Automated Meter Infrastructure (AMI) Project Update and Service Contract Approval

Presented To:	City Council
Meeting Date:	July 14, 2021
Type:	Managers' Reports
Prepared by:	Michael Loken Water/Wasterwater Treatment & Compliance
Recommended by:	General Manager of Growth and Infrastucture

Report Summary

This report provides a recommendation regarding the Automated Meter Infrastructure (AMI) Project Update and Service Contract Approval.

Resolution

THAT the City of Greater Sudbury directs staff to approve the negotiated service agreement between Olameter, Inc. and the City of Greater Sudbury to provide water meter reading services through the implementation of the AMI project and on an as needed basis after completion of the project, as outlined in the report entitled “Automated Meter Infrastructure (AMI) Project Update and Service Contract Approval, from the General Manager of Growth and Infrastructure presented at the City Council meeting on July 14, 2021.

Relationship to the Strategic Plan, Health Impact Assessment and Community Energy & Emissions Plan (CEEP)

The Automated Meter Infrastructure (AMI) Project addresses a number of objectives within the strategic plan, including:

- *1.2 “Establish Sustainable Asset Service Levels”* through increasing the accuracy and frequency of water billing to help rate payers effectively manage their water consumption choices and resulting costs;
- *1.5 “Demonstrate Innovation and Cost-Effective Service Delivery”* by maximizing the benefits of technology in the City’s service delivery processes, in accordance with the City’s IT Strategy, and;
- *4.4 “Invest in Transformative Facilities, Space and Infrastructure Initiatives”* by replacing aging water meters with industry leading technology.

AMI also supports climate change initiatives by improving the level and quality of water consumption data which will support effective plant utilization, facility planning and long-term asset renewal. These actions support CEEP Goal 5 to *“decrease energy use in the potable water treatment and distribution system”*.

Financial Implications

The total projected cost of the AMI project as approved in June 2019, along with the amount spent (not including tax) as of June 2021 is as follows:

Contract or Item	Spending		%
	Planned	Actual	Spent
ISD19-18: Water Meter & Encoder Register Supply & Delivery	$ 4,412,159.00	$ 1,871,759.74	42 %
ISD19-02: AMI Technology Installation and Deployment	$ 10,203,920.40	$ 412,467.01	4 %
ISD19-03: Project Management Services for AMI	$ 1,155,878.57	$ 614,218.34	53 %
Contingency	$ 744,704.00	$ 92,718.00	12 %
Total	**$ 16,516,662.02**	**$ 2,991,163.09**	**18 %**

The above table does not incorporate approved change orders, the municipal portion of HST or pressures faced as a result of COVID-19.

The project is expected to cost approximately $17.7 million, which is approximately $500,000 higher than originally anticipated due to COVID-19 related pressures. This can be funded within the existing, approved project budget.

Annual operating savings that will be realized upon project completion are approximately $684,000, summarized as follows:

Description	Estimated Savings
Elimination of meter reading costs	$ 360,000
Meter maintenance efficiencies	$ 40,000
Efficiencies in customer service and billing	$ 182,000
Reduction of Non-Revenue Water	$ 428,000
Increased annual costs (data analysis, technology support and GSU services)	- $ 326,000
Annual Net Benefit:	**$ 684,000**

These values reflect previous estimates and will be revised as work proceeds.

Executive Summary

Project History

The implementation of a City-wide Advanced Metering Infrastructure System (AMI) was approved in June 2019 with the scope to:

1. Install smart water meters at all residential and ICI (Industrial, Commercial and Institutional) accounts, along with sufficient radio transmitters to collect & transmit data on a near real-time basis;
2. Implement appropriate hardware and software solutions to allow for review of production and consumption data by both customers and CGS staff, and;
3. Perform significant asset renewal through the replacement of aging water meters to increase accuracy of measurements used for billing, reduce inefficiencies and enhance customer service.

A number of key improvements will be achieved through the implementation of this project scope, including:

- Enhancing customer service through:
  - Eliminating estimated water bills, performing billing only on metered data;
  - Introducing a monthly billing cycle based on actual measurements;

