ADVANCED METERING INFRASTRUCTURE (AMI)
December 4th, 2017
Purpose

Provide background on a proposed resolution authorizing staff to proceed with development and design of an Advanced two-way metering infrastructure (AMI) system as the preferred alternative for future customer metering and to be assumed as a part of the integrated customer technology program that includes the new customer information system (CIS) and meter data management (MDM)
AMI Resolution Overview

Historical background and related efforts
Description of direct customer-owner benefits of AMI
Description of efficiencies and cost savings
Overview of customer-owner outreach
Issues raised and subsequent research/findings
Path forward towards a Request for Proposal
Background on AMI

Actively researched the customer and operational benefits of AMI since 2005

Identified industry best practices in discussion and site visits with other utilities

Installed one-way/drive-by automated meter read (AMR) system for all water meters

Established a meter reading service contract and reduced meter reader positions from 13 to 2
Background on AMI

Expanded to one-way drive by electric AMR at >16,000 homes as the preferred meter

Sought the expertise of Utiliworks, a leading AMI consultant, to help develop the business case

Presented the original business case in July 2015 and an update in January 2017

Researched/reviewed extensively the literature for health and privacy impacts
## Business Case Results

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

Better management of energy use

Ways to determine if conservation/energy efficiency programs can save money

More timely and accurate outage notifications & restoration

Quicker response to bill inquiries

Remote account access & ability to initiate service calls

Increased billing accuracy & reduction in estimated bills

Reduced need for utility worker access on customer property
AMI Efficiencies and Cost Savings Benefiting Customer-owners

- Reduced operational costs for meter reading and various other types of service calls
- Reduced customer service costs related to bill handling
- Reduced cost for outage restoration and management
- Increased meter accuracy
- Greater information to support asset management strategies
- Improvements in safety
- Carbon footprint reduction
2017 Customer-owner AMI Outreach

Focused effort during April and May

- 450 people reached “face to face”
- More than 18 community meetings
- More than 45,000 post cards to encourage feedback
- 33,000 emails
- Separate website landing page dedicated to AMI
  www.chelanpud.org/advanced-meters
- May 22nd and June 5th Board updates in public session
- Aug. 8 Chelan City Council Presentation
AMI
Customer Feedback

Many favorable comments, some concerns raised centering on:

- Radio frequency (RF) and electromagnetic fields (EMF)
- Meter safety
- Data privacy and security
- Opt-out options
AMI Customer Feedback

Staff listened to community members and conducted extensive research around the country and internationally looking at the best science available to address the concerns. That information is available on the District’s website at:

www.chelanpud.org/advanced-meters
Response to Customer Feedback

Key points:

− AMI meters emit very infrequent pulses of RF and there is not a significant increase in health risk due to the use of RF associated with AMI meters

− Meters must meet safety requirements and standards per the National Electric Safety Code

− The District is committed to protecting individual customer information consistent with state and federal consumer protection laws

− The District is committed to offering an opt-out option
Recommendation

It is in the best interest of the District to move into the budgeting process for AMI as the preferred alternative for future customer metering and as part of the overall comprehensive CIS/MDM project, and to create an associated request for proposal to be reviewed and approved by the Board of Commissioners prior to issuing.
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