

Report To:	Regional Chair and Members of Regional Council
From:	Andrew Farr, Commissioner, Public Works Keshwer Patel, Commissioner, Finance and Regional Treasurer
Date:	October 20, 2021
Report No:	PW-28-21/FN-30-21
Re:	Long Term Water Meter Strategy - Implementation Plan Update

RECOMMENDATION

1. THAT Report No. PW-28-21/FN-30-21 re: “Long Term Water Meter Strategy – Implementation Plan Update” be received for information.
2. THAT the Regional Clerk forward a copy of Report No. PW-28-21/FN-30-21 to the City of Burlington, the Town of Halton Hills, the Town of Milton and the Town of Oakville for their information.

REPORT

Executive Summary

- The implementation of Advanced Metering Infrastructure (AMI) is included in the 2019-2022 Strategic Business Plan.
- Through Report No. PW-18-18/FN-25-18, re: “Long-Term Water Meter Strategy”, Regional Council approved the implementation of Advanced Metering Infrastructure and through Report No. PW-45-19/FN-35-19, re: "Long Term Water Meter Strategy Implementation Plan", Regional Council approved the Implementation Plan.
- Halton Region has awarded the Advanced Metering Infrastructure System and Meter Replacement contract to KTI Utility Services at cost of \$43,042,687, which is within the approved budget for this project.
- The Sensus FlexNet Advanced Metering Infrastructure system is comprised of radio transmitters, data collectors and software. Advanced Metering Infrastructure technology replaces the existing touchpads on the exterior of the property with a battery operated radio transmitter.

- As part of the installation project, approximately 111,000 water meters throughout the Region will be replaced and approximately 55,000 will be retrofit with a radio transmitter only.
- The project schedule has been updated to reflect delays due to the COVID-19 pandemic, negotiations with KTI Utility Services and complexities of implementation.
- Halton Region is currently in the System Design, Integration and Testing stage of the project.
- Deployment of the Advanced Metering Infrastructure system and meter replacements is anticipated to begin summer 2022 and is anticipated to be completed by mid-2025.
- A communications plan to support high-quality customer service and access to information during Initial Deployment is under development, including toolkits for members of Regional Council and the Local Distribution Companies.

Background

The basic function of a water meter is to log the amount of water consumed for fair and accurate billing of water and wastewater services for residential and Industrial, Commercial and Institutional (ICI) customers. As of December 31, 2020 Halton Region had 166,113 water meters installed in residential and ICI properties throughout the Region. Of this, there are approximately 8,470 ICI meters and 157,643 installed within residential homes.

Halton Region contracts out water meter reading, billing, front line customer service and collection to the Local Distribution Companies (LDC) in the City of Burlington, the Town of Halton Hills, the Town of Milton and the Town of Oakville as noted in Report No. FN-01-18, re: “Water and Wastewater Billing and Collection Services Contract Renewal with the Local Distribution Companies”.

All four LDCs have contracted out meter reading to a third party (Olameter Inc.) who obtains manual water meter reads through a touchpad located on the outside of each home on a bi-monthly basis for residential customers and on a monthly basis for ICI customers. Each LDC Customer Information System (CIS) determines water consumption based on an actual water meter read obtained or on a system generated estimated read and issues a bi-monthly (residential customers) or monthly (ICI customers) bill. The customer bill also includes the customer’s hydro charges.

The installation of the Advanced Metering Infrastructure (AMI) radio transmitter will allow for hourly water meter readings to be sent digitally multiple times per day from each residential or ICI property to data collector units placed strategically throughout the Region. Water meter reads will be provided by Halton Region to the four LDCs to facilitate water and wastewater billing services.

Each LDC provides front line customer service on behalf of Halton Region for any water meter billing issues. Customer inquiries are usually related to high consumption/leaks, bill calculation, water arrears, meter reading, account opening/closing and bill payment. Customer inquiries may be escalated to Halton Region.

Discussion

In June 2018, Regional Council approved Report No. PW-18-18/FN-25-18, re: “Long-Term Water Meter Strategy”, and authorized staff to develop a detailed implementation for a Region-wide AMI system for Halton residential and ICI customers. In October 2019, Regional Council approved the AMI Implementation Plan through Report No. PW-45-19/FN-35-19, re: “Long Term Water Meter Strategy Implementation Plan”.

Procurement Update

A procurement strategy was developed to ensure that Halton Region’s requirements for a robust AMI system and long-term goal of a reliable, accurate, cost effective and customer service focused metering and billing systems will be met. With assistance from E Source, the consultant retained in 2019 to support the project, the project team developed a comprehensive request for proposal and evaluation process that included vendor demonstrations, reference checks and a total cost of ownership analysis.