    - Implementing a customer portal allowing users to view their consumption in real time and better understand & manage their water consumption decisions;
    - Providing proactive notification of frozen water service issues through automated alarming;
    - Allowing customers to create customized high water consumption and leak detection alerts, and;
    - Streamlining move-in/move-out process for customers changing addresses.
- Creating operational efficiencies and savings by:
    - Eliminating manual water meter readings;
    - Increasing water meter reliability and reducing meter reading exceptions;
    - Expediting special water meter read requests and providing same day final meter reads;
    - Minimizing high / low meter read field visits, and;
    - Assisting in detection of backflow events to safeguard our drinking water distribution system.
- Improving accuracy and completeness by:
    - Automatically detecting meter damage and tampering along with notifications of meters reporting consumption;
    - Increasing meter accuracy and meter reading reliability, and;
    - Improving financial reporting.
- Strengthening distribution system management by:
    - Increasing understanding and accountability for water loss across CGS distribution systems;
    - Utilizing AMI and district metering data to identify operational improvements and provide information to the Water/Wastewater Master Plan to prioritize capital projects, and;
    - Improving system wide financial reporting.
- Creating societal benefits by:
    - Reducing energy consumption in treatment processes by reducing lost water, and;
    - Supporting water conservation initiatives.

At the time of project approval a number of items were outstanding and listed as “next steps”, these were as follows:

1) Execution of contracts with successful vendors selected through the competitive tendering process;
2) Negotiation of revised Service Level Agreements (SLAs) with Greater Sudbury Utilities (GSU);
3) Development and implementation of a comprehensive communications plan, and;
4) Execution of a “Proof of Concept” in a selected ward to assess and confirm specific project steps and inform plans to fully implement the project scope.

<u>Progress Summary & COVID-19 Pandemic Impacts:</u>

Since the project approval and last report to council in June 2019, the following items have been completed:

- Awarding and executing of all pertinent contracts required for project implementation, including:
    - Supply and Delivery of Water Meters and Encoder Registers (ISD19-18): Neptune Technology Group
    - AMI Technology Installation and Deployment (ISD19-2): KTI Incorporated
    - Project Management Services (ISD19-3): Diameter Services, Inc.
- Negotiation of a new service contract with Olameter, Inc. for meter reading services until full implementation of AMI is achieved;
- Creation of a comprehensive communications plan providing:
    - Open house sessions for each Ward before meter installations start (currently virtual due to COVID-19 restrictions);
    - Staged bilingual communications to residents and ICI customers, revised in May 2021 to include more detailed and up to date information on COVID-19 safety protocols and procedures:
        - “Contact 0” – Introductory flyer;
        - “Contact 1” – Initial contact letter and appointment booklet;
        - “Contact 2” – Reminder letter;
        - “Contact 3” – Door knocker reminder notice;

        - "Contact 4" – Reminder call from KTI call center, and;
        - "Contact 5" – Final notice and warning of service disconnect.
    - Information flyer to be left with customer upon completing installation of new meter.
- Completion of 1,759 meter installations, approximately 47.2% of accounts in Ward 10 (designated as the "Proof of Concept" area) as of June 22nd, 2021.

As has been the case for many projects, the COVID-19 pandemic and the associated restrictions implemented to safeguard public health have had a significant financial and scheduling impact. Due to the nature of the work being completed, primarily entering private residences, all appointments were cancelled proactively and installation staff were put on standby until restrictions were lifted. The two stay at home orders and resulting additional project costs encountered to date are as follows:

1. January 14th to February 16th, 2021: $31,200.07
2. March 15th to June 6th, 2021: $154,509.22

It is currently estimated that shutting down the project for 15.5 weeks as a result of the stay at home orders will delay the completion of meter installations by approximately the same amount of time; 16 weeks.

Additional costs totaling $256,813.57 have also been approved to extend the Project Management Services provider (Diameter Services) an additional year to account for project delays and additional requirements. A more detailed breakdown of the impacts resulting from COVID-19 are included later in this report.

<u>CGS Staffing and Organizational Changes:</u>

As part of the AMI project, a critical new role will be created in the Water Meter Shop to assist in meter deployment and maintaining critical service level goals. This role, with funding allocated through the existing project budget, will focus on:

i. Customer Information Analysis;
ii. AMI Compliance, and;
iii. Invoice Auditing.

Additionally, due to retirements, absences and other vacancies the following positions have changed or been filled on the AMI project team:

Project Sponsor:	Michael Loken, Acting Director of Water/Wastewater Treatment & Compliance
Project Manager:	Jody Rybachuk, Project Manger
Key Stakeholders:	Joel Castonguay, Manager of Compliance & Operational Support
	Aaron Priebe, Water Meter Compliance Officer

The AMI Steering Committee and the Project Team are recommending the approval of a service agreement with Olameter Inc. This not only addresses a long standing deficiency of not having a proper service agreement in place, but will ensure proper continuation of manual meter reads until the full implementation of the AMI system is complete.

Finally, negotiations are continuing with Greater Sudbury Utilities to create appropriate service level agreements for Water Billing and Related Services, radio spectrum license use and shared network use. Once final contracts have been drafted, they will be presented to Council for approval.

