



**ON TABLE**  
Special City Council Meeting  
January 25, 2023

**ADVANCED METERING INFRASTRUCTURE**  
**A MODERN ENERGY-SAVING**  
**ELECTRICAL GRID FOR OUR CITY**



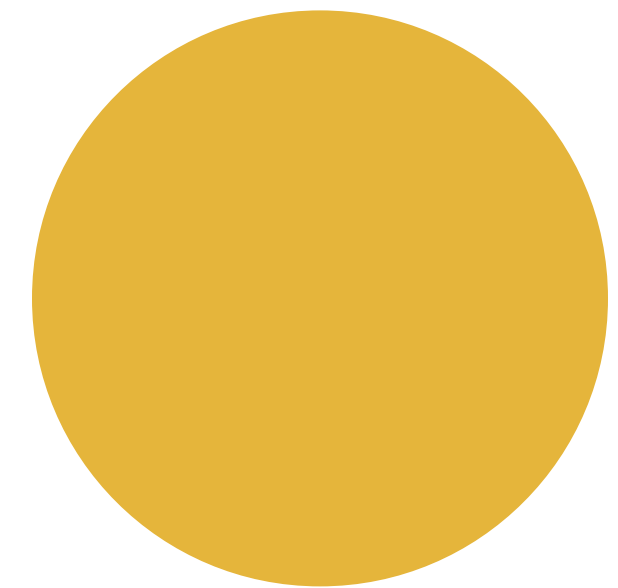
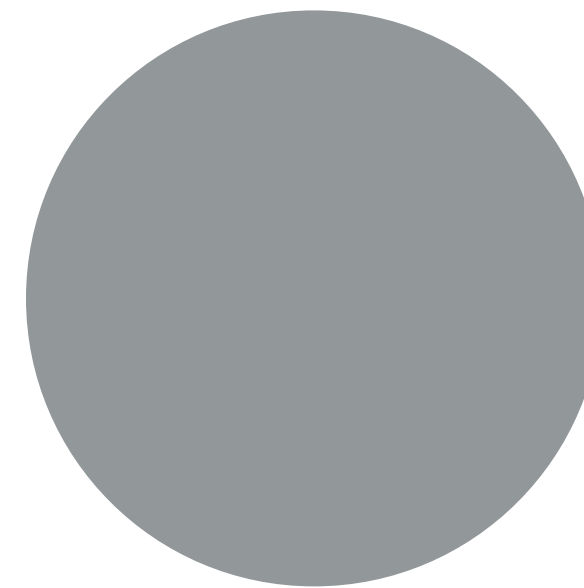
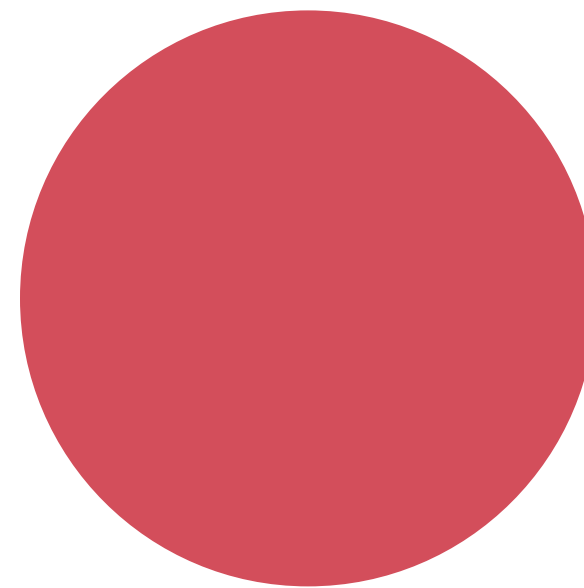
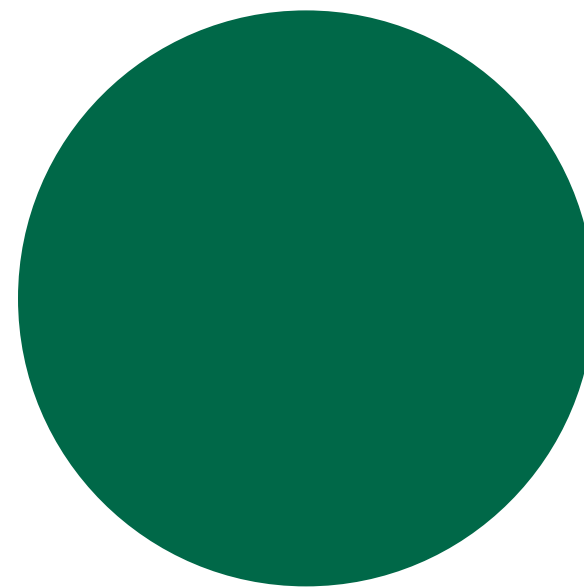
NEW WESTMINSTER



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## ADVANCED METERS ARE COMING SOON

The New Westminster Electric Utility will be upgrading existing electrical meters, which are at end-of-life, with a more capable metering system known as advanced metering infrastructure (AMI).

