Request to Defer the Vote on the Water Meter Renewal Project Report: Unanswered Questions about Health, Liability, Opt-out Provisions and Lack of Details of Costs

By Margaret Friesen M.Sc.

Environmental Health Association of Manitoba

EHA-MB
Environmental Health Association of Manitoba

Executive Policy Committee, City of Winnipeg

Tuesday, Nov. 14th, 2023

Margaret (Marg) Friesen



- Masters Science Degree in Entomology/Toxicology
- More than 30 years with the federal government and University of Manitoba
- Original research projects in ecosystem toxicology, DNA population genetics of Arctic marine mammals
- Post retirement, as a volunteer, researched wireless radiation (radiofrequency electromagnetic radiation RF-EMR) and impacts on environmental health.
- Director of the Environmental Health Association of Manitoba and an advisor to Canadians for Safe Technology.

EHA-MB

Environmental Health Association of Manitoba

Founded in 2012. Not-for-profit, non-governmental, non-partisan organization run entirely by volunteers and funded by donations.

Goals of EHA-MB:

To promote education and information on environmental sensitivities and environmentally induced illnesses to the public, educational institutions and medical community in Manitoba.

Building and Environment 176 (2020) 106324

Contents lists available at ScienceDirect

Building and Environment

journal homepage: www.elsevier.com/locate/buildenv



Building science and radiofrequency radiation: What makes smart and healthy buildings

Frank M. Clegg[a,*], Margaret Sears[b], Margaret Friesen[c], Theodora Scarato[d], Rob Metzinger[e], Cindy Russell[f], Alex Stadtner[g], Anthony B. Miller[h]

[a] *Canadians for Safe Technology; Business Advisory Board, Environmental Health Trust; Canadians for Safe Technology, PO Box 33, Maple Grove Village Postal Outlet, Oakville, ON L6J 7P5, Canada*

Defer Today's Vote - Further Information on Health, Insurance Aspects and Costs is Needed

<u>A vote by EPC on this report should be deferred</u>

- **A full public consultation is necessary**
- **More information needs to be collected and background data provided to the public**
  The Diameter Report needs to be made available for public comment
- **Ensure proper liability insurance is in place**
- **Project is reviewed throughout and open to public comment**
- **Inclusion as a Public Engagement item on the City of Winnipeg website.**

October 26, 2023 submission:
Barry Malowanchuk retired Professional Engineer with 37+ years service at Manitoba Hydro; last 10 years as the Senior Telecommunications Engineer

“ I believe you need to defer decision making on this project until further information can be provided to the public and all feedback is considered!”

Health

Wireless “ smart” water meters communicate using microwave/radiofrequency (RF) radiation

Same RF as emitted from cell tower network antennas and cell phones

YES, Non-ionizing Wireless Radiation Can Cause Adverse Biological Effects at Extremely Low Levels



Physics (PhD), electrical engineering (15 years) and health sciences (30 years).

https://ehtrust.org/science/published-research-by-paul-heroux-phd-on-electromagnetic-radiation/

Dr. Paul Héroux
Faculty of Medicine, McGill University

EMF MEDICAL CONFERENCE 2021

Conference for MDs and others
Continuing Medical Education (CME) Credits

https://emfconference2021.com/**speaker/paul-heroux-phd/**

More than 50 Canadian MDs during the 2015 Revision of Safety Code 6

Called for Health Canada to provide:

" Wireless safety standards that are more protective of the health of Canadians."

