

Kentucky Utilities Company and Louisville Gas and Electric Company
Case Nos. 2020-00349 & 2020-00350
Advanced Metering Infrastructure Annual Report
July 31, 2023

I. Introduction

In accordance with the Kentucky Public Service Commission’s Order of June 30, 2021 and subsequent order of December 6, 2021 in Case Nos. 2020-00349 and 2020-00350, Kentucky Utilities Company (“KU”) and Louisville Gas and Electric Company (“LG&E”) (collectively “the Companies”) submit their annual Advanced Metering Infrastructure (“AMI”) report.

Pursuant to Ordering paragraphs 8, 11 and 13 in the June 30, 2021 Orders mentioned above, the Companies report provides the plan and progress toward maximizing benefits in the areas of reduced meter reading expense; ability to disconnect/reconnect remotely; reduced field service costs; avoided meter costs; fuel saving from decreased customer usage; conservative voltage reduction; time of day rates; electric distribution operations; improved outage response; management and prediction of outages, overloads, and shortfalls of transmission and distribution assets; data availability to customers within 4-6 hours; innovative rate design; reduced theft and earlier detection; a detailed plan for customer engagement of its AMI systems’ as well as detailed plans regarding how the Companies identify outages, how the AMI systems will facilitate notification and communication of information with customers regarding outages, the estimated times of repair, and the AMI systems’ interaction with the Companies other smart grid investments, including the outage management system.

This report reflects data through the end of June 2023, except where noted.

II. Quantitative Benefits

Reduced Meter Reading Expense

Meter exchanges began in September 2022. Meter reading savings will be reported on an annual basis. Through December 2022, there were 28,024 meters installed which results in avoided meter reading costs of approximately \$60,000 (based on meter read cost times number of meters installed).

Ability to Disconnect/Reconnect Remotely

Electric meters installed to date (under 200 amp) have a remote disconnect/reconnect switch that cannot be enabled for operations until the completion of system integration scheduled for Spring 2024 (see Appendix I for the schedule of planned work). Consequently, reporting on the ability to disconnect/reconnect remotely will begin with the July 2025 report. Minimal savings are expected, if any, in 2024 as the switches will have been enabled for only a short period of time.

Reduced Field Service Costs

Reduced field service costs are associated with remote service switch enablement because field technicians are not needed to visit each electric meter for a disconnect or reconnect. However, these savings will not occur until after the remote service switch systems are enabled and

integrated. As noted above, the plan is to begin utilizing these switches in the Spring of 2024 (see the schedule in Appendix I) after system integration work is complete. Consequently, reporting on reduced field service costs will begin with the July 2025 report. Minimal savings are expected, if any, in 2024 as the switches will have been enabled for only a short period of time.

Avoided Meter Costs

Avoided meter costs are associated with not purchasing replacement meters at the same level as prior to AMI approval. Through December 31, 2022, the Companies have realized savings of approximately \$1.7 million related to avoided meter costs.¹

Fuel Saving from Decreased Customer Usage

Meter installations began in the fall of 2022 with coincident customer engagement. Communications encouraged customers to take full advantage of their AMI meter capabilities in order to save energy, which results in avoided fuel expense for rate payers. At this time, energy savings are difficult to assess as data related to fuel savings from customer use of their AMI meters is minimal due to only 4% of customers having an AMI meter and the short amount of time since install for the majority of them. However, for the customers having AMI meters installed by the AMI Project the initial results show savings. The 2022 data (only a 2-month comparison due to the annual basis for fuel savings calculations) shows that LG&E and KU Residential Service customers are saving 7.24% versus an assumed rate of 0.35% on average relative to non-AMI customers (this data comparison does not take into account those that were already enrolled in My Meter). The Companies consider these estimates to be preliminary as both additional AMI meters are installed which grows the population of customers with access to interval data and the length of time customers have an AMI meter increases, we anticipate the energy savings assessment will be refined. In addition to having more customers with AMI meters, a full 12-month comparison will assist in balancing consumption due to weather. The Companies will report on this in future annual reports.

Conservation Voltage Reduction

Conservation Voltage Reduction (“CVR”) is dependent upon integration with electric distribution systems. Plans are to conduct system integration with distribution systems in the second quarter of 2024 and continue through 2024 (See Appendix I); therefore, CVR benefits are not planned to commence until 2026. The first report that may have CVR benefits will be the July 2026 report.

Time of Day Rates

The Companies currently have voluntary time-of-day (“TOD”) rates for residential and non-residential customers with loads that do not exceed 50 kW. All non-residential customers with loads that exceed 250 kVA are already on TOD rates. AMI Meters began being installed in the fall of 2022. AMI meters will provide customers with information to make an informed decision on whether a TOD rate would benefit them. The customer communication and engagement plan will let customers know about these alternative rates and how they can utilize their AMI meter to make an informed decision. As meters have only begun to be installed as part of the project, we

¹ Avoided meter costs are reported on an annual basis aligned with the Companies fiscal calendar (January 1 – December 31).

currently have 3 customers with an AMI meter that have moved to a residential TOD rate through December 2022.

Electric Distribution Operations

Electric Distribution costs are not expected to be affected by AMI until 2025,² when EDO and AMI systems are integrated. Additionally, AMI systems are not planned to be integrated with electric distribution until the latter part of 2024. Consequently, there is nothing to report until after these system integrations occur and maybe not until distribution would have planned expenditures in 2025 or beyond.

Improved Outage Response

Important aspects of managing outages are identifying the outage area, isolating it, and then restoring service. AMI enables the Companies to know of an outage down to the individual customer as soon as it occurs without the customer taking any action. When integrated with electric distribution operations systems, the AMI system will report outages quickly and will reduce the time to accurately determine the outage location. With earlier outage detection and location, faster and more effective restoration can be achieved. This will translate into decreased crew time, overtime savings, reduced fleet costs, and lower contractor expenditures.

Integration with distribution operations is scheduled to begin in the second quarter of 2024 and continue through the end of 2024 (see Appendix I.); therefore, significant outage benefits are not planned to commence until the end of 2024 at the earliest and most likely not until 2025. The first report that may have outage management benefit reporting will be the July 2025 report.

Management and Prediction of Outages, Overloads, and Shortfalls of Transmission and Distribution Assets

Some distribution transformer failures may be predicted prior to failure by using AMI data for transformer load management. This earlier identification allows the Companies to move from time-based maintenance to condition-based preemptive repair or replacement of the failing transformer before it fully fails, thereby reducing the outage duration and avoiding any additional cost of an “emergency” replacement. This capability is especially important as more load is placed on the system by electrical vehicle charging which can stress transformer capacity especially during extreme heat or cold periods.

AMI data can also be used to diagnose momentary outages related to overloaded hydraulic reclosers which are not connected to Supervisory Control and Data Acquisition (“SCADA”) systems. Following weather events that cause an increase in demand, momentary outages can be plotted on a map to identify hydraulic reclosers that are operating due to load. Pockets of momentary outages that appear on the map behind hydraulic reclosers indicate a recloser that was probably operating due to load. Although the Companies have been installing intelligent reclosers since 2016 to identify these kinds of issues, there are more than 900 circuits that do not have an

² Case Nos. 2020-00349 and 2020-00350, Exhibit LEB-3, Table 24, page A-17, The labels on Table 24 should be 2021-2030 instead of 2031-2040.

intelligent recloser and will benefit from the information AMI will provide. Without AMI, these operations may go unnoticed until the recloser fails altogether.

AMI can provide data for voltage management. If the average voltage of a meter is outside of the normal band, but not low enough to be considered an outage, the meter can send the voltage reading to the system operator for analysis and response. These voltage excursions will help the Companies identify where there may be issues in the system and can also be used to enable more advanced voltage management solutions on the distribution system.

Utilities have experienced initial success at identifying failed or failing equipment based upon information from AMI meters. Average voltage information can be used to identify transformers with windings shorted and can also identify regulators and switched capacitors that are not operating properly. When voltage information is combined with circuit data, the type of problem identified can be scripted which allows repair orders to be automatically created and dispatched. Voltages that are out of range on a single meter indicate a bad meter and a work order will be issued. Voltages out of range for multiple meters on a transformer create a repair order to swap the transformer. Voltages out of range for multiple transformers are investigated for regulator or capacitor problems.

The savings discussed above are dependent upon integration of AMI with distribution operational systems. This is planned to begin in late 2024. Therefore, these benefits are not planned to commence until 2025 or beyond. Thus, the first report that may address these benefits will be the July 2025 report.

AMI usage and demand data will be used to identify over or underutilized transformers. There is additional value in keeping larger transformers from failing due to overload or replacing them with smaller transformers. The process is very straightforward for transformers with only one customer served. The same process can be applied to smaller transformers by summing the load from all the AMI meters that are connected to the transformer. This process will identify overloaded transformers and may also identify transformers that have mis-linked meters. Additionally, this can help identify distribution losses or theft.

The Meter Operations Center is monitoring various alerts including power outages and restorations. Ad hoc analysis revealed a pattern in power outage events on a single street. Upon dispatch of a distribution crew, the root cause was confirmed as a failing service transformer (burnt up hot block) feeding multiple customers. (Service drops depicted in Figure 1 below.) Further project activities such as Release 5 and broader business formalization of analytical data models will likely uncover similar instances and more.

Figure 1 – Failing service transformer Identified via AMI telemetry.



The connection between the meter and the transformer is critical to accurately predicting failed devices and the customers impacted from an outage. The service from a meter may be rerouted to a different transformer for several reasons. When this occurs, it is important that the rerouting is correctly mapped in the Companies' mapping system. Voltage signatures from AMI meters can be used to determine what meters are connected to a transformer and make any necessary adjustments. Thus, AMI provides very precise and current mapping of meter-to-transformer pairings.

Data Availability to Customers Within 4-6 Hours

The Companies are providing data within 4-6 hours to the My Meter portal for customer use and will continue to do so as AMI meters are installed across the service area.

Innovative Rate Design

The Companies affirm their commitment to offer innovative rate designs to ensure customers receive benefits from AMI beyond the operational savings that will be reflected in their bills following future rate cases. The Companies will offer residential customers a voluntary prepay option upon full deployment of AMI and plan to utilize AMI data to guide rate design and thus would not plan to offer these rates until 2026 or later when AMI data is available for all customers.

