

## **Recommended Strategies to Address Prematurely Failing Water Meter Transmission Units**

**Date:** April 23, 2025

**To:** Infrastructure and Environment Committee

**From:** General Manager, Toronto Water, and Chief Procurement Officer

**Wards:** All

### **REASON FOR CONFIDENTIAL INFORMATION**

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*The attachment to this report is about a plan to be applied to any negotiations carried on or to be carried on by or on behalf of the City of Toronto (City).*

### **SUMMARY**

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The purpose of this report is to provide an assessment of the costs and benefits associated with two implementation options for a strategy to replace the City's rapidly failing water Meter Transmission Units (MTUs).

Aclara, a U.S.-based company, remains the sole supplier of MTUs compatible with the City's existing water metering technology. Aclara MTUs are manufactured in Mexico and shipped directly to Canada.

Confidential Attachment 1 to this report contains additional information for Council's consideration, along with recommended confidential instructions to staff.

### **RECOMMENDATIONS**

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The General Manager, Toronto Water, and the Chief Procurement Officer recommend that:

1. City Council adopt Strategy 1 as described, in Confidential Attachment 1 to this report.

2. City Council direct that Confidential Attachment 1 to this report (April 23, 2025) from the General Manager, Toronto Water and the Chief Procurement Officer, remain confidential in its entirety as it contains information and confidential instructions to staff respecting a plan to be applied to any negotiations carried on or to be carried on by or on behalf of the City, and direct that the confidential instructions to staff be made public at the discretion of the City Solicitor.

## **FINANCIAL IMPACT**

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The financial impact is detailed in Confidential Attachment 1 to this report.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

## **DECISION HISTORY**

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At its meeting on November 13 and 14, 2024, City Council, by its adoption of Item IE17.2 "Meter Transmission Units Emergency and Emergency Non-Competitive Contract with Aclara Technologies LLC to Obtain Supply of Replacement Water Meter Transmission Units", authorized, among other things, the General Manager, Toronto Water to enter into negotiations with Aclara, as the manufacturer and exclusive supplier of the MTUs, for the supply and delivery of additional MTUs, to procure additional MTUs and associated equipment from Aclara, by or before June 30, 2025 to a maximum \$3,000,000 in order to keep providing working meters and MTUs for new builds and high volume users pending Council decision on a long term strategy, and adopted the confidential instructions to staff in Confidential Attachment 1 to the report (October 7, 2024). City Council's decision can be viewed here: [Agenda Item History – 2024.IE17.2](#).

At its meeting on July 24 and 25, 2024, City Council, by its adoption of Item EX16.18 "Toronto Water 2024 Capital Budget and 2025-2033 Capital Plan Adjustments", authorized, among other things, amendments to Toronto Water's 2024 Capital Budget and 2025-2033 Capital Plan by adjusting project cashflows contained within the Budget and Plan, to align forecasted project accelerations and deferrals and to reallocate project costs and cashflows to address an earlier than forecasted need to replace MTUs. City Council's decision can be viewed here: [Agenda Item History - 2024.EX16.18 \(toronto.ca\)](#)

At its meeting on October 29 and 30, 2019, City Council, by its adoption of Item IE8.3, "Non-competitive Contract with Aclara Technologies LLC, for the supply of Proprietary Meter Reading Hardware, System Upgrade, and Annual Maintenance and Support," authorized the General Manager of Toronto Water to negotiate, enter into and execute a non-competitive supply of goods agreement with Aclara for, among other things, the supply of MTUs. City Council's decision can be viewed here: [Agenda Item History – 2019.IE8.3](#)

At its meeting on July 23, 2018, City Council, by its adoption, without amendments, of Item PW31.6 "Authority to Negotiate a Non-Competitive Contract with Aclara Technologies LLC for the Supply of Proprietary Meter Reading Hardware, System Upgrade and Annual Maintenance and Support", authorized the General Manager of Toronto Water and the Chief Information Officer (CIO) to negotiate a non-competitive, five-year contract with Aclara for proprietary meter reading hardware, system upgrades, and annual maintenance and support. Additionally, City Council directed these officials to report back with the negotiation results for contract approval in the first quarter of 2019. City Council's decision can be viewed here: [Agenda Item History – 2018.PW31.6](#)

