



DEVELOPMENT AND INFRASTRUCTURE SERVICES – PUBLIC WORKS SERVICES
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February 10, 2015

**JOINT DEVELOPMENT & INFRASTRUCTURE SERVICES, PUBLIC WORKS SERVICES
AND CORPORATE SERVICES, FINANCIAL SERVICES
REPORT 2015-17**

TO: Committee of the Whole
SUBJECT: Advanced Metering Infrastructure (AMI) Proposed Fixed Network System
ORIGIN: Directors of Public Works Services and Financial Services

RECOMMENDATIONS

THAT Joint Development and Infrastructure Services Report – Public Works Services and Corporate Services – Financial Services Report 2015-17, dated February 10, 2015 regarding Advanced Metering Infrastructure be received and the following recommendation(s) be adopted:

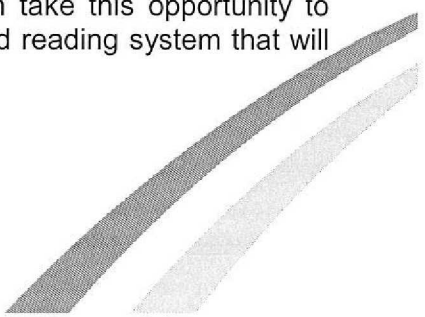
- 1. THAT Council consider the benefits of Advanced Metering Infrastructure as outlined in conjunction with the draft 2015 capital budget submission;**
- 2. AND THAT Council give consideration to initiating a Meter Replacement Program in the 2015 budget through a Request for Proposal process.**

COMMENTS

Advanced Metering Infrastructure (AMI) technology allows water meters to be read electronically rather than through direct visual inspection by meter readers. The meters transmit customer consumption and time-of-use data to a central database for billing, troubleshooting and analyzing. Additionally, AMI data identifies and alerts staff and customers of unusual consumption patterns which could identify potential leaks within a customer's home, meter tampering and backflow. This will benefit both the user and the Municipality identifying problems quickly and minimizing water costs and usage.

Currently the Town of Newmarket owns and maintains over 25,000 residential and commercial water meters within our distribution system. Of these 25,000 plus meters, an estimated 12,173 are believed to be under registering usage by about 9% due to age. Typically after 10 years, the existing Positive Displacement water meter will lose 0.5% each year. This translates in a loss of revenue to the Municipality in excess of \$500,000 per year. The proposed AMI replacement of these meters would be with a new improved water meter that provides an innovative magnetic technology for reading consumption with no moving parts, low flow accuracy and lead free construction.

With such a large number of meters to be replaced, it is suggested the Town take this opportunity to convert from our present metering process of direct visual reads to an automated reading system that will strengthen our finances, customer service and asset management.



The following represents the benefits of a modernized AMI Fixed Network System:

Customer Service

- Customers can access their consumption data online with a dashboard feature.
- No inconvenience to the customer for meter reader access issues.
- Identifies abnormal usage patterns or spikes in consumption sooner, maybe before residents see their bill, therefore allowing quicker reaction time and less frustration from residents.
- Water loss is more accurately determined.

Environment

- Identifies residential backflow incidences protecting the public and our water system.
- Less carbon footprint because vehicles aren't needed on the road to read meters with two way communication.
- Water consumption usage will assist consumers in determining a water conservation strategy.

Financial

- Identifies potential water leaks so staff can investigate and react sooner with potential savings to customers and reduce unaccounted for and unbilled water.
- Stopped and tampered meters are identified in hours instead of days or months.
- Ability to accurately evaluate the difference between water production and water consumption.
- More precise readers that maintain accuracy longer and reduce unbilled water use.
- Cost savings of reducing water meter reader needs.

BUSINESS PLAN AND STRATEGIC PLAN LINKAGES

This report links to Newmarket's key strategic directions in being *Well Managed through fiscal responsibility*.

CONSULTATION

The Utility Transition Task Force has been reviewing this potential project and has had presentations from potential suppliers. The Task Force has representation from across the corporation – Public Works, Engineering, Financial Services, Strategic Initiatives, Corporate Communications, Procurement Services and I.T.

HUMAN RESOURCE CONSIDERATIONS

The issuance of an RFP and the installation of new meters and AMI technology should have no direct impact on staffing levels. Opportunities to improve customer service may arise that could affect staffing levels, but they would be presented separately for consideration in the future.

BUDGET IMPACT

Operating Budget (Current and Future)

Investment in this project should have a positive effect on the operating budget. More accurate meter readings should increase revenues. There will be some reduction in maintenance costs; however, this amount would not be determined until the project has been fully implemented. Neither of these factors has been included in the proposed 2015 water and wastewater budgets at this time.

Capital Budget

This project will be included in the 2015 draft capital budget submission for consideration by Council. The project would be financed by a reserve fund loan per our Investment Strategy, and the loan would be repaid through operational savings. The suggested time frame is 15 years which would align with the life cycle and future replacement of the meters.

CONTACT

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