Background

The purpose of this report is to provide a detailed update to Council on the progress made and challenges encountered with the AMI project, including:

- Meter installations completed;
- Project costs and change orders incurred;

- Impacts of the COVID-19 Pandemic;
- Updated project risks and potential impacts;
- Case studies highlighting customer benefits, and;
- Summaries of negotiated service agreements.

Through providing this comprehensive update we hope to once again highlight the critical nature of this project, its wide ranging project scope and the significant benefits which will be achieved for water customers and the City of Greater Sudbury as a whole.

Project Timeline & Milestones

To provide a broad view of the project, a timeline indicating major milestones and events along with estimated dates for 25%, 50%, 75% and 100% completion is shown in Figure 1:

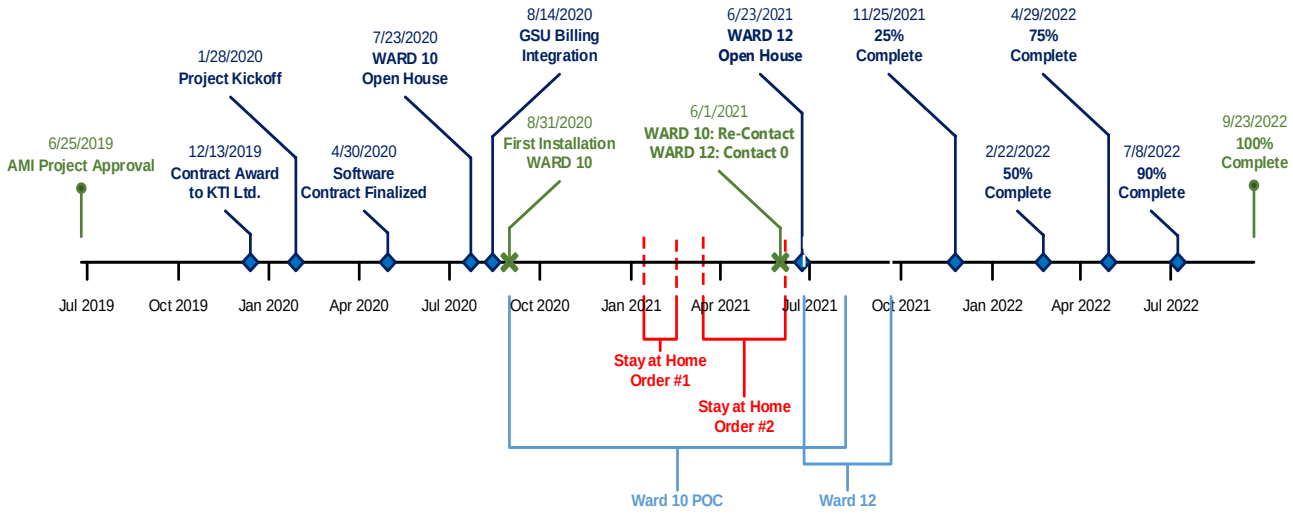

Figure 1: AMI Project Timeline

The current estimate for 100% contractual completion is the week of September 23rd 2022. Additional project milestones not shown above are indicated in

Table 1, with a more detailed overview of the delays imposed by the Stay at Home orders found later in this report.

Table 1: AMI Project Milestones

Milestone	Completion Date	Status
Revised Public Engagement Material	28-May-2021	Complete
Factory User Acceptance Test (FUAT)	Jul-2021	Ongoing
Ward 10 - Proof of Concept (POC)	6-Aug-2021	Ongoing
Network Towers Scope of Work Approval	Jun-2021	6 of 7 completed
Network Repeater Towers Scope of Work Approval	TBD	0 of 2 completed
Ward 12	8-Oct-2021	Start Date: 25-Jun-2021
Customer Portal	TBD	Ongoing
Ward 1	TBD	Not released to KTI
Ward 11	TBD	Not released to KTI

Project Summary

Customer Portal (Software)

One of the most significant benefits of the AMI project is the implementation of a customer portal where individual users can access real time and historical data collected from their water meter. Using this data, users will be able to track water consumption, understand usage patterns and set up personal alarms for high water flows. By providing this detailed information in a user friendly and easy to understand manner, customers will be able to make informed decisions that will directly impact their bill.

The AMI steering committee, along with key stakeholders from CGS Communications, 311, Finance and GSU will be evaluating options available from SilverBlaze (GSU customer portal software provider) and Sensus Analytics (software provider for AMI data collection system). An update will be provide to council once a preferred solution has been selected by this diverse stakeholder group.

