

Council Meeting Staff Report

January 17, 2018

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Indexes (Council Goals):	BCC - N/A
Presenters:	Bob Westervelt
Legislative File:	AGR0545-18

Title

Approval of Services Agreement No. AGR17-32 with Anixter Incorporated in the amount of \$4,974,717.00, plus Applicable Gross Receipts Tax, for the Purpose of Advanced Metering Infrastructure (AMI) Equipment and Services

Recommended Action

I move that the Board of Public Utilities approve Services Agreement AGR17-32, with Anixter Incorporated in the amount of \$4,974,717.00 plus applicable gross receipts tax, and forward to Council for approval. I further move that the Board approve budget revision 2018-07 to properly distribute existing budget authority between the Water, Gas, and Electric funds according to the final project plan, and forward to Council for approval.

Staff Recommendation

Staff recommends that the Board approve as presented.

Body

This contract is for equipment, supplies, installation, software, and project management services for implementation of a system wide advanced metering infrastructure (AMI). The system will provide accurate, near real time read capability for electric, water, and gas services for DPU customers.

BACKGROUND: DPU began considering implementation of AMI several years ago as the capabilities of the available systems improved in response to the development of more complex pricing models which began to emerge, primarily in the electric industry, in the early 2000s. The DPU conducted a pilot deployment as part of the NEDO Project in 2012 through 2014. While the project was limited in scope and distribution, the Department did learn and realize the impact advanced metering could have on our systems and business model, and made the strategic decision to explore the business case for system wide deployment. In 2015 the Department engaged Power Systems Engineering, a consulting firm specializing in electric grid modernization and utilities metering systems, to conduct a business case analysis for full implementation of advanced metering in all of the metered services (electric, gas, and water), system wide. The study identified both economic benefits and non-economic benefits, both of which have been considered in the decision to move forward. Only considering the economic benefits, the analysis indicated a fourteen-year payback for a representative system. Excerpts from the PSE report are included as attachment C to this staff report.

In 2016 the DPU issued RFP 2016-2031 for system wide deployment of Advance Metering Infrastructure. This was in about the same time as the County's ERP project was being competed and moving forward, and in order to better coordinate the two projects the decision was made to postpone the AMI project, so that RFP was cancelled. We reissued the RFP in late 2016 as a multi-step procurement.

PROJECT OBJECTIVES: System wide deployment of advanced metering offers many benefits to customers of the DPU.

- More accurate metering. While some customers may see increases in their bills, this is a result of more accurate metering. It is important to remember that any consumption that is not metered simply adds to the “socialized cost of doing business”. More accurate metering yields the result that those customers using the metered commodities pay for them, rather than some portion of their consumption being spread to all customers.
- Reduced Meter reading costs. The five-person crew of meter readers, plus equipment and vehicles, will no longer be required. The department has been working with affected personnel to transition them into other vacancies as they materialize. We also anticipate that one or two “metering technicians” will be required to manage the metering system, but the net result is anticipated reduction of staffing by three to four FTE’s upon full system implementation.
- Reduced billing costs. Again, because of the constraints of manually reading meters, the billing is required to be handled in 22 separate read cycles. The billing staff runs billing essentially every business day of the month. With full deployment of advanced metering, we will be able to establish more efficient billing schedules.
- Reduced costs for turn on/turn offs, move in/move outs, rereads, and other account management issues. For example, when a customer comes in with a question about their readings, the customer service representative can “ping” the meter real time, right then and there, and get an accurate reading to correct or confirm the billing in question. This functionality has been in place in the pilot project deployment area for two years or more, and has proven to be extremely useful and reliable for resolving billing disputes or errors.
- Two way communications. The system provides for true two-way communications, so customers can be notified of service events or issues by way of an in-home display, SMS message, or mobile app.
- Real time leak detection and notification. All three meters can be set to monitor and detect potential leaks. If consumption is registered constantly for a defined period of time, notice can automatically be generated to the Utility or the customer advising them of a possible leak. This can save customers thousands of dollars in consumption and potential damages, compared to not being aware of the abnormal consumption until their next regular read and billing cycle.
- Customers can also monitor their consumption and realize savings by managing their consumption real time. If you only get your consumption information in monthly totals and only once per month, it is harder to recognize and take advantage of incremental opportunities for savings.
- Functionality of the Smart Customer Mobile app, is realized. We implemented the customer mobile application last year, but with only limited functionality, as many of the capabilities and features require real time, or at least incremental reads, to be fully realized.
- Improved outage management. Through advanced metering, the Utility can be notified of actual or impending outages, and may be able correct the situation, often before customers are even aware that an event was occurring. Engineers can also monitor the system and determine the exact scope of an outage, and can monitor restoration efforts.
- Advanced rate design. There are many exciting rate options that can improve system reliability, reduce costs system wide, and save individual customers money, all facilitated by the advanced metering’s measurement of incremental consumption. For example, demand response programs can be initiated, allowing customers to choose to shift their consumption to lower cost non-peak periods.
- Account management is improved. For example, Account Prepay can be enabled, allowing a

customer to pay in advance, and notifying that customer as available funds reach predetermined thresholds. This allows the customer to make real time decisions as to whether to curtail consumption. This is especially helpful to households that have trouble keeping up with their bills.

SELECTION PROCESS: Award was through a multi-step competitive process. Power Systems Engineering remained under contract to assist with the procurement, and provided consulting expertise on requirements definition, scoring criteria and weighting, coordination of offeror inquiries, and evaluation of proposals. Step one invited proposals from qualified offerors in response to a defined set of requirements and scoring criteria. Eight proposals were received and reviewed. The top three, based on the criteria specified in the Step One Solicitation, were invited to participate in Step Two, which included additional specified written responses and an on-site product demonstration, following a defined demonstration script. Anexter was selected based on criteria specified in the step two solicitation.

PRIVACY OR HEALTH CONCERNS: In some areas of the US, citizens have expressed concern over having “smart meters” installed at their properties. The concern most often expressed relates to having RF transmissions in close proximity to the customer’s domicile and any potential subsequent health impacts. This health concern has been studied and the extremely low power of the RF transmission from meters has not been shown to have any adverse health effects. The other most common concern heard relates to the potential for loss of privacy should someone be able to access the data from a customer’s meter. All AMI systems that would be considered have extremely advanced data encryption and security protocols. No instance has yet, to our knowledge, occurred where anyone has hacked into a smart meter data transmission and used the information for nefarious purposes. More information on these issues and links to relevant and credible studies are posted on the DPU website.

Alternatives

If the Board does not approve this service agreement the DPU will continue metering and billing with existing meters and processes and would seek other, potentially less effective methods to realize the cost savings and service and reliability enhancements the project provides.

Fiscal and Staff Impact

The project involves an initial cash outlay of approximately \$4.9M and continuing annual operating costs of approximately \$100k. It is anticipated that the meter reading function, currently a crew of five FTE’s, will be eliminated, but would be replaced by a Metering Technician function of one or two FTE’s. With reductions in system losses due to more accurate metering, reduction in account costs due to the ability to service meters and accounts remotely rather than having to dispatch a crew, and improved outage and restoration management, the expected fiscal payback (economic breakeven point) for the system is fourteen years. There are also significant operational benefits that do not have direct fiscal or staffing impacts, as discussed in the Body of this report.

Attachments

- A - Services Agreement AGR17-32 and Exhibits as noted therein
- B - Budget revision 2018-07 - Advanced Metering Infrastructure
- C - Excerpts from Business Case Study performed August 2015
- D - Nexgrid Solution Overview