Reduced Theft and Earlier Detection

The identification of theft or the failure of metering equipment resulting in under billing of a customer is dependent upon AMI meter installation and the collection and analysis of interval data.

For the roughly 240,000 meters installed through June 2023, 675 accounts with potential issues related to theft or tampering have been identified for initial review with 18% of those accounts requiring further investigation. There have been 127 cases of equipment failure which were investigated and resolved by the MOC since deployment began.

Customer Engagement

The Companies developed an Advanced Metering Infrastructure Customer Engagement and Communications Plan (attached as Appendix II) that includes awareness, education, and engagement phases before, during, and after metering equipment upgrades.

The fully executed plan tactics include paid awareness advertising in areas where deployment is occurring as well as search engine marketing ads in all areas of the service territories to drive customers to the Companies' dedicated website when searching for information online. Awareness ads are placed on a variety of platforms to have the widest impact possible while also remaining targeted to only the current deployment areas at any given time. Tactics include digital media, social media, online music streaming radio, and other mediums as appropriate in each area of the media market, such as outdoor and print, to build awareness of the project and explain the benefits of the technology to the customer.

The Companies' website includes a searchable deployment map so customers can find out when meter exchanges will be coming to their area of the service territory and frequently asked questions (FAQ's) are regularly updated online for customers to find answers they seek. Informational articles, presentations, and printed flyers and fact sheets highlight the customer benefits of the project, reinforce the safety of the technology, and explain the elements of the project that are currently underway. These are available through customer-facing offices and from dedicated AMI Ombudsmen and the customer-facing employee base.

The AMI Ombudsmen also attend community meetings, engage with community leaders and organizations, and field questions from stakeholders and customers alike during both the awareness and the education phases of the project. These employees are responsible for a maintaining a high level of customer satisfaction and their roles include:

- managing customer expectations during the deployment of AMI meters in a specific area
- establishing mutually beneficial dialogue and building strategic relationships with community leaders and organizations
- researching and resolving complex and escalated customer complaints/inquiries; and
- serving as leaders in furthering the adoption of the AMI strategic plan

In addition to the AMI Ombudsmen, the Companies' Key Accounts Managers work closely with their non-residential clients to ensure a smooth meter upgrade process with the least impact to their business operations.

Also, during the education phase, the critical direct customer notifications are executed that include emails, letters, postcards, text messages and automated outbound calls notifying customers of the approaching installations in their zip codes. The timing of these notifications is approximately four weeks prior to each customer's scheduled service date, with reminders two weeks prior and a

final reminder the week prior. This tiered strategy is intended to provide customers with clear and accurate information to prepare them for and facilitate the installation of their new AMI metering equipment, provide opt-out information for those customers who choose to opt-out of receiving an advanced meter and to minimize the inconvenience to the customer by offering appointments, where necessary.

During the meter exchange, technicians who have been fully trained on the importance of both safety and creating a positive customer experience approach each premise and attempt a friendly exchange with the account holder prior to the meter exchange procedure, alerting the customers of the event and providing further information. Door hangers are left with the customer after the meter exchange providing information about the My Meter tool and where to find more information.

After meter exchanges are complete, the Companies will continue to use established communication channels like Power Source newsletter, customer mailings and the advocacy of community stakeholders to engage customers by encouraging them to take full advantage of the benefits that will be available to them upon installation of their AMI meter. The Companies will encourage them to track their energy usage and avail themselves of innovative rate structures so they can make more informed decisions and change behaviors to reduce their bills, if desired. An example of one such communications piece is a promotional marketing postcard explaining the various customer benefits of the My Meter tool that is being mailed to customers after meter exchanges are complete in each area of the service territory.

With the successful launch of Green Button *Connect My Data*® in June 2023, LG&E, KU and ODP customers with AMI meters can also access the two Green Button standard energy data formats through the My Meter usage portal.

The first post-meter-exchange customer satisfaction surveys were performed in the first quarter of 2023. The purpose of those surveys is to collect feedback on customers' experience, gauge the effectiveness of advance communications, monitor the performance of contractors, and ensure operations comply with expectations. Overall, customers showed satisfaction with meter exchanges from the customers (4.33 on a 5-pts scale).

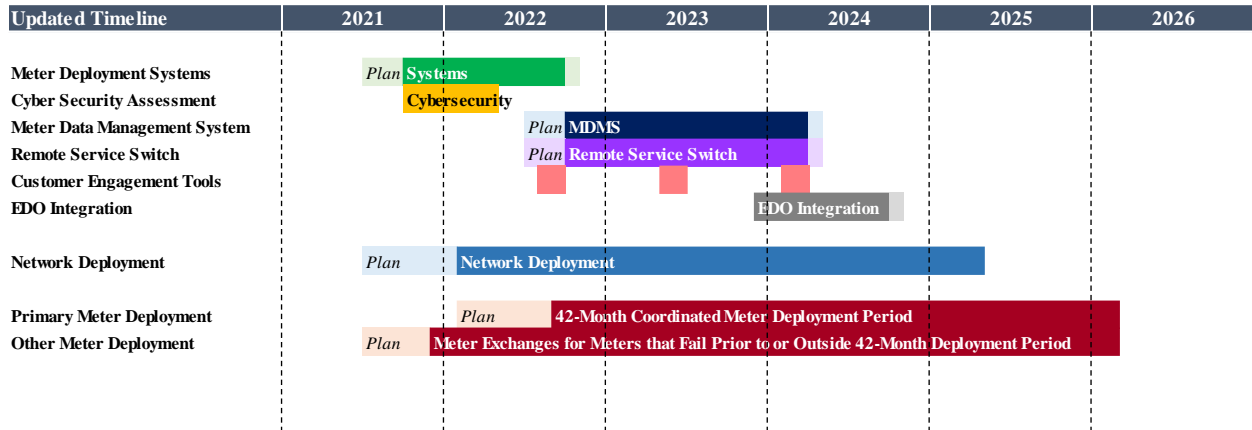
To support our employees during this project the Change Management and Training teams are working to prepare employees for the future-state so they can best serve our customers. A Change Agent Network of employees was established to facilitate top-down and bottom-up communication and change within the organization. The Change Agents are AMI ambassadors who help filter information out to the different areas of the business. Employee news articles keep the wider employee base informed about the status of the project and customer talking points are frequently updated and shared to assist employees in fielding questions from customers, neighbors and friends about the AMI technology and the deployment schedule.

During and after full deployment, the Companies will continue to work to identify opportunities that engage customers and third parties, and to enhance the customer experience and improve community relations.

III. Outage Management

AMI meters can do much more than just provide usage and billing data. They act as a coordinated group of sensors throughout the service area. In that capacity, they can be used to provide various types of information the Companies can use to prevent and handle power outages and validate restoration.

Integration with electric distribution operations is scheduled to begin in the second quarter of 2024 and continue through 2024. (See Appendix I.) Therefore, outage benefits are not planned to commence until the end of 2024 at the earliest and most likely not until 2025. Thus, the first report that may have outage management benefit reporting will be the July 2025 report.



Advanced Metering Infrastructure Customer Engagement and Communication Plan



PPL companies

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Updated 7/6/2023

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Introduction and Background

The LG&E and KU Advanced Metering Infrastructure (AMI) will consist of new digital meters to replace existing electric meters for customers, new communication modules for gas meters in areas of combined electric and gas service, and a new two-way system that will allow for wireless communication between the meters and the utilities. Initially, AMI will require a significant investment in the meters and supporting infrastructure that will, over time, lead to cost savings from reductions in operational expenses associated with reading meters and service connections/disconnections/reconnections.

In addition, there are many short- and long-term benefits to the customer experience. For example, the new service will allow for enhancements in outage detection that will lead to faster and more efficient power restoration, especially when combined with automated controls that already are being installed in electric distribution. Moreover, the new meters will capture more detailed and real-time energy usage information that can:

- help customers become more informed about their usage patterns and behaviors; and
- help LG&E and KU develop and offer new programs and rate options, both of which offer the potential for lower energy bills and greater customer satisfaction.

AMI provides customers new data, tools, and control over their energy consumption. A robust customer engagement strategy is the key element in engaging customers to take advantage of the benefits AMI offers. Without robust customer communications, education, and support before, during and after deployment, the Companies are likely to encounter customer concern, resistance, and low adoption of advanced capabilities. Consequently, the Companies are committed to educating and engaging customers and other interested parties to help them understand and take advantage of the benefits of their AMI meters.

Using the Companies proven approach to communications, LG&E and KU will:

- communicate to customers the benefits of AMI; the installation process; and greater control, increased options, and improved convenience available with AMI meters.
- encourage customers, and any third parties they designate to adopt AMI meters and their associated benefits.
- establish communication channels that allows the companies to reach all customers with information about AMI meters.
- support collaboration with stakeholders to enhance customer adoption and identify opportunities for additional programs and benefits.

The LG&E and KU AMI Customer Education and Engagement Plan (Plan) reflects a customer-focused, collaborative strategy resulting from the Companies' research, customer surveys, experience with participants in the LG&E and KU voluntary Advanced Metering System (AMS) Opt-In Program, collaboration with third-party stakeholders, and benchmarking with peer utilities. LG&E and KU developed an education and engagement strategy that:

- ensures customers receive messages consistent with their preferences,
- ensures third parties receive messages that enable them to educate and engage with their constituents, and
- encourages customers and third parties to participate in discussions with the Companies about customer preferences and options.

The Plan was developed through a collective and holistic process involving the Companies and various stakeholders. LG&E and KU gained insights into how best to communicate with their customers about

AMI meters while promoting and installing meters through their voluntary AMS Opt-In Program. In addition to anecdotal feedback LG&E and KU received from participants, the Companies reached out with surveys inviting customers to share direct feedback and comments. To further shape the Plan the Companies drew upon the expertise of industry professionals, research, and benchmarking from other utilities of similar size that have deployed AMI meters system wide.

Various studies of third-party customer satisfaction surveys showed a connection between strong, proactive customer communications and positive customer experiences with AMI programs. With this in mind, LG&E and KU developed this comprehensive Plan to educate customers, as well as community stakeholders, throughout the duration of the deployment and after customers' AMI meters are installed to encourage participation and support of AMI and future programs.

