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August 18, 2016

**JOINT DEVELOPMENT & INFRASTRUCTURE SERVICES – PUBLIC WORKS SERVICES,  
CORPORATE SERVICES REPORT - FINANCIAL SERVICES-2016-36**

**TO:** Mayor Tony Van Bynen and Members of Council  
Committee of the Whole

**SUBJECT:** Advanced Metering Infrastructure Update

**ORIGIN:** Financial Business Analyst

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**RECOMMENDATIONS:**

**THAT Joint Development & Infrastructure Services – Public Works Services, Corporate Services Report - Financial Services – 2016-36 dated August 18, 2016 regarding Advanced Metering Infrastructure Update be received and the following recommendations be adopted:**

- 1. THAT authorization be given to continue the Advanced Metering Infrastructure (AMI) Project as outlined in this report, within the limits of the previously approved Water Meter Replacement Program budget;**
- 2. AND THAT any request for additional funding for the Advanced Metering Infrastructure (AMI) Project be submitted with the 2017 capital budget.**

**COMMENTS**

**Purpose**

The purpose of this report is to provide a status update and revise the current funding level for the Advanced Metering Infrastructure (AMI) Project.

**Budget Impact**

The total capital cost of this project is \$10,000,000.

**Summary**

This project will provide a \$7,045,000 net benefit to the Town over 20 years, with an internal rate of return of 5.86%. The project is projected to be completed in 2020.

The net benefit includes the cost of repaying the capital investment.

## Background

On February 10 2015, the Committee of the Whole was presented with the benefits of implementing Advanced Metering Infrastructure (AMI) with joint report 2015-17. AMI, also known as smart meters, allows for two-way remote communication with water meters. With this report, Council directed staff to initiate the project. A consultant has since been hired to further develop the business case for the AMI project and assist with the Request for Proposal (RFP) process.

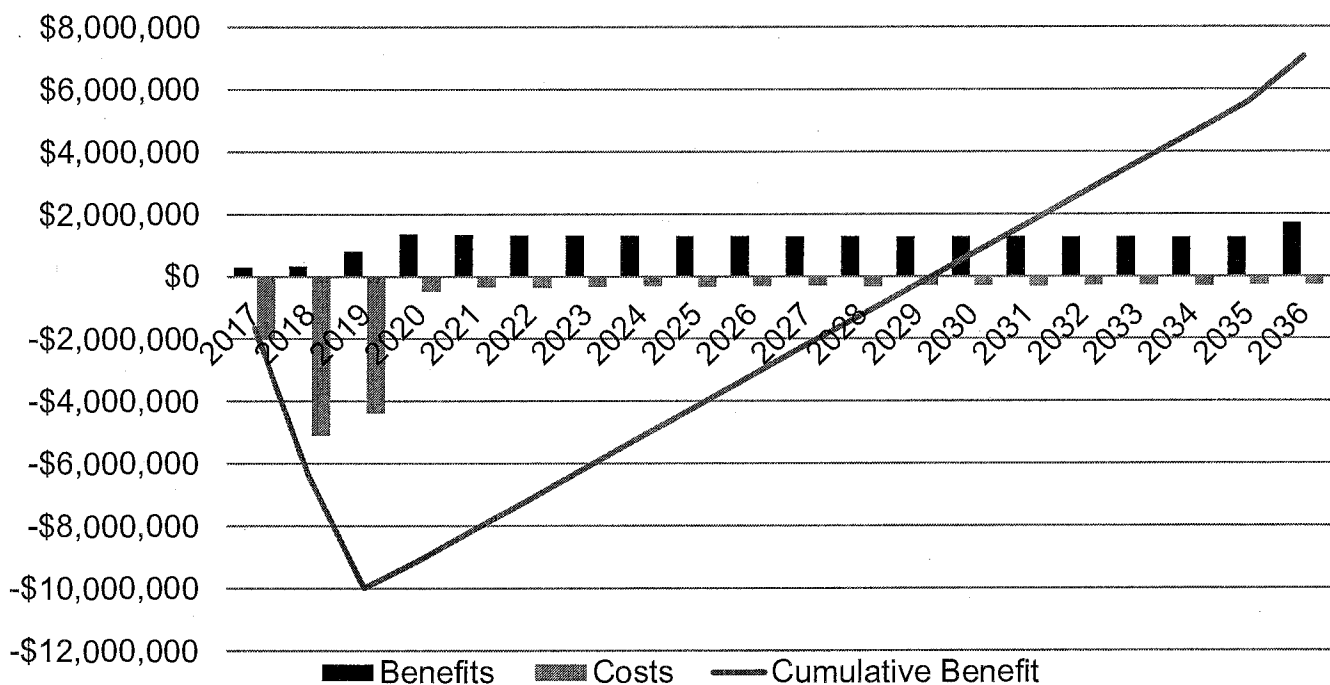
## ANALYSIS AND OPTIONS

### Financial Benefits

The business case estimates that the net benefit of this project will be \$7,045,000 over the next 20 years. Please note that all business case numbers are in present value terms, meaning that future benefits and future costs are discounted to better reflect their worth at the present time. For an illustration of the cost and benefit projections for this project, see figure 1.

