

Bridge the Gap Between AMI Planning and Procurement

The first step in moving to advanced metering infrastructure (AMI) technology is selecting the right system for your utility. Ensure the project's successful completion with a sound, hands-on strategy for securing AMI equipment and services. **BY JOEY MITCHELL**

UPGRADING TO AN advanced metering infrastructure (AMI) system isn't as easy as it may seem. You may think you can get all the products and services you need from a single vendor. The truth is, you can't, and that's why developing a sound procurement strategy is critical to any AMI initiative's success.

As discussed in the January/February 2021 *Opflow* article "Smart Planning Drives Smart Metering," selecting and properly installing the right AMI technology is essential to the performance

of your new metering upgrade. But without a proper go-to-market strategy for the product and required services, the AMI program could be doomed before a single vendor is under contract—even with proper planning.

GET INVOLVED

Developing an AMI program is a complex process, requiring metering-related equipment traditionally purchased through bids or qualifications-based procurement; cloud-based software packages that may or may not be

provided by the equipment manufacturer and are typically purchased through qualifications-based procurement; and specialty services to support installation, activation, and configuration of meters, endpoints, and collectors that aren't offered by manufacturers and are typically negotiated directly with third-party service providers or purchased through qualifications-based procurement. An AMI program also requires professional services to integrate the new software into existing software systems. Such services are directly negotiated through existing vendor service agreements and/or third-party service providers.

The easy thing to do is to determine your requirements and let the vendors figure it out. Although this may be the easiest approach, it often leads to more vendor questions, extended response times and complexities in evaluating proposals fairly, and additional project risks that can lead to higher prices or necessary change orders after the project starts. Leaving your program requirements for others to negotiate also leads to conflicts when selecting hardware and service providers.

Keep in mind that 75% to 80% of an AMI program's total cost is in the equipment, and the remaining 20% to 25% is in the services required to properly deploy it. Adding to the procurement's





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complexities is the fact that equipment manufacturers typically don't deploy the AMI or want to assume construction risk. To provide these services, manufacturers need to partner with a service provider.

Given the operational and strategic significance of an AMI system, you want to be confident that you have the right mix of vendors for the project. If the system fails, the last thing your utility needs is to have various component vendors blaming one another rather than working together to get the system back up and functioning properly.

The multicomponent nature of an AMI system entails many potential failure points. For example, if the meter data management (MDM) software stops receiving data from the meter, the failure could be because of the installation, the meter, the communications sensor inside the meter, the communications network, or the MDM itself. When multiple vendors' products are used to build an advanced metering program, which is a common practice, there's the

additional possibility of communication failure between each vendor's technology. Again, you want the right vendors on the job, so get involved in planning your procurement strategy.

PLANNING AND PROCUREMENT

According to the US Environmental Protection Agency's Office of Water, operations and maintenance personnel and the capital budget account for an estimated 85% of a typical water system's expenses. So when it comes to AMI, a procurement strategy is a valuable tool that helps a utility strategically manage its budget.

The best way to ensure a carefully thought-out AMI procurement process is to involve utility staff across key areas, such as finance, customer service, engineering, legal, information technology, and procurement. It's especially useful to include the procurement and legal teams early in the project. Getting all parties involved helps them understand the complexities of the project and gives them

time to research and leverage state or local procurement statutes they may not even know about.

To start organizing the elements of your procurement process, create a matrix:

- Across the top, categorize the required services and products—e.g., meters, AMI endpoints, MDM software, customer portal, meter installation, interface development, software modifications, and project management.
- On the left side, categorize, at a high level, who can deliver these products and services. Example categories are meter manufacturers, AMI manufacturers, third-party software vendors, existing software vendors, integrators, installers, and engineering firms.
- Beginning with the top row, move from left to right and place a check mark in each square for the product or service these companies can deliver. There may be more than one answer. Keep it at a high level and keep subcontracting capabilities out of the equation—for now.

Technology

■ Evaluate the marks. You'll find multiple check marks for multiple categories and sometimes find that multiple parties are needed for one task. For example, your existing billing vendor may need to make modifications to your billing system and create an interface to accept AMI data, but the MDM software provider will need to develop and test the interface developed for your unique billing application.

With your matrix complete, you're ready to evaluate the best way to go to market to receive the products and services that best fit your situation. In most AMI programs, procurement needs fall into the following buckets:

- Metering technology
- AMI technology
- Customer portal
- Professional services for installation and integration
- Existing vendor services

PROCUREMENT STRATEGIES

Choose the AMI procurement strategy that best suits your utility. Two options are the turnkey approach and the multiple-contract approach. Regardless of which approach is taken, it's important to ensure that the vendor or vendors

have the financial backing to support all liabilities associated with AMI project deployment.


Turnkey Approach. In this approach, all the responsibility for technology, installation, integration, procurement, and testing resides with one vendor. The utility benefits from having one contract with a prime contractor that is accountable for every aspect of the AMI deployment. The other vendors are subcontractors to the prime contractor. If any of the vendor technology or service fails in any capacity, the prime contractor is responsible for ensuring the project gets back on track. The turnkey approach can be an attractive model for utilities that haven't gone through a thorough AMI design process or lack the resources to manage an AMI project.

Multiple-Contract Approach. Other utilities aren't comfortable having limited visibility into an AMI project's various work streams and prefer to have more direct control. Such utilities may be better served with a multiple-contract approach in which they solicit contracts for materials and service separately, and each vendor responds to the scope of work in which they're most interested. When using a multiple-contract

approach, it's important to ensure that the service and materials vendors have worked together before and that you build the scope of work with each vendor in an integrated manner. For example, you can align vendor interest by including provisions that drive agreement on project completion dates. Equipment providers would have to meet shipping milestones, and service providers would have to meet installation deadlines.

Another approach to managing multiple contracts is through joint service-level agreements for each vendor. This approach establishes provisions that hold all vendors jointly accountable if the AMI system fails to meet certain service levels. Thus, non-performance by any vendor equates to non-performance by all vendors.

CAREFUL PLANNING LEADS TO SUCCESS

Whichever procurement approach is used, it's important to allocate a significant amount of time and effort in developing it. There are many more options available, and many of them depend on the state or county in which a utility is located. There are pros and cons to each approach. Fully understand the strengths and capabilities of each vendor you consider. Ask a lot of questions and validate your findings. Also, consider the accompanying tips to help you find the expertise and resources required to execute your plan. Done properly, a procurement strategy will position your utility for success in promoting and delivering an AMI project. 

Editor's Note: This is the second of a three-article series on the AMI technology transition process. The first article appeared in Opflow's January/February issue and provided guidelines for planning, communicating, and implementing an AMI rollout. The third article will appear in the April issue and examine best practices to ensure AMI installation success.

BEST PRACTICES

ENSURE YOU HAVE THE RIGHT VENDORS FOR THE JOB

As part of your advanced metering infrastructure (AMI) procurement strategy, use the following tips to better understand your project and the vendors you consider:

- Avoid basing your choice on the lowest bidder. The lowest bid doesn't equate to the best value, and it doesn't always deliver the lowest total cost of ownership.
- Include your legal and procurement team early in the AMI planning process. When leveraged effectively, the procurement and legal teams will add tremendous value.
- Always ensure your vendors have experience and the financial backing to cover the potential liabilities of a failed deployment.
- Always ensure the prime contractor or technology vendor has the knowledge and experience for large-scale deployments.
- Always define the full scope and requirements of your AMI deployment up front.