



APPROVED 11-9-16

Tacoma Public Utility Board
Special Meeting
October 29, 2016
Cushman Hydroelectric Project
21451 N. US Highway 101
Shelton WA 98584

Board Members present: Mark Patterson, Monique Trudnowski, Woodrow Jones, Karen Larkin, Bryan Flint (left at 9:15 a.m.)

Chair Patterson called the meeting to order at 8:06 A.M.

The meeting was quorate.

Chair Patterson made welcoming remarks.

Advanced Metering Infrastructure

Director Gaines made introductory remarks and introduced Joe Tellez, Chief Information Officer, and John Lawrence, Utility Technology Manager. Mr. Tellez summarized his background and Advanced Metering Infrastructure (AMI) implementation experience.

Mr. Tellez began by reviewing a graphical representation of infrastructure required for an advanced metering system. Basic infrastructure is a meter with added communication modules into a built communication infrastructure that turns data into information.

In response to a Board inquiry, Mr. Tellez answered that the life of AMI meters is approximately 20 years and software is upgradable remotely. The business case is based on a 20-year life span and staff plans to look for technology that will meet current needs but can also be upgraded to align with future changes.

In response to a Board request, Mr. Tellez answered that other utilities have made attempts with older generation meters via fiber coax with heavily customized implementation. The industry is standardized on wireless technology and 73 percent of smart meters today are wireless smart meters. The remaining 27 percent are mechanically being read. The premise of the business case is standard technology, not custom technology that is a one-off as it can be costly.

Mr. Tellez then walked through a detailed infrastructure description of two AMI technology options: Local Area Network and Backhaul Network. To summarize the current state of AMI, RF mesh communications is the most popular and successful AMI solution for the US in speed and reliability. Point to multi-point RF communications is one of two popular and successful AMI solutions in the U.S. Powerline carrier communications is not cost effective and does not have sufficient bandwidth for the U.S., but is an effective and popular solution for Europe. Only one AMI vendor is offering the solution of cellular communications at a premium; fiber-coax is obsolete, non-standard and challenging. The cost per meter is excessive; no one is doing fiber to meter today for AMI deployment.

The industry outlook is that the AMI market has matured; prices have come down while speed and performance have improved. Deployment of power residential meters with disconnects are becoming the standard. Smart water initiatives are helping to evolve water AMI technology. Neighboring utilities' experience on AMI was then detailed. Key technology takeaways are that AMI technology and vendor space has matured. There are multiple technology vendors; wireless is the industry direction; utilize fiber where it already exists for backhaul; cost of building out fiber for AMI is much higher than wireless and there are custom solution risks. TPU's AMI needs: AMI procurement will follow a fair selection process; there are cost considerations; solution reliability and vendor viability.

Customer research takeaways are that AMI can help fulfill customer needs. TPU primary research shows strong interest in AMI technology in that 79 percent want a web/mobile tool to understand energy use; 76 percent want the option to select payment date; 71 percent want usage alerts; 69 percent are interested in remote access to programmable thermostat; and 63 percent prefer monthly billing.

Current administration challenges: Existing AMI pilots are at the end of life; PayAsYouGo has proved to be a successful program but is hampered by Gateway meter technology absence; limited load and demand forecasting capability; commercial and industrial customers are asking for consumption management services and data

which TPU has difficulty delivering; large number of water meters need replacement; and water service delivery charge administration relies on daily read information.

Chris Robinson, Power Superintendent, spoke to AMI's relation to Power strategic plan. AMI is a driver to initiatives in Tacoma Power's strategic plan as it leverages technology to develop a TPU-wide AMI business case. AMI also can satisfy the aforementioned customers' needs by identifying future AMI customer programs and developing enhanced customer outage communications. Benefits will include online/mobile access to usage data, usage alerts, tailored conservation recommendations, monthly billing, and PayAsYouGo.

Water strategic plan: Linda McCrea, Water Superintendent, outlined needs for continued improvement in the following areas as it relates to Tacoma Water and AMI: asset management; data capture and analysis in real time; performance management; data-driven decision making; vertical/horizontal communication; electronic records management; supply and demand analytics; customer relationships and risk management .

AMI Business Case: AMI is considered a strategic investment to products and services enabled by the technology; soft benefits bolster the business case; customer survey points to services that require AMI, business costs are unlikely to go down; AMI solution costs have never been better; nearby utilities are all implementing AMI or working on business cases.

Customer outreach and engagement: Need to proactively address privacy and health concerns; installation coordination; manage expectations on new services and tools availability; on-going change management.

Steve Hatcher, Customer Services Manager, outlined Customer Services employee impacts, then outlined the plan that recommends reductions of fourteen meter readers, six field investigators, and four customer service representatives. These reductions would occur during the 2020-2021 biennium. Mr. Hatcher reviewed the Customer Service organizational structure and classification changes. Customer Services operational considerations include the type of programs to implement for both residential and commercial customers, develop a communication plan, and policy and procedure review. Customer Service operational impacts are sewer sub meter reading, offline meter readings, customer opt-out, mail services, and customers with life support/supply guarantee.

