Understanding the AMI Deployment/ Upgrade Process and Ensuring Quality Relationships with Your AMI Vendor

July 2018

CTC Overview

- We offer decades of AMI consulting experience

- Our focus is on supporting municipal utilities with 60,000 or fewer meters; we have worked with clients that have as few as 2,000 meters

- We are independent advisers: We have no financial relationship with any vendors, and do not sell or endorse any products

ctc technology & energy

engineering & business consulting

What Do I Need to Know?

- The lowest-cost AMI option **may not be the most valuable**

- Thoughtful contract development will **mitigate risk** to your organization

- **An RFP provides value and leverage** in negotiation

- This is a **multi-year, million-dollar decision**

ctc technology & energy
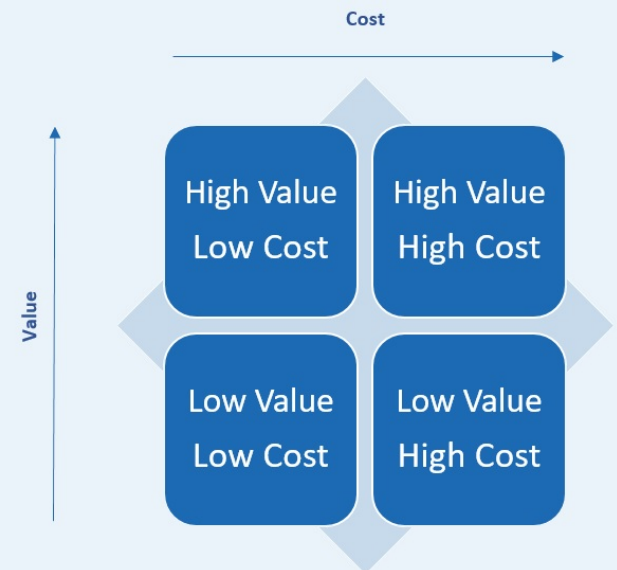engineering & business consulting

What Is AMI?

There is neither a standard definition nor a common set of industry requirements for AMI

- AMI is a tool; its value is not simply in having it, but in **how it is applied**

- Value is driven by procedural and organizational changes at the utility in terms of consumer interaction, utility operations, and power supply management

- Our AMI engagements center around how to use AMI (what information is required, when is it required), and understanding the total cost of ownership (implementation/operating costs) and projected benefits

ctc technology & energy
engineering & business consulting

AMI Vendor Selection Considerations

Not only a selection of the lowest-cost vendor for implementation

- Vendor's financial stability
- Likelihood of a vendor continuing support of the AMI product line for the next 10 to 15 years
  - All AMI vendor solutions are proprietary
- Vendor's ability to support applications that bring value to the utility today and in the future
- Total cost of ownership, including: license fees, technical support, maintenance, and ongoing network upgrades
- Vendor's technical and customer service support
- Contract terms (avoid just issuing a purchase order)

Cost →

↑ Value

| High Value Low Cost | High Value High Cost |
| Low Value Low Cost | Low Value High Cost |

ctc technology & energy
engineering & business consulting

Approaching End-of-Life with Your Vendor

Vendors have discontinued support for services and products

- End-of-life will likely require early write-off of existing AMI investments
- End-of-life requires replacement of all AMI modules, most electric meters, and all collectors (the majority of the AMI implementation costs)
  - May be able to retrofit some polyphase meters
  - In most cases can maintain AMI server and software
- Often, vendors present a quote for replacement AMI modules
  - Quote does not include meters, installation, or implementation

ctc technology & energy
engineering & business consulting

Navigating Vendor Quotes

Understand your leverage whether this is your first or fifth AMI system

1. Accept a vendor's quote and issue a purchase order (PO)
   - We do not recommend this approach
2. Create and offer a vendor a contract that specifies performance and price commitments, then issue a PO upon execution of the contract
3. Prepare and issue a request for proposals (RFP) for a new/replacement AMI system
   - Distribute to all AMI vendors including current vendor, if applicable
   - Use response as the foundation of a contract

1 Accept

2 Negotiate

3 Procure

ctc technology & energy
engineering & business consulting

No AMI Vendor Is Perfect

You have the most experience with your vendor; you understand its good, bad, and ugly points

- Each AMI vendor has its own set of good, bad, and ugly characteristics
- Each AMI vendor is proprietary
  – Standard interfaces do not equate to product interoperability
  – Upgrading often means replacement
- Each AMI vendor has you captive once you commit to a full installation

Development of a contract can help mitigate future risk

ctc technology & energy
engineering & business consulting

Development of Contract Terms

What features and applications are needed today and in the future—not just for AMI, but for support of the full range of applications?

"Only **what** is needed **when** it is needed **in the amount** it is needed."

"Just in Time"
www.Toyota-global.com

- What data are needed?
- When are data needed?
- What devices will create or receive data (direct and indirect)?
- What applications will create information from data?
- Who needs access to data and information?
- Where do applications reside?
- How will the utility and consumers leverage the data and information?
- What interface requirements are needed?

ctc technology & energy
engineering & business consulting

Development of Contract Terms

What product and support requirements help mitigate risk?

- Apply an annual price increase ceiling based on a consumer price index (CPI) for:
  - Product pricing
  - Software pricing
  - Support fees
  - License fees
- Require migration of product and software
- Obtain commitment (in years) of continued product and service support
- Specify all pricing FOB utility
- Specify support hours
- Outline network performance parameters

In comparing AMI vendor costs, it is important to examine purchase, installation, and operating costs – the total cost of ownership

Each vendor has a unique pricing strategy. For example, Honeywell tends to have low end-point pricing, but higher-cost application module and annual support fees. Eaton tends to have high end-point pricing, but lower-cost application module and annual support fees.

Each vendor's server replacement cycle and requirements can greatly impact total cost of ownership. For example, Tantalus requires use of HP servers that are pre-racked. Further, Tantalus server requirements vary with the frequency of data collection.

ctc technology & energy
engineering & business consulting

Development of Contract Terms

What product features help mitigate risk?

- AMI modules and AMI collectors accept firmware downloads (all modules)

- AMI modules leverage available data from meter

- AMI network supports meter firmware downloads

- AMI network supports integration of data to other applications

- AMI module supports reclosers, fault monitors, street light controllers, and other devices

ctc technology & energy
engineering & business consulting

Development of an RFP

Even if you have decided your preference is to move forward with your vendor, developing and releasing an RFP provides value

- Obtains point-by-point commitments for network features
- Obtains commitments for maintaining product support (years)
- Provides a current comparison of performance metrics among other AMI vendors
- Provides a current comparison of product costs and annual support fees
- Gives you greater leverage with your current vendor

ctc technology & energy
engineering & business consulting

Questions

Tom Asp

tasp@ctcnet.us

(847) 922-3978

Bob Hannough

bhannough@ctcnet.us

(905) 464-6511

Michael O'Halloran

mohalloran@ctcnet.us

(949) 610-2821

ctc technology & energy

engineering & business consulting