Customer Information System (CIS)/Meter Data Management (MDM) Supporting Strategy for a Potential Advanced Metering Infrastructure (AMI)

Chelan County PUD

November 20th, 2017
Purpose

Update on CIS/MDM and AMI actions since June 5th
Board update – Informational, leading up to a December AMI decision

Topics covered:

• Update on the CIS/MDM project and how it relates to AMI
• Overview of Washington State AMR/AMI implementations
• Review of regional opt-out policies and fees
• Opt-up recommendation
• Steps forward in both CIS/MDM & AMI project
• Questions
CIS/MDM Strategy Supporting Potential AMI

**ACTIONS:**
- CIS software application to include integrated MDM capabilities
- CIS implementation to include MDM configurations
- CIS/MDM demo environment installed for evaluation

**OUTCOMES:**
- Allows for a more focused/phased-in approach for AMI project
- Able to refine MDM capabilities prior to full AMI deployment
- Increased ability to pilot AMI infrastructure (meters/backhaul)
- Streamlines future AMI Request For Proposal (RFP)
## Business Case Results

<table>
<thead>
<tr>
<th></th>
<th>Base Case updated January 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Present Value</td>
<td>$1.143 Million</td>
</tr>
<tr>
<td>Capital Costs</td>
<td>$13.194 Million</td>
</tr>
<tr>
<td>Benefits Estimate (20-year life)</td>
<td>$32.9 Million</td>
</tr>
<tr>
<td>Internal Rate of Return</td>
<td>8.1%</td>
</tr>
<tr>
<td>Payback Period</td>
<td>14 Years</td>
</tr>
</tbody>
</table>
CIS/MDM Strategy Supporting Potential AMI

How will the CIS/MDM in partnership with a potential AMI system improve customer satisfaction?

• Reduces the length and frequency of outages
• Timelier outage information
• Quicker responses to bill inquiries
• Enable customers to look at usage patterns and determine if conservation or efficiency programs would save them money
• Foundational for designing customer-centric programs
• Overall positive return on investment will help keep rates low
CIS/MDM Strategy Supporting Potential AMI

How will the CIS/MDM in partnership with a potential AMI system support operational & engineering efficiencies?

• Reduces operational costs for meter reading and various types of service calls
• Reduces call center costs related to bill handling
• Reduces costs for outage restoration and management
• Improves meter accuracy
• Provides greater information to support asset management strategies
• Improves safety and reduces emissions
Opting-Out of AMI Metering

• Customers will have a choice
• There are additional costs associated with Opt-out
  • Meter set-up, Meter Reading, Data Analytics & Estimating
• Non-AMI meters leave gaps in data and operations
• Utilities strive for 100% AMI meters when possible
• Estimates for Opt-out are < 1% of meters or < 500 end-points
• Opt-out process will be developed to help guide customer choice
# Regional Survey of Opt-out Fees

<table>
<thead>
<tr>
<th>Utility</th>
<th>One-time Fee</th>
<th>Monthly Fee</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grant PUD</td>
<td>TBD</td>
<td>TBD</td>
<td>Proposed</td>
</tr>
<tr>
<td>Benton PUD</td>
<td>$90.00</td>
<td>$15.00</td>
<td>In place</td>
</tr>
<tr>
<td>Clallam PUD</td>
<td>TBD</td>
<td>TBD</td>
<td>Proposed</td>
</tr>
<tr>
<td>Cowlitz PUD</td>
<td>$135.00</td>
<td>$25.00</td>
<td>In place</td>
</tr>
<tr>
<td>Mason 3 PUD</td>
<td>TBD</td>
<td>$50.00</td>
<td>In place</td>
</tr>
<tr>
<td>Wahkiakum PUD</td>
<td>$80.00</td>
<td>$15.00</td>
<td>In place</td>
</tr>
<tr>
<td>Clark PUD</td>
<td>No</td>
<td>$30.00</td>
<td>In place</td>
</tr>
<tr>
<td>Inland Power</td>
<td>No</td>
<td>$25.00</td>
<td>In place</td>
</tr>
<tr>
<td>Seattle City Light</td>
<td>$124.43</td>
<td>$15.87</td>
<td>In place</td>
</tr>
<tr>
<td>Avista</td>
<td>$200.00</td>
<td>$50.00</td>
<td>In place</td>
</tr>
<tr>
<td>Puget Sound Energy</td>
<td>TBD</td>
<td>TBD</td>
<td>Pending proposal</td>
</tr>
</tbody>
</table>
Potential Customer Options

- **Option 1**: Replacement of one-way AMR meter or analog meter with two-way AMI electric meter (RF communication module turned off)
- **Option 2**: Replacement of an existing analog meter with two-way AMI electric meter (RF communication module turned off)
- **Option 3**: Retention of existing one-way AMR electric meter
- **Option 4**: Relocation of new two-way AMI Electric Meter to alternative location at a shared cost

AMI technology selection will ultimately provide the full roster of opt-out options
Opt-up Recommendation

Opt-up definition: the option to provide the same customer/utility benefits of advanced two-way metering using a wired technology

Staff recommendation – after reviewing potential options staff recommends not setting this as a requirement with a potential AMI RFP. Rather, evaluate each RFP respondent’s technology and consider what potential opt-up options may be available within each proposed solution.
Opt-up Recommendation

Why?:

• Wireless technology is the industry standard
• Creating a hybrid wired and wireless AMI solution could add significant cost and complexity
• An overall technology review through the RFP process may uncover feasible options but should not limit proposals
Projected Next Steps

• Board decision on AMI - December 2017
  *If AMI approved*

• Approve CIS/MDM Implementation Contract ~ Q1/2018

• Initiate CIS/MDM project ~ Q1-2/2018

• CIS/MDM project implementation informs AMI requirements ~ Q3/2018

• AMI RFP is Developed ~ Q3-4/2018
Projected Next Steps

• RFP to the Board for approval ~ Q1/2019
• AMI system selection ~ Q2/2019
• CIS/MDM goes live ~ Q2/2019
• Opt-out policies are refined and presented to the Board ~ Q2/2019
• AMI deployed ~ Q3/2019 thru 2020
Questions