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Fuelling the Future

Advancing Sustainability with AMI

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Energy utilities account for **25%** of global carbon emissions.

This staggering statistic underscores the critical need for change in the energy utility sector. As a Product Manager at Xylem, my commitment is to leverage technology to enhance sustainability, particularly in the utility industry. Today, we will discuss how Advanced Metering Infrastructure (AMI) is not just a technological upgrade, but a pivotal tool in transforming energy utilities into sustainable operations.

Defining Sustainability in Today's Utility Landscape

What Sustainability Means for Utilities

- Sustainability focuses on balancing energy needs with ecological preservation.
- Operational efficiency minimizes waste and maximizes resource utilization.
- Reducing carbon emissions is critical to combating climate change and protecting the environment.

The Role of AMI in Achieving Sustainability

- AMI enables real-time data analysis for better decision-making and efficiency.
- Supports critical initiatives like demand response and energy conservation.
- Acts as a foundation for utilities to meet regulatory and customer expectations.

What is AMI and Why is it a Game-Changer?



Understanding AMI

Advanced Metering Infrastructure (AMI) is an integrated system combining smart meters, data management, and communication networks for real-time data analysis.



Automated Data Collection

AMI provides utilities with critical insights into consumption patterns and operational efficiency through remote data collection and analysis.



Xylem's Leadership in AMI

Xylem's AMI solution empowers utilities to drive sustainability initiatives, supporting energy conservation and reducing carbon footprints.

Empowering Customers with Real-Time Data Insights

Real-Time Consumption Data

- AMI technology enables customers to access real-time data on their energy consumption through user-friendly dashboards, allowing them to monitor usage patterns and make informed decisions.

Building Trust Through Transparency

- By providing customers with clear insights into their energy consumption, AMI fosters transparency, which in turn enhances trust between utilities and their customers.

Enhanced Engagement and Satisfaction

- With access to real-time data, customers feel more empowered to engage in energy conservation efforts, leading to higher satisfaction and a stronger relationship with their utility.

The Future of AMI: Our Vision for Sustainable Innovation



Adapting to New Technologies

AMI is evolving through the integration of AI and machine learning, enabling predictive analytics that optimize energy consumption and reduce waste.

- AI-integrated AMI systems
- Machine learning algorithms
- Energy consumption reports

Green AMI and Sustainability

The concept of 'Green AMI' focuses on sustainability by enhancing grid modernization and promoting the use of renewable energy sources.

- Green AMI models
- Sustainability assessments
- Renewable energy integration plans

Predictive Analytics in AMI

Predictive analytics in AMI can forecast demand fluctuations, allowing utilities to manage resources more efficiently and lower carbon footprints.

- Demand forecasting tools
- Resource management strategies
- Carbon footprint reports

Supporting Smart Grids

With real-time data and advanced algorithms, AMI supports smart grids, facilitating better integration of solar, wind, and other renewable energies.

- Real-time data analytics
- Smart grid integration frameworks
- Renewable energy support systems

AMI in Action: Sustainability Success Stories

By deploying the FlexNet solution with gas meters and SmartPoint transceivers, Long Beach, California, **eliminated 80 truck rolls per day**, achieving outstanding read rate success and data accuracy. This resulted in efficient meter management and resource savings during resident transitions.

As the largest natural gas distribution company in Illinois with 2.1 million endpoints, Nicor Gas transitioned from estimated to actual reads using the FlexNet communication network and EasyLink Mobile Communications. This shift improved billing accuracy, customer experience, and **reduced the carbon footprint with fewer service vehicles on the road**.

By implementing AMI, Fayetteville Public Works Commission **achieved a 44% reduction in mileage and 91% fewer truck rolls**, resulting in significant savings and a positive environmental impact. This shift not only enhanced operational efficiency but also contributed to the utility's sustainability goals.

Empowering a Sustainable Workforce with AMI



Improved Safety

AMI reduces fieldwork by remote data collection, minimizing exposure to hazards and enabling proactive maintenance to avoid emergency repairs.



Increased Efficiency

Automated data from AMI supports quick response to issues, optimizing resources and focusing on high-priority tasks.



Skill Development

AMI requires workers to learn data analytics and remote management, offering upskilling and career advancement opportunities.



Environmental Impact

Remote capabilities of AMI reduce truck dispatches, cutting fuel use and emissions, supporting a sustainable work model.



Work-Life Balance

Flexible work arrangements via AMI improve job satisfaction by reducing manual labor and offering remote management options.



Future-Ready Workforce

AMI equips employees with relevant skills for the modern digital utility industry, ensuring long-term employability.

Setting the Standard for Sustainable AMI Solutions

1

Xylem's AMI solutions utilize advanced data analytics for actionable insights, optimizing operations and reducing waste.

2

Our AMI solutions integrate seamlessly with existing utility systems, ensuring a smooth transition without operational disruptions.

3

Xylem's smart meters offer unparalleled accuracy, improving billing precision and supporting effective resource management.

Your Path to Sustainable AMI Implementation

Assessment & Planning



- Assess current infrastructure and identify sustainability goals.
- Work with Xylem to create a tailored implementation plan for your utility's needs.
- Outputs include an assessment report, implementation roadmap, and defined sustainability goals.

Pilot Program



- Launch a pilot program to test the AMI solution on a smaller scale.
- Evaluate performance and refine processes with Xylem's support.
- Outputs include pilot program results, feedback collection, and refined implementation strategies.

Full-Scale Implementation



- After a successful pilot, proceed to full-scale implementation.
- Xylem assists with integration, training, and monitoring to ensure a smooth transition.
- Outputs include full-scale deployment, training materials, and a monitoring dashboard.

Ongoing Support & Optimization



- Post-implementation, Xylem offers ongoing support.
- Regular reviews and data analysis will help optimize sustainability outcomes and ROI.
- Outputs include performance review reports, optimization recommendations, and ongoing support contact.

Quantifying the Value of AMI for Your Utility



\$10

Annual Savings/Meter

70%

Theft loss reduction

90%

Billing error reduction

10%

Annual ROI

Note: Savings estimates are based on industry averages and may vary by utility. Sources: U.S. Department of Energy (DOE), International Energy Agency (IEA), Metering International.

Sustainability is not just a goal; it's a necessity for a thriving future.

As we explored, AMI is crucial for driving sustainable practices in energy utilities.

By implementing AMI, utilities can reduce their carbon footprint, enhance efficiency, and foster customer engagement. Together, we can lead the charge toward a greener future where our energy use aligns with sustainability principles. Thank you for your dedication to this important journey.