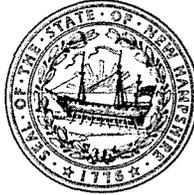


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STATE OF NEW HAMPSHIRE



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NH PUC 7 MAY 15 AM 11:46

April 30, 2015

Matthew Fossum, Senior Counsel
Eversource Energy
P.O. Box 330
Manchester NH 03105

Re: Jesse Mertz
Complaint Against Eversource Energy

Dear Attorney Fossum:

On March 19, 2015 the Commission received the attached complaint from Jesse Mertz against Eversource Energy (Eversource) regarding Smart Meter Gateway Devices.

The Commission is treating this matter as a complaint pursuant to RSA 365:1 and :2 and will require that Eversource respond to the complaint on or before May 14, 2015.

Sincerely,

A handwritten signature in black ink, appearing to read "Debra A. Howland".

Debra A. Howland
Executive Director

Enclosure

cc: Commission
Legal Division
Electric Division
Consumer Affairs Division
Jesse Mertz

Jesse Mertz
121-125 Main Street
Suncook, NH 03275

March 17, 2015

Debra Howland, Executive Director
New Hampshire Public Utilities Commission
Consumer Affairs Division
21 South Fruit Street, Suite 10
Concord NH 03301-2429

NHPUC MARCH 17 2015

cc: Janet Quint, NHPUC

Dear Ms. Howland, and all others to whom this may concern,

Thank you for your succinct reply regarding the three ZigBee gateway-equipped Itron OpenWay Centron C2SOD smart residential meters illegally installed by PSNH/Eversource on my property on January 26, 2015, without my prior written consent or permission. Since that date, the Utility again on March 16, 2015, has installed an additional fourth C2SOD commercial meter. On both occasions, no warning was given before the meters were pulled, thus on both occasions we have suffered damage to sensitive electronics due to the power surge recklessly caused by PSNH/Eversource technicians. I have copied the NHPUC Executive Director on this email to ensure that I am reaching all of the proper channels.

I have asked both PSNH/Eversource as well as the NHPUC some very direct and specific questions regarding how the meters installed on my property on relate to both RSA 374:62 as well as NHPUC's Docket 12-245 – none of which have been directly answered. I keep being stonewalled and pointed back to the same sources in a feedback loop by both PSNH/Eversource, as well as the NHPUC, yet nobody seems willing or able to comment on the overwhelming differences between the cited precedent and the fact that said precedent overwhelmingly supports my complaint against the Utility.

As you are aware, NH RSA 374:62 Property Owner's Consent Required for Smart Meter Gateway Devices, "an Act prohibiting electric utilities from installing and maintaining smart meter gateway devices without the residential or business property owner's consent", states in full:

I. In this subdivision:

(a) "Smart meter gateway device" means any electric utility meter, electric utility meter component, electric utility load control device, or device ancillary to the electric utility meter, which is located at an end-user's residence or business, and which serves as a communications gateway or portal to electrical appliances, electrical equipment, or electrical devices within the end-user's residence or

business, or which otherwise communicates with, monitors, or controls such electrical appliances, electrical equipment, or electrical devices.

(b) "Electric utility" means any public utility, as defined in RSA 362:2, which is engaged in the sale or distribution of electricity ultimately sold to the public, any rural electric cooperative, without regard to whether a certificate of regulation or deregulation is on file with the public utilities commission, and any municipal electric system operating pursuant to RSA 38 within or outside its municipal boundaries.

II.(a) No electric utility that sells or provides electricity within the state of New Hampshire shall install a smart meter gateway device on or in a person's home or business without the written consent of the person or persons who own the home or business.

(b) An electric utility selling or providing electricity shall create a form that the person or persons who own the home or business must sign to opt-in to having a smart meter gateway device installed on or in his or her home or business. The form shall, in at least 12-point boldface type, state that:

(1) The opt-in is optional and one's service will not be affected if one elects not to opt-in: and

(2) The device is a "smart meter gateway device," and provide the definition in subparagraph I(a).

III. When an electric utility enrolls a homeowner or business owner for electrical service at his or her home or business, the electric utility shall disclose in writing whether a smart meter gateway device has been installed, and shall remove, or allow to be removed, all smart meter gateway devices upon written request of the homeowner or business owner.

As you were previously made aware via our correspondence, after considerable effort on our behalf we eventually received a written response from PSNH/Eversource confirming our meter types, which differ from other meters in our neighborhood. Bruce Overton, AMR Project Manager, responded on behalf of PSNH/Eversource that, "Although both the Centron Bridge meter and the OpenWay Centron meter [...] have the same hardware, they have different firmware. That firmware determines whether the installed components are functional, and if so how they function. Eversource is not installing any meters in NH which are configured as OpenWay Centron meters, all firmware in these meters is of the Centron Bridge type. [...] Your concern that this meter can serve as a "communication gateway or portal," however, is not valid primarily because the meter installed at your location is not configured to enable or use the Zigbee chip."

It is encouraging that PSNH/Eversource is finally now admitting to the ZigBee gateway device being physically present and installed, as it made them look quite foolish given that the technical specifications for my model are readily available online via Itron's website, as well as that of the FCC. However, the fact that (according to NHPUC), "PSNH has stated the meter(s) installed at your premise are not going to be used as a smart meters," does not change the fact that they are indeed present and installed, and do in fact physically contain ZigBee "smart meter gateway device(s)". To illustrate, the fact that I am not using the pen in my pocket to type this letter today makes it no less a pen in my pocket, much the same as the idea that I am not currently using my screwdriver makes it no less a screwdriver.

