The future of AMI and how utilities can maximize their investments

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In our recent webinar The future of AMI and how to maximize your investment, we explained how to best leverage your initial advanced metering infrastructure (AMI) investment and its next-generation counterpart, AMI 2.0. The discussion addressed crucial considerations for utilities at different stages of their AMI journey—from initial deployment to contemplating system replacements.

Delving into the intricacies of AMI 2.0, we wanted to shed light on the aging of early systems, vendor-driven advancements, and the diverse opportunities arising in hardware, network, software, and data management components. We also explored specific enhancements in electric and water metering, network architecture, and customer engagement portals, providing attendees with strategies for optimizing their operations and using emerging technologies. And we were honored to have Kevin Healy of Halifax Water join us to share an insightful case study.

Here are a few key takeaways from the event.

The future of AMI and how to maximize your investment

Watch our webinar on demand to better prepare for what the future of AMI has to offer.

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AMI and its vast utility benefits

One of the biggest stages in an AMI journey is what we call AMI Day 2, which is the postdeployment phase where utilities with an established AMI system explore ways to maximize its potential beyond basic automation.

The inherent benefits of AMI deployment—such as improved efficiency—are important, but the untapped possibilities (that often require additional effort and time) offer even more for utilities to gain.

It’s time to move beyond initial benefits and build increasing value by integrating AMI data with other utility systems, enabling deeper analytics and optimizing operations.

During the webinar, we urged attendees to develop a roadmap and prioritize areas that can enhance internal *and* external benefits. The ideal roadmap would involve analyzing current AMI usage, setting goals, identifying pain points, and then prioritizing potential improvements.

Leveraging AMI data for water loss control with Halifax Water

Our guest, Kevin, shared a compelling example of his experience working with the E Source team. Hailing from Halifax, Nova Scotia, Canada, Kevin explained his utility’s unique challenges—particularly being situated on the Eastern Seaboard, exposed to the increased frequency of hurricanes.

Despite facing challenges during the pandemic, Halifax Water is now reaping the benefits of using AMI data to improve operational efficiency and reduce the impact of water main breaks.

With a population of approximately one million (half of which reside in Halifax), Halifax Water manages a complex system comprising two supply lakes; 1,500 kilometers of pipes; and around 91,000 service connections.

Kevin detailed Halifax Water’s journey into AMI deployment, which was completed around 2020. With a focus on leveraging AMI data for distribution water loss control, Halifax Water used the technology to build district metered areas and dynamic benchmarks for flow calculations.

The implementation facilitated early detection of anomalies, allowing the team to identify and address issues promptly. Looking ahead, Kevin emphasized ongoing efforts to integrate AMI data into advanced analytics, aiming to enhance predictive capabilities and further optimize Halifax Water’s water distribution system. Despite facing challenges during the pandemic, Halifax Water is now reaping the benefits of using AMI data to improve operational efficiency and reduce the impact of water main breaks.

What AMI 2.0 can offer utilities

For those utilities that have already deployed AMI and are contemplating a replacement or upgrade, the next generation of AMI—AMI 2.0—is sure to present new opportunities. The aging of early systems (many initially deployed as a result of federal smart grid investment grants) prompts a need for AMI 2.0, aligning with the evolving landscape of technology.

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Vendors play a pivotal role in introducing new capabilities, ranging from realized advancements to more aspirational features, contributing to the exploration of hardware, network, software, and data management components.

The increased computing power and memory within modern electric meters offer benefits such as:

- Higher resolution
- Transactive energy support

- Improved capabilities such as distributed energy resource or EV detection

There’s also potential for real-time connectivity models, load disaggregation, and grid management enhancements.

This extends to water metering. Utilities can use solid-state meters for improved resolution, remote disconnects, and innovations like acoustic leak detection.

For more information, watch the webinar, The future of AMI and how to maximize your investment, now available on demand. We hope our comprehensive overview of the dynamic landscape of AMI left attendees feeling empowered to make informed decisions in the pursuit of enhanced efficiency and technological advancement.

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