Benefits Case Studies:

Despite the delays to the project, there have been a number of cases worth noting where customers and the City have benefitted from AMI installations. Two case studies are presented here, with the hope that many more customers will realize similar benefits as meter installations continue.

1. A residential account was flagged in April 2021 due to consumption increasing dramatically over a period of two days from less than 0. 5 m^3/day to over 7.1 m^3/day, as shown in Figure 2. Usage also changed from expected diurnal (day/night) patterns to a consistent use over the whole day.

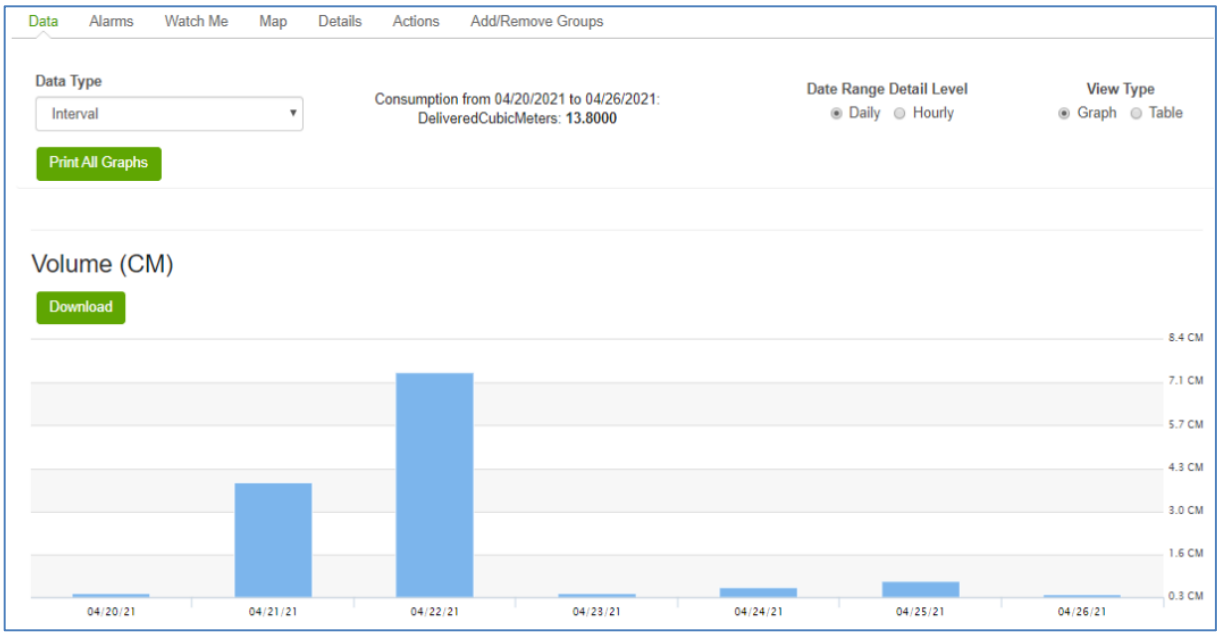

Figure 2: Customer Benefit - Case Study #1

When contacted, the customer was able to identify that they had left their garden hose on. Once they turned off their hose, their usage immediately returned to normal levels.

2. A residential account was flagged in May 2021 when usage increased from approximately 0.3 m^3/day to over 0.5 m^3/day, as shown in Figure 3:

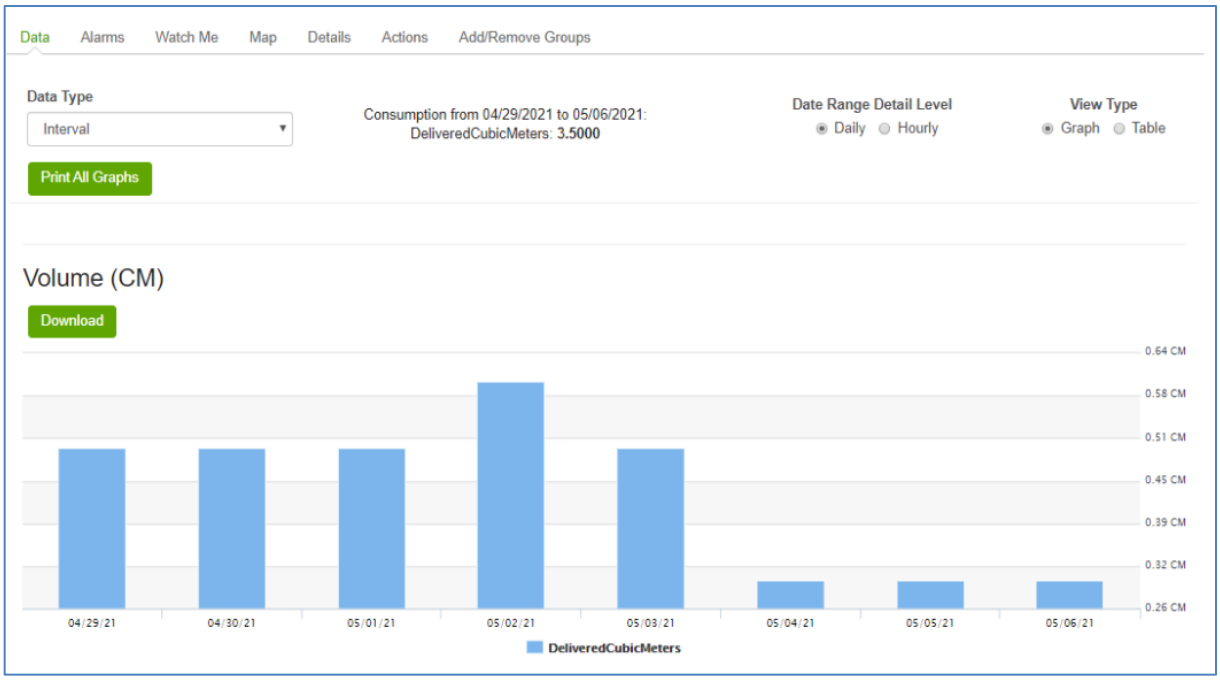

Figure 3: Customer Benefit - Case Study #2

Staff reached out to the homeowner who indicated that they were having work done on their sprinkler system. When usage patterns did not decrease, staff reached out to the homeowner again and were able to determine that there was a hose running into their pool which the customer was not aware of. Feedback from the customer was that they were very appreciative of the customer service provided.

In each case the near real-time measurements provided by the AMI system allowed staff to flag high flow conditions. This allowed homeowners to eliminate water use they were not aware of, conserving water and reducing potential charges on their monthly bill.

<u>District Metering Implementation</u>

In order to achieve maximum benefit from AMI measurements, work is also ongoing to install district meters which will measure the amount of water entering large sections of the City. By comparing this district data to AMI data in the same area, estimates of water loss can be generated and used to prioritize capital projects and operational improvements.

Although a city wide plan for district meter installation has not yet been completed, a project has been approved to install a new meter at East Street in Coniston. Coniston is a logical starting point for this work as there are only two distinct water feeds entering the community, and the valve on Second Avenue already has a meter installed. Upon installation of this second meter, the first permanent metered district will be established within CGS allowing staff to determine true water losses on a continual basis.

In addition to Coniston, CGS personnel are working with representatives from Vale to complete metering within Copper Cliff and Lively/Walden, which are serviced from the Vermilion Water Treatment Plant (WTP), owned and operated by Vale. Through using a combination of Vale water meters and City installed water meters, it is expected that full district metering of these communities could be completed by the end of 2022.

Finally, the option does exist for temporary/mobile district metering to be done in advance of permanent meter installations. By utilizing contractor resources, “snapshots” of individual communities could be obtained. Though not as comprehensive and detailed as measurements obtained from permanently installed meters, the use of temporary meters could allow for identification of areas with significant water loss, allowing for remediation in a shorter time frame.

Work on district metering will continue through the Asset Management Task Force, Infrastructure Capital Planning and Linear Infrastructure Services.

Impacts of COVID-19 on Project Cost

Due to the nature of work being completed as part of the project, mainly entering private residences to replace water meters, all in-home appointments were suspended during the lockdown periods ordered by Public Health Sudbury & Districts and the Government of Ontario. This decision was made proactively by the AMI Steering Committee, despite the ability to continue installations as work on municipal water systems was deemed as "essential" under provincial legislation. As of the writing of this report, these lockdowns consisted of the following dates:

- January 14th to February 16th, 2021, and;
- March 15th to June 6th, 2021

During these periods, KTI Inc. was instructed to retain trained installation and support staff in order to allow for a rapid return to work once restrictions were lifted. The costs associated with maintaining this staff, rescheduling appointments and covering fixed overhead costs were as follows (not inclusive of HST):

- Shutdown #1: $31,200.07
- Shutdown #2: $154,509.22

The difference in cost between the two periods is as a result of the increased number of installation staff retained combined with the longer timeframe imposed by the second shutdown.

Impacts of COVID-19 on Project Schedule

The impact of the shutdown periods outlined above on the project schedule has been substantial. In order to reduce the impact of the second shutdown as much as possible, and utilize resources that would otherwise be idled, KTI was instructed to do the following:

- Shift work from residential meter replacement to industrial, commercial and institutional (ICI) meter replacement, and;
- Re-allocate internal resources to supplement work on the overall network deployment, testing and error correction in meters already installed and developing more streamlined project management practices.

