



DATE: May 15, 2023

TO: Honorable Mayor and Members of the City Council through City Manager

FROM: Dan Herrera, PE, Deputy Director of Operations, Public Works & Utilities (PW&U)
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SUBJECT: Resolution Authorizing a Purchase from Badger Meter for the Advanced Metering Infrastructure (AMI) Water Meter Upgrade, and Authorizing the City Manager to Execute All Documents Necessary to Complete the Purchase

RECOMMENDATION

It is recommended that the City Council adopt the attached Resolution authorizing the City to specify by manufacturer Water Meter Materials, authorizing a purchase from Badger Meter for the Advanced Metering Infrastructure (AMI) Water Meter Upgrade, and authorizing the City Manager to execute all documents necessary to complete the purchase.

BACKGROUND

The City of Petaluma (City) operates approximately 20,500 water meters in its water distribution system, which includes different use types, such as residential, commercial, industrial, and irrigation. Currently, these meters are equipped with Automated Meter Reading (AMR) components, which is the communication technology used to collect water consumption data from the meters. This older technology allows water usage information to be collected by City staff via radio equipment as staff drive by each meter on a monthly cycle. The City currently uses the Beacon software platform to integrate this water consumption data with the City's EDEN financial system for billing purposes.

On January 3, 2022, the City Council adopted Resolution No. 2022-005 N.C.S. authorizing the grant application, acceptance, and execution for the City of Petaluma AMI project. On June 14, 2022, the grant was executed between the State of California Department of Water Resources and the City, granting the City \$7,502,702 for the implementation of the project.

The AMI project consists of upgrading the City's water meter technology from AMR to AMI. The AMI technology offers benefits on multiple fronts. It promotes water conservation by identifying

leaks and alerting both the City and the customer to these anomalies. AMI allows for remote water meter readings, which will replace the current inefficient and time-consuming meter reading system of drive-by data collection. In addition to the labor/time savings, the use of this technology will also result in the reduction of vehicle miles traveled and the associated gas emissions. AMI will provide greater data insight, down to 15-minute intervals. This will allow customers to view and monitor their usage in (near) real-time, providing valuable feedback and water conservation opportunities. In addition to the benefits mentioned, the underlying reason for replacing our metering infrastructure now is the considerable number of existing water meter components (registers and/or endpoints) that are at the end of their useful life and due for replacement.

DISCUSSION

The City's existing water meter devices and water billing system are currently provided by Badger Meters (Badger), one of the leading water meter manufacturers. As part of the planning phase of the AMI project, City staff researched the manufacturers that supply AMI meters to identify which supplier would best serve the City's needs. Based on compatibility between AMI meter devices and the water meter body, familiarity with the already-in-place billing system, and other benefits offered in the software systems, it was determined that continuing to use Badger's products and services is the best option for the City and warrants a sole-source designation. This designation will allow the City to continue standardization of critical equipment compatible with operational systems and provide ease of operation and maintenance.

If the City were to procure from any manufacturer other than Badger, the City would need to replace all its meters (bodies and endpoints/transmitters) which would be substantially more expensive than just purchasing the standalone AMI. Additionally, the City has a current license with Badger Meters for the billing software, and purchasing from a different provider would require the replacement of the existing license. Lastly, staff are already well trained to repair and maintain Badger equipment, and purchasing a different manufacturer's AMI would require robust staff training for the new equipment. As Badger AMI is the only procurement option that interfaces with the City's current Badger Meter infrastructure and software, staff recommend continued use of Badger's system with the purchase of their AMI components as a sole source vendor.

Public works contracts and equipment purchases are also subject to the requirements of the City Charter, which requires competitive bidding for acquisitions above a certain threshold, according to bidding procedures specified in the purchasing chapter in the Municipal Code. Section 4.04.050 of the Municipal Code allows dispensing with formal bidding when a commodity can be obtained from only one vendor. This is known as the "sole source" exception. As Badger Meter is the only available option that interfaces with the City's existing meter infrastructure and bidding software, a finding of the sole source is warranted.

In addition, the common law recognizes a bidding exception for circumstances where competitive bidding of public contracts otherwise required by statute may be excused, including circumstances where the contract is such that competitive proposals would be unavailing or would not produce an advantage, and the advertisement for competitive bid would thus be undesirable, impractical, or impossible. Government contracts for goods and services only available from a sole source have been found to fall within the exception. *Graydon v. Pasadena Redevelopment Agency* (1980) 104

CA3d 631. As Badger Meter AMI is the only AMI product that provides a seamless interface with the City's existing infrastructure and billing software, it would be unavailing and provide no advantage to bid out this purchase. Moreover, to reduce costs from contractor material mark-ups, to mitigate risks associated with supply chain delays, and to ensure control over the components of the system, the City intends to purchase these materials directly from Badger Meters.