AMI will be better able to support the dynamic needs of a modern grid and will accommodate new and sustainable technologies that are part of New Westminster's climate emergency response. An upgraded system will improve operational efficiency, provide customers with new ways to conserve, and support options such as electric vehicles and solar panels.

## BACKGROUND

### 2012 – Council Declines Proceeding in Parallel w/ BCH

Council presented with opportunity to “piggy-back” on BCH’s rates for Itron meters.

### 2017-2018 –Decision Making Framework

- 4 choices presented to council
  - Fully Automated AMI
  - 2-way communication only
  - 1-way communication
  - Do nothing



### 2018 – Original Scope & Budget

Initial scope was limited to supply & install of new meters

### 2019-2020 RFQ + RFP

- Completed RFQ Process
- Completed RFP Process
- Entered into contract negotiations with lead proponent
- Extensive work to develop Statement of Work
- Gap in Scope Identified – IT investments needed
- Significant delays as a result of COVID
- Risk to City - Terminated contract negotiations

### 2020 to '21- ~ 1 Year Pause due to Covid

### 2021 to '22- Re-issued RFP & Signed Contract

- Re-issued RFP
- Negotiated with lead vendor
- Signed Contract
- Began detailed planning process



## WHY AMI?

Meters are one part of a collective system which impacts many areas of our utility as well as our customers.

### Benefits include:

- ✓ Existing infrastructure has reached end-of-life (costly to maintain & being phased out)
- ✓ Outage response times will be faster and more targeted
- ✓ Enhanced safety features will help protect your home and community
- ✓ Theft and tamper detection and voltage monitoring functionality (increased revenue)
- ✓ Billing and data accuracy and management through functionality such as real-time power factor data and support of automated demand reset
- ✓ The utility will have improved operational efficiency and will reduce costs over time
- ✓ A modernized grid will support innovative technologies such as electric vehicles and solar panels
- ✓ Reduced truck-rolls reduces city's GHG emissions and environmental impact
- ✓ Option for time of use billing (BCH has begun discussions)
- ✓ Having greater insight into your energy usage will help you reduce energy waste and save money



# HOW AMI WORKS



## COMMUNICATIONS

Advanced meters communicate using safe, secure low-level radio signals, just like an FM radio or a TV. The signals from the meters are much lower than common household devices such as Wi-Fi routers, cell phones, and baby monitors.



## PRIVACY PROTECTION

Advanced meters measure electricity use. No personal information is ever transmitted, and the meters will not indicate which appliances you're using.



## GREATER PRECISION

Currently, your meter is read manually approximately every two months. Your new advanced meter will transmit your energy consumption on more frequent intervals.



## ENERGY MANAGEMENT

Information is transmitted across a secure, wireless network back to the electric utility. This will result in more timely information which will allow the utility to manage the flow of electricity throughout the city's electrical system and measure the quality of power being delivered more efficiently.



## IMPROVED TRACKING

Advanced meters are just one part of a collective system upgrade. Once the system is functioning as a whole, you'll be able to track how much and when your household is using electricity so you can make informed choices.



## OUTAGE RESPONSE

When an outage occurs, advanced meters will provide information about the power outage and the location. This will result in quicker response and restoration.



## KEY MESSAGES

- The City of New Westminster's existing electric metering infrastructure has aged, becoming obsolete, and costly to maintain. Most of our existing meters will have to be replaced over the next five years to meet accuracy requirements.
- Advanced meters are a critical step to modernizing the City's electrical grid and will enable the electrical utility to keep providing reliable, cost-effective service to our customers.
- Advanced meters are the current industry standard and are used on more than 70 per cent of Canadian homes and this number continues to grow.
- Improve Data leads to operational efficiencies and customer service
- Another step towards our Bold Climate Action response



## KEY MESSAGES

- Advanced meters communicate using safe, secure low-level radio signals, just like an FM radio or TV. The signals from the meters are much lower than common household devices, such as Wi-Fi routers, cell phones and baby monitors.
- Advanced meters are certified to meet both government and professional safety standards, including rigorous safety checks enforced by Measurement Canada and Industry Canada.
- The new electrical meters will only record electricity use at specified intervals. They will not give us access to any real-time information, and can't tell us which appliances you're using.





