

Advanced Metering Infrastructure Business Case Guidance Document¹

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INTRODUCTION

Advanced Metering Infrastructure (AMI) offers many benefits over traditional utility investments. These benefits include providing more customer options, responding to evolving customer expectations and providing data that can improve the operation of the distribution system.

Despite the apparent benefits, there have been numerous AMI proposals that have been rejected by state public service commissions in recent years. The U.S. Department of Energy recognizes the role AMI can play in grid modernization and authorized the Advanced Grid Research division to conduct a study to investigate AMI applications (approvals and denials) from various parties' perspective. The results were published in the July 8, 2020 report prepared for the U.S. Department of Energy by E9 Insights and Plugged in Strategies titled, "AMI in Review: Informing the Conversation."

This guidance document is based entirely on the results of that report and is intended to provide a condensed and more accessible guide to effectively utilize those findings to draft a strong business case. It is highly recommended that the "AMI in Review: Informing the Conversation" report is read in its entirety and referenced in any proposal development. The link to the report, along with other helpful resources are available at the end of this guidance document.

FOUR MAJOR COMPONENTS OF A PROPOSAL

- **Explaining the Vision**
 - **Be clear.** A clearly articulated, well laid out plan with sufficient detail can make an application easier to evaluate.
 - **Put your best foot forward by pulling together individuals from across the organization to develop the proposal.** CEO or upper management buy-in is critical because developing a robust proposal requires a vision for the future as well as input and collaboration from multiple departments across the utility enterprise.
 - **Include the rationale or reasoning for decisions.** Other parties don't have the benefit of knowing what trade-offs were made or the reasoning behind a given decision. If it's not in the application, they won't know.
 - **Address those 'lingering stories' or unfavorable reports.** Acknowledging areas where there have been actual – or perceived – missteps can help to calm concerns.
 - **Assign values to intangible benefits can show a well-thought-out plan.** Savings from reduced truck rolls can be easy to justify; calculating more intangible benefits

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- can be difficult. Thinking through what might happen or how data might be used can be challenging but it can uncover how departments will need to work together and interdependencies or new system requirements. It can demonstrate an understanding of what will be required to achieve future value.
- **Consider whether the proposal addresses questions others might have.** For example, what is the incremental cost of going to AMI rather than swapping out an old meter kind-for-kind? What are the incremental benefits associated with the upgrade?
 - **Think about the interest areas of different commissioners.** Do they like numbers? Are they more focused on customer benefits? A proposal that doesn't satisfy commission questions in a way that aligns with their priorities can make approval more difficult.
- **Putting Customers at the Forefront**
 - **Think through customer engagement plans.** A detailed customer education and engagement plan can emphasize commitment to consumer value and responsiveness to consumer needs. Customer engagement plans were often required in settlement agreements.
 - **Present alternatives and different scenarios.** Explain other options or what the alternative might be and what this will mean for the customer. Understanding tradeoffs can help demonstrate future value.
 - **Input from focus groups can help show a utility understands customers' needs.** It also demonstrates commitment to the technology and willingness to accept some risk by performing work prior to commission approval.
 - **Be clear on the timeline between meter installation and customer benefits.** Regulators and advocates expect customers to see benefits soon after meters are installed. Articulating and providing a clear timeline for when different benefits will be achieved and why some might take longer than others can help level-set expectations.
 - **Providing Sufficient Detail to Support the Record**
 - **Do your homework.** Perform focus groups, conduct demographic surveys, get bids for technology costs, talk to other utilities about the value they are achieving, and ask stakeholders what benefits are important to them. This might seem like excessive detail, but details can give commissions and other parties assurance in the plan.
 - **Remember that what may seem clear, might not be.** Make sure information is clear and easy to understand for those outside the utility.
 - **Support decisions with benchmarks or examples from other utilities.** Look at how long the implementation took, the value they achieved, and what was the timeline for achieving benefits. But remember that what was convincing to one commission might not be apparent or relevant for another case.
 - **Use data from pilots.** Explaining how data was used or what lessons or insights it provided can demonstrate a commitment to future value. It can help substantiate assumptions, provide insights into data storage or management needs, offer lessons

- learned about customer engagement, or analyzed to investigate future use cases (like informing planning or the development of new rates).
- **Talk about data.** Commissions and other stakeholders know AMI generates vast amounts of data. They want to know how the data will be handled, stored, and utilized. Will it be used across departments? How will it be made available?
- **Making Commitments and Accepting Risk**
 - **Be clear if additional investments will be required to realize a specific benefit.** Commissions and advocates don't like surprises that come up at a later time and expressed frustration when the realization of a benefit in the original application depends on a future capital investment that was not included at the outset.
 - **Identify risks and plan to mitigate them.** Explain the impact and the overall technology value for customers if some assumptions don't work out as expected or if customer behavior is different than anticipated.
 - **Consider commitments in the face of uncertainty.** It's difficult to make commitments based on future projections, but commissions and advocates both expect a utility to include a plan and commitments about the benefits to be pursued and a timeline for achieving them.

RESOURCES

- AMI in Review: Informing the Conversation. A manual prepared for the U.S. Department of Energy by E9 Insights and Plugged in Strategies (July 8, 2020).
 - https://www.smartgrid.gov/files/documents/AMI_Report_7_8_20_final_compressed.pdf
- Voices of Experience|Insights on Smart Grid Customer Engagement (September 2013).
 - <https://www.energy.gov/sites/prod/files/2013/07/f2/VoicesofExperience.pdf>
- Voices of Experience|Leveraging AMI Networks and Data (March 2019).
 - https://www.smartgrid.gov/document/VOE_Leveraging_AMI_Networks_Data
- NARUC Resolution on Smart Grid (July 2011).
 - <https://pubs.naruc.org/pub.cfm?id=53985C3E-2354-D714-51A8-281C62A21700>.
- DataGuard|Energy Data Privacy Program.
 - <https://dataguardprivacyprogram.org/>
- Smart Grid Interoperability: Prompts for State Regulators to Engage Utilities, National Association of Regulatory Utility Commissioners (April 2020).
 - <https://pubs.naruc.org/pub/28950636-155D-0A36-313C-73CCEA2D32C1>
- Value of Customer Data Access: Market Trends, Challenges, and Opportunities, National Association of Regulatory Utility Commissioners, prepared by Navigant (April 2015).
 - <https://pubs.naruc.org/pub/536E2D7C-2354-D714-5129-435231D889E0>
- Distributed Energy Resources Rate Design and Compensation: A Manual Prepared by the NARUC Staff Subcommittee on Rate Design (November 2016).
 - <https://pubs.naruc.org/pub/19FDF48B-AA57-5160-DBA1-BE2E9C2F7EA0>