Good morning. My name is Sharon Noble and I am a founder and director of Citizens for Safer Tech, an international organization based in BC. Our mission is to obtain and share information pertaining to wireless technology and devices as well as scientific research relating to microwave/radiofrequency radiation

I worked for 24 years at Great West Life Insurance in Winnipeg, in both individual and group risk assessment before retiring from my position as an Officer of the Company.

I appreciate this opportunity to speak with you as someone who has been involved with smart meters since 2010 when British Columbia implemented the Clean Energy Act.

There are many problems associated with wireless digital so-called smart meters which include:

1)HEALTH and biological effects associated with microwave/radiofrequency (RF) radiation and electromagnetic fields (EMF) (harmonics) on home wiring such as those emiited from wireless meters. Many people have reported serious health problems once wireless meters have been installed on their homes. There are hundreds, if not thousands, of studies confirming these health issues with microwave radiation.

2)Fires, of which 100s have been associated with various design features of the smart meters, as well as the microwave radiation affecting and degrading home wiring. This was not mentioned in the public service report. I have compiled, and will send to you, an extensive report of fires in BC likely linked to smart meter fires. I also will send you a report prepared by experts identifying fire potential of home wiring exposed to electromagnetic fields.

3)Security and Privacy invasion. Wireless devices are easily hacked. An analysis of costs and consequences of being hacked of the wireless meters vs the mechanical meters is not in the report and something that should be considered. What safeguards are there to prevent cyber-attacks?

4)Expense due to short lifespan -- industry admission of 5-7 years. By the time this project is estimated to be completed (7 years) many meters would likely need to be replaced. Many experts state that analog/mechanical meters can be expected to last at least 20-30 years
According to the public service report the optimal life of a mechanical meter is 15 years and can be as long as 50 years or more.

5)Increased demand for energy. Wireless/smart grids are energy hogs, requiring far more energy than do wired systems. This was not mentioned in the public service report. Estimates need to be made in the over-all cost/benefit analysis. In the table in Section 5.1 it states 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 “ Meter reading software and equipment currently in use requires limited IT support to operate and maintain.” Where is the cost analysis for this?

6)Possible accelerated corrosion of metal exposed to electromagnetic fields.

You are fortunate to be at a stage in your city and province where you can benefit from the experiences, both good and bad, of those who have committed to wireless metering. Many of these jurisdictions made their decisions before the newer technology, fiber optic cable, was readily available. I have been told that Winnipeg has fiber optic cable in many, if not most, areas. It would take little to extend this cable to and into homes to support various functions, such as internet and metering.

Fiber optic cable has been called by many in the industry as the way of the future. It has many advantages over wireless technology:

1)It is faster than wireless can ever be -- it sends data at the speed of light.

2)It is far more efficient in that it can carry far more data than wireless or even other wired systems.

3)It is far more secure than wireless because it is much harder to hack into it.

4)It is safer for people. There is no microwave radiation to endanger health and it is far less prone to cause or to exacerbate fires.

5)It is far less expensive in the long-term. It uses far less energy and the fiber cable does not need to be upgraded to support changes to the system.

6)It is the way of the future. I would encourage you to contact Dr. Timothy Schoechle who has written as excellent report called: **Re-Inventing Wires: The Future of Landlines and Networks** where the advantages of wired vs wireless networks are clearly laid out. I can help put you in contact with Dr. Schoechle if you wish.

Many communities in BC along the coast are being connected to fiber and they may be able to provide information. The video I've sent which is from a townhall meeting where New York City officials are discussing the benefits of fiber also provides useful information. It includes a discussion about the success of fiber optics in Chattanooga, TN where a fiber grid has been in use for more than 10 years. It is truly a success story where functions are more efficient and reliable, significant savings have been realized and new jobs have been created.

In section 3 of the public service report, it states: "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." I suggest you investigate wired smart meters of being "the right choice."

The decisions you make with regard to water metering will affect Winnipeg for years to come. I truly believe that cities like Winnipeg should consider this alternative to wireless especially when smart metering is first being considered. Winnipeg could lead the way for future decisions in Canada.

Should you have any questions about anything I've said or would like documentation to support my statements, please do not hesitate to contact me. My email address is citizensforsafertech@shaw.ca

Thank you for your time and consideration.