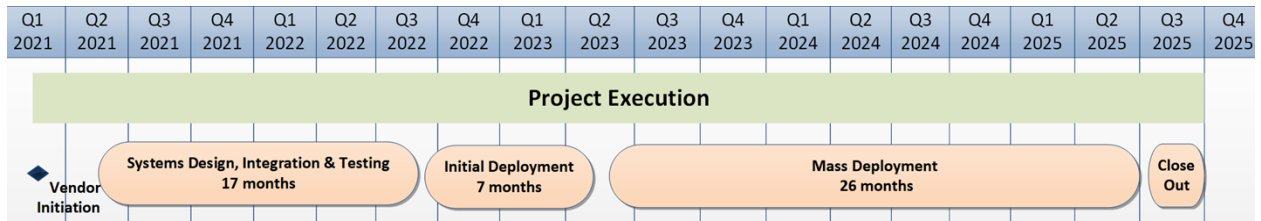
Through this competitive process, KTI Utility Services was the highest ranked proponent and awarded the contract in February 2021 following procurement delays of approximately three months due to the COVID-19 pandemic and extended negotiations to ensure best value for Halton Region. The final negotiated cost for this project is \$43,042,687, which is within the capital budget. KTI Utility Services will be installing, operating and maintaining the Sensus FlexNet AMI system and replacing and retrofitting water meters throughout the Region.

Project Schedule Update

As reported in Report No. PW-45-19/FN-35-19, re: “Long-Term Water Meter Strategy Implementation Plan”, the project is comprised of three stages as follows:

1. Systems Design, Integration and Testing;
2. Initial Deployment; and,
3. Mass Deployment.

Supported by E Source, staff have worked closely with KTI Utility Services to update the project schedule as shown below. The project schedule and approximate duration of each stage is as follows:



Schedule adjustments may be required due to COVID-19 impacts. Measures to mitigate delays will be implemented as needed.

System Design, Integration and Testing Stage

The System Design, Integration and Testing stage is a necessary and critical element of a successful implementation as it ensures that all Halton water customers will receive uninterrupted meter reading and billing once radio transmitters are installed on the meters. The estimated timeframe for this stage has been extended from 12 months to 17 months in recognition of the complex design, integration and testing work that must be completed. The integration with the four LDCs billing system will be critical in Halton Region’s ability to continue with the outsourced billing and customer service process through the LDCs and minimize any impact to the customer. Halton Region is working closely with the LDCs to determine the best strategy for billing integration. Once the System Design, Integration and Testing stage of the AMI system is completed, implementation will enter the Initial Deployment stage.

Initial Deployment Stage

A well-planned Initial Deployment stage is essential to a successful implementation with minimal impact to the customer. This stage will verify that the AMI system is fully functioning Region wide. This will be achieved by installing a subset of water meters with radio transmitters in the homes and businesses of water customers throughout Halton Region. The subset will include approximately 50 premises per Ward.

The estimated timeframe for this stage was extended from approximately five months to seven months to provide sufficient time to install AMI meters throughout the Region and ensure that the billing process is functioning properly and accurate meter readings are being obtained. Mass deployment will commence once the AMI system and associated business processes have been fully tested.

Mass Deployment Stage

The Mass Deployment stage will involve installation of radio transmitters and water meter replacements where necessary across the Region.

Each water customer will be contacted directly and they will be provided with information about the work that is required at their premise, the benefits of AMI and details on how to book an appointment to have their water meter replaced, if necessary. Each mode of communication will clearly identify Halton Region as well as KTI Utility Services as the

installation contractor. Based on KTI Utility Services' experience, the timeframe for this stage has been extended from 24 to 26 months. A detailed mass deployment schedule for installations Region-wide will be finalized with the vendor and in consultation with the LDCs in 2022.

Communications Plan

Staff have developed a communications plan for the Initial Deployment stage to support the delivery of high-quality customer service and ensure residents have access to information about the new meter technology. A new webpage on halton.ca will act as a central hub for the project, providing access to information, and frequently asked questions to help customers better understand and accept the new technology. Customers will also be able to sign up to receive email updates about the AMI project and milestones.

Toolkits will be sent to members of Regional Council via email to provide relevant technical information, project timelines, and answers to common questions about the project and links to related webpages, including the LDC websites. Toolkits will also be provided to Access Halton and staff within the Finance and Public Works departments as well as the LDCs' customer service representatives to support with potential customer inquiries. Halton staff will work closely with local municipal communications teams to ensure a coordinated effort in the awareness and promotion of this information.

To ensure continuous improvement, the project team will monitor the response to the Initial Deployment stage to bring further insights into the development of the Mass Deployment communications plan. The Mass Deployment communications plan will be finalized closer to 2023 and will aim to build customers' understanding and acceptance of the new meter technology.

Customer Service

As outlined in Report No. PW-18-18/FN-25-18, re: "Long-Term Water Meter Strategy", through the implementation of the AMI system, Halton Region intends to enhance customer service for all water customers by meeting the following objectives:

- Maintaining a consistent service level to meet or exceed customer expectations;
- Providing increased access to data;
- Improving customer self-service functionality;
- Improving efficiency and reducing the cost of operations;
- Improving data driven decision making; and,
- Maintaining a reasonable water bill and reading cost.