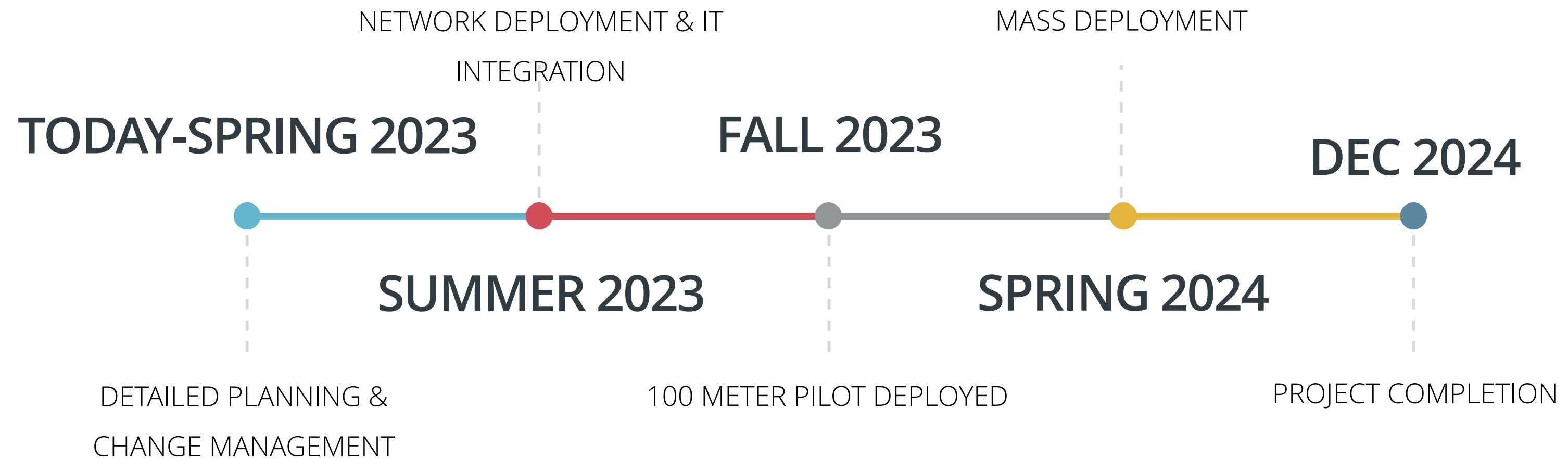
## KEY MESSAGES

- Customers can choose to receive an advanced meter with the wireless transmissions disabled. In this case, a monthly fee will be charged to recover the costs of manually reading non-standard meters. The associated details and costs are still being finalized.
- We'll keep City employees informed throughout this change, and we're committed to working with employees as we transition to this new system.
- We're currently in the final stages of detailed planning phase





## PROJECT TIMELINE





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## PRIVACY & PERSONAL INFORMATION

We place a high priority on customer privacy and the protection of personal information. All personal information we collect is managed in accordance with the Freedom of Information and Protection of Privacy Act.

The Office of the Information and Privacy Commissioner for British Columbia has received notice of the City's project and the City has completed a Privacy Impact Assessment to ensure correct measures are in place to protect privacy and information.

## Project Budget

- 2022-2026 Existing Approved Capital Plan: \$10M to procure and install meters only
- Source of Funds: Electrical Reserve
- Project Committed at \$10M: Contracts Awarded to the following key vendors:
  - KTI – 37,511 meters
  - Harris – MDM, integration
  - JTS Consultant
- Pending Commitments ~\$4.5M (subject to Council approval of Budget Adjustment):
  - KTI – deployment and installation
  - Harris – Silverblaze Customer Portal and Automated Invoicing
  - Ongoing Internal Staff Overhead of ~15-20% of total project budget

## Project Budget

Original Budget, developed in 2018, is \$10M

2023 Forecasting \$14M to \$16m due to the following scope items:

### Added Scope:

- ✓ Purchase and integrate Meter Data Management software: \$320k
- ✓ Other IT related upgrades and integration: \$430k
- ✓ Additional staffing to support the project and ongoing operations: \$1,050k
- ✓ Inflation on meters and installation: \$1,410k
- ✓ Nearly 700 additional meters: \$349k
- ✓ Allocation of internal staff hours: \$1,775k\*

\*Internal Overhead is estimated at approx. 10-12% of Total Project Cost to mitigate against long term reliance and cost of external resources; resiliency to maintain the system ongoing from City Electrical, IT and Finance staff.



## Project Forecast as at January 2023 – Budget Gap over \$4M

### Cost by Category:

Expense Category	Pending Budget Adjustment ('millions)	% of Total Budget	\$ Average per Meter (37,511 meters)
Project / program management - external	\$0.5	3.4%	\$13.33
Hardware and extended warranty	\$7.1	48.6%	\$189.28
Deployment and installation	\$3.3	22.6%	\$87.97
Additional software and technology upgrades and infrastructure	\$0.8	5.5%	\$21.33
Incremental internal staffing	\$1.1	7.5%	\$29.32
Internal overhead	\$1.8	12.4%	\$47.99
<b>Total – excluding Contingency</b>	<b>\$14.6</b>	<b>100%</b>	<b>\$389.22</b>

Recommended project contingency of 5% or \$700k utilized at project level

Recommended project reserve of 5% or \$700k utilized at the discretion of the Steering Committee

Total project contingency + project reserve = \$1.4M, or 10% of current project forecast

Total recommended project Budget is \$16.0M



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