

**REGIONAL DISTRICT OF NANAIMO**

**COMMITTEE OF THE WHOLE  
TUESDAY, FEBRUARY 12, 2013  
7:00 PM**

*(RDN Board Chambers)*

**A D D E N D U M**

**PAGES**

**NEW BUSINESS**

2 - 5                      **Further Consideration of Smart Meters.**

To: RDN Directors

From: Julian Fell, Director, Area F.

Date: 07 February 2013

Re: Smart meters.

**Further consideration of Smart meters.**

There are numerous grounds for objection to smart meters, but at present only health issues arising from transmitting types fall into the prerogative of Local Government.

BC Health Act. Sec 83 (1) *A municipality must take action when it learns of something that could be harmful to its residents. It must notify the Minister of Health or take immediate action.*

In 2010-2012, 59 local governments in BC with a cumulative population of ca 2,496,000 (55% of BC's 4.6 million) variously requested moratoria and/or opt out provisions in the installation of smart meters. In 2011 UBCM requested a moratorium. As of January 2013 85,000 customers had actively refused installation of a smart meter (4% of customer base). A larger proportion would prefer not to have one but appear to be resigned to the circumstance.

The reaction of BCHydro to these requests has been disdain tending to contempt, and a blanket refusal to consider any alternative (such a non-transmitting, or mechanical metering).

In addition, BCH has continued to issue misleading and false statements concerning safety and EMR exposure levels. Examples:.....

-declaring exposure levels based on the shielded back side of the meter base, not the radiating and reflecting front side (where intensity is more than ten times greater). Keeping this circumstance hidden.

-claiming that standing next to a smart meter for 20 years results in exposure no greater than a 30 minute cell phone call (patently false). BCH says your meter will transmit house data 6-10 times per day. PG&E was ordered by a court in California to reveal actual smart meter transmission times and events. PG&E produced 14,000 pulses per day as average use with a range from 400 to 190,000 pulses per day, dependent on the position in a mesh network.

-BCH says smart meters are less dangerous than the sun. Fact. Most solar radiation is light (harmless), heat and ultra violet (avoidable). The unavoidable (penetrates through walls) microwave component is one 10 millionth the power of a smart meter.

-BCH acknowledges the heating effects (temporary) of EMR, but ignores the biological effects (electrical, -which is also temporary, mutagenic and carcinogenic). The latter two are permanent and cumulative. All three biological effects occur at exposures one thousand to 100 thousand times lower than the thermal effects.

This Director (Fell) and others attended a cell-phone tower seminar at UBCM 2012 where a representative of Industry Canada declared the Canada Code 6 (thermal) exposure limit (6-10W/ sqM) to be perfectly safe. When challenged from the audience about the non-thermal effects and the studies by Henry Lai, Neil Cherry, Magda Havas, etc the Industry Canada representative had no knowledge. It turns out that Industry Canada does no research and follows the wishes of the electronic communications industry. They are not informed of the current findings of EMR health issues.

Examples of medical evidence are given in the attached Schedule A.

BCH has now indicated that it intends to force transmitting Smart Meters onto everyone; no exceptions, and will offer no alternatives. EMR today is where tobacco and asbestos were 40-80 years ago. EMR will be the cigarette smoke of the 21<sup>st</sup> Century. We have at the moment a Provincial Government that goes to extraordinary lengths to limit exposure to cigarette smoke (which can be detected and physically avoided by non-smokers): while at the same time forcing microwave exposure upon everyone, which is hard to avoid because it is largely undetectable and passes through walls.

**RESOLUTIONS: The RDN Board declares:**

1. The evidence for medically harmful effects of EMR justifies measures to reduce exposure by both persons and governments.
2. No person should be involuntarily exposed to EMR, and every person is entitled to have their exposure to EMR minimised.
3. No residence should be irradiated by the meter of a neighbour.
4. BCH has not properly considered the wishes and medical needs of residents.
5. No persons should suffer trespass by BCH or its agents wishing to force a transmitting smart meter on to their residence.
6. BCH expects every person experiencing EMR sensitivity coming from mandatory smart meter transmissions to fully bear the costs of mitigative and protective measures. This is unethical. It is like requiring a tobacco smoke sensitive persons to provide their own gas masks.
7. BCH has not demonstrated any serious consideration of the health-compromising effects of EMR.
8. The RDN Board requests that the RCMP not intervene to assist in the installation of smart meters on contesting properties and that the RCMP enforce trespass laws and rights to protect residents in such events.

## SCHEDULE A. **Some medical effects of Electro-Magnetic Radiation (EMR)...**

This covers the lower so-called microwave range, (500MHz to 10GHz).

It has been known since the development of the first cavity magnetron (1941) that microwaves caused materials containing water to heat up. A standard of a maximum exposure of 6-10 watts per sq meter for 6 minutes every hour (10% time) was developed for radar workers to dissipate this heat in the 1940's. An exposure 15 times this level is fatal. This thermal standard remains today as Canada's microwave exposure limit. Like the standard setting the number of lifeboats on the Titanic, it is totally obsolete, but the electronic communications industry clings to it as it maximizes the amount of radiation it can place upon the populace. Most consumer exposure in this range comes from cell phones, certain walkie-talkies, cordless phones, baby monitors and now smart meters and WiFi.

