

Dear Mr. Doyle,

*Re: Service at <xxxxxxxxxxxxxxxx>
Account number*

I am writing in response to your letter dated "September 10 2018" stating that you will be replacing my legacy meter with either a "smart" meter or a "radio-off" meter.

I note your inability to replace my existing legacy meter with the same type is your choice, made despite the fact I have paid a premium of \$32.40 per month (\$388.80 per year) in order to retain a legacy meter. This inability arises from your BC Hydro's not to keep a stock of those meters by purchasing or recertifying such meters. This is your choice, and is not reasonable.

I also note that you intend to discontinue providing a reduced rate of electricity supply for heating purposes under the electricity 'B' program, a concession that was used to influence the choice of electric heating when the house was built. Again, this is not reasonable and could, perhaps, be regarded as a breach of the original contract.

I do not regard these coerced changes as reasonably consistent with any kind of customer service mandate. If BC Hydro is short of funds, it could well be due to pressing ahead with the Site 'C' dam which seems both unnecessary, given the projected demand for electricity (which has plateaued), and incapable of providing a positive return on investment. BC electricity consumers will be on the hook in order to provide subsidised electricity to support the LNG industry at a time when fossil fuel is (or should be) on the way out.

As an individual consumer I have very little power to affect these decisions. However, as a courtesy, and in line with your stated rôle in providing the best customer service possible under the circumstances, I can make the following concession, subject to the conditions included.

(1) You may install a standard electronic "smart" meter for metering supply to my property on Bowen, *provided the meter is located on the pole that carries the supply to my house, rather than on my house*. That will remove the meter to a more reasonable distance from my work desk and house, and is easily achieved if you leave the existing meters (A & B) in place and simply put a new base on the pole with some extra wiring on the pole to and from the meter base.

(2) You must undertake not to sell or give any of my electricity usage information that you are able to collect to third parties for any marketing or other commercial purpose. That is a matter of my privacy.

You must be aware that both "smart" meters, and a "radio-off" meters are actually small computers, plus a wireless transceiver, plus a Switching Mode Power Supply (SMPS), a multi-function device more vulnerable to damage and malfunction than a legacy meter. I also have concerns about the suitability of the remote disconnect for reliable operation, and about the design decisions to protect against surges which are a bigger problem with the new meters than for the legacy meters.

Incidentally, you imply that the new meters are designed to provide accurate electricity consumption measurements. However, the consumption is measured by a digital sampling algorithm in a real-time system (the new meter), rather than by what amounts to a stable, reliable electric motor driving the metering dials through mechanical gears. The accuracy of the digital system depends on the sampling and smoothing involved. With significant noise on the line being measured, it is important to ensure that the current and voltage waveform samples are taken at a rate that is at least twice the highest frequency present (the Nyquist rate) to determine the true consumption waveform followed by suitable integration over time to get the true consumption. Otherwise sampling can lead to significant inaccuracies. Since the circuits and firmware/software routines used in the measurement are proprietary and thus not generally known, I have no reason to believe that the laboratory tests on clean waveforms used for certification by Measurement Canada are

representative of field conditions where the noise present is largely unknown and untested.

If BC Hydro is concerned about costs, why have they replaced legacy meters having a life of several decades with electronic meters that have a life of only five to seven years?

There are many other points I could make, but subject to conditions (1) and (2) I am willing to accept a “smart” meter. *However, I will make one more important point.* Meters should never be unplugged from or plugged into a meter base whilst the grid input to the end user is active, and the load is connected. This is against the specifications of the CSA certified base yet is common practice.

Yours sincerely,

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