

# ADVANCED METERING INFRASTRUCTURE (AMI)

December 4th, 2017



CHELAN COUNTY



# 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

	Base Case updated January 2017
Net Present Value	\$1.143 Million
Capital Costs	\$13.194 Million
Benefits Estimate (20-year life)	\$32.9 Million
Internal Rate of Return	8.1%
Payback Period	14 Years

# 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](http://www.chelanpud.org/advanced-meters)**
- May 22<sup>nd</sup> and June 5<sup>th</sup> 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](http://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