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To: greffe@regie-energie.qc.ca ; to the attention of Madam Louise Pelletier.

Subject: Compteurs"intelligents"-DossiersR-3854-2013&R-3863-2013

Dear Madam,

I was among the first in my borough to receive the new smart meter (FOCUS AXR-SD).

I have electrical engineering training and I am well-versed in this field.

When I read the brochure from Hydro-Quebec stating that these meters emitted a mere 55 microW/m² at 1 meter distance, I interpreted the information to mean that the smart meter would emit once every two months a short 55 microW/m² signal that would relay my electrical consumption to Hydro-Québec. I was wrong in that assumption; the brochure had intentionally mislead me.

I am the owner of a duplex, the meters were installed on the exterior brickwall facing my backyard in early spring 2013. The day following the installation, my daughter, whose bedroom was located on the wall behind where the meters are installed, told that she was feeling somewhat "strange". I could not have imagined that that something strange could actually come from meters that are slated to emit at 1 meter a mere 55 microW/m² once every two months, but I felt compelled to look into the matter. With the personal instrumentation that I had in my possession, I tested the emissions coming from these meters and, to my great astonishment, the measurements indicated huge microwave emissions bursts of roughly 60,000 microW/m² at one meter away from the meters, and these RF pulses were occurring more than a few times each minute. To my even greater astonishment, I found out that these RF bursts could not be stopped even if I turned off the main power switch in the house. Surely, the signal strength behind the brick wall was lower than what I had measured in front of the meters, but not enough to make it trivial; I took action and moved her bedroom to another room located away from the meters in front of the house.

My surprise at the reading was so great that I questioned the validity of the measurements; perhaps, I thought, my meter was somewhat "special" or defective. I took the time to look into this matter and discovered this was not the case; reputable engineering measurements yielded results.

Short high-intensity microwave emissions capable of piercing through brick walls were the reality hidden by the "smart" deception in the presentation of the meter in the brochure that I had received.

Madam, I do not consider how a gadget that was placed deceptively on my private property and that emits microwave pulses at this level, repeatedly every minute, and regardless of my action on my own property can in anyway be considered normal, typical, or trivial; this represents a departure from civic behaviour. Nothing in the brochure indicated that a pulsed microwave signal of such level, occurring at such a frequency, and over which even my power switch had no control was what was going to be installed. I have been fooled by the "smart" deception..

I am not the one who will argue that an exposure of a 60,000 microW/m² signal at 1 meter from the source of the emission on occasion is deadly, nor that in anyway exceeds the Canadian safety limits that, sadly to say, sit at the tail-end of international safety standards in terms of short terms safety, lacks and deny the need for guidelines for long terms exposure, and are based on the antiquated premises of mid 1940s that non-ionizing RF radiation can only produce thermal effects on human body; this is not the forum to discuss why Canada is so antiquated in this domain in comparison to such diverse countries as Israel, Italy, and even Russia and China that have standards that are 100 times

more stringent than ours, nonetheless, Madam, please let me point out that this innocent “little” 60,000 microW/m² at 1 meter emission is equivalent to facing a situation where over 100 typical mobile at one meter distance are concurrently in operation for the very short duration of the bursts, and that we are exposed to these emissions more than once each minute, hour after hour, day after day, month after month, and year after year. And, please keep in mind that over 3.4 million of such units are planned to be installed over the Province and many of these in highly density populated areas.

Is this good for the health of all of us?

This kind of exposure is not large enough to “roast” human tissue, but does it merit to be trivialized as done in the brochure?

The brochure that Hydro sent me pretends that it is all very trivial, but not all it is said, only half truths are presented. Comparing, as Hydro does in the brochure, a smart meter working with a duty cycle of less than 0.1% side by side with a cellphone made to operate with a duty cycle of 100%, and not mentioning a word on duty cycle on the graphical representation of the comparison, shows a clear intent to deceive.

There is a clear intent in selling, not in informing, not in showing the whole truth so that people can have a clear idea. Half-truths are not the truth; these are a deceptive projection of reality.

Why not tell the whole truth?

In my situation, which is certainly not unique in the metropolitan area, even if I were to pay close to \$450 a year penalty fee for protecting my tiny home space by getting rid of my two meters, I would not be able to get rid of an equal inconvenience that represent the two smart meters from my next door neighbour that are face to face, just a few short steps away from my kitchen window, and whose pulsed emissions I am now compelled to live with for many hours of the day in my kitchen, right in front of my face anytime I prepare a meals or wash up dishes after meals. I bought special transparent foils to apply on the windows panes to attenuate the level of the emissions burst from these meters; it helps, but the microwave pulses from my neighbours meters go through the brick wall of my kitchen. So, here I am: I have done my best and yet, the problem is not solved, my home has been invaded and money can't solve it all. Smartness” is nowhere to be seen in this new environment.