All ignored by Health Canada

Safety Code 6 (2015) – Power Density

Health Canada Santé Canada | *Your health and safety… our priority.* *Votre santé et votre sécurité… notre priorité.*

Limits of Human Exposure to Radiofrequency Electromagnetic Energy in the Frequency Range from 3 kHz to 300 GHz

https://www.canada.ca/en/health-canada/services/publications/health-risks-safety/limits-human-exposure-radiofrequency-electromagnetic-energy-range-3-300.html

Table 5. Reference Levels for Electric Field Strength, Magnetic Field Strength and Power Density in Uncontrolled Environments

Frequency (MHz)	Electric Field Strength (E_{RL}), (V/m, RMS)	Magnetic Field Strength (H_{RL}), (A/m, RMS)	Power Density (S_{RL}), (W/m^2)	Reference Period (minutes)
10 - 20	27.46	0.0728	2	6
20 - 48	$58.07 / f^{0.25}$	$0.1540 / f^{0.25}$	$8.944 / f^{0.5}$	6
48 - 300	22.06	0.05852	1.291	6
300 - 6000	$3.142\, f^{0.3417}$	$0.008335\, f^{0.3417}$	$0.02619\, f^{0.6834}$	6
6000 -15000	61.4	0.163	10	6
15000 - 150000	61.4	0.163	10	$616000 / f^{1.2}$
150000 - 300000	$0.158\, f^{0.5}$	$4.21\times10^{-4}\, f^{0.5}$	$6.67\times10^{-5}\, f$	$616000 / f^{1.2}$

Frequency, f, is in MHz.

Red and yellow markings added

Smart meter emissions

minutes

6

6

Based ONLY on "over-heating" of body tissue by no more than 1C within a period of 6 minutes. The assumption is that if it does not over-heat (within 6 minutes), this radiation will not harm.

$0

No health studies have been conducted in Canada on health effects of smart meters

$ Billions

Income by the Government of Canada for the licensing of radiofrequencies such as for smart meters

Health Canada has been Slow to Act on Other Toxic Agents

- Asbestos
- Cigarette Smoking
- Dioxins
- Thalidomide
- Urea formaldehyde insulation(UFFI) and
- Others

WHO Press Release
Wireless Radiation – Group 2B *possible* carcinogen

International Agency for Research on Cancer

World Health Organization

PRESS RELEASE
N° 208

31 May 2011

IARC CLASSIFIES RADIOFREQUENCY ELECTROMAGNETIC FIELDS AS POSSIBLY CARCINOGENIC TO HUMANS

Lyon, France, May 31, 2011 -- The WHO/International Agency for Research on Cancer (IARC) has classified radiofrequency electromagnetic fields as **possibly carcinogenic to humans (Group 2B)**, based on an increased risk for **glioma**, a malignant type of brain cancer, associated with wireless phone use.

Medical Doctors and Scientists
Independent of Industry Influence
Calling for a Group 1 *known* human carcinogen.
Same classification as asbestos and cigarette smoke

Based on additional studies including
2 large-scale animal studies

“clear evidence of carcinogenicity”

Electrosensitivity

headaches, sleep difficulties, heart effects, ear ringing, nausea, anxiety, depression and more …



Image courtesy of Canadian Educators for Safe Technology

Wireless smart meters will severely limit housing options

Exacerbation of existing housing crisis for persons made ill by exposure to radiofrequency/microwave emissions

Liability – where's the insurance?

Need to recognize, prevent, inform about risks ...

Insurance Exclusions for Health Damages

Swiss Re is the world's second largest secondary insurance (reinsurance) company.

- *"explicitly refusing to insure against damages from 5G and other EMFs"*

Pending Government Immunity for Telecoms Uninsurable 5G Network?



Devra Davis Follow

Jun 14 · 5 min read ★



https://medium.com/@devradavis/pending-government-immunity-for-telecoms-uninsurable-5g-network-cffc43f61e8b

The biggest telecommunications companies in Canada - Bell, Rogers, TELUS all acknowledge potential risk

Example:

Rogers Communications Inc. Rogers 2022 Annual Report

- Posted to SEDAR; Rogers Communications Inc. Mar 9 2023 18:25:25 ET Annual report – English PDF 8492K
- Quote Heading Page 66, **"REGULATORY RISKS"**
- Quote from Page 67, *"**Radio frequency emissions***
- From time to time, media and other reports have highlighted alleged links between radio frequency emissions from wireless devices (including new 5G technology) and various health concerns, including cancer, and interference with various medical devices, including hearing aids and pacemakers. This may discourage the use of wireless devices or expose us to potential litigation even though there are no definitive reports or studies stating that these health issues are directly attributable to radio frequency emissions. Future regulatory actions may result in more restrictive standards on radio frequency emissions from low-powered devices like wireless devices. We cannot predict the nature or extent of any restrictions.