Smart meters transmit in pulses which have greater biological effect than the same energy as continuous wave (CW). Mesh communication is at 903-925MHZ, power varies from ¼ watt to 2 watts depending on location and model. Zigbee appliance communication is at 2.4 GHz. A transmitting smart meter contains the equivalent of a cell phone and a WiFi transmitter.

In the 1950's Soviet Russia experimented heavily and was able to identify 31 discrete frequencies that had specific physiological impacts. In the 1960's and 70's the soviet government irradiated the US Embassy in Moscow with microwaves, pretty much matching the frequencies and at less power than smart meters and cell phones. Exposure was continuous. Staffing assignments ran from 2 to 4 years. Three ambassadors died subsequently of cancer. 16 clerical staff developed breast cancer later.

Military personnel exposed to Radar developed cancer at rates double the expected levels. In 1975 the US Military issued a general warning that low level microwave radiation was dangerous. Radar workers found their fillings kept dropping out. It was discovered the radiation was ionizing the mercury in the amalgam which was going into solution and shrinking the filling (and poisoning the technician).

1976: US Defense Intelligence Records> Lists all health hazards of wireless devices and ended with the Observation "This should be kept secret to preserve industrial profit." This echoed another 1950's report "If this paper comes known around the world, it will threaten military and commercial interests." This was described by Barrie Trower (UK authority) as the saddest and most despicable document ever published in history". Trower has especially condemned the Health Canada Code 6 standard 6W/sqM (=600uW/sqCm).

Lloyds of London Underwriters refuse to insure phone manufacturers against damage to users' health.

WHO World Health Organization has classified microwave radiation 2B (possible carcinogen). This came after intense pressure from the USA. The original classification was to be 2A (probable carcinogen).

In 2006 a group of bioelectrical scientists formed a BioInitiative Group that produced the Bioinitiative Report (2007). This report reviewed all the evidence that established health dangers from electric field radiations. It was criticized by regulatory and industrial agencies because it did not give weight to studies that failed to show health dangers. This report was updated 2012 (Jan 2013) which concluded

the evidence for health risks from EMR has greatly strengthened since 2007. Covering DNA damage, leakage of the blood-brain barrier, altered immune function, memory and sleep disruptions, sperm damage, increased incidence of child and adult brain tumors, especially glioma. Acoustic neuroma on the side of the head habitually used for phone, increased child and adult leukemias and breast cancer in men and women. Also apparent links to alzhiemers, ALS, autism, fatigue, hyperactivity and cardiac irregularities. In conclusion "Epidemiological evidence shows that radiofrequency [electric fields] should be classified as a human carcinogen. The existing public safety limits and reference levels are not adequate to protect public health."

The BioInitiative report recommends 0.001uW/sqCm as a safe level for most people. This is 50,000 times lower than Health Canada Code 6.

The Russians have used their extensive knowledge to forbid routine exposure to microwaves to persons under 18 years of age. Russia, UK, India, Germany, Finland, Israel, Belgium, Toronto and recently China now specify that children and pregnant women should only use cell phones in emergencies, preferably on speaker mode. This is about 50% of the global population. Italy uses wired smart meters only.

Safe Schools 2012. Six medical associations in USA and other international medical bodies have concluded that WiFi should never be used in schools.

The BioInitiative report showed that for DECT cordless phones, (after 10 years use, average 30 minutes/day) the risk of brain tumors on the side of head habitually used relative to other side was a 470% greater occurrence of Glioma and 310% greater occurrence of acoustic neuroma.

There is a great amount of variation between estimates of smart meter irradiation in comparison to Cell phones. Cell phones concentrate radiation into the head, and are held close. Smart meters tend to whole body radiation at a greater distance. Smart meters run 24/7, cell phone use varies to personal habit. In terms of whole body dosage the estimates for Smart meters run from 5 to 450 times greater than cell phones. This is important when non cranial impacts are considered.

A 2012 study from Univ. of Athens has concluded that everyone is equally electro-impacted by EMF. All persons show the same effects in laboratory testing. Inflammatory markers go up, hormonal changes, copper changes, neurotransmitter changes, irregular heartbeats, higher blood pressure. Electro-sensitive people differ only in that they can sense these effects and are conscious of them and feel ill from them where others do not. Some doctors observe that health problems today differ substantially from those of 30-40 years ago and aggravation by EMR is believed to be the major change in the environment.

A study in Germany showed that cell phone towers increase cancer rates, but these effects only appear 5 or more years after start of operation. German industrially sponsored studies of EMR effects only run for four years.

The literature covering EMR biological effects is huge. There are about ten thousand papers. The best studies include large samples over long periods of time (5-30 years).