Although these initiatives could not fully replace the residential meter installation work put on hold, a number of key ICI meters were replaced which were scheduled to be completed at the end of the original project schedule.

Figure 4 shows the original project schedule, 1st revision and most recent revision based on the work completed to date, the overall impact of the COVID-19 lockdowns and the project re-start on June 7th:

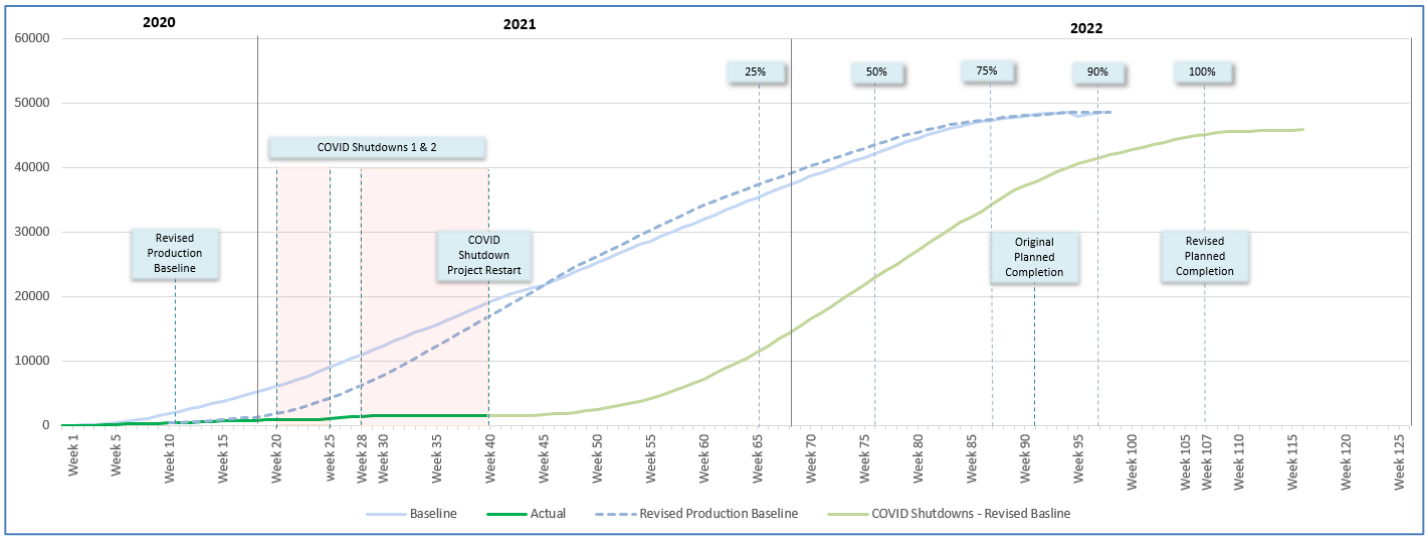

Figure 4: AMI Production (Meter Installation) Schedule

When referencing the data in Figure 4, "Week 1" is the week ending September 4th 2020.

After the first project shutdown in January/February 2021 a revised production baseline was generated. This first revision indicated that an aggressive installation schedule would result in the project meeting the original timeline. However, the 11 week shutdown from March to June 2021 has created a situation where completion by the week ending June 3rd 2022 (Week 91) was not possible.

Based on the available installation resources, and assuming that there are no other significant delays imposed on the project, the current estimate is that the project will be substantially complete by the week ending September 23rd 2022 (Week 107). This represents a 16 week delay over the original project schedule, which is in line with the 15.5 weeks of shutdown imposed upon the project.

Olameter Service Agreement

Manual water meter readings and other services, including water disconnects, have been performed within CGS boundaries since 2001 by Olameter Inc. The agreement with Olameter was originally administered by CGS, but was transferred to GSU in 2004. Since that time, the contract has not been formally extended or re-negotiated.

With the transition to AMI, and the decreasing need for manual water meter reads in the future, a new agreement has been negotiated between Olameter and CGS. This agreement covers the following:

- Reading, recording and transmission of water meter usage performed on a "per meter" basis as per an agreed cost, with 2% annual price increases.
- Owning, operating and maintaining all equipment required to perform water meter reads.
- Performing other services as request by CGS such as delivery of notices, collections, etc.
- Term of agreement: 5 years, with the understanding that the agreement can be terminated early after the successful completion, commissioning and operation of the AMI project.
- Cost: Costs are in line with the previous rates changed by Olameter, accounting for annual price increases. In 2020 Olameter charged $246,926 for their services, as such as estimate for services in 2021 would be approximately $252,000 with costs beginning to decrease upon substantial completion of the AMI project in Q3 2022.

