What’s new in AMI 2.0: Meter advancements and the paths that lay ahead

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The transition to advanced metering infrastructure (AMI) 2.0 is looming for many utilities and is definitely on the minds of most. More specifically, some may be wondering what’s to come. How will technology evolve? What path is the right one to take for AMI 2.0?

Meters, the unsung heroes and once humble measuring devices, are now at the forefront of innovation, evolving into remote computing powerhouses with enhanced memory, channels, and embedded sensors for monitoring diverse parameters.

The future of AMI and how to maximize your investment

When making another 15-to-20-year commitment to vendor technology and a solution partner, you want to be sure it’s the right fit. Watch our latest webinar on-demand to learn how AMI can support your future initiatives.

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In this landscape of possibilities, we’ll also explore the strategic pathways to adopting AMI 2.0—from enhancing existing systems to full-scale replacements—prioritizing aligning your AMI 2.0 vision with the needs of your utility.

Meters, meters, meters! What’s up with all the meters?

Meters remain the foundational device for AMI. Expansion of meter capability is perhaps the biggest difference with AMI 2.0. Electric meters are paving the way for in-the-meter analytics and distributed intelligence, while water meters embrace electronic precision and remote disconnect solutions. Simultaneously, gas meters are making gradual strides toward improved functionality.

Electric meters

Electric meters are essentially becoming remote computers—more memory, more channels, and sensors for temperature and tilt. Increased computing power in higher-end meters is enabling in-the-meter analytics (grid edge or distributed intelligence). Utilities are in the early stages of evaluating the benefits of distributed intelligence. The debate from 15 years ago about whether to get a disconnect switch in a meter has been solved—yes, get the disconnect switch! Many vendors now offer 300-amp disconnect switches.

Water meters

Water meters continue the evolution from mechanical measurement to electronic with wider adoption of ultrasonic technology in small meter sizes. Electronic meters can include temperature and pressure sensors to increase situational awareness across your distribution system. Installation of remote disconnect valves—with trickle or low-flow settings—is increasing. Some utilities are installing 100% of small meters with remote disconnect valves while others are managing more-strategic deployments.

Gas meters

Gas meters have seen the least change compared to the others, with little increase in functionality for the base meter population. Vendors now offer ultrasonic meters with integrated AMI modules, pressure sensors, and remote disconnects. Adoption of these meters is slow.

Oh, the places AMI 2.0 can go …

There are many paths utilities can take with AMI 2.0, and it can be easy to get overwhelmed or turned around. It's important to prioritize identifying what you expect from your AMI 2.0 system. You are, after all, making a long-term commitment to vendor technology and a solution partner. You may want to consider the following:

- Are there use cases where your current AMI system simply cannot perform?
- What's in your future for AMI, billing, analytics, network operations, and distributed energy?
- How will AMI support your utility's unique future?

Let's explore a few paths to get you started.

AMI 2.0 as an upgrade. On this path, you've concluded through your evaluation process that your current vendors provide an AMI 2.0 experience that will meet your future needs. Your current vendors have been good partners and provided adequate service over the life of your AMI 1.0 system. You may have had some rough spots over the previous 10, 15, and 20 years, but your current vendors worked with you to get through them. You would enjoy continuing to work with them. If this sounds familiar, this path may be a partial replacement rather than a full replacement.

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Rip it out and replace it. If you opt for this path, you've decided that fully replacing your existing AMI system is the best option for you. It might be because your experience with your current vendor has

been … let's say, *less* than ideal as described above. It might be that your current vendors aren't providing a clear roadmap to the AMI 2.0 functionality you need. Or it might be that a project of this size (and expense) requires a competitive bid and your current vendors are simply not the top choice. Either way, you've decided that the expense and effort of a complete AMI replacement project is worth the improved functionality to meet your AMI 2.0 business requirements.

Some components of your AMI system are easier to replace in the future. For example, you can replace your meter data management system (MDMS) if your vendor isn't meeting your AMI 2.0 expectations. A future replacement of a customer information system or enterprise resource planning system may warrant considering a different MDMS. You can also replace your customer engagement portal as your customer engagement strategy evolves.

As always, we're here to lend a hand on this sometimes-confusing journey. We have experience with utilities that have successfully navigated both paths described above. If you're wondering about AMI 2.0 at your utility, please contact us to start the journey.

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