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

## Chelan County PUD

## November 20th, 2017

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# 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

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# 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)

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# 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 |

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# 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

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# WASHINGTON STATE UTILITIES & AMI/AMR DEPLOYMENTS



**Legend:**
- Electricity PUDs
- Water PUDs
- Electricity and Water PUDs
- Electricity and Telecommunications PUDs
- Electricity, Water and Sewer PUDs
- Electricity, Water and Telecommunications
- Electricity, Water, Sewer and Telecommunications PUDs
- Water and Sewer PUDs
- Water and Telecommunications
- Water, Sewer and Telecommunications
- Not served by a PUD

- AMI — Advanced Metering Infrastructure (2-way)
- AMI Pending — Advanced Metering Infrastructure Pending
- AMR — Automated Meter Reading (1-way)
- NONE — No full AMI or AMR Deployment
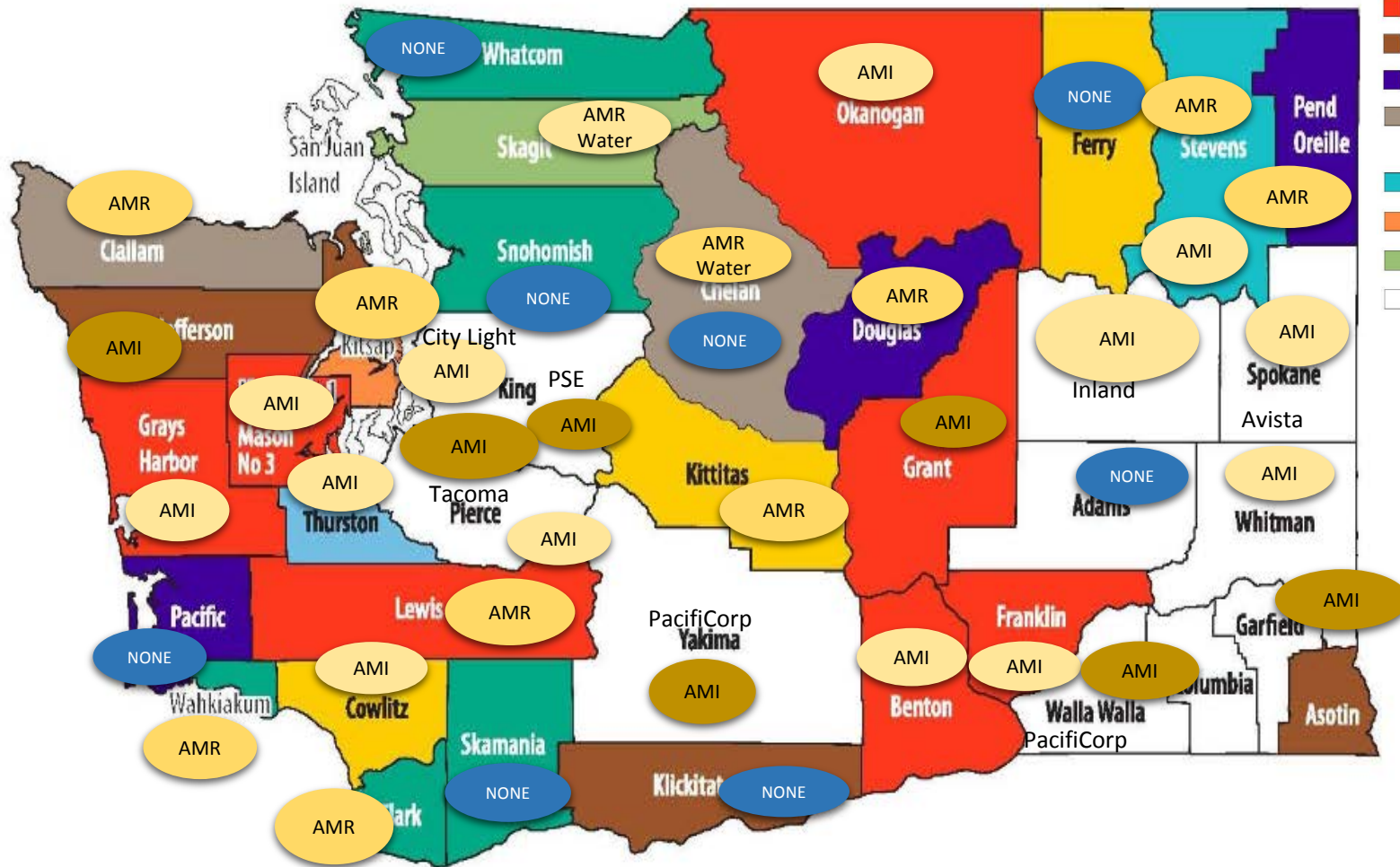
# Opting-Out of AMI Metering



- 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

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# Regional Survey of Opt-out Fees

| Utility | One-time Fee | Monthly Fee | Status |
|---|---|---|---|
| Grant PUD | TBD | TBD | Proposed |
| Benton PUD | $90.00 | $15.00 | In place |
| Clallam PUD | TBD | TBD | Proposed |
| Cowlitz PUD | $135.00 | $25.00 | In place |
| Mason 3 PUD | TBD | $50.00 | In place |
| Wahkiakum PUD | $80.00 | $15.00 | In place |
| Clark PUD | No | $30.00 | In place |
| Inland Power | No | $25.00 | In place |
| Seattle City Light | $124.43 | $15.87 | In place |
| Avista | $200.00 | $50.00 | In place |
| Puget Sound Energy | TBD | TBD | Pending proposal |

# 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**

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# 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

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# 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

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# 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