I will not claim that this exposure so deadly that I will fall ill tomorrow but, let us be clear: it is not an improvement conducive to a healthier environment in my home and my province. Even worse, when the next projected insanity of turning on the second antenna in the meter will come to be, it will be another step downward toward an even worse situation; we will all have to pay for the consequences through our pocket books and our silent physical suffering.

Why is the worsening of my environment good for me and my fellow citizens?

What medical studies say that exposure to pulsed microwave radiation is healthy?

Is this the new “smart” way of delivering electrical power? Is this a “smart” grid?

Is this the healthy smart society of tomorrow in the making?

There is plenty of room to ponder, isn't it ?

The meters were installed, yet not a word was spoken about any short-distance precautionary recommendations. There are no directives or warning to be seen. I looked to see whether any SAR figures appear somewhere on the meter; I found none!

I looked at the documentation that was presented by the utility at the Energy Board hearing, and found no reference to this figure at all; have SAR measurements been taken by Industry Canada on the unit?

What are they? I saw none from any of the document presented to the Energy Board. The matter was not even discussed at the hearings; it was flashed out, not a whisper was spoken; why?

When I asked this specific question to visiting engineer from Hydro in my borough, he told me that

SAR measurements were not taken because these were too expensive to conduct. Madam, I find this reason rather feeble, not plausible at all. Have SAR measurement been taken?

What precautionary distance should people keep from the meter based on SAR measurements and, if these were not taken because it was deemed that people will not approach the meter, then why have people not been notified of the default recommended safe distance?

Not a single word on this simple matter was ever mentioned or whispered; instead, I have noted a concerted attempt at trivializing even the simplest of the precautionary measures.

This is regrettable; this is not an honourable behaviour!

I am outraged at the deception and the prospect of having had my living space invaded forever.

I am equally outraged at the fact that the good faith of the vast majority of my fellow citizens is being taking advantage by this deception.

And, Madam, isn't it strange to see that the deception is compounded with the prospect of economic coercion through monthly penalties for those who dare and can afford not to bow to the wishes of the few who intend to ram this project through? Whose interests are being served?

There are undoubtedly private interests that benefit from this project, should we remain silent and allow the ramming through of this project with coercion and deception of the ordinary Quebecer for the benefits of private interests?

Certainly, this is not a praiseworthy way of proceeding; what honourable words worthy of a cultured society can describe this situation? I know of none!

I told myself, perhaps there is another side to the equation; perhaps, there are huge savings in store for the utility and its clients. I thought that I could find an excellent answer that could point in this direction and make my inconvenience and health risks inside my own home an endeavour worth taking. I searched to find that strong reason, and I have discovered instead a mirage, a senseless reason.

According to Hydro's own predictions, if we, the citizens-clients and owner of Hydro put up with this inconvenience for everyday of a foreseeable future, the utility will save \$25 at most each year per customer, after the initial losses for covering the installation and commissioning are fully paid.

Yes, you read it right: a mere \$25 a year on my total bill of over \$1500 in my particular case.

And, this "may be \$25 per year economy" comes after the utility does away with 500 to 800 jobs here in Québec. Moreover, this trivial saving will last only for a few years because the meters have a much shorter life span than others on the market; thus, the capital cost associated with their replacement will have to occur earlier rather than later, and during this time, the capital acquisition cost will create an upward pressure on the utility operational cost that will be passed on to us (citizens-clients and owner of Hydro)!

Not to mention the blind disposal of the capital assets that represent a good portion of the meters that are systematically being thrashed whether or not these have reached the end of their life cycle, so as to speed up the deployment of this Advanced Metering Infrastructure (AMI).

Madam, this is a not desirable "*ami*"; it is a thief of money and health, not an "*ami*"!

The "advantage" is a **mirage**, a tiny island of green in a senseless desert that is nothing but a figment of the imagination brought about by a marketing word: "*smart*".

I took the time to read the documentation presented to the Energy Board at the time of hearing for the approval of the first phase of the project; may I bring to your attention that many factors that throw doubts on the economic viability of the project have been either omitted or minimized in order to sell

the project idea. We, citizens-clients-owners of Hydro-Québec will be paying the cost of a wrong decision that represents this deployment.

For your information, Madam, Brazil, in January 2013, has come to the conclusion that the AMI does not bring the economic advantage it preaches to be able to deliver and has stopped the planned mandatory deployment. Furthermore, despite political pressure to say otherwise, the largest power Utility in Massachusetts has in January 2014 also come to a similar conclusion. The AMI infrastructure does not pay, does not bring economic benefits and does not, more than obviously, bring about a healthier environment. It is **not** a worthy investment. It does not save electricity, it compounds with problems the physical health and economic wellbeing of the Province; nonetheless, yes, I will agree that it gets rid of jobs in Quebec to create them elsewhere. Is this an advantage?