Does the City of Winnipeg have any liability insurance in case of lawsuits due to harm from wireless smart water meter emissions?

If so, please make documentation available to the public, in writing, of possession of liability insurance that <u>does not exclude health claims</u> due to radiofrequency (RF) radiation exposure to emissions from the smart water meters as proposed in the Public Service Report "Advanced Water Metering Solution Business Case."

Agenda – Executive Policy Committee – November 14, 2023

Report – Standing Policy Committee on Water, Waste and Environment – October 30, 2023

Item No. 1 Advanced Water Metering Solution Business Case

STANDING COMMITTEE RECOMMENDATION:

On October 30, 2023, the Standing Policy Committee on Water, Waste and Environment concurred in the recommendation of the Winnipeg Public Service, as amended, and submitted the following to Council:

1. That the capital project, Water Meter Renewals, with an AACE Class 3 capital cost estimate of $135,000,000, be approved and advanced to 2024.

2. That, subject to approval of Recommendation 1, any financial implications of the funding source, Water Meter Renewal Reserve, be referred to the 2024 - 2027 Budget process.

3. That the Public Service seek out all opportunities for external funding available to assist with the capital project, in accordance with Council priority setting.

4. That the Winnipeg Public Service be directed to report back to the Standing Policy Committee on Water, Waste and Environment in 90 days with details on a proposed opt-out program.

5. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

4 Reports:

1. City of Winnipeg Public Service. (2023). **Advanced Water Metering Solution Business Case**. *Report to Standing Policy Committee on Water, Waste and Environment – October 30, 2023*. https://clkapps.winnipeg.ca/dmis/ViewPdf.asp?SectionId=710892&time=1699934827245
2. City of Winnipeg. (2020). **Request for Proposal RFP Number. 801-2020 Professional Consulting Services for an Advanced Water Metering Solution Business Case**. *City of Winnipeg.* https://Legacy.Winnipeg.ca/Finance/Findata/Matmgt/Documents/2020/801-2020/801-2020_RFP.Pdf
3. Diameter Services Inc. 1315 Pickering Parkway, Suite 300. (2023). **City of Cornwall. Universal Water Metering and AMI Project Findings and Recommendations Report**. *Report to the City of Cornwall* https://www.cornwall.ca/en/resources/Findings-and-Recommendations-Report-Universal-Water-Meters-06-20-2023.pdf
4. Diameter Services Inc. 1315 Pickering Parkway, Suite 300. (2023). **City of Cornwall. Financial Report Universal Water Meters**. *Report to the City of Cornwall*, https://www.cornwall.ca/en/resources/Financial-Report-Universal-Water-Meters-06-20-2023.pdf

#3 and #4 in lieu of City of Winnipeg's report from Diameter Services which has not been made available to the public (nor City of Winnipeg Councillors?)

1st Report – 24 pages

ADMINISTRATIVE REPORT

Title: Advanced Water Metering Solution Business Case

Critical Path: Standing Policy Committee on Water, Waste and Environment – Executive Policy Committee – Council

AUTHORIZATION

Author	Department Head	CFO	CAO
L. Szkwarek, CPA CGA	T. W. Shanks, M. Eng., P. Eng.	C. Kloepfer	M. Jack

HISTORY/DISCUSSION

On January 30, 2020, Council approved the 2020 to 2023 Water and Sewer Rate report which included the establishment of a Water Meter Renewal Reserve for replacement and renewal of aging water meters and a City-wide advanced metering system (AMS), and referenced an automated meter read pilot project with the objective to develop, test and evaluate policies and processes required for a larger AMS implementation.

As part of the 2020 Capital Budget, Council approved funding of $450,000 to review current water meter technology, validate the best replacement technology, and develop a plan and Class 3 estimate for implementation of a multi-year water meter replacement program.

