

SUBMISSION – BARRY MALOWANCHUK

ITEM 1 - REPORT OF THE STANDING POLICY COMMITTEE ON WATER, WASTE AND ENVIRONMENT DATED OCTOBER 30, 2023 - ADVANCED WATER METERING SOLUTION BUSINESS CASE

Sent: Tuesday, November 21, 2023 8:16:02 AM

Personal information

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Organization:

Address:

City: Winnipeg

Province or territory: Manitoba

Postal code:

Delegation information

Committee: Council

Committee - council: Opposed to the recommendations

Committee - other: N/A

Agenda item (number and title): REPORT OF THE STANDING POLICY COMMITTEE ON WATER, WASTE AND ENVIRONMENT DATED OCTOBER 30, 2023 Advanced Water Metering Solution Business Case

Service inquiry: Submit Comments in writing

Participation preference: N/A

Comments in writing: Good Morning Mr. Mayor and Concillors,

I am a retired Professional Telecommunications Engineer with over 40 years of Manitoba Hydro experience and I think that my background allows me to speak to some issues that should concern you.

I submitted these comments to the committee on October 27 but this was sent directly and they were not part of the public record.

I am greatly concerned that the City cannot maintain the existing mechanical meters and now the addition of batteries which will have a shorter lifetime, will overwhelm the City with maintenance issues. The cost of maintenance does not appear to have been considered.

Does the City plan to set up and execute a maintenance program now?

Best Regards

Barry Malowanchuk P.Eng. (ret)

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File: Comments on Advanced Water Metering Solution Business Case.pdf

Public engagement preference: Yes

Comments on Advanced Water Metering Solution Business Case

by Barry Malowanchuk P.Eng (ret)

October 26, 2023

I am a retired Professional Engineer with 37+ years' service at Manitoba Hydro leaving after 10 years as the Senior Telecommunications Engineer. My experience encompasses all aspects the utility, from the main transmission grid down to the distribution substations. Earlier in my career I was part of a team that executed a 30 station wireless AMR trial in the Lynden Woods area of Winnipeg. I have had a short time to consider the proposed project and want to offer my comments for your consideration.

Time Frame for Feedback

I got wind of this project yesterday and today received a copy of the Business Case. This is a very short time line and considering the Magnitude of this Project, 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!

Introduction & General Comments

I have lived with technology change throughout my career and subsequent life. This project has a long timeline (7+ years). This is problematic for high technology products, as the technology changes over a relatively short timeline (5 years). Manufacturers have difficulty in continuing to manufacture a consistent product over longer timelines due to the availability of "chips" and the evolution of compatible software. So as long as the project continues as planned it "may" actually install the same vintage of equipment in year 7 as was done in year 1. If it differs at all, it may have significant impact to the operations and maintenance costs of the system if the customer meter types change during the project. Of course the IT costs can be significant.....and if there is a change in field hardware there could be significant IT cost increases.

This project is a very major cost item. All necessary moneys have already been procured to do this work. Thank you COW for my big water bills in the recent past without project approval. Just because you have the money, does not mean that you should spend it frivolously.

The COW has a Very Bad Record with executing Large Projects (Police Headquarters, North/ Southend Sewage Treatment Plants), so what are the chances that this project's costs will go out of control?

Even the Province of Manitoba through Manitoba Public Insurance has lost control of costs for their substantial IT project costs, so how confident is the COW with these estimates?

Replacement Options

We have been offered 3 options for consideration:

1. AMI City Owned,
2. AMI Driveby
3. AMI Cellular

We have NOT been offered the DO Nothing New Option! That is Replace Meters with Conventional (non AMI units).

We have been told that the ideal age of an existing meter is 15 years, but we have 58 year old meters in the system. Most of the savings is from eliminating the inaccuracies of old meters. So how many old meters are out there? Do you have any idea? Perhaps if you got a handle on your meter inventory and replaced your oldest conventional meters, you would recoup most of the lost revenue?

Do we have a cost for a program with replacement with conventional non AMI meters?

I know the COW has a history of running systems as long as possible (remember that Manitoba Hydro took over Winnipeg Hydro facilities...so I know). But if the COW “managed” a non AMI meter inventory then there would not be “old” meters out there undercharging for water.

If you eliminate the IT project costs (\$2M) for an AMI (if it stays that low) that is a considerable saving. If you eliminate the \$32M for AMR/ AMI Supply then you are looking at huge savings....can you justify \$34M+ for the “nice to have” features of AMI? At Manitoba Hydro we could not justify the “nice to have” features of AMI.

The present improvement of using emails to prompt customer meter reads is a significant improvement over the mail option, and is sure to reduce costs. Personally I had found the mail option to be unreliably delivered recently.

If you want to spend money on IT, please look at incorporating an estimating system that understands seasonal variation in water use! I am not happy when I do not get a meter reading card in the mail and receive a \$500 estimated Bill in January! I have a very large irrigated back yard garden!

Operational Costs

The Business Case talks of the estimated Battery Lifetime of 10 to 20 years, which depends heavily on the frequency of meter reads executed on the Lithium batteries. In the Manitoba Hydro trial that I was a part of, battery life was a significant concern. We had anticipated very low frequency of meter reads. With discussion of some of the advanced features possible with AMI (theft reduction, leak detection), how frequent are the reads going to be done (hourly, daily or monthly?) as this has a substantial effect on battery lifetime.

What is the anticipated battery lifetime?

Has the cost of battery replacement been factored into the operational costs?

What funding is included in the estimates for meter interface units and remote disconnect devices and how extensively are these to be deployed?

With modern technology it is very unusual for the life of products to last as long as 7 + years. Is the COW confident that identical models of customer meters will be available for the full life of the Project? Subtle changes in the Internals of the meters can result in higher maintenance costs.

Ultimately newer meters will need to be used on this system. Does the COW have any assurance that going forward newer meters will be compatible with the planned collector network?

What is the Depreciation lifetime being used for this planned system? Anything beyond 10 years is probably inappropriate.