The Plan includes providing customers a robust offering of information on a variety of topics, including:

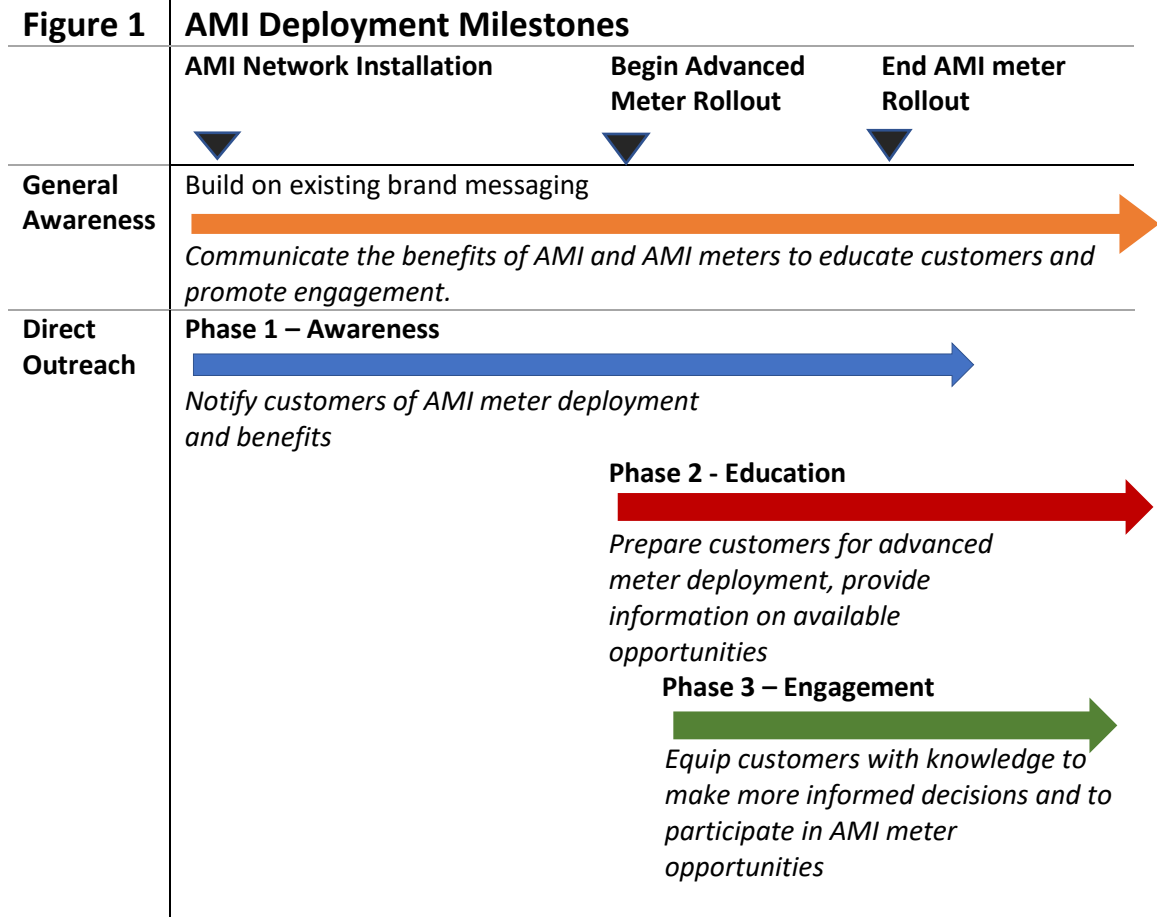
- how an AMI meter works
- the meter installation process
- new tools and features available through AMI
- the online dashboard My Meter which provides features, tools, and ways to help manage energy use

The overarching objective of the Plan is to inform customers of the benefits of AMI meters and promote engagement post AMI meter installation. The Companies have an unwavering commitment to customer service and satisfaction and implementing the action plan laid out in the Plan will ensure a positive customer experience before, during and after a system-wide rollout of an AMI.

While communications tactics will be triggered based upon AMI deployment in geographic areas as part of the multi-phase strategy, the overall campaign will reflect two positions:

- **General Awareness:** Raise customers' and stakeholders' awareness of our AMI meter rollout and educate our audiences about the benefits of modernizing our system (with specific emphasis on the role AMI meters play).
- **Direct Outreach:** Target and engage affected customers with direct communications (pre- and post-rollout) to:
 - set expectations about the installation process (what to expect),
 - how the meter works,
 - how customers benefit from AMI, and
 - the tools, information and features they can access to gain the most benefit from their new AMI meter.

Figure 1 below depicts the timing of these two positions based upon AMI deployment milestones and the multi-phase approach of the Plan discussed further below.



In executing the Plan, LG&E and KU will encourage adoption of the capabilities of AMI meters and provide customers with resources that allow them to manage their energy usage and costs. During and after full deployment, the Companies will continue to work to identify opportunities that engage customers and third parties, and to enhance the customer experience and improve community relations.

History of Strong Customer Education and Engagement

At LG&E and KU, the customer experience is one of our highest priorities. Employees understand and recognize the importance of ensuring a positive experience with every customer interaction. In addition, they appreciate knowing that their efforts to hold down costs and maximize performance also contribute to a positive customer experience. The Companies understand that a robust customer education and engagement plan is paramount to the success of AMI and to ensuring a positive customer experience.

In 2015, the Companies established Customer Experience Action and Advisory committees to develop and implement strategies that enhance the customer experience. Internal leaders representing all lines of business comprise each committee. Through regular communication, including strong internal messaging, a corporate website and mobile app available to all employees and contractors, the committees emphasize the importance of positive customer interactions. The committees advise all departments throughout the Companies on what, when, and how to communicate effectively with customers. The committees are key

to continuing the Companies' outstanding customer satisfaction and will be utilized to assure AMI messaging resonates with customers.

Prior to developing the Plan, the Companies conducted numerous surveys among customers to gauge their awareness and understanding of AMI meters. In addition, the Companies surveyed participants in their voluntary AMS Opt-In Program to gauge awareness and engagement. Survey results and industry research drove the development of a multi-phased communication approach. The Plan focuses on three phases – Awareness, Education and Engagement – that build on the Companies' existing "Empowering Possibilities" messaging phase which launched in early 2019.

Understanding Customer Needs, Priorities and Expectations

A successful plan must focus on understanding and anticipating the needs, priorities and expectations of customers. To that end, LG&E and KU reached out to existing advisory groups for feedback and insights into customer preferences and an understanding of AMI meters and their associated infrastructure.

Respondents to our surveys provided the following insights into customers' preferences, awareness, and perceptions about AMI meters:

- **Overall Awareness:** In a brand favorability survey conducted among residential customers in April 2018, nearly 25% indicated they were familiar with the Companies' AMS Opt-In Program. When asked to describe their overall feelings about advanced meters, 45% of those surveyed indicated they felt extremely or very favorable while 37% indicated they were somewhat favorable. Extremely favorable and very favorable responses were higher among customers in Eastern Kentucky with 57% expressing favorable feelings. Generation X customers were far more likely to have favorable feelings about advanced meters (58%) than Baby Boomers (40%) and Millennials (39%).
- **Sources of Knowledge:** Customers who participated in the April 2018 brand favorability survey were asked to indicate their sources for general news and information. Three-fourths of them (75%) cited television; more than half (54%) indicated general internet; and over half (51%) cited social media. When asked for preferences for how to receive company news and information, more than half (56%) said email; 42% said a flyer with the bill; and 37% said direct mail. Other sources – LG&E and KU website, television, social media, print or digital customer newsletter – were also mentioned.
- **Feelings About Advanced Meters:** In a survey conducted from August 24 to September 8, 2020, among customers who participate in the voluntary AMS Opt-In Program, more than half the respondents expressed satisfaction with the program. Customers who are most satisfied with the program mentioned ease of use and the ability to look at detailed data and usage trends to help make informed, energy-saving decisions as reasons for satisfaction.

Customer Education and Engagement Plan

LG&E and KU recognize the importance of engaging all market segments as well as the challenges in reaching every customer. To that end, the Plan includes customized approaches for all customers, including low income, seniors, high usage customers, customers with plug-in electric vehicles, and customers with private solar systems. The Plan, which was shaped by feedback from our customers, informs and engages customers throughout the various phases of implementation. LG&E and KU will reach out to customers to obtain feedback about their experience and adjust communication messages and channels based on customer feedback and preferences.

There is no "one size fits all" approach to communicating with customers. Customers will select the messaging methods they prefer. One of the Plan's strengths is that it allows flexible, scalable, and measurable communications as the customer evolves and becomes more engaged. The Companies utilize

tools and data that analyze which communications are most effective for educating and engaging each customer segment. The result of this analysis informs the Companies to adjust plans, communication channels, and messages to resonant with customers.

In addition, the Companies' proprietary online customer panel is a resource to share draft communication pieces and gain direct customer feedback.

Multi-Channel Communications

The Companies are committed to customer service and satisfaction, and they plan to ensure a positive customer experience before, during and after a system-wide rollout of an advanced meter infrastructure. The overarching objective of the Plan is to inform customers of the benefits of advanced meters and promote engagement post advanced meter installation.

LG&E and KU will use a diverse range of methods to educate and communicate with customers about:

- the Companies' plans to deploy advanced meters system-wide
- the installation process, and
- the benefits afforded by advanced meters and the supporting infrastructure

The Companies approach to communications includes using a variety of communication channels to distribute information. This may include but is not limited to, direct mail, emails, bill inserts, bill messages, outdoor signage (e.g., billboards), newspapers, radio, television, corporate website (e.g., information and videos), brochures/flyers, etc. In instances where there are key stakeholder groups (e.g., low-income agencies), the Companies will also provide education and materials to the groups to prepare them for any questions they may receive.

The Plan involves a three-phased approach that builds on the Companies' existing "Empowering Possibilities" campaign. Empowering Possibilities is a territory-wide campaign that serves as an introduction and the foundation that gives all LG&E and KU customers a broad sense of the future of the energy industry, its landscape and new technologies that benefit customers and add value to the communities served by the utilities. For more information about the campaign, please see Appendix A.