The Public Service contracted with Diameter Services through a Request for Proposal (RFP No. 801-2020) process to review the City's current inventory of water meters, analyze current meter reading and billing processes, and identify opportunities for improvements in functionality and efficiencies. Analysis included feasibility and benefits of using improved metering technologies commonly referred to as smart meters for the City.

BACKGROUND

3. Automated Meter Reading (AMR)

Approximately 7,500 AMR meters are installed upon construction in select new residential developments (Waverley West, Ridgewood South and Summerlea) and commercial establishments with higher-risk meter placement. AMR meters include encoder receiver transmitters (ERT) which transmit consumption data to a hand-held device. A City staff must walk or drive by the customer location to receive the consumption data. The City has realized expected benefits that support the overall introduction of automated meter reading practices such as improved meter reading and billing accuracy, early leak detection, reduced safety concerns and improved customer service.

Although installing AMR meters has provided benefits, it does not address the challenges of replacing existing meter infrastructure on a City-wide scale nor determining what technology is the right choice for the City.

?

4. Residential AMR Replacement Pilot Project

During the spring of 2019, the Public Service conducted a Residential Automated Meter Reading Replacement Pilot (Pilot) project in which direct read water meters within a designated area of Winnipeg were replaced with AMR meters.

The Pilot area encompassed a section of River Heights consisting of approximately 500 water meters. The age of the water meters averaged 22 years, ranging from one to 58 years. The selected area was representative of the age of water meters in the City as a whole.

AMR has been installed in about 7,500 homes AND tested in a pilot project BUT the recommendation is to go with an unpiloted, untested (e.g. for Winnipeg cold temperatures) using AMI based on the unreleased Diameter Services report.

ADVANCED METERING INFRASTRUCTURE (AMI) BUSINESS CASE OVERVIEW

Under the guidance of Diameter Services, a business case was completed supporting the implementation of an AMI solution with a City-owned network. AMI provides more functionality in terms of business drivers and better aligns with the City's long-term goals and objectives.

Before going forward, this report needs to be made available to the public with time to review it thoroughly and with a process to have a dialog about this issue.

6.0 Implementation Strategy

City of Winnipeg by-law changes are required to ensure authority is in place to allow:

- The installation of additional devices in private premises (meter interface units and remote disconnect devices).
- Updated penalties for tampering and theft of water (including damage to additional devices).
- Authority to disconnect service or impose fines for non-access to the water meter.
- New fees for customers who opt-out of AMI meter technology

Which by-laws will be amended and can the public be notified through the Public engagement site?

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

Consideration was given as to whether this report connects to the Winnipeg Poverty Reduction Strategy (PRS) and its Goals and Objectives, and it was determined that the PRS is not applicable to this specific report.

How was this determined?

Many with electrosensitivity face huge challenges in finding safe housing. Radiofrequency radiation emissions from "smart meters" in and on residences will further limit the housing options for people at and below the poverty line.

2nd Report:

