



# Automated Metering System (AMS)

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Project Status Report  
April 28, 2008



# Our Message Today

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- The “Vision”
- Selecting the right system for Chelan County PUD
- What AMS will do and what it won't
- Question: Why not use fiber exclusively?
- Bridging the gap to AMS



# The AMS Project Vision Statement

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- Improve the quality of service.
- Enhance employee safety and efficiency.
- Create a foundation for a “smarter” grid.
- Meet current and probable regulatory requirements.
- Provide key data to improve reliability.
- Enable key energy efficiency initiatives.
- Reduce our carbon footprint.

# Technology Alternatives

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# AMS delivery technologies

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- Fiber
- RF Meshed Networks
- RF Star or Line of Sight
- RF Drive-By
- RF Cellular
- PLC Wideband
- PLC Narrowband
- Dial Up

# Technology Matrix

| <b>Technology</b>               | <b>Bandwidth<br/>(capacity)</b>    | <b>Ubiquitous</b>      | <b>Support<br/>O&amp;M</b>         | <b>In Service<br/>Software</b>     | <b>Robustness<br/>(immunity)</b> | <b>Security</b>       | <b>Afford-<br/>ability</b> | <b>Summary<br/>by<br/>Technology</b> | <b>Rank</b> |
|---------------------------------|------------------------------------|------------------------|------------------------------------|------------------------------------|----------------------------------|-----------------------|----------------------------|--------------------------------------|-------------|
| <b>Fiber</b>                    | 5                                  | 2                      | 2                                  | 5                                  | 4                                | 5                     | 1                          | <b>24</b>                            | <b>4</b>    |
| <b>RF<br/>(Meshed)</b>          | 5                                  | 3                      | 3                                  | 5                                  | 4                                | 4                     | 2                          | <b>26</b>                            | <b>2</b>    |
| <b>RF<br/>(Star)</b>            | 5                                  | 2                      | 2                                  | 5                                  | 3                                | 4                     | 1                          | <b>22</b>                            | <b>5</b>    |
| <b>RF<br/>(Drive-By)</b>        | 1                                  | 1                      | 1                                  | 1                                  | 5                                | 4                     | 4                          | <b>17</b>                            | <b>8</b>    |
| <b>RF<br/>(Cellular)</b>        | 3                                  | 3                      | 3                                  | 3                                  | 2                                | 4                     | 3                          | <b>21</b>                            | <b>6</b>    |
| <b>PLC<br/>(Wideband)</b>       | 2                                  | 5                      | 3                                  | 2                                  | 4                                | 5                     | 4                          | <b>25</b>                            | <b>3</b>    |
| <b>PLC<br/>(Narrowband)</b>     | 1                                  | 5                      | 5                                  | 2                                  | 5                                | 5                     | 5                          | <b>28</b>                            | <b>1</b>    |
| <b>Dial-up</b>                  | 3                                  | 2                      | 1                                  | 2                                  | 3                                | 4                     | 4                          | <b>19</b>                            | <b>7</b>    |
| <b>Strength By<br/>Catagory</b> | <b>Fiber,<br/>Meshed,<br/>Star</b> | <b>Meshed,<br/>PLC</b> | <b>Meshed,<br/>PLC<br/>(narrow</b> | <b>Fiber,<br/>Meshed,<br/>Star</b> | <b>Drive-By</b>                  | <b>Fiber,<br/>PLC</b> | <b>PLC</b>                 |                                      |             |



# Technology Summary

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- PLC (narrowband) is a proven technology and in wide use today
- Fiber is robust in bandwidth but as discussed the added cost will make it difficult to choose this option
- We will continue to evaluate technologies as we progress through the next steps



# Beyond the RFP

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- Identify and evaluate process changes enabled by AMS technology
- Assess the impact of AMS information to help customers manage their energy use
- Consider improvements in distribution system reliability, asset utilization, and operating efficiency

# Meter Reading – Bridging the Gap to AMS

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# Update Topics

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1. Staffing update
2. Transition of existing Meter Readers
3. Contract meter reading
4. Timing
5. Communications
6. Q & A

# Staffing Update

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## Production Demands

| <u>Date</u>              | <u>Staffing</u>            | <u>Customers/Reads</u> |
|--------------------------|----------------------------|------------------------|
| July 2005                | 10 Full-time<br>2 Seasonal | 45,000 / 540,000       |
| July 2007                | 9 Full-time<br>2 Seasonal  | 45,900 / 563,000       |
| July 2008<br>*Projection | 7 Full-time<br>2 Seasonal  | 48,500 / 582,000       |

# Staffing Update

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*How have we been able to reduce?*

Leveraging attrition and meter reader transition

- Water AMR installed in 2006
- Service cycle re-routing
- Cycling in estimates



# Meter Reader Transition

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*Regular Full-time Meter Readers are in a preferred hiring pool*

- Preference for right-of-selection jobs
- Communication with all managers
- Job shadowing opportunities
- Human Resources support



# Meter Reader Transition

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*Beginning the process of bringing in contracted meter reading*

- Request for proposal was posted
- Negotiations are beginning
- Contract to be presented in May
- Early Summer begin providing services



# Contract Meter Reading

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## *What we can expect*

- New faces in the field
- Hand off issues as contractors learn the routes and experienced Meter Readers move into new careers
- Customer questions
- Continued estimates on occasion

# Communication Effort

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*Key efforts include the following:*

- Mailing to all customers an AMS project update including the transition to contract meter reading
- Website updates, as site is developed
- Establishing processes for addressing any customer concerns
- This effort today!



# Questions?

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