AMI Implementation Approach: Mr. Tellez then outlined the six projects that make up the program scope: Planning and procurement; system integration; AMI network deployment; education, awareness and communications; AMI meter deployment and business operations. The high-level, proposed schedule with a complete meter rollout in 2020-2021 was then detailed. The program organizational structure for the vendor selection and implementation phases, were then shared. The program schedule and milestones and governance framework were reviewed. In summary, staff recommendation is to deploy a TPU-wide wireless AMI solution over a four to five year timeframe and that the Board designate a special project resolution for AMI. Next steps in the next three to six months include creating a special project status, recruit a program manager, finalize the governance structure, begin early customer and employee awareness, and deploy requests for information from vendors.

Economic Development

Director Gaines made introductory remarks that outlined ways TPU can support economic development. Board Members shared their views and expressed support of TPU economic development efforts and initiatives while recognizing that there are statutory limitations on the use of public funds and that government can be restricted in certain ways. Bob Mack, Deputy Director for Public Affairs, stated that TPU can serve as a collaborative, helpful partner to regional organizations focused on economic development and be a part of long-term initiatives that will benefit the community. The recommendation from the TPU 10-year management review supported TPU involvement in economic development. Erik Andersson, has been hired to help achieve economic development goals. TPU will assess memberships in organizations with which we can be a strong partner. The seven points of TPU's economic development strategy are to: provide consistent and effective engagement with economic development partners; establish an internal work group to address the needs of new and expanding customers; compile current utility capacity data for key industrial sites; create an economic development engagement plan; leverage TPU program resources for business development; communicate the importance of economic development; and identify and implement programs that position TPU to encourage job creation and economic growth.

Rail: Dale King, Rail Superintendent, stated that Tacoma Rail can support economic development by providing customers the option to route competitive traffic over least-cost routes with access to two, Class 1 railroads, use volume incentives to attract incremental business, and compete by offering superior service.

Water: Linda McCrea, Water Superintendent, outlined Tacoma Water's economic development current study objectives which are to: define full cost for various

development fees and charges; conduct survey of other utilities to determine competitiveness; examine policies; conduct demographic and geographic analysis of anticipated growth in the service territory; make recommendations for fee recovery and policy shifts as appropriate and to work in alignment with other economic development efforts.

Power: Chris Robinson, Power Superintendent, outlined Tacoma Power's efforts to support economic development. There will be a review and/or drafting of procedures and guidelines that impact new business connections. To review and develop modification of fees charged to customers for evaluating new business connections and propose policy that identifies appropriate categories of costs for direct customer contribution and to draft guidelines for staff on use of the new customer A&R budget. Policy updates are expected by the first quarter of 2017 and will be presented to the Board in a memo or study session. Other efforts include working on an undergrounding proposal and economic development incentives.

Legislative Policies

Bob Mack, Deputy Director for Administration, provided a summary of comprehensive, federal, and state general legislative issues for TPU and each of the operating divisions.

The legislative policy document remains the same, except for bullet two under Power comprehensive policies which acknowledges and credits hydropower as a carbon-free energy source.

The Board last approved the legislative policies two years ago and a resolution reapproving policies will come to the Board at a future meeting.

Mr. Mack then provided an update on election activities that may have an impact on local representation or initiatives and reviewed federal, state, and local polling results.

Structure of Public Utility Board Meetings

Chair Patterson stated that the Board study sessions are a good and informative way to present issues and that regular the meetings are mostly dominated by contract approvals. Mr. Patterson offered the idea that it may be beneficial and informative for the public to see some study session presentations at regular meetings. Also, as a way to accommodate that, routine purchasing matters could be addressed at the study session or be placed on the consent agenda. The Board shared ideas and discussed ways to accommodate this idea: shortening the study session; starting the regular meeting earlier; is meeting twice monthly ideal; adjusting public comment periods; Board providing purchasing questions in advance to answer at the study session;

criteria for picking presentation items for evening meeting; creating a tracking mechanism for Board requests/due dates; recording audio at study sessions.

Staff will work on turning the Board discussion and requests into several options for Board consideration.

Board Development/Self-Evaluation

Chair Patterson offered the idea of having development, self-evaluation, and training opportunities for Board Members and having a consultant help to provide insight as to what effective boards are doing.

Board Members expressed agreement and requested that an RFP for a qualified consultant be prepared.

Adjournment

There being no further business or comments, the Public Utility Board was adjourned at 2:25 p.m. until Wednesday, November 9, 2016, for a study session beginning at 3:00 p.m., followed by the regular meeting at 6:30 p.m.