Winnipeg

THE CITY OF WINNIPEG

REQUEST FOR PROPOSAL

RFP NO. 801-2020

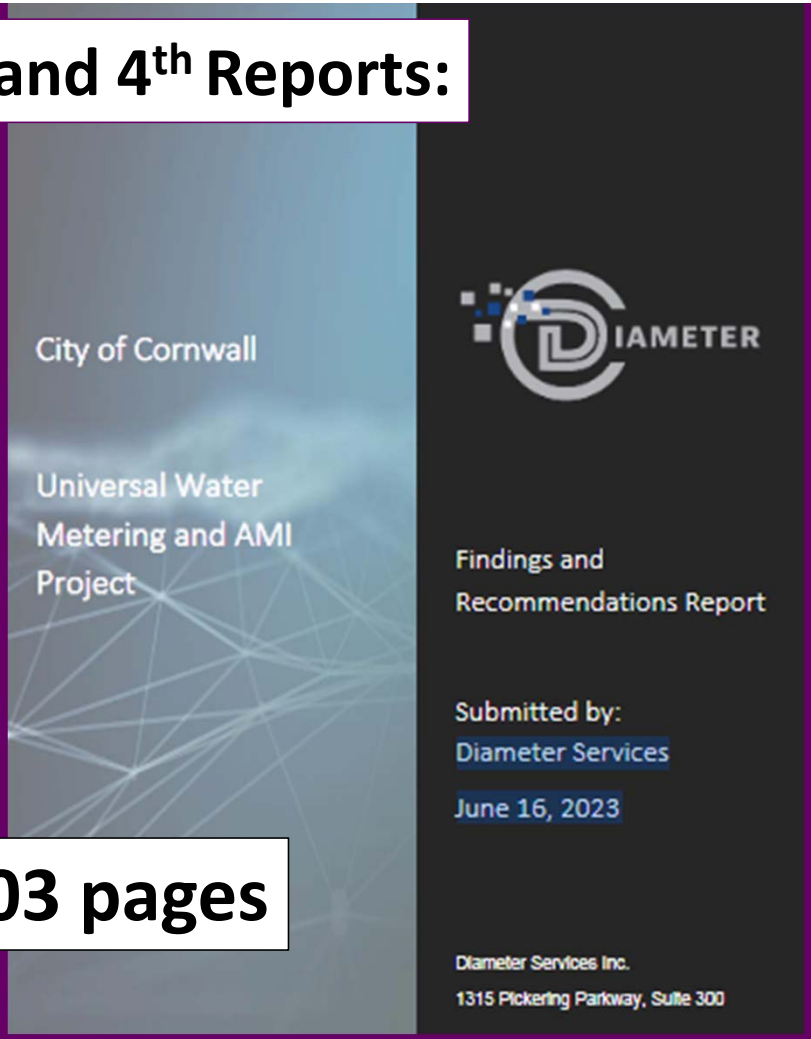
PROFESSIONAL CONSULTING SERVICES FOR AN ADVANCED WATER METERING SOLUTION BUSINESS CASE

Did not include evaluation of AMI with 1-way communication. e.g., as in Toronto. 2-way transceivers are more costly and require more IT support AND increase radiofrequency radiation in the environment.

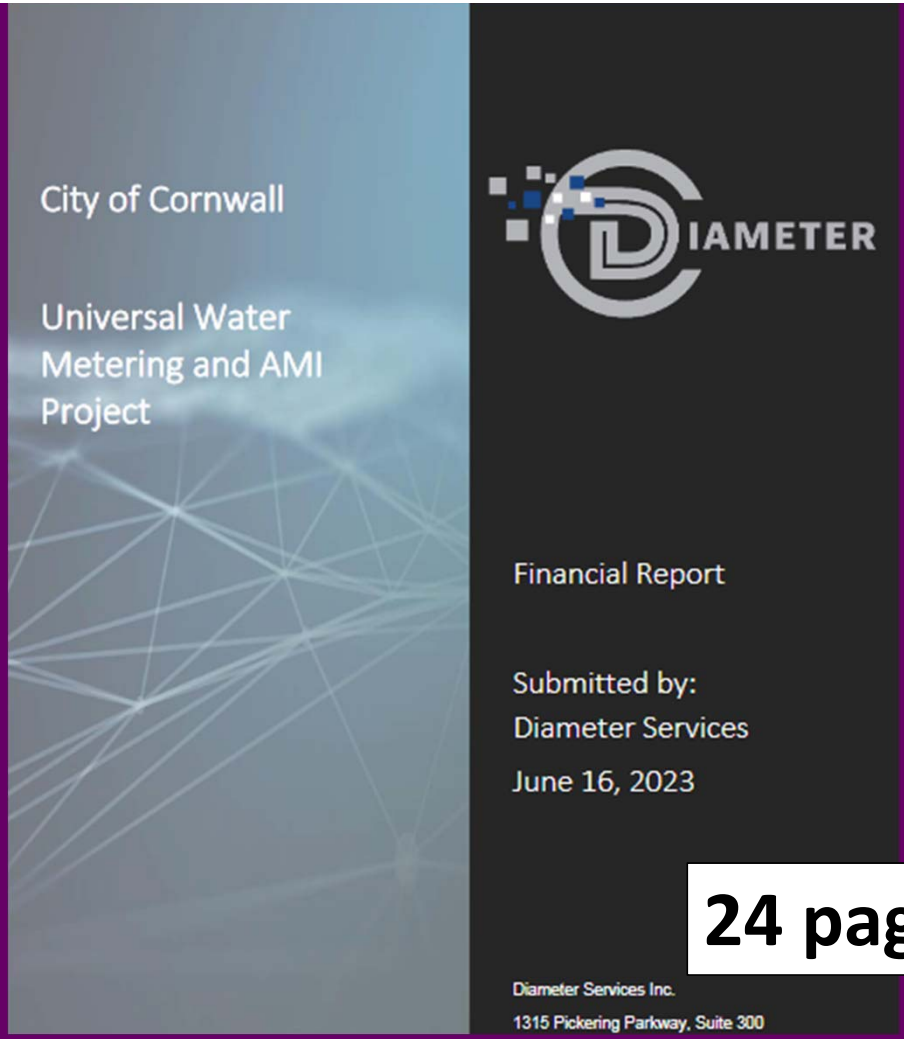
Also did not ask to consider wired options e.g. fibre optic cables.