Phase I: Awareness

The Awareness Phase occurs prior to the installation of a customer's advanced meter. The Awareness Phase will include customized messages aimed at notifying all LG&E and KU customers of the Companies' plans to deploy AMI system-wide and emphasizing the high-level benefits to customers and to LG&E and KU. The Companies will ensure customers from urban areas to more rural settings receive the messages.

When interacting across multiple channels, customers recognize the messages easier and awareness increases. Messaging around the Awareness Phase will begin soon after receiving approval for full deployment.

During this phase, messaging will emphasize AMI technologies along with benefits and opportunities to give customers more control, choice and convenience. Other messages will provide information, resources and assurance to customers who express concerns over safety, privacy and security.

Awareness Objectives

- Educate all LG&E and KU customers about the Companies' plans for system-wide deployment of new advanced meters.

- Explain the reasons LG&E and KU are making this investment, with a focus on customer benefits, “What’s does it do for them?”
- Educate LG&E and KU employees with a strong focus on those who have direct customer interaction so they can fully and effectively discuss the benefits and specifics of AMI with customers.
- Start to inform elected officials, media, and other stakeholders (e.g., low-income advocacy groups) generally about AMI, the benefits, and the implementation process.

Phase 2: Education

The Education Phase would begin as the Companies approach meter installation in a specific area. Stakeholder communications will generally begin approximately six weeks before any advanced meter installations in an area. Direct customer communication will begin approximately four weeks prior to scheduled installation; additional communication will be deployed to each customer approximately two weeks prior to scheduled installation and again the week of the installation. The focus is on educating customers on the deployment process and the benefits of an advanced meter.

Education Objectives

- Educate LG&E and KU employees with a strong focus on those who have direct customer interaction so they can fully and effectively discuss the benefits and specifics of the initiative with customers.
 - Prior to the beginning of deployment, customer-facing employees will be trained on the process, provided detailed information about the schedule, and key points about the advanced meter and the capabilities it provides customers.
- Follow up with elected officials, media, and other stakeholders (e.g., low-income advocacy groups) regarding the deployment process and timeline.
 - Approximately six weeks in advance of deployment in a specific area, the Companies will use a variety of communication channels to ensure all stakeholders are aware of the deployment schedule and the advantages of an advanced meter. This includes but is not limited to, local news interviews, newspaper articles, phone calls, etc.
- Inform and educate all LG&E and KU customers about the Companies’ plans for system-wide deployment of new advanced meters.
 - The Companies will send three direct communications to customers prior to the installation of their advanced meter (i.e., two emails and/or letters and a postcard and one automated telephone call and/or text message – dependent upon each individual customer’s contact information on file).









Messaging Initiatives

The Education Phase will focus on AMI meter benefits and emphasize control, choice and convenience. Each deployment area will receive multiple messages through three distinct initiatives:

- 1) **Schedule and Deploy:** Provide customers with clear and accurate information to prepare them for and facilitate the installation of their new AMI meter and gas AMI module (only applicable to LG&E electric and gas customers), and inform customers of opt-out process, and address other concerns.
- 2) **Opt-Out Coordination:** Further, educate customers on advanced meter benefits and the opt-out process.
- 3) **Minimize Inconvenience:** Find ways to address concerns customers have about any inconveniences that may occur as a result of their advanced meter installation.

Schedule and Deploy

Specific information will be presented to the seven segmented audiences listed in the stakeholder column in the table below, as a notification prior to advanced meter deployment. Given experiences with meter replacement, the Companies have decided that the most effective deployment notification should be delivered to customers approximately four weeks before their advanced meter is scheduled for installation. The initial communication will be followed by two additional communications – one approximately two weeks prior to scheduled installation and the other the week prior to installation. Doorhangers will be left the day of installation. See the table below, which depicts customer communications prior to AMI meter installation.

~6 weeks prior	~4 weeks prior	~2 weeks prior	Week prior to installation	Day of Meter Installation
<p>Stakeholder Communications</p>  <p>KYPSC Local Officials Low Income Agencies Medical Alert Special Needs Key Accounts Media</p>	<p>Customer Notifications</p>  or 	<p>Customer Notifications</p>  or 	<p>Customer Notifications</p>  or 	<p>Customer Notifications</p> 

This initiative will conclude when LG&E and KU inform the customer that the advanced meter has been installed and will seek to assess the customer’s satisfaction with the process. This will be done through the following actions:

- LG&E and KU will leave a door hanger on the door to notify each customer when their new advanced meter has been installed. The door hanger has instructions for accessing and registering their online account via the My Meter portal and how/when they can begin to use the functionality.
- Customers who have registered their email address with LG&E and KU will receive an email or letter notification after their new advanced meter has been installed. The communication piece includes instructions for accessing the My Meter portal.
- The Companies will periodically execute customer satisfaction surveys to assess the deployment and installation processes.

Opt-Out Coordination

LG&E and KU will focus their opt-out campaigns on decreasing the number of customers who decline to allow the Companies to install an AMI meter by proactively alleviating typical

concerns through awareness and education. For those customers who choose to opt-out even after reviewing the information, LG&E and KU will provide a clear opt-out process.

Opt-out information will be included in the letter/notification customers receive. Customers who wish to opt-out will be instructed to call LG&E or KU. Opt-out coordination will be handled by employees specifically trained to provide customers with accurate and up-to-date information regarding advanced meters and the available opt-out process. Front-office employees and other individuals who will be handling customer contact and meter installations will receive information about opt-out processes.

Minimize Inconvenience

Consistent with each phase, LG&E and KU will design communications that are aligned with successful examples the Companies have employed in their voluntary AMS Opt-In Program, other large-scale company projects, and materials used throughout the energy industry.

LG&E and KU materials will be clear, concise, non-technical and segmented based on customer demographics. Appendix B contains samples of materials LG&E and KU have used along with drafts of materials LG&E and KU would use.

Phase 3: Engagement

The Engagement Phase starts when a customer receives an AMI meter and access to the tools necessary to better understand their energy consumption as well as optional rates available to them. The objective of the Engagement Phase is to assess and use insights gathered from customer surveys concentrating on the post installation user experience, focus groups and outreach experience to refine and promote new customer opportunities and future offerings. These activities will facilitate greater customer interaction with the Companies' programs, increase access to energy efficiency tools and information, and provide for other energy management opportunities offered by the Companies and other innovative third-party vendors.

A campaign will be developed to promote the information and benefits customers can access after their AMI meter is installed via the online My Meter portal. Additionally, LG&E and KU will highlight tools and features to customers via periodic notifications. This approach has proven to be extremely helpful during the existing voluntary program.

For example, in early 2019, the Companies launched a monthly email update to AMS Opt-In Program participants³. Each update offers information about existing – or new – tools and features available to customers via the My Meter portal. Not only have LG&E and KU seen strong open rates and interest in the email updates, but engagement on the portal increases significantly in the days after an email update is deployed.⁴

LG&E and KU have tools in place to increase customer engagement, and the Companies are investing more and more in digital channels. These digital channels will have the ability to gather and store customer preferences for the delivery of personalized, timely, effective, and educational communications. These communications will allow customers to make smarter energy decisions. Paired with information the Companies gather from the advanced meters, the engagement tools will allow LG&E and KU to transform their relationship with their customers by proactively providing new usage insights to customers.

³ A history of these communications can be viewed at <https://lge-ku.com/advanced-meter/roadmap>

⁴ See Appendix D

Engagement Objectives

- Educate customers about online resources and how to access My Meter.
 - The Companies will use multiple communication channels to engage the customer (e.g., bill messages, bill inserts, corporate website, videos, etc.)
- Make it easy for customers to select energy management tools and energy efficiency offerings that are available to them based on their personal preferences.
 - For example, written materials and videos that explain each feature and how it can be used to accomplish an individual's goals.

Messaging Initiatives

The Engagement Phase provides digital experiences while still recognizing that many customers prefer non-digital channels. Outreach programs will provide education materials through social and traditional channels to enhance face-to-face outreach from LG&E and KU personnel. The Engagement Phase is a long-term, holistic approach that leverages several digital and non-digital channels to engage and educate customers.

The Digital Experience

Among the digital channels used for ongoing customer engagement is the My Meter portal. LG&E and KU will create added value for customers by providing access to personalized and useful energy usage data. The portal enables customers to leverage this information to gain insights into how they use energy and then turn those insights into action. Specifically, the My Meter portal:

- Provides customers with an easy, intuitive method to view their energy usage in near real time.
- Provides a customized and personalized experience anywhere, anytime and on any device.
- Provides customers the ability to download usage data in various formats, including Green Button format, which is the national standard.
- Provides improved analytical capabilities to better understand customer behavior and empower customers with tools to make informed decisions.
- Provides the ability to overlay additional data, including weather, price and comparisons to other Advanced Meter customers in the customer's zip code and throughout the LG&E and KU service territory all in graphical format.
- Utilizes a customer analytics engine that leverages advanced meter usage data to provide customers with insights and energy savings tips as well as personalized action plans to conserve and save.
- Provides customers with proactive alerts associated with projected billing, home energy use, and customized thresholds set by customers (energy use or projected cost).
- Provides the ability for customers to set markers for dates when they make certain energy improvements so they can monitor to gauge the effectiveness of their actions.

My Meter portal functionality is tailored to specific customer segments (residential, small business, large commercial) and optimized for viewing on multiple devices (e.g., desktops and tablets). The portal integrates with the LG&E and KU corporate website, which means customers experience seamless access via a single sign-in process. The multi-channel experience extends to the front office, which allows LG&E and KU customer service employees access to the same data screens as the customer.

The end result of the My Meter portal is a low-effort, high-satisfaction digital customer experience that drives increased customer adoption. With “customers first” as the guiding principle at LG&E and KU, the My Meter portal sets the Companies’ direction while AMI provides the platform that helps bring it to life.