City staff has identified the quantity, size, and model of all water meters in the distribution system that will be upgraded to AMI and collaborated with Badger to receive a quote for the upgrade. This work will upgrade approximately 20,100 out of the total 20,500 water meters to AMI technology with a seamless replacement of meter components. Additionally, aging water meters that are three inches and larger in diameter (mostly commercial and industrial), should not only be upgraded to AMI but should also have the meter body replaced with the newer ultrasonic meter technology. These ultrasonic meters offer more insight and critical data for the Operations Department, such as system pressure, while providing greater low-flow accuracy and minimal maintenance.

PUBLIC OUTREACH

This item appeared on the May 1, 2023, tentative agenda, which was a publicly noticed meeting.

City staff held a virtual community public meeting on Tuesday, March 21, 2023, to inform the community about the project and receive feedback and comments/questions. Staff also presented the project to the Technology Advisory Committee on Wednesday, March 22, 2023. Lastly, staff presented the project to the Council on Monday, May 1, 2023.

In addition, a webpage was created and posted on the City's website with project information.
<https://cityofpetaluma.org/ami/>.

COUNCIL GOAL ALIGNMENT

This proposed action supports the FY 21/23 City Council Goals and Priorities and the following Workplan items:

- #42 "Find ways for City Operations to reduce greenhouse gas emissions, conserve water, decrease waste, and minimize the use of fossil fuels and investigate and pursue options for carbon sequestration."
- #70 "Continue focus on water conservation and urban recycled water expansion."
- #81 "Promote emergency preparedness and resiliency strategies to our residents and businesses."

CLIMATE ACTION/SUSTAINABILITY EFFORTS

The consensus amongst experts is that the climate crisis will bring about more extreme weather in the coming years. For the North Bay and Sonoma County, it is projected that there will be an

increase in intense rainfall events during wet months from atmospheric rivers, as well as longer periods of drought conditions in summer months. Moreover, there will be greater variability in these events from year to year.

Continued water conservation efforts and urban water supply planning efforts will reduce the City's reliance on limited surface water supplies during water shortages by providing increased water use efficiency with the implementation of AMI.

Upgrading to AMI technology will also eliminate the need for City staff to drive City vehicles to collect water meter reads, which will reduce fossil fuel consumption and greenhouse gas emissions.

ENVIRONMENTAL REVIEW

The AMI project was determined to be categorically exempt under CEQA Guidelines, sections 15301 (Existing Facilities and 15302 (Replacement)). The project consists of a minor alteration to existing facilities in the City of Petaluma. All improvements will replace existing meters.

Moreover, the AMI will reduce time, labor, cost, energy, and GHG emissions compared to the existing AMR system which requires Water Service Representatives to drive by to read each meter. Accordingly, there is negligible or no expansion of use beyond what currently exists; the AMI replacement will result in a benefit to the environment and there are no cumulative impacts, unusual circumstances, or other factors that would make the exemption inapplicable pursuant to CEQA Guidelines section 15300.2.

FINANCIAL IMPACTS

The purchase of these materials will be funded by the Urban and Multi-benefit Drought Relief Grant awarded to the City of Petaluma for the AMI project.

The costs of the materials quoted by Badger Meters are below:

Registers, Endpoints & E-Series Water Meters			
Item	Qty	Price	Total Price
Registers	20,100	\$52.45	\$1,054,245.00
E series (Ultrasonic) Water Meter	103	Varies	\$ 245,922.00
Cellular Endpoint	20,408	\$94.50	\$1,928,556.00
Orion Cellular LTE Service	264,000	\$ 0.65	\$ 171,600.00
		Subtotal	\$3,400,323.00
		Taxes (Est.)	\$ 323,030.69
Total			\$3,723,353.69

The total cost for the purchase of water meter materials is \$3,723,353.69, which is within the \$7,502,702 grant amount awarded for the project and does not require City matching funds.

ALTERNATIVES

The City Council may choose not to make the required findings in this report to authorize the sole-source material selection or the purchase of the materials from Badger Meters. This would risk delays in the execution and delivery of the project, and potentially higher costs from switching meters and billing systems to a different manufacturer. This would require a modification to the existing financial software system used by City staff.

ATTACHMENTS

1. Resolution
2. Quote from Badger Meters