Greater Sudbury Utilities Service Level Agreements

As part of the approval of the AMI project, authorization was given to enter into negotiations with Greater Sudbury Hydro Plus Inc. (Greater Sudbury Utilities) to enact new water billing and associated agreements which "reflect the resulting improvements in customer service and billing processes" achieved within CGS. These negotiations will result in the creation of three separate agreements:

1. *Water Billing and Related Services Agreement:*

   This agreement will cover water billing, customer relations and collections services. This will also include improved contract language and recognition of changes in legislative requirements, such as the *Accessibility for Ontarians with Disabilities Act* (AODA).

2. *Innovation, Science and Economic Development Canada License Agreement:*

   This agreement will cover the use of 8 blocks of the 12.5 kHz spectrum as part of the Innovation, Science and Economic Development Canada Radio Licenses 932.4625 – 932.4875 and 6941.4625 – 941.4875 currently held by Greater Sudbury Utilities. The identified blocks will be used to communicate with the automated meters in order to obtain water consumption and use data.

3. *AMI Network Shared Use Agreement:*

   This agreement will cover the use of the 5 radio towers located within the service area of Greater Sudbury Utilities that are currently used for smart electricity meter communications.

Due to the expanded customer service requirements and complexity of these agreements, a number of items are still outstanding that require further discussion with GSU. Once final drafts have been agreed upon, an additional report will be submitted to Council for approval.

CGS Staffing & Organizational Changes

As part of the feasibility study presented to Council in April 2018, funding was proposed for an AMS Champion role at 50% of a FTE. As the project has continued to develop, it has become clear that a 100% FTE position within the Meter Shop should be created in order to effectively support project deployment and ongoing service level expectations. As such, a job description is currently being developed for a Water Meter Shop Maintenance Officer (MO) which will focus on the following duties:

i. Customer Information Analysis

- Review AMI data for patterns and trends to assist with tracking, compliance and conservation initiatives when possible;
- Assign tasks to various stakeholders to address identified issues;
- Assist in providing notification to customers of high or continuous flow, and;
- Ensure that information is properly transferred from AMI software systems to the Northstar billing software.

ii. AMI Compliance

- Address compliance requests issued as part of the AMI project, and on an ongoing basis;
- Resolve work requests from the AMI installation contractor (during the project timeframe) or meter shop technicians (after project completion) and subsequent coordination with CGS stakeholders, and;
- Coordinate turn-off/turn-on of services and appointment scheduling with CGS resources.

iii. Invoice Auditing

- Mange service contracts relating to water meter activities;
- Review and audit inventory shipments from meter suppliers;
- Review and audit Olameter invoices through the AMI project, and;
- Develop, oversee and audit Olameter's additional read schedule as the AMI project progresses towards completion.

Through supporting data analysis and compliance, this role will be critical in ensuring ongoing savings for both water customers and the City.

The current project funding will allow for expansion of this resource to a 100% FTE. As such, there are no anticipated budgetary implications from creating this role.

In addition to the creation of a new position, a number of internal resource changes have been required as a result of retirements or long term absences, as follows:

Project Sponsor:	Michael Loken, Acting Director of Water/Wastewater Treatment & Compliance
Project Manager:	Jody Rybachuk, Project Manger
Key Stakeholders:	Joel Castonguay, Manager of Compliance & Operational Support
	Aaron Priebe, Water Meter Compliance Officer

The AMI Steering Committee, comprised of Tony Cecutti (Chair, General Manager of Growth and Infrastructure), Ed Archer (Chief Administrative Officer) and Kevin Fowke (General Manager of Corporate Services) continues to monitor all aspects of project delivery in order to ensure this project is successful.

Project Financial Status

The current financial status, along with a detailed list of all change orders approved as of June 2021 is shown in Table 2, with a summary of approved change orders in Table 3 and pending change orders in Table 4.

