If MISO does not call an event in 2020, Ameren will call events near the end of the cooling season (August and September) to clear the capacity account and ensure enrollees have the opportunity to earn bill credits
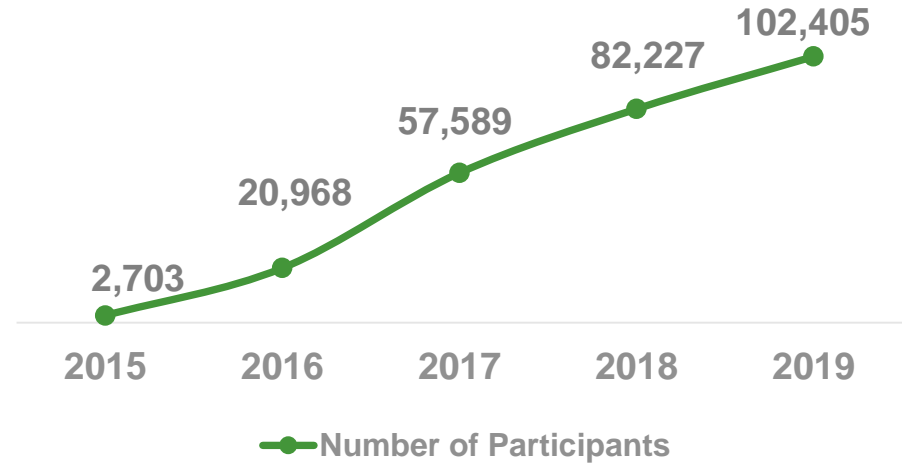
Peak Time Rewards Enrollment by Plan Year

Peak Time Rewards: Overall Customer Sentiment

> **"** The chance to save money without any pressure.
>
> Knowing that it's up to me to save money and help the environment by doing my small part.
>
> I appreciate that Ameren is taking the steps to try to make users more aware of how much energy they use (or waste) in an attempt to be eco-conscious.

79% Bill Savings

7% Convenience

4% Conserving Energy

4% Environment
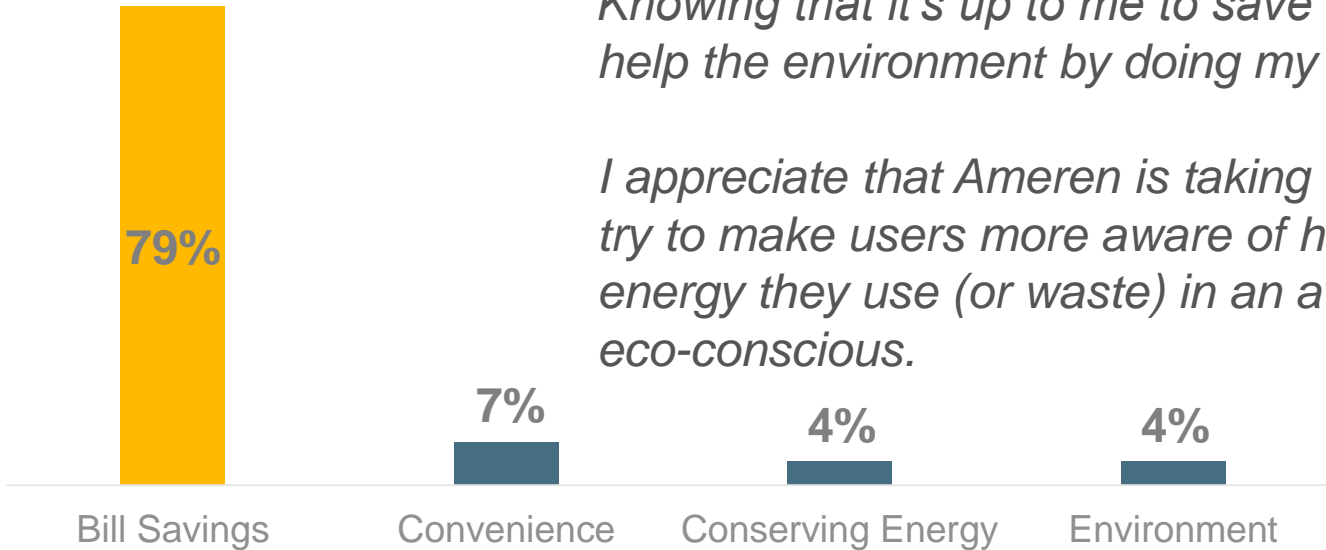
Top Four Response Categories

Ameren ILLINOIS

Non Standard Metering (NSM) (1/2)

At the end of December 2019, 1,305 Ameren Illinois customers received charges for non standard metering.

Type	Count
AMI Customers Charged for NSM	1,305
AMI Customers Requesting NSM But Not Yet Eligible for Charges	1,369
Total Customers Enrolled in NSM	2,674

Non Standard Metering (NSM) (2/2)

Customer Enrollment Method	Count
Enrolled After Meter Installation	246
AMI Refusal During Deployment	652
Customer Contact Center	453
Unable to Complete Meter Exchange	1,323
Total	2,674

Electric AMI Capital Expenditures (1/2)

Category	Budget	2019 Actual Costs	Variance
AMI Meters	$38.9	$29.1	$9.8
Communication Network	$0.2	$3.2	($3.0)
Information Technology	$1.3	$0.6	$0.7
Program Management	$1.2	$1.0	$0.1
AMI Operations	$6.3	$0.9	$5.4
Total	$47.9	$34.8	$13.0
*Filed in ICC Docket 12-0244 Re-Opening			

Electric AMI Capital Expenditures (2/2)

Electric AMI	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
100% Electric Allocated Budget*	$2.9	$18.1	$32.9	$46.1	$37.4	$60.0	$56.5	$47.9	$0.0	$301.8
100% Electric Allocated Actuals / Forecast	$2.9	$18.1	$32.9	$46.1	$37.9	$66.5	$56.2	$34.8	$0.4	$296.0
Difference	$0.0	$0.0	$0.0	$0.0	($0.5)	($6.5)	$0.3	$13.1	$(0.4)	$5.8
Filed in ICC Docket 12-0244 Re-Opening										

Ameren
ILLINOIS

Appendices

2019 Year End AMI Related EIMA Metrics

Metric	2018	2019
Estimated Bills	108,455	84,018
Consumption On Inactive Meters	6.4M kWh	3.8M kWh
Uncollectibles	$11.3M	$11.3M

Ameren Illinois satisfied the 2019 performance year goals for all three metrics. These metrics will be explained in more detail in Ameren Illinois' Modernization Action Plan Multi-Year Performance Metrics 2019 Annual Report to be filed pursuant to 220 ILCS 5/16-108.5(f).

Ameren
ILLINOIS