Personalized Data Insights

An important element of customer engagement is personalization. Traditional utility communications have been largely one-size-fits-all. LG&E and KU are committed to using a software platform that sends information that is relevant to each customer’s unique situation. The information takes the form of periodic energy reports for customers, customized with information ranging from new plots to energy saving tips to benchmark comparisons. The tips can be further refined based on publicly available non-utility information about the customer, such as the age of the customer’s house. In addition to the My Meter tools listed under the Digital Experience, below are even more tools integrated into the My Meter portal that LG&E and KU will employ to increase customer engagement:

- A user-friendly, interactive visualization tool will allow customers to analyze their energy usage trends through a series of views. Customers will be able to see their data by different time periods (e.g., days, weeks, months, years). Customers also will be able to see their bill costs in addition to usage data.
- Personalized energy cost comparisons across the standard residential rate and the Companies’ two residential time-of-day rates so that customers can determine what rate offers the best value for them.
- A bill comparison tool will allow customers to compare their last bill to their previous bill or to the corresponding bill from the same time period the previous year. Comparing bills is a useful way for customers to track their energy use and identify possible causes for an increase or decrease in their bill. AMI data allows for a more personalized and detailed breakdown of bill differences, including the impacts of weather, rate plan changes, and peak versus off-peak usage.
- Modules highlighting the resources available on the online portal and encouraging customers to engage with LG&E and KU online.

The tools in the Digital Experience and Personal Data Insights are complementary to each other and will drive a customer journey for years after the deployment of AMI meters. See Appendix C for screen shots of some of the tools, data and information customers can access via the My Meter portal, including a direct mail piece postcard that highlights the functions of the online tool.

Engaging All Customer Segments

There are customer segments throughout the LG&E and KU service territory that require special engagement efforts. Some customers may not be comfortable receiving messages through digital channels while others may not have access to online services. LG&E and KU will use a range of channels beyond digital means to engage customers. Engagement with non-digital, seniors, low-to moderate-income and non-English speaking customers will include the efforts of Customer Outreach Ombudsmen. These employees will determine which customer segments are not receiving the appropriate messages and take action to fill those gaps. Mail, community groups, events, social services, libraries, and government centers can all be leveraged as channels for reaching customers with education materials or personal interactions.

The Companies also acknowledge that there are customer segments (e.g., high usage customers, customers with electric vehicles, solar customers) within their service territory that may have

opportunities to take part in additional offerings. As such, LG&E and KU will provide targeted messaging to these customers that will revolve around additional opportunities to become involved in energy efficiency, third-party offerings, or other ways to save.

Customer engagement will evolve over the course of AMI deployment through lessons learned, surveys, focus groups, and a building of awareness across the LG&E and KU service territory. More opportunities to engage across channels means customers will participate more and begin to adopt new behaviors.

Conclusion

This Plan provides a framework to communicate and collaborate with customers and interested third parties in support of the Companies' AMI initiative. While AMI and the My Meter portal provide technologies that support customer control, choice and convenience, the Plan will help customers and third parties better understand how to best take advantage of AMI.

The Companies combined research, past experiences, benchmarking, and outreach to develop the Plan. The Companies' collaborative relationship with customers, energy service companies, and other interested parties played an invaluable role in gaining extensive support for the effort. Energy data access, rate pilots, and additional AMI-enabled opportunities detailed in the Plan support security and convenience for customers and third parties. The Companies will continuously seek and benefit from feedback from interested parties to maintain a customer-centric focus as new AMI-enabled opportunities arise.

In summary, the LG&E and KU AMI Customer Awareness and Engagement Plan provides a robust framework for successful customer awareness, understanding and engagement as part of AMI deployment.

Appendix A – Awareness Phase

This phase is key to educating customers and community stakeholders about system-wide deployment and build awareness of AMI benefits prior to and during meter exchanges through:

- Clearly communicating to customers the benefits of AMI; How a meter works; Explaining the Installation Process, Opt-Out Process and Fees; Promoting AMI’s Safety, Security, Control and Convenience; Tools and Features
- Robust outreach to all customer segments; tailoring messaging to reach customers who require special engagement efforts.
- Employing a variety of communication channels to reach all customers, including, where possible, outreach in each customer’s channel preference.
- Collaboration with Stakeholders to encourage customers to embrace the technology and adopt new behaviors.

Examples of customer-facing tactics utilized:

Fall 2021

- Updates to corporate website
- Updates in AMP it Up! Monthly Emails to AMS Opt-In Participants
- Communicating to stakeholders the project, filing approvals, and timelines

January 2022

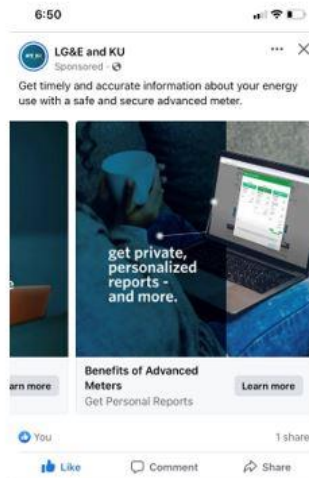
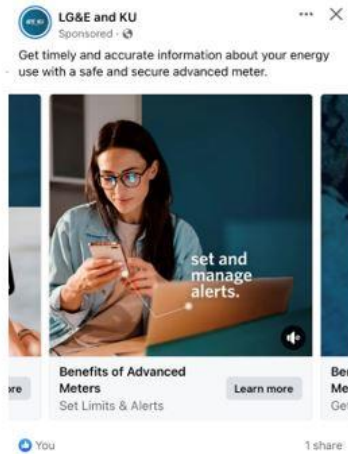
- Monthly Power Source News articles
- Paid Advertising - Search Engine Marketing keywords
- Begin to inform key stakeholder groups details of the project, e.g., Consumer Advisory Panel, Low-income advocacy groups, etc.

August 2022 to Current – Awareness Advertising in Market & Stakeholder Notifications

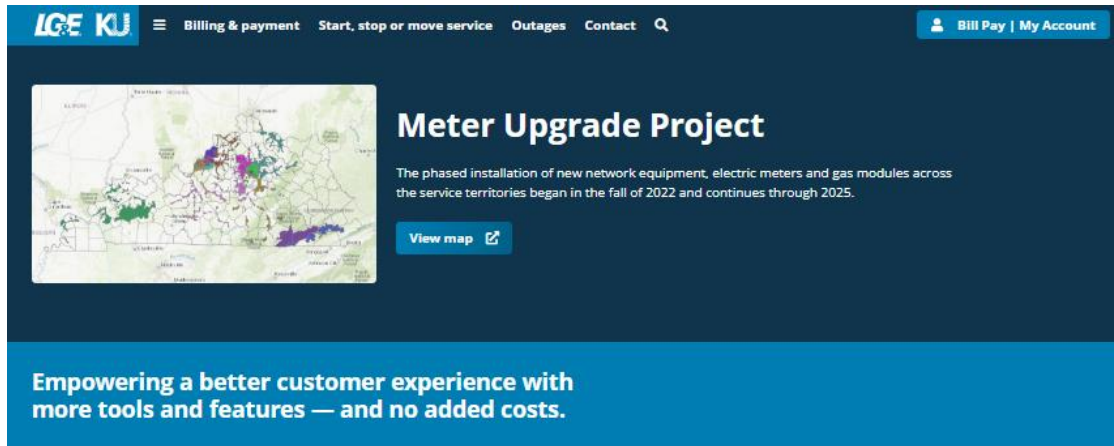
- Corporate websites live with interactive Meter Upgrade Project Map, providing customers approximate start Quarter/Year that meter upgrades are coming to their area
- Digital ads, Facebook, and Instagram ads
- Out-of-home (billboard) advertising
- Spotify radio ads where possible
- Print ads for smaller market newspapers
- Fact Sheets in English and Spanish
- Flyers, posters, and handouts in customer-facing walk-in centers and business offices
- Additional presentations to various stakeholder and advocacy groups, e.g.:
 - Consumer Advisory Panel – quarterly updates, presentations, and newsletters
 - Customer Commitment Advisory Forum – quarterly updates
 - Stakeholder outreach from AMI Ombudsmen, e.g.
 - Chambers of Commerce
 - Elected Officials
 - Mayors
 - County Judge Executives
 - Neighborhood Associations
 - Kiwanis Clubs

Starting Q1 2023 – Post-installation surveys begin

Sample Awareness Advertising Samples



Corporate website <https://lge-ku.com/meter-upgrade>



Advanced Metering Infrastructure (AMI)

AMI will allow us to build the foundation to expand on the exceptional service we provide to our customers.

In June 2021, the Kentucky Public Service Commission approved our request to fully deploy Advanced Metering Infrastructure (AMI). The Virginia State Corporation Commission also approved the project in May of 2022 and we are excited about the prospects of bringing our customers more tools and services after meter upgrades are completed in your area.

These meter upgrades are at no additional cost to our customers. The total cost of AMI will be offset by the savings that will occur with reductions in the cost of meter reading, service requests, outage management and other automated functions that will be implemented over time.

When will meter upgrades begin near me?

Check our fully interactive map to see when electric meter upgrades are coming to your area at no additional cost to you — or even do a search by address to see the estimate of when the project will begin near your home or business.

[View map](#)



Detailed and personalized energy usage data

Once installed, the new advanced meters give you access to a customized online dashboard that provides the tools, resources, and insights to better help you manage your energy usage and take steps to reduce your monthly energy bills. Soon you will be able to:

- Stay updated on your usage
- Set and manage energy usage alerts
- Learn valuable energy-saving tips

A few days after your meter is upgraded, you can register and start using your My Meter dashboard to track and manage your energy use. Learn more about My Meter's features and benefits.

[My Meter](#)

FAQs

Select a topic category to get answers to frequently asked questions about advanced meters and the meter upgrade project.

When will I receive my meter upgrade?

How will you notify me before my meter is upgraded?

Do I have to be home during my meter upgrade?

Who will be performing the meter upgrades?