There are many reasons to ponder about this point, but this too seems to have been flashed out from the cost-benefit analysis of the project and from the social discourse; it disrupts the aura of the mirage. So, not only I, as a Quebecer, have to finance the sale of electricity elsewhere outside the province by selling electricity at a lower cost than what I am paying here, I will now have to endure to see my publically owned utility coerce us into accepting a project that sheds jobs here, worsen my living environment, is clearly intended to raise my electrical bill as soon as the time-of-use function is activated; and, all this at a time when we have an oversupply of electrical power which is bound to last for many years. Does it sound logical to accept this situation in silence? Does it sound smart?

The adoption of an AMI grid effectively compels the utility to enter into a situation that requires the maintenance and upgrades of a province wide WAN network. This is a totally new task that was not needed before. The capital cost for the deployment is not the end of the investment requirement; it is a beginning of a recurring operational expense that will increase in cost with time. Such large network requires constant maintenance and upgrades. This totally new expense for the utility does not come without financial risks. Given the nature of the product, the outlay of operational services will come from a single or very limited number of private suppliers. This places the utility in a position of dependency for years or decades to come; those who are already profiting from the deployment will be in a position of privilege to profit even more after the deployment is terminated, while Hydro will be in a position of dependency for their services.

As a shareholder of Hydro, I am unhappy to see my utility place itself in a position of dependency from a single or very restricted group of suppliers for the upkeep and maintenance of the network, and for its dependency on privately held wireless services for carrying on the data collection from the grid to the centre. This situation of dependency guarantees profits to these private providers of the service, for the upgrade of the control center facilities and network hardware, but does not augur well for cost saving on the part of my utility. We, as consumers and shareholders, will have to foot the bill of this arrangement for the next two decades; we will have to foot the bill for having placed the utility in a situation of captivity. Private interest that are benefitting from the deployment have reasons to rejoice from this situation but, that is not so for us, the shareholders and clients of the utility. Is this smart?

Is the continuation of the AMI deployment reasonable?

It is NOT at all so from a citizens-client-owner of Hydro-Québec point of view; but it is a GREAT prospect for those private interests that have managed to push this project through in the first place. Whose interest should prevail, the public interests or the private financial interest of the few?

Finally, Madam, let me bring to your attention a jurisdictional point.

The approval of telecommunication units is strictly under federal jurisdiction and the placement of a telecommunication unit is done in Canada in full respect of private property rights.

Licensed carriers in Canada respect private property rights and have to enter into commercial mutually

beneficial agreements with property owners before antenna/transmitters are operated on private property. Hydro-Québec rights, as a non-licensed user, has even less privileges than licensed carriers. In fact, it has no more rights than a common citizen; it has bullied its way into a public band, but it is has no more right than you and I to use it. Our utility data will travel on a public band that anyone can legally use; does it sound like a safe arrangement?

The Energy Board and Hydro do have jurisdictional rights on electrical power delivery, these include the right of passage over private property for the delivery of electrical energy; however, Madam, the compliance of an antenna with the Canadian Safety code 6 does not authorize the Energy Board or Hydro to place the antenna on someone's private property without a proper commercial agreement with the property owner.

In essence, the Energy Board does not have jurisdictional powers over approval or placement of antennas. This point seems to have been omitted from the discussion over the approval of phase 1 of this AMI deployment. It would be wise to take into account the jurisdictional limits of the Energy Board. It would be wise to take into account the property rights of home and business owners.

The Energy Board competency and limits in this domain have strikingly been omitted from earlier discussions or debates. This ought not to have been the case.

I urge the Energy Board and Hydro to govern their actions by taking into account the limits of their jurisdictional powers.

To make a mistaken choice is human, and the Energy Board is made up of human beings; I count on their courage to correct the mistake. Errors must be corrected, not repeated.

To persist, to insist in an error that causes such inconveniences, that certainly will not bring health benefits, but only problems in the longer run, and whose financial advantages, **if any**, are uncertain and are at best \$25 year per customer, is simply unreasonable. Taking financial and economic risks to explore a *mirage* is not a smart undertaking.

I ask the gentlemen at the Energy Board to kindly work for the best interest of the silent majority that has been, through deception and economic coercion, lured to bow to a situation that is not in their best interest, that makes no sense from their health and economic perspective..

We are humans, not just consumers and taxpayers, not just cows that can be milked at will.

I urge you to stop this project.

Madam, please convey my comments to the Energy Board.

I wish the very best to you, to all my fellow citizens.

Best regards,

Peter Arella, B. A.Sc., M. Elect. Eng.