At its meeting on November 12, 2015, the Public Works and Infrastructure Committee received for information Item PW9.6 - "Water Meter Program - Final Report" whereby the General Manager of Toronto Water reported on the status of the project advising, among other things, that the project achieved substantial performance in March 2015, approximately nine months ahead of schedule, with total projected expenditures forecasted at \$168 million, or 77 per cent of the \$219 million funding limit. At the time, the financial benefits to the City were projected to be approximately \$32.8 million per year, including \$27.8 million in revenue recovery and \$5 million in operating savings. This information report can be viewed at: [Agenda Item History – 2015.PW9.6](#)

At its meeting on June 23 and 24, 2008, City Council, by its adoption, with amendments, of Item PW16.12 "Request for Proposal (RFP) 0713-08-0001: Water Meter Replacement and Automated Meter Reading System", authorized, among other things, the General Manager of Toronto Water and the Treasurer to negotiate and enter into an agreement with Neptune Technology Group (Canada) Limited for a total amount of \$191,756,663.14, net of GST, including provisional items for the Water Meter Replacement and Automated Meter Reading (AMR) System project as specified in RFP 0713-08-0001 (the AMR Agreement). Additionally, a funding limit of \$219 million, net of GST, was set to finance the AMR system, covering contingency, provisional items, and inflationary indexing for labor and materials over six years. City Council's decision can be viewed at: [Agenda Item History – 2008.PW16.12](#)

## COMMENTS

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### Background

The City's Automated Meter Reading (AMR) system was designed to enable automated water billing, eliminating the need for on-site meter readings. Water Meter Transmission Units (MTUs) are a critical component of the City's AMR system, enabling the transmission of accurate and timely water consumption data for water utility billing. A failure in these units results in reliance on estimated billing, affecting both customer service and operational efficiency. Aclara is the exclusive supplier of MTUs compatible with the City's AMR system, with each MTU having an expected service life of 20 years.

In 2023, in line with its long-term asset management strategy, Toronto Water began developing plans to transition from the existing AMR system to the next generation of water metering technology.

The City's MTUs are failing prematurely, well before their expected 20-year service life. Currently, over 50 per cent (248,000) of the City's 470,000 MTUs have failed, and, due to operational challenges such as a backlog of replacement MTUs, the City has increased its reliance on estimated billing.

Over the past 6 months, failures have accelerated to a forecasted rate of 11,000 to 12,000 MTUs per month. Toronto Water's ability to replace MTUs is constrained by the availability of internal labour, MTUs, and field programming tools.

### **Impact on Customer Service and Operations**

The premature failure of MTUs has significantly affected the City's ability to maintain expected service levels. When an MTU fails, the transmission of actual water consumption data is interrupted, requiring the City to rely on estimated consumption based on historical usage for water utility billing. Customers continue to receive estimated bills until actual meter readings are obtained, either by a manual reading or the installation of a replacement MTU.

To support customers affected by estimated billing, several initiatives are in progress or have been implemented:

- **Customer Communications:** An informational mailer was sent prior to customers receiving their latest water bill, notifying them of the MTU issue and providing information about estimated billing and how to submit a water meter reading.
- **Dedicated Call Centre Support:** Revenue Services Division created a dedicated customer care team to assist customers with estimated billing inquiries and manual water meter readings.
- **Online Meter Reading Portal:** Coming soon, customers whose MTU fails to send a reading will be notified and given the option to self-report their water meter reading online in advance of receiving their bill, maintaining the integrity of the billing cycle and pro-actively reducing the reliance on estimated billing. The online meter reading portal will be launched June 30, 2025.
- **On-Site Support:** Customers who wish to report their meter readings but cannot access their meters can contact the dedicated Revenue Services Division Customer Care Call Centre via 311 for assistance.

### **Negotiations With Aclara**

The details of the City's current negotiations with Aclara **for the supply and delivery of MTUs** are provided in Confidential Attachment 1 of this report.

Aclara is a U.S.-based company. Continued engagement with Aclara is necessary to ensure compatibility with the City's existing water metering technology. Aclara manufactures its MTUs in Mexico and ships them directly to Canada.

Continued installation and ongoing support services for MTUs are provided by Neptune Technology Group (Canada) Limited.

## Evaluation of Strategies to Address Premature MTU Failures

Toronto Water staff have explored two strategies to address the premature MTU failures. The assessment of the strategies included analysis of contractual considerations, financial impacts, customer risks, and operational implications. The analysis also considered the availability of MTU replacement stock and installation kits. The details of this analysis, along with staff recommendations, are provided in Confidential Attachment 1 of this report.

### CONTACT

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### SIGNATURE

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Lou Di Gironimo  
General Manager, Toronto Water

Geneviève Sharkey  
Chief Procurement Officer

### ATTACHMENTS

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Confidential Attachment 1 – Strategies and Next Steps