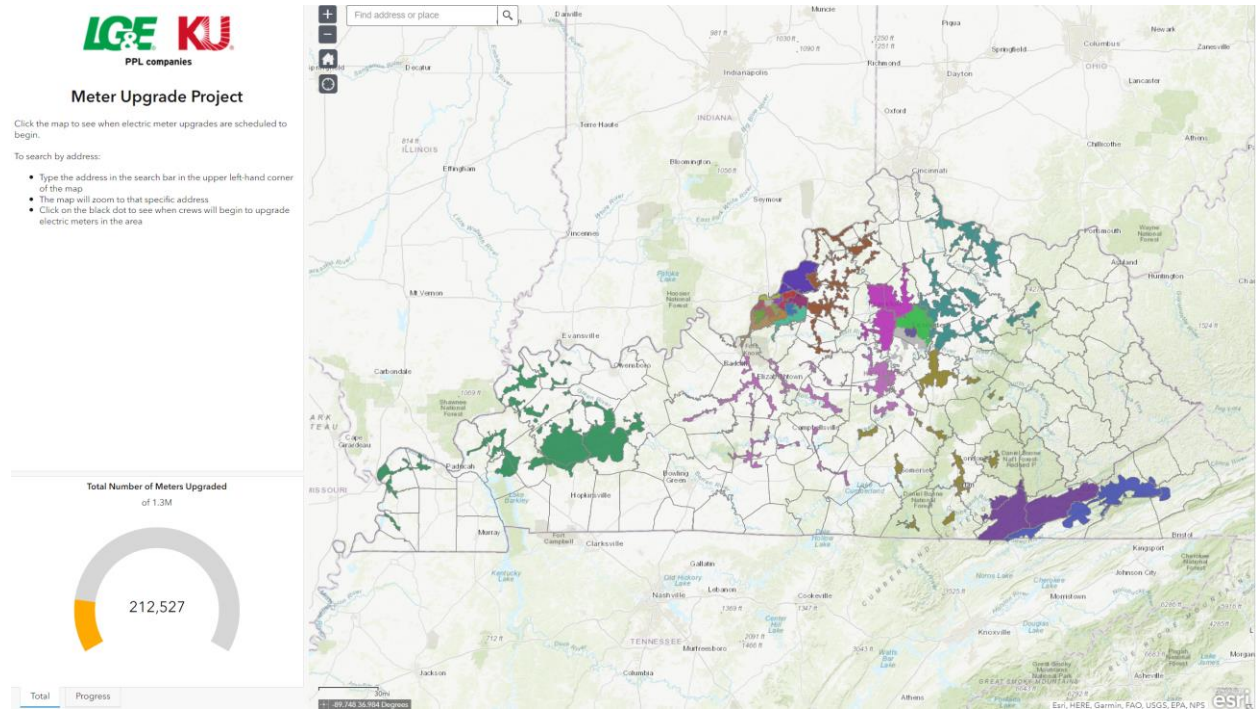
Will my service be interrupted when the technician exchanges my meter?

When will I receive my meter upgrade?

We are currently deploying advanced meters to our more than 1.3 million customers and will continue through 2025. Check out our fully interactive map above to see when the project will begin near your home or business.

The map is updated weekly, every Monday morning.

Meter Upgrade Map available on the corporate website <https://lge-ku.com/meter-upgrade>



Example results from a location search:




Appendix B – Education Phase

This phase is focused on educating customers on the deployment process and the benefits of an advanced meter.

Sample 4-weeks Advance Notice Letter⁵

Advanced Metering Infrastructure (AMI)
Residential Phone:
LG&E: 800-331-7370 | KU: 800-981-0600
Business Phone:
LG&E: 800-331-7370 | KU: 800-383-5582



Address

<Insert Date>

Meter upgrade project

Dear Valued Customer,

In the next few weeks, trained service technicians working on behalf of LG&E and KU will be in your area exchanging electric meter(s) in your property's zip code – [INSERT PREMISE ZIP CODE] – at no additional cost to you. These new advanced meters help you manage your energy use and allow us to offer new tools and services.

During the meter exchange process:


- A technician from Utility Partners of America (UPA) will upgrade your meter(s). They carry photo identification, and their vehicles are marked as LG&E and KU contractors.
- The meter exchange will only take a few minutes and you do not need to be present. There may be a brief disruption of power during the meter exchange. Contact UPA at 800-914-4179 if you have questions about the meter exchange.
- If you do not wish to receive an advanced meter, please visit lge-ku.com/meter-opt-out, and fill out the form. We will contact you about the monthly charges you will incur by opting out.

Visit our website at lge-ku.com/meter-upgrade to learn more about the meter upgrade process and the benefits of advanced meters.

LG&E and KU Energy LLC | 820 West Broadway | Louisville, KY 40202 | lge-ku.com/meter-upgrade

⁵ This is a sample letter.

Sample 2-weeks Advance Notice Postcard⁶



Your meter is being upgraded.

- Stay updated on your usage
- Set and manage energy usage alerts
- Learn valuable energy-saving tips

Visit lge-ku.com/meter-upgrade to learn about the benefits of advanced meters.

LGE KU
PPL companies

During the meter exchange process:

upa
Utility Partners of America

- **A technician from Utility Partners of America (UPA) will upgrade your meter.**
They carry photo identification, and their vehicles are marked as LG&E and KU contractors. The meter exchange is at no additional cost to you.
- **The meter upgrade will only take a few minutes and you do not need to be present.**
There may be a brief disruption of power during the meter exchange. Contact UPA at 800-914-4179 if you have questions about the meter exchange.





Advanced Metering Infrastructure (AMI)
820 West Broadway
Louisville, KY 40202

AMIP1 3/23

If you do not wish to receive an advanced meter, fill out the contact form at lge-ku.com/meter-opt-out. If you elect to opt-out, you'll be required to pay the fees to offset the charges associated with the manual processes required to provide your service. After filling out the online form, we will contact you about the monthly fees you will incur by opting out.

⁶ This is a sample postcard.

Sample Door Hangers (Examples)⁷

Success!	Your attention is required.
<p>Today a technician successfully upgraded the following equipment at no additional cost to you:</p> <p><input type="checkbox"/> Electric Meter <input type="checkbox"/> Gas Module (LG&E only)</p> <p>Your new meter gives you access to the tools, resources and insights to better help you manage your energy usage and take steps to reduce your monthly energy bills. Soon you will be able to:</p> <ul style="list-style-type: none"> • Stay updated on your usage • Set and manage energy usage alerts • Learn valuable energy-saving tips <p>In a few days, you can register and start using your My Meter dashboard to track and manage your energy use. Visit lge-ku.com/mymeter to register and learn more about the features and benefits of the advanced meter.</p> <p>Visit lge-ku.com/meter-upgrade to learn more about our project to replace all meters within our service territory.</p> <p>Today's Date <input style="width: 200px;" type="text"/></p>	<p>Today a technician was unable to upgrade the following equipment:</p> <p><input type="checkbox"/> Electric Meter <input type="checkbox"/> Gas Module (LG&E only)</p> <p>The technician was unable to complete the exchange because of the following reason(s):</p> <p><input type="checkbox"/> Pets <input type="checkbox"/> Bushes/Shrubs</p> <p><input type="checkbox"/> Obstruction <input type="checkbox"/> Meter Inside</p> <p><input type="checkbox"/> Locked Gate <input type="checkbox"/> Safety Issue</p> <p><input type="checkbox"/> Other: <input style="width: 150px;" type="text"/></p> <p>Please call 800-914-4179 at your earliest convenience to schedule a time for a technician to return. Normally, the entire process can be completed in a few minutes. You do not need to be present. There may be a brief disruption of power during the exchange. This meter upgrade is at no additional cost to you.</p> <p>Today's Date <input style="width: 200px;" type="text"/></p>
  <p>AMIUPA13/23</p>	  <p>AMIUPA13/23</p>

⁷ These are sample door hangers.

Fact Sheets and Informational Articles (Examples)⁸

Privacy Fact Sheet Advanced Metering Infrastructure

What is an Advanced Meter?

Advanced meters give customers more timely information on their energy use. After installation, customers will also be able to access a customized online dashboard that can help them track and compare their energy usage by day, week, month or year.

While most meters record a running total of the energy used, an advanced meter can record energy usage data in 15, 30 or 60 minute increments. Generally, the meter will only transmit the usage information for a few minutes each day.

When we build out this network of advanced meters over the next several years and install the necessary supporting infrastructure, these technologies will then work together and help us more quickly detect when an outage occurs and then communicate with our system to help identify its location.

Will Advanced Meters keep my data safe and secure?

YES All customer information is confidential and only available to the customer and authorized utility personnel as needed for information such as maintenance, billing and customer service. We place the utmost importance on our customers' safety and security, and we have stringent practices in place to protect their energy usage information.

Are Advanced Meters capable of invading my privacy?

NO Advanced meters measure how much energy you use, based on time of day, not how you use that energy. Unless you install a home energy management system, advanced meters cannot tell whether the energy used is from your oven, air conditioner, or hairdryer.

Utilities adhere to strict policies, following state laws that regulate the use of personal information.



Meter Upgrade Project
To empower our customers with detailed and personalized energy usage data, and to help the Companies better respond to and restore power outages, LG&E and KU will upgrade metering equipment at no additional cost to customers. For more information about Advanced Metering Infrastructure visit lge-ku.com/meter-upgrade.

LG&E KU
PP&L companies

Health Fact Sheet Advanced Metering Infrastructure

What is an Advanced Meter?

Advanced meters give customers more timely information on their energy use. After installation, customers will also be able to access a customized online dashboard that can help them track and compare their energy usage by day, week, month or year.

While most meters record a running total of the energy used, an advanced meter can record energy usage data in 15, 30 or 60 minute increments. Generally, the meter will only transmit the usage information for a few minutes each day.

When we build out this network of advanced meters over the next several years and install the necessary supporting infrastructure, these technologies will then work together and help us more quickly detect when an outage occurs and then communicate with our system to help identify its location.

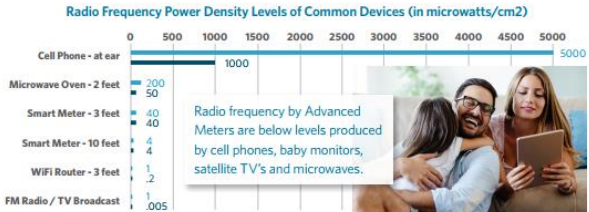
Can Advanced Meters affect my health?

NO The World Health Organization (WHO) has concluded that no adverse health effects have been demonstrated from exposure to low-level radio frequency energy such as that produced by advanced meters¹.

Radio frequency signals also weaken significantly as the distance between you and the device increases. The casing of an advanced meter, as well as wall construction materials, also decreases the level of RF energy in the vicinity.