Diameter Services Reports – Cornwall, Ontario June 16, 2023

3rd and 4th Reports:



203 pages



24 pages

Diameter Services Reports – Cornwall, Ontario

Assumptions are listed in estimates and recommendations. Not all assumptions are listed in the Public Service Report.

Page 134 of the first report recommends OUTDOOR installation of the radiofrequency emitting component. Will this be done in Winnipeg?

Diameter Services Reports – Cornwall, Ontario

Public engagement is key (page 160)
Will we have public consultations from the start?
Will this project be listed on the Public Engagement site?

Page 134 of the first report recommends OUTDOOR installation of the radiofrequency emitting component.
Will this be done in Winnipeg?

Diameter Services Report – Cornwall, Ontario

Page 183

12. Proposed Internal Project Support Organization

A project of this nature needs to be supported through a combination of internal (in blue) and external resources (in white). There will be two main categories of oversight, support and participation in this project. The Steering Committee will be made up of City of Cornwall key leaders guiding the overall direction and the Project Team will be made up of roles from Customer Service, Operations, Finance, Water Purification, Infrastructure and Environmental.

How will the "Steering Committee" be selected?

Are Winnipeg residents eligible?

Please Defer Today's Vote
Further Information is Needed

A vote by EPC on this report should be deferred

- **A full public consultation is necessary**
- **More information needs to be collected and background data provided to the public**
  The Diameter Report needs to be made available for public comment
- **Ensure proper liability insurance is in place**
- **Ensure project has oversight and is reviewed throughout and open to public comment**
- **Inclusion as a Public Engagement item on the City of Winnipeg website.**

Thank you

Electromagnetic fields - EMF

A field of force that consists of both electric and magnetic components, resulting from the motion of an electric charge and containing a definite amount of electromagnetic energy.

Cannot see, taste or smell EMFs. We are electrical beings e.g. EKGs (heart), EEGs (brain)

Marg's Comments as a Taxpayer:

Lack of transparency and accountability

- **Needed are more details on breakdown of costs. Where can we find the numbers behind the data presented? The supporting reports (e.g., from Diameter Services) and analyses?**
- **Very concerned about possible cost overrun as in Ontario**

  Of particular concern are the IT projections, See Table in 5.1 IT Support Costs: Listed as a benefit – "Introduction of automated infrastructure technology will increase IT costs and would include meter reading and data collection software, network, data and cellular support costs" vs currently: "Meter reading software and equipment currently in use requires limited IT support to operate and maintain."
- **Cost of batteries/lifetime, No details on opt-out costs**
- **Cyber-security/hacking, Liability issues**
- **Lack of oversight by elected officials – this is a $ 135 million project!**
- **Today's vote needs to be deferred. A full public consultation is necessary.**