**The results of the business case are favorable. This project will pay for itself in 13.2 years and provide an internal rate of return of 5.86%.**

**Figure 1: Projected Benefits and Costs of Advanced Metering Infrastructure Project**



The costs are estimated to be \$16,938,000 over the business plan's time period. This includes \$9,345,000 in capital costs and \$7,593,000 in operating costs.

The benefits are estimated to be \$23,983,000 over the business plan's time period. The benefits include cost savings and revenue increases. Table 1 identifies and describes the financial benefits.

**Table 1: List and Description of Project Benefits**

Item	Description	Benefits
Meter Reading and Disconnects	Decrease in cost due to no longer having to manually read and disconnect meters.	\$2,826,000
Meter Accuracy	Increase in revenue due to more accurate meter reading.	\$10,207,000
Leaks & Loses	Decrease in cost due to greater awareness of water main leaks. The awareness will inform the Town where to make repairs.	\$5,343,000
Avoided Meter Replacement	Meter replacement costs that are avoided due to this project.	\$5,607,000

### Customer Service Benefits

***Beyond the positive financial impact, the AMI project will enable the Town to provide a greater level of customer service.***

First, it will allow the Town to notify customers when there is likely a leak or running tap/appliance on their property, as customers are financially responsible for the water used. This will help customers to identify and repair water loss issues sooner, to prevent unexpectedly high water bills.

Second, it will allow the Town to provide an online tool that will enable customers to track hourly consumption, compare usage with their personal water budget, and compare their consumption level to the average Newmarket customer.

Thirdly, it will enable the Town to revise the billing schedule so that all customers can be billed on a calendar month cycle. Feedback has indicated this is preferable as it makes it easier for customers to track and compare their consumption.

### Project Timeline

The RFP for the meter and installation portion will be issued in the 4<sup>th</sup> quarter of 2016. The installation of the meters is projected to be completed in 2020.

## BUSINESS PLAN AND STRATEGIC PLAN LINKAGES

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

This report links to Council's Strategic Priorities by ensuring effective and efficient services. The business case shows a favourable rate of return for this project.

## CONSULTATION

Util-Assist was hired to educate staff and develop the business case for this project. The consultant worked previously with Newmarket Hydro to help them with their transition to AMI.

Newmarket-Tay Hydro has been consulted throughout the project to provide information on our current environment and advise on lessons learned from their own transition experience.

***By partnering with Newmarket-Tay Hydro in this project, the Town will benefit from operational efficiencies by sharing services with proven quality standards.***

Communications, Customer Service, Finance, Information Technology, Procurement and Public Works were consulted in the development of the business case. Regular updates were provided to the Utility Transition Task Force, which includes the aforementioned departments and Economic Development, Legal, Engineering, and Strategic Initiatives.

## HUMAN RESOURCE CONSIDERATIONS

Not applicable to this report.

## BUDGET IMPACT

### *Operating Budget (Current and Future)*

Over the 20 year life-cycle of the new meters, it is projected that there will be additional revenues of about \$10 million – an average of \$500,000 per year as stated in joint report 2015-17. Further analysis shows that the net benefit will be \$7,045,000. These will be sufficient to repay the principle and interest on the capital investment.

### *Capital Budget*

Council approved \$6.7 million in 2015 for the Water Meter Replacement Program. Further review has established that the cost will be about \$10 million. The request for additional funding will be submitted as part of the 2017 budget. Consistent with our multi-year budgeting approach, Table 2 shows the projected allocation.

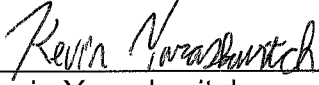
**Table 2: Projected Funding Allocation for the Implementation of AMI**

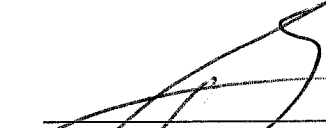
Water Meter Replacement Program		Additional funding for Advanced Metering Infrastructure Project	Total
2016	\$100,000		\$100,000
2017	\$1,900,000		\$1,900,000
2018	\$4,700,000	\$300,000	\$5,000,000
2019		\$3,000,000	\$3,000,000
Total	\$6,700,000	\$3,300,000	\$10,000,000

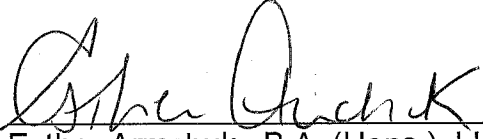
The project will be financed by a reserve fund loan from the Water and Wastewater Asset Replacement Fund. The loan will be repaid from additional revenues and savings resulting from this capital investment. This will be done in compliance with our Investment Strategy.


## CONTACT

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