Please note that advanced meters transmit RF energy only for short periods each day. In fact, an Electric Power Research Institute (EPRI) analysis of 47,000 advanced meters installed in southern California found that 99.5% of the meters were transmitting for approximately three minutes or less daily².

Radio Frequency Power Density Levels of Common Devices (in microwatts/cm²)



Radio frequency by Advanced Meters are below levels produced by cell phones, baby monitors, satellite TV's and microwaves.


Source: Electric Power Research Institute (EPRI), Radio-Frequency Exposure Levels from Smart Meters: A Case Study of One-Month (February 2013), California Council on Science & Technology, Health Impacts of Radio Frequency from Smart Meters (January 2013), The Health Threat from Smart Meters, Utilities Technology Council Journal (April 2013), FCC, Radio Frequency Safety (FCC, Interference - Challenging the Safety of Smart Meters, Hazards Smart Grid Initiative, Pilot 2RF Emissions Testing Summary Report V2.0, Smart Meters, Household Equipment, and the General Environment (December 10, 2013), International Agency for Research on Cancer, IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals (January 2002)

Meter Upgrade Project
To empower our customers with detailed and personalized energy usage data, and to help the Companies better respond to and restore power outages, LG&E and KU will upgrade metering equipment at no additional cost to customers. For more information about Advanced Metering Infrastructure visit lge-ku.com/meter-upgrade.

LG&E KU
PP&L companies


THE 411 ON AMI

Did you know? The "A" in AMI stands for "Advanced." After installation, you will have access to a customized online dashboard that can help you track and compare your energy usage by day, week, month or year, providing you with advanced tools to manage the energy you use and the money you spend. Visit lge-ku.com/ami to learn more.




THE 411 ON AMI

Did you know? The "M" in AMI stands for "metering." With AMI, the new two-way system will allow for wireless communication between your meters and LG&E. Visit lge-ku.com/ami to learn more.



WHAT IS AN ADVANCED METER?

Advanced meters provide private, two-way communications between energy companies and customers. These new meters communicate usage information to KU's secure communication network several times a day and don't need to be manually read. Data from your advanced meter is used to generate your bill and allows us to deliver a higher level of service to you. Visit our website at lge-ku.com/meter-upgrade to learn more.



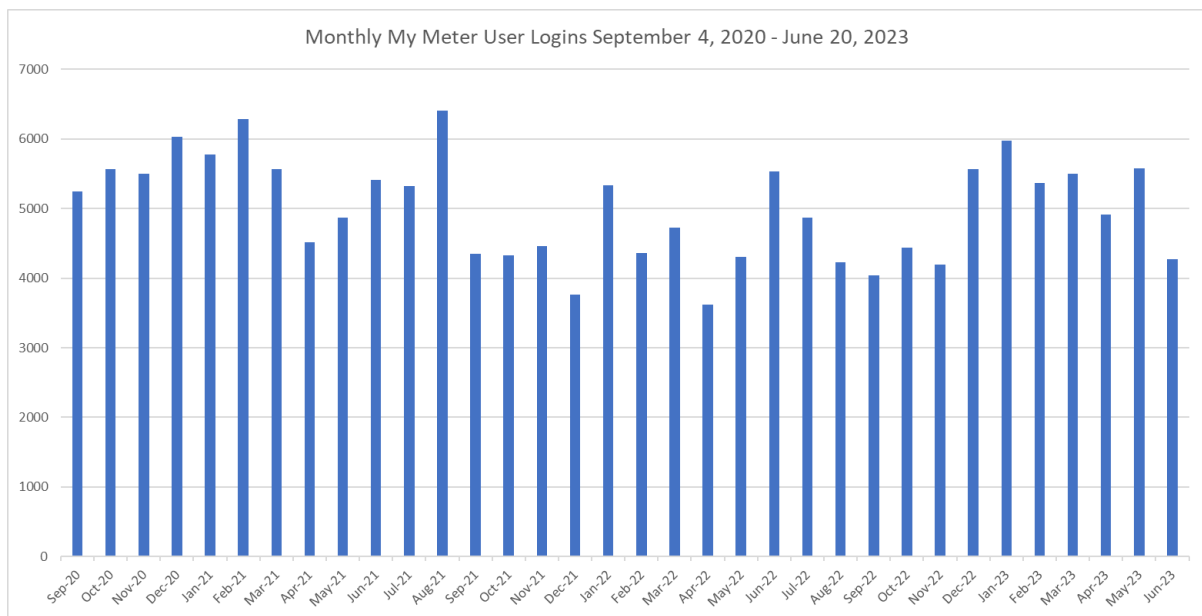
⁸ These are sample fact sheets and informational articles.

Appendix C – Engagement Phase

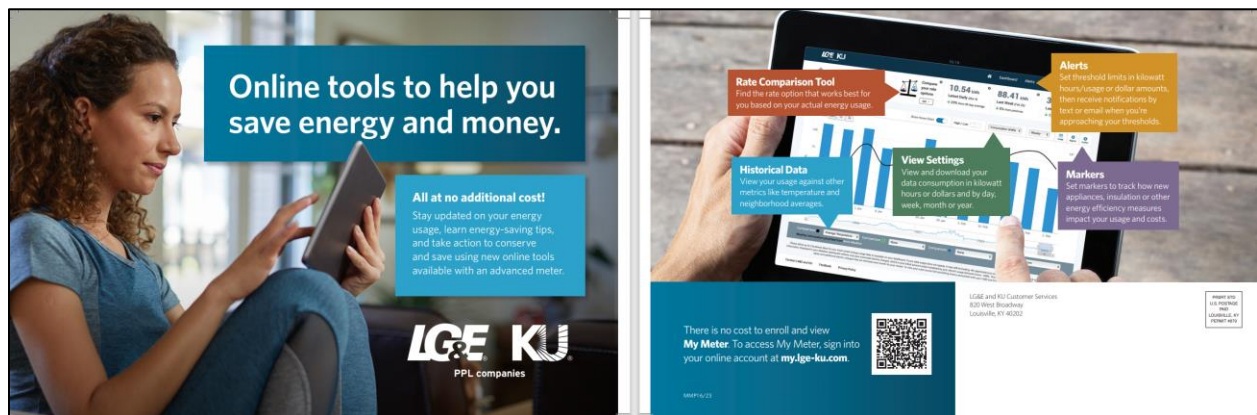
This phase is focused on the promotion of the information and benefits to customers after meters are upgraded. Customers can access the My Meter online portal after their AMI meter is installed. This phase will highlight tools and features to customers via periodic notifications, as this approach has proven to be extremely helpful during the existing voluntary program. In addition, a My Meter email address has been established to field customer inquiries at my.meter@lge-ku.com and emails are being sent to customers from My.Meter@lge-ku.com during the customer notifications process to reinforce the My Meter tool and resource.

My Meter monthly users

The number of My Meter monthly users will grow as meter exchanges are completed and customer learn more about the tools and resources available with an advanced meter.

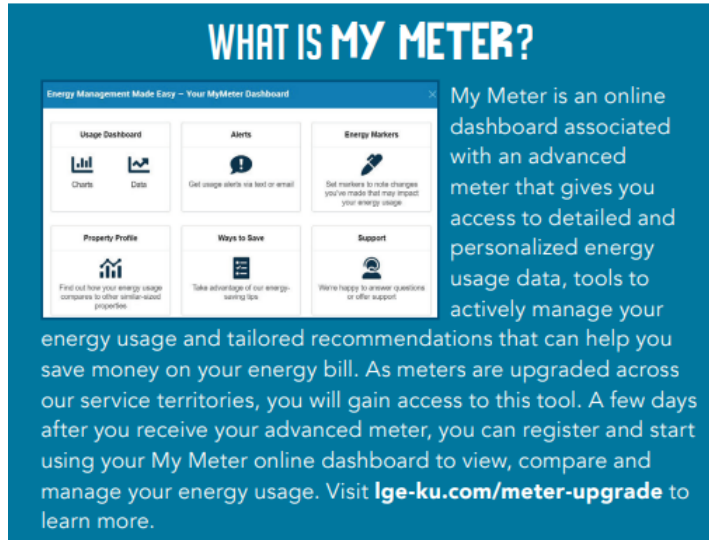


My Meter promotional postcard via home mailing after upgrade



My Meter promotions via customer newsletters

In 2023, My Meter tips and tools are now being highlighted quarterly in monthly Power Source customer newsletters to continue to reinforce to customers the benefits of advanced meters as deployment continues.



Green Button *Connect My Data*® made available June 2023

The Green Button initiative allows customers to securely access, download and send their monthly or incremental energy use data to third-party applications or service providers choosing from two industry-standard formats:

- Green Button *Download My Data*®
- Green Button *Connect My Data*.

These apps and service providers provide tools that can help customers manage their energy consumption. Customers can securely access and download the data at their convenience. Then, they can save it, share it, or authorize third parties to access it directly, when, and how they prefer. Green Button *Download My Data* was already available to customers with advanced meters. With the successful launch of Green Button *Connect My Data* in June 2023, LG&E, KU and ODP customers with AMI meters can access both Green Button standard energy data formats through the My Meter usage portal.

The Green Button initiative is just one of the tools and resources for our customers that will continue to roll out as the AMI project progresses.



* GREENBUTTON CONNECT MY DATA and GREENBUTTON DOWNLOAD MY DATA are registered trademarks owned by the U.S. Department of Energy.

Usage Dashboard – Access and Home Page

Customer communications continue to encourage use of the My Meter online tool to download data, set markers, use alerts and notifications – and more. An example of this is a recent email on June 20, 2023, to customers with more than 13 months of My Meter usage explaining how data can be viewed and downloaded from the tool.

Dear Valued Customer,

Advanced electric meters provide information, tools, and resources to help you manage your energy use when you log in to My Meter.

If you have already checked out the My Meter tool, you may be familiar with viewing your usage data on a chart, but did you know you can print those charts and/or download the images? Here's how:

- Click on the hamburger on the top right of the chart to see the options for downloading images.
- Or click on "Data View" to use a calendar-style format.
- With either view, you can see your 15-minute interval data for up to 13 months. To keep these details, download your data regularly.

