

As voted by the Board of Trustees and in accordance with the notice of the meeting, the monthly Workshop Meeting of the Board of Trustees of the Portland Water District was held in the Nixon Training Center at the general offices of the District, 225 Douglass Street, Portland, Maine, and via Zoom, on Monday, May 13, 2024. In attendance from staff were S. Garrison, C. Crovo, D. Kane, S. Firmin, J. Wallace, P. Cutrone, T. Quirk, J. Hudak, D. Katsiaficas, and M. Clements. Attending from the public were Julie Keim and Allison Pesce of BerryDunn and Joel Carty of Diameter.

All Trustees were present except Trustee Douglas. President Lunt opened the workshop meeting at 6:33 p.m.

## **1. 2023 Audit**

Tom Quirk, Director of Financial Services, introduced the auditors. The District has a new firm this year - BerryDunn. Julie Keim, represented the firm. She explained that a presentation had been made to the Admin. and Finance Committee. She asked if there were any questions. Trustee Libby asked about debt limits and the debt coverage ratio; he asked if this year's ratio of 1.39 is something to be worried about. David Kane explained we had a low ratio last year because a number of large projects were being done and PWD had not received the bond proceeds for those projects yet. Early this year, the bond funds did come in; it was a timing issue.

No other questions were asked of the auditors.

## **2. Meter Replacement and Meter Reading Project**

Peter Cutrone, Project Manager - Administration, and Joel Carty of Diameter addressed the Board.

PWD last changed its meters to drive-by (AMR) meters about 20 years ago. Water utilities need to change meters every 20 years or so.

Mr. Carty explained that his company has been in this business for 18-19 years. It is a small niche company specializing in utilities in North America doing this type of project.

PWD meters are reaching the end-of-life point, as are the batteries that support the meters. PWD has analyzed mechanical vs. non-mechanical and Automated Meter Reading (AMR) vs. Advanced Meter Infrastructure (AMI) meters as well.

PWD has mechanical meters and they are approaching their end of life. The batteries are reaching the end of life as well. For small residential meters, half of the meters are failing—they are reading below 90% accuracy on low flow.

Mr. Cutrone explained the useful life of mechanical vs. non-mechanical meters. Non-mechanical meters maintain more accuracy over time. Mr. Carty explained that with non-mechanical meters, there will be a financial benefit to PWD; low flow and sustained high flow accuracy will also be improved, leading to better revenue. A decision has therefore been made to move to non-mechanical meters on the residential side.

Mr. Cutrone explained the difference between AMR and AMI meters. With AMI, an infrastructure must be built to facilitate communication. The AMI yields more information – an hourly read every day. He gave examples of how an AMI system would benefit PWD operations.

Looking at capital costs, AMI will cost \$2.5 million dollars more than AMR—more software and hardware are involved in AMI and it will take more project management.

Efficiency gains and losses were presented. AMI has a larger support infrastructure and customer portal cost than AMR. A portal was not necessary for AMR. When the gains and losses are added up, PWD will spend \$2.5 million dollars more, to get an improvement of \$3.4 million dollars. Savings come from meter reading savings, and efficiencies in solving high bill complaints (there will be fewer of them) and leak abatements will be reduced. Headcount reductions are not anticipated; customer service efficiencies will lead to savings.

Customers will likely notice an increase in their bills — 3%-5% based on an increase in the efficiency and accuracy of the new meters, and not due to a rate change. Trustee Cote noted there should be a customer relations push to alert customers to the new meters and how it will affect them. Mr. Carty said he expected that customers would be engaged, and encouraged to learn about the new meters and schedule appointments for the change out.

Mr. Cutrone noted that using the Cayenta system, we are trying to use information to find problems like customer leaks. With the AMI system, the analysis will be easier and it will find anomalies more easily and can set up notifications for the customers.

President Lunt was concerned that PWD would be doing something it really doesn't need to do. He questioned whether this sophistication was needed. Mr. Cutrone said that they hope to only promise what they can deliver. He noted technology will continue to change over time, and that PWD will continue to evolve with the technology as it evolves. PWD is trying to work with vendors in a way that will ensure the technology purchased continues with PWD. PWD is looking for a long-term relationship with a vendor.

President Lunt asked if mechanical meters were purchased if you could just swap out the batteries in 20 years. Mr. Carty said on the residential side, batteries are not replaceable; the meters must be replaced in 20 years. On larger meters, it may be possible to replace the batteries.

The meters will have warranties. Full replacement up to 10 years, thereafter replacement is prorated. A certain number of meters will fail right away. Those will be replaced immediately. Then towards the end of the useful life, failures will increase again.

The Board was advised that although there is a significant cost difference between AMR and AMI, the cost savings and increased revenue over the useful life of the meters means PWD will come out ahead if it goes with an AMI system.

Mr. Carty explained the timeline for procurement. The procurement document is being developed now. It will go out to vendors at the end of June. By the end of the year, a recommended supplier will be provided to the Board. Building out the software system will begin in the first quarter of 2025. Full deployment of the project will start in the 4th quarter of 2025. The full project should be completed by the end of the second quarter in 2028. At its peak, 800 customers a week will have meters installed. Meters will be installed by an independent contractor, not PWD. PWD will provide support to the contractor for the installation of large meters. At this time, the industry is not experiencing product delays or challenges.

A discussion ensued on what happens if things don't work as intended. Mr. Carty and Mr. Cutrone explained the process of resolving issues that come up during the project. President Lunt expressed concerns, and noted if PWD agrees to a certain amount of money, he wants the project done for that amount of money.

There is no solution to the meter replacement that will not require the purchase of new software. 30%-40% of water utilities have moved to AMI metering. It is a big investment. There are many benefits that will come.

100% of PWD's customers will be affected. Meters endpoints and installations represent 86%-90% of costs. The AMI solution presents the best life cycle value for PWD customers. One vendor will be responsible for the whole project. The project will take 3-4 years.

No matter which type of meters are procured—AMR or AMI—the meters are designed to fail in 20 years.

The Project, vendor, and costs will be presented to the Board in December 2024 for approval.

**3. Other Business**

Michelle Clements, Public Relations Manager, explained the goals that were laid out on new posters that will be posted in our facilities.

**4. Adjourn**

The meeting was adjourned at 7:55 p.m.

Submitted by,

Carrie E. Cote  
Assistant Clerk