

Utility infrastructure advances



With WACS' Chief Executive **Craig Mataczynski**.

P&E. Who is WACS and what is the company's role in the AMI space?

CM: WACS is a software development company specializing in meter data management systems (MDMS). WACS was founded in the year 2000 with the goal and vision of providing a world-class enterprise application to help utilities manage the data being made available by automated meter reading and advanced metering infrastructure. The company is focused on creating a system that has flexibility to handle data at any interval size and any frequency from any meter reading source – including data collected from any AMI/AMR technology provider, as well as data collected manually via a hand-held, drive-by system or even data collected in the meter shop.

WACS implemented the first MDMS in the US in 2001 at Puget Sound Energy. This system has been managing AMR and manual meter reading data for 1.7 million gas and electric meters for many years; data for all customer classes is handled in one scalable and configurable system.

WAVE and iWAVE, our automated validation, estimation and editing (VEE) modules for daily data and interval data, are unparalleled in the industry. These have been proven to provide extremely accurate validations and estimations. Our advanced applications – including outage validation and restoration verification, automated service order generation, and meter configuration and installed asset management – have been operational in this full-scale production deployment since 2004.

WACS has integrated our software with large utilities that have numerous interfaces to many internal systems. Our integration knowledge and first hand experience with utilities and utility systems has proven to be very helpful to our clients, and WACS software products continue to evolve to meet current and future requirements as identified by domestic and international customers. Our team of experts are motivated and determined to continue to provide the best MDMS products available.

P&E. What is the biggest challenge for utilities considering AMI/AMR and related MDMS deployments today?

**1.7
million**

**Meters managed by WACS
in the US' first MDM
implementation at Puget
Sound Energy**



CM. The implication for advanced metering infrastructure and automated meter reading is that 'most advantaged' metering devices will continue to improve and be supplied from an increasing number of varied sources. Deployments need to plan for heterogeneous meter populations that are continuously upgradeable. The utility needs to keep this in mind when selecting the infrastructure, as any closed or proprietary solution would limit the ability to take advantage of these improvements. Therefore, utilities should keep this in mind when selecting both the meter and meter data management system solutions.

P&E. What is the impact of the rapid advancements in meter technology?

CM. The domain and definition of meter data is rapidly evolving within utilities. Consequently, meter data has become a distinct and complex asset that is now being associated not just with customers for billing but also with operational, engineering and financial data within the utility. The information derived from this data can be used to enhance the management and performance of utility assets for the benefit of both the customers and the people charged with operating the distribution assets. In effect, while a MDMS may have been considered an adjunct to the customer information system (CIS) or a tool just for the meter department, it needs to be considered in the context of supporting a much broader requirement that includes system planning and operations.

P&E. What is the implication to the business processes and supporting systems within a utility?

CM. Historically, meter reading has been a serial or batch process. Meter technology advances are enabling real-time access to highly granular consumption data at the endpoint. Customer demand for timely access to this data is requiring MDMS solutions to have highly scalable and highly available architectures typically found in large online mission-critical transactional systems. The MDMS should not be considered as just a simple database developed in-house or a bolt-on product used solely for the management of customer consumption information. Instead, there must be careful consideration regarding the efficiency with which multiple types of data are managed within the MDMS and the enterprise-wide integration with critical operating systems.

P&E. What should a utility consider when selecting an MDMS?

CM. The domain of 'use cases' for the data within the MDMS is in its infancy. By extension, deployments need to seek MDMS solutions that are

open and easy to integrate with, in real-time when appropriate. Integration will need to occur with internal systems as well as meters, other endpoint devices and potential third parties or external data ex-

changes; MDMS solutions not embracing open, common, standardized integration frameworks or methods will impair or dilute a utility's ability to capture the full benefits of future use cases.

P&E. What are the most common use cases driving benefits today?

CM. Today, the industry is still primarily focused on customer-related uses such as improving accuracy of meter reads, verifying that the correct rates are being applied, streamlining the billing function, pushing energy usage information out to the customer, and some rudimentary monitoring and management of customer demand. What we are talking about in the future is enabling more effective management of the distribution of the commodity (electricity, gas, water). This involves direct support of outage management; predictive capability to show where distribution bottlenecks are going to occur (and then directing actions to resolve those issues in advance); and may even include very direct management of consumption through the control of customer devices behind the meter.

P&E. What is the primary barrier to entry/benefit realization?

CM. Balancing the scope of investment with return adjusted for risk. Many utilities cannot clearly justify early adoption of a full-scale deployment and tend to experiment with point solution or limited scope programs.

These programs are typically biased by limited scope or resources, and result in either a stranded asset and/or an integration liability within broader deployment programs.

Deployment of a Software as a Service (SaaS) MDMS offering that will align expense with use and streamline the transition from pilot programs to large-scale deployment programs may help with this dilemma. We believe early implementation of the MDMS in a SaaS model will provide cost-effective access to a scalable platform capable of supporting both pilot programs and full-scale deployments. The continuity of a common management platform and interface/integration across potentially diverse sets of meter technologies will allow clients to leverage investments made in point solutions or limited scope programs. This will also allow utilities to further evaluate and determine the appropriate meter technologies on an incremental cost basis for their specific service territory and customers. ■



Craig Mataczynski is the CEO of WACS LLC, a leading meter data management (MDM) firm. He has over 25 years of experience in utility and energy company management where he has been involved a variety of aspects including construction management, renewable (hydro, biomass and wind) energy, gas and power marketing and development and implementation of utility corporate strategy. He is the former President and CEO of NRG Energy's North American Business unit (2001 revenues of \$4.5 billion) and has been involved in the start-up of three successful businesses.