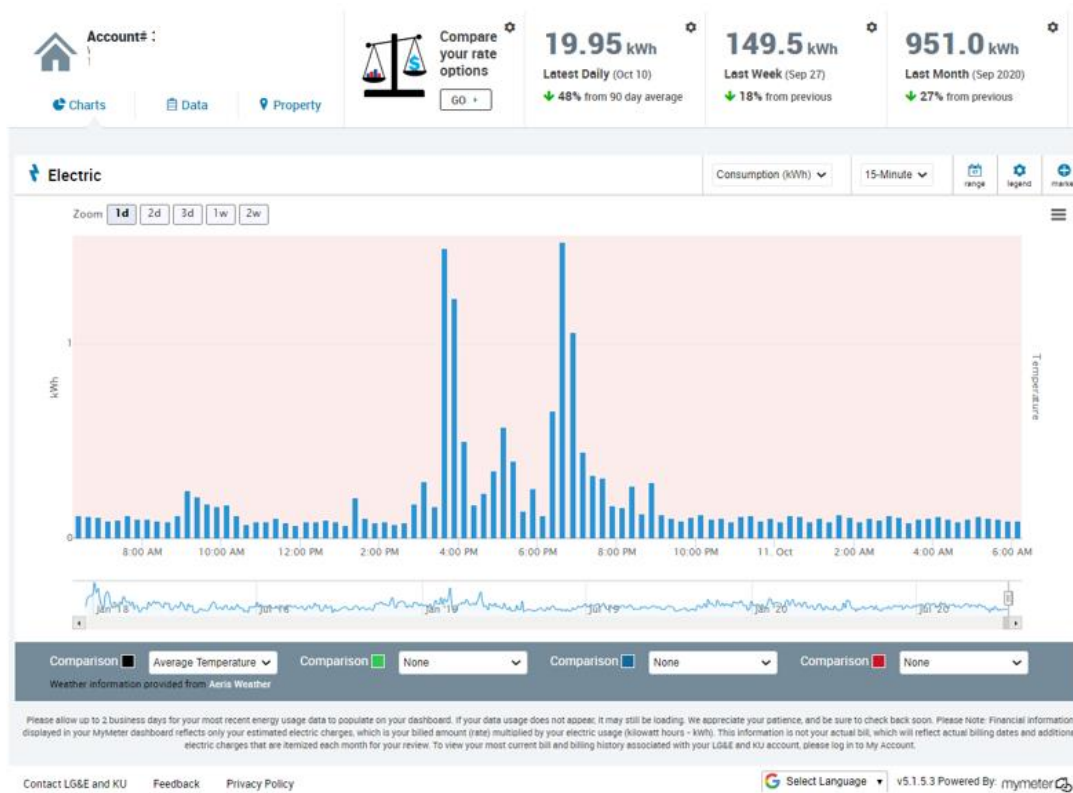
After 13 months, daily usage information will be available; however, the detailed data for every 15-minute increment will no longer be accessible.

To save your personalized data, click the download button located between the range and marker icons.

You can also set alerts or energy markers to receive notifications in near real time or an email each week that shows changes in your energy use. To request these options and more, check out "Your MyMeter Dashboard."

The Home Page, or Dashboard, is used in many of the My Meter promotions to reinforce the user-friendly and convenient tool.

Usage Dashboard – Charts



Can you tell me more about the charts?

9



Want to know more about your near real-time usage?

10



How do I compare my energy usage over time?

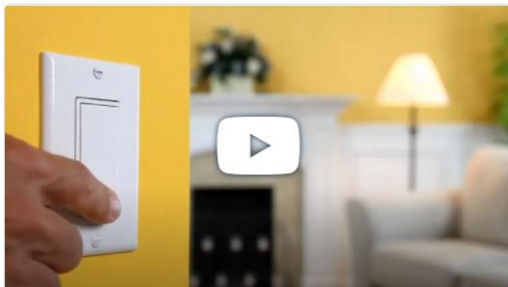
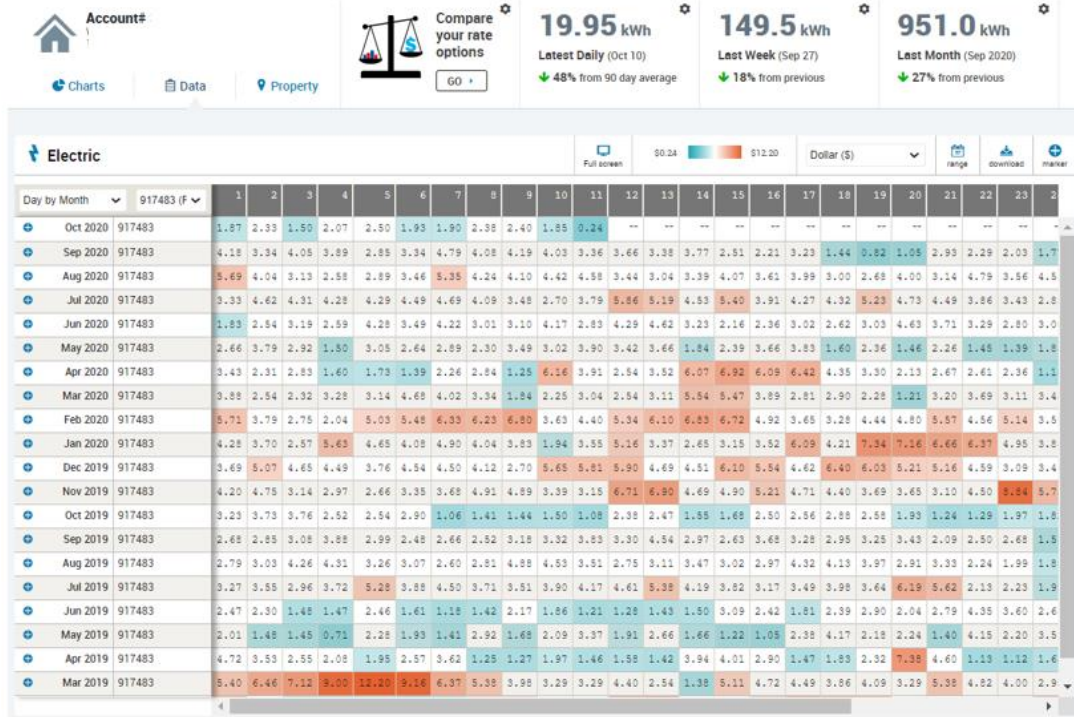
11

⁹ <https://youtu.be/nhJ5lcEwvvk>

¹⁰ <https://youtu.be/WD0N0qlA8zA>

¹¹ https://youtu.be/tvz0_3PMom0

Usage Dashboard – Data



I want to know more about the data I see in my MyMeter dashboard.



How can I use my MyMeter data to save energy in my home?

12,13

¹² <https://youtu.be/57f8WicBKny>

¹³ https://youtu.be/DeCgv_TTRcE

Alerts – Notifications

Add Threshold Notifications

Notification Details

Location: Account

Service Type: Electric

Meter: Meter #

Threshold Details

Notify me when: 15-Minute usage is: Over 0 kWh

You currently average 30.4288 kWh per day, 213.0018 kWh per week, and 912.8647 kWh per month on meter 917483 (Residential Electric Service)

Recipient Details

Contact Method: Email Email: Email Address

Delivery Method: Enabled

There are no recipients for this notification. Please fill out the recipient details section and click the "Add Recipient*" button to add recipients to the notification.

Close Save Changes



What are "alerts?"

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¹⁴ https://youtu.be/BP2_xuReeKU

Energy Markers

The screenshot shows a user interface for energy management. At the top, there are three usage cards: '19.95 kWh Latest Daily (Oct 10)' with a 48% decrease from the 90-day average, '149.5 kWh Last Week (Sep 27)' with a 18% decrease from the previous week, and '951.0 kWh Last Month (Sep 2020)' with a 27% decrease from the previous month. Below these is a section titled 'Energy Markers' which currently shows 'There are currently no markers for this property or service.' To the right of this section is a form to 'Add Marker'. The form includes fields for 'Type' (set to 'Travel'), 'Start Date' (10/11/2020), 'Start Time' (empty), 'End Date' (10/11/2020), and 'End Time' (empty). There is also a 'Description' text area. At the bottom of the form are 'View All', 'Cancel', and 'Add Marker' buttons. Navigation links for 'Charts', 'Data', and 'Property' are visible at the top left.



What is an Energy Marker®?

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What is the Energy Challenge?

16

¹⁵ <https://youtu.be/GIK7uxoGNpo>

¹⁶ <https://lge-ku.com/node/16246>

Property Profile

The screenshot shows the LG&E KU MyMeter dashboard. At the top, there are navigation links for Dashboard, Notifications, and Usage History. The main content area features three energy usage cards: Latest Daily (19.95 kWh, down 48% from 90-day average), Last Week (149.5 kWh, down 18% from previous), and Last Month (951.0 kWh, down 27% from previous). Below these is the 'Home Energy Yardstick' section, which is currently 0% complete. To the left, there is a 'Details' form with fields for Name, Primary Use, Total Sq Ft, Occupants, and Year Built. A 'SCORE' button is visible below the form. At the bottom of the dashboard, there are links for Contact LG&E and KU, Feedback, and Privacy Policy, along with a language selector and version information (v5.1.5.3 Powered By: mymeter).



How do I complete my Property Profile?

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¹⁷ <https://lge-ku.com/node/16246>

Appendix D – Customer satisfaction survey feedback

Objective:

- Collect feedback on residential customers' experience with AMI installation
- Gauge effectiveness of advance communications about AMI and the meter exchange process
- Monitor the performance of contractors completing the meter exchanges
- Ensure that operations comply with expectations

Methodology:

- Quarterly data collection among residential customers with a completed meter exchange
- This survey is administered using mixed-mode phone and online (email invitations)
- Among residential customers in the LG&E and KU territory
- Sample is provided the first week after quarter-end
- The study is conducted at the 95% confidence level

Results from Q1 2023 Survey:

Overall, LG&E and KU customers were satisfied with the meter exchange (4.33 on a 5-pts scale). 5 means “completely satisfied” and 1 means “not at all satisfied.”

Those recalling the advance notification were more satisfied with their experience than those who did not recall the advance notification.

The Q2 2023 Survey to field in mid-July.