Table 2: Current Project Financial Status

Contract or Item	Spending		%
	Planned	Actual	Spent
ISD19-18: Water Meter & Encoder Register Supply & Delivery	$ 4,412,159.00	$ 1,871,759.74	42 %
ISD19-02: AMI Technology Installation and Deployment	$ 10,203,920.40	$ 412,467.01	4 %
ISD19-03: Project Management Services for AMI	$ 1,155,878.57	$ 614,218.34	53 %
Contingency	$ 744,704.00	$ 92,718.00	12 %
Totals	**$ 16,516,662.02**	**$ 2,991,163.09**	**18 %**

Table 3: Approved Project Change Orders

Description	Spending	
	Approved	Actual
Regional Network Interface (RNI) & Testing Systems	$ 92,917.93	$ -
Contract extension due to project delays	$ -	$ -
Contract language: change to virtual open houses	$ -	$ -
COVID-19 Project Impacts	$ 54,500.00	$ -
Contract language: Meter configuration & parameters/programming	$ -	$ -
COVID Project Shutdown: 14-Jan-2021 to 16-Feb-2021	$ 31,200.07	$ -
COVID Project Shutdown: 12-Mar-2021 to 10-May-2021	$ 106,752.43	$ -
Contract extension – Diameter Services	$ 256,813.57	$ -
Network adjustments	$114,016.75	$ -
Northstar Software Integrations	$ 93,720.13	$ 93,720.13
Totals	**$ 749,920.88**	**$ 93,720.13**

One of the costs shown in Table 3, for Northstar software integration, will be moved to Water/Wastewater operational costs in Q3 2021. Northstar billing software is used by GSU for electricity and water billing, and the modifications required as a result of the project are considered operational in nature. The reallocation of these costs will better represent the actual spending.

A majority of the costs included in approved change orders are a direct result of the COVID-19 pandemic. The original project tender included no provisions for additional procedures and precautions as it was completed before the we entered a state of emergency. As such, an additional $54,500 was added to KTIs contract for Personal Protective Equipment (PPE), training, etc. Additional costs were then added as a result of the delays experienced from the stay at home orders, previously discussed in this report. These delays have also resulted in the contract for Diameter Services being extended to ensure the project is properly supported to completion.

The other significant cost, indicated as “Network adjustments”, is as a result a number of changes required after detailed design for the sites selected for network towers. These include design changes for:

- Site #1: Azilda Water Tower
- Site #2: Coniston Wastewater Treatment Plant
- Site #3: Dowling Water Tower
- Site #4: Onaping Water Tower
- Site #6: Walden Landfill
- Site #7: Walden Water Tank
- Site #8: Nordic Ski Hill Repeater Station
- Site #9: Wanapitei Water Treatment Plant Repeater Station

Evaluation of the remaining site (#5: Val Caron Booster Station) will be completed once Water Treatment capital project work at that site is finished.

Table 4: Pending Project Change Orders

Contract	Description	Spending	
		Pending	Actual
ISD19-2	COVID Project Shutdown: 11-May-2021 to 6-Jun-2021	$ 47,756.79	$ -
ISD19-2	COVID Project Shutdown: Ward 10 Reset	$ 22,768.75	$ -
	Totals	**$ 70,525,54**	**$ -**

As shown in Table 4, the costs for KTI as a result of the second project shutdown were broken into two change orders. This is a result of the extension of the second stay at home order; originally intended to expire on 10-May-2021, which was subsequently delayed to 7-Jun-2021.

Additionally, the project did incur additional costs to re-issue contact materials and re-start installations in Ward 10 after the second project shutdown. These revised contact materials, which contain significant details on COVID safety procedures and precautions, will be used for all wards moving forwards.

A summary of all contingency related costs is currently as follows:

Table 5: Estimated Remaining Contingency

Item	Amount
Original Project Contingency	$ 744,704.00
Approved Change Orders	- $ 749,920.88
Pending Change Orders	- $ 70,525,54
Reallocation to Operating Cost Centres	$ 93,720.13

Estimated Remaining Contingency	$ 17,977.71

Based on the remaining contingency amount, the project is expected to cost approximately $17.7 million (inclusive of the municipal portion of the HST), which is approximately $500,000 higher than originally anticipated. This is as a result of $449,266.07 in direct pandemic related costs due to project shutdowns and contract extensions. This will be funded within the existing, approved project budget.

Asset Management Task Force and Long Term Capital Planning

Data from AMI will be used in the future to help define:

- The amount of Non-Revenue Water (NRW) in specific areas, helping to direct capital funding to address compromised distribution piping;
- Additional data to supplement Inflow & Infiltration calculations, as approximately 70% of produced water returns to the sanitary sewer system, and;
- The overall level of water conservation and efficiency in our community.

Many of these benefits can only be realized once significant installations (i.e. multiple wards) are complete. Further updates will be provided to Council once available.

Resources Cited

1. Request for Decision, Implementation of Automated Meter Infrastructure (AMI), Report dated June 12th 2019, Presented to City Council on June 25th 2019.
2. Request for Decision, Automated Water Meter Reading Feasibility Study, Reported dated April 17th 2018, Presented to City Council on April 3rd 2018.