Staff are working closely with E Source, the four LDCs and KTI Utility Services to develop a comprehensive customer service plan that will achieve the objectives set out by Regional Council to ensure an enhanced customer service experience. The customer service plan will consider the information and tools available through the AMI system and

the LDCs' customer web portal as well as the responsibilities of Halton Region and the LDCs as the front-line customer service provider. Insights from the customer service plan will also inform communications planning and deliverables.

The availability and access to AMI data is integral to customer service. Through AMI technology, Halton Region will have access to hourly water data that will give Halton Region the opportunity to notify customers of possible irregular consumption trends or possible leaks prior to billing. In addition, the availability of data increases the likelihood of first call resolution and potential disputes due to estimated readings as a result of inaccessible meters. The availability of data may reduce the need for field investigations to diagnose potential meter issues, which cause increased labour/contractor costs.

Through AMI technology in combination with a customer web portal, Halton Region can offer self-serve access to water consumption information. Customers currently have access to the LDCs' customer web portal to view their utility bill (water/hydro) and hydro usage only. Staff are working with the four LDCs to provide access to water usage as well. Through the web portal customers will be able to track and monitor their own water usage on a daily basis. Customers will also be able to set alerts to identify abnormal consumption trends. Currently, abnormal consumption is identified based on billed consumption (bi-monthly for residential and monthly for ICI). Customized views and the ability to set up alerts will allow customers to react to changes in their consumption behaviour and access to hourly consumption data will allow transparency to water billing consumption, trends and patterns and identify high consumption prior to billing.

The comprehensive customer service plan is under development in collaboration with the four LDCs who deliver front line customer service to the Region's water customers and will be provided to Regional Council in 2022.

Additional Considerations

Increased Water Billing Frequency

As part of previous reports, members of Regional Council had inquired as to the possibility of moving to monthly water billing for residential customers. Moving to monthly water billing is complex and can be costly as it requires a reconfiguration of the four LDCs' Customer Information Systems databases as reported to Regional Council in Report No. FN-44-15, re: "Annual Report on the Local Distribution Companies' (LDC) Agreement for Water and Wastewater Billing Services".

As mentioned above, AMI will have opportunities to enhance the customer service delivery and experience for the water customer. To further understand the customer service experience today in order to fully assess the areas for enhancement, Halton Region is collaborating with the LDCs to collect additional customer service data via a survey. During the System Design, Integration and Testing stage, staff will discuss monthly billing with the LDCs to understand estimated implementation and annual costs as well as resources and benefits that can be attained with monthly billing. As noted

above, the comprehensive customer service plan will be completed prior to Initial Deployment and provided to Regional Council as part of a future update. Included in the update will be the summary of findings on increased water billing frequency.

Manual Read Fee

In other municipalities that have implemented AMI systems, a small percentage of water customers do not accept the radio transmitter that must be installed to facilitate automated meter reading. If a radio transmitter is not installed, these meters will continue to have to be read manually by staff visiting each property to obtain the read for billing.

Although Halton Region does have the authority to mandate the AMI system technology installation, staff are proposing to charge customers with a manual read costs as an alternative to levying fines as permitted through By-Law No 71-19, re: "Drinking Water System". Instituting a fee, payable only by customers that do not accept the radio transmitter, is a common method to recover the cost for providing the manual meter reading service and incentivising the AMI system installation. Staff anticipate the manual read fee will be brought forward for Regional Council's consideration as part of the 2023 annual operating budget in advance of the Mass Deployment stage of the project.

Long Term Staffing Plan

As reported through Report No. PW-18-18/FN-25-18, re: "Long-Term Water Meter Strategy", a long term staffing plan will be developed as part of the AMI project.

Conclusion

The implementation of the Automated Metering Infrastructure system for Halton Region achieves Regional Council's long-term goal of a reliable, accurate, cost effective and customer service focused metering and billing program that positions Halton Region well for the future and leverages new technology to meet current and evolving needs of Halton and its customers. The AMI system is anticipated to be fully implemented by mid-2025.

FINANCIAL/PROGRAM IMPLICATIONS

There are no capital financial implications associated with this report. Any operating impacts will be brought forward through Halton Region's annual budget and business planning process.

The integration cost with the four LDCs are being reviewed/quoted, and Regional Council will be updated once these costs are known and are included in the capital project budget.

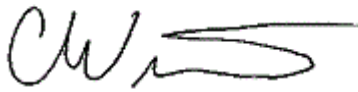
Respectfully submitted,



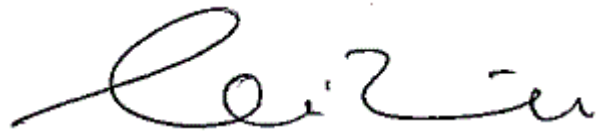
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Attachments: None