Unfortunately, the NHPUC's assertion that "the order [No. 25,409] provides the Commission's ruling does address the Zigbee issue and how simply being able to accommodate a Zigbee device [sic] doesn't make the meter a smart meter", is not pertinent to my ZigBee-equipped Itron OpenWay Centron Bridge meter, which is itself a gateway device already containing an "advanced" 2.4GHz ZigBee radio module, in addition to its "basic" 900MHz dual band.

The "advanced" OpenWay Centron Bridge meters that PSNH installed differ greatly from those "basic" meters installed by NHEC, chiefly in that they do in fact have a ZigBee radio chip physically present that is designed for, and capable of, "the statutory definition of a smart meter gateway device require[ing] that the meter communicate with, monitor or control appliances, equipment or devices within the residence or business."

I have read NHPUC Docket 12-245 and the related documents many times at this point, and am puzzled as to why the NHPUC is choosing to cite said precedent in defense of the Utility, as the docket states clearly that "*NHEC properly recognizes its Zigbee-equipped Elster Type R2S meters as smart meter gateway devices pursuant to RSA 374:62*. According to NHEC, it only provides its Zigbee-equipped Elster Type R2S meters to customers who have volunteered to have them as part of a pilot program. Those meters are not at issue in this proceeding." Additionally, Mark Dean of NHEC claimed during the Senate Bill 266 hearing that, "The Co-Op intended that *any part that involved the gateway meter had to be an opt-in*."

As you are aware, leading up to the NHPUC's September 6th, 2012, "Order Denying Hearing Request" to the plaintiff Joan Wirth, the cited brief entitled "NHEC Smart Meters vs. "Smart Meter Gateway Devices"", as well as the related accompanying sworn affidavit issued by Douglas Bergholm and submitted on behalf of NHEC on August 9th, 2012, states the following:

"12.] There is a second broad subset of smart meters which share a substantial set of additional capabilities. *These "advanced smartmeters" contain a second, separate communications device which is capable of communicating (through wireless transmitter/receivers which are sometimes referred to as a "Zigbee boards" or "smart meter gateway devices")* with specially equipped appliances or electrical equipment located within consumers' premises and which allow the advanced smart meter to record and/or control electric usage associated with these "smart meter-enabled" devices. These smart meter-enabled devices have their own transmitter/receivers and may be separate plug-in controllers or may be built into appliances or other electric consumer devices."

"15.] SB 266, as described by Rep. Manuse, created NH RSA 374:62 which requires that electric utilities obtain written consent from home and business owners prior to the installation of "smart meter gateway devices" as that term is specifically defined within the statute. As defined, "smart meter gateway devices" must be all of the following: 1) They must be electric utility meters, components thereof or ancillary devices thereto; 2) They must be located at an end-user's residence or business; and, 3) They must serve as communications gateways so as to communicate with, monitor or control electrical equipment within the endusers' home or business."

Contained in that very same testimony describing SB266 (RSA 374:62) to the NHPUC, Rep. Manuse further stated, "As I understand it, NHEC's current "smart meter" devices

do NOT include so-called Zigbee boards, also referred to as "gateways", which would be able to read information from "smart" appliances inside the home and transmit that data to the company or the government. NHEC, at least, is allowing consumers to voluntarily add these devices to their homes. In addition, so-called "load controlling units", which would allow an electric company or the government to remotely control certain appliances, such as heaters or air conditioners, are not being installed by force, but may be installed if a person volunteers. However, this bill prohibiting these devices installation without a homeowner's consent is needed to make sure such programs remain voluntary, and to ensure that when someone buys a home from someone who has volunteered to have such features added to their meters, that these features can be uninstalled."

"What the bill WILL DO is require people to *opt-in to the installation of* "load control devices," which enable a remote control of your heating or air conditioning systems, for instance, as well as the technology (called a "*gateway board*") that reads electrical use data for specific enabled appliances inside your home, such as your heater, air conditioner, refrigerator, and so on. While some people might want this technology, and this bill does not prohibit them from *installing* it, other people DO NOT want this technology, and this bill would protect them. For those folks, *a smart meter gateway device constitutes an unreasonable search of the inside of their homes*. This is not a "reasonable" invasion by any stretch of the imagination. These folks should not be subjected to such invasions of their privacy. The bill Sen. Forsythe and I have written will ensure they are not subject to such privacy-rights violations, without their consent."

"16.] The Elster Solutions Type R2S meters which NHEC has purchased for general deployment throughout its system are those without Zigbee boards or any other smart meter gateway components. Accordingly, the new NHEC meters are "basic" or "standard" smart meters... These Elster Solutions Meters are not "advanced" smart meters. These meters, with their single 900 MHZ range transmitters, can only communicate with NHEC's Energy Axis metering information system. They do not contain a second transmitter/receiver, smart meter gateway device, or any other device which would allow them to communicate with, monitor, or control any smart meter-enabled appliances or equipment which members may have within their premises."

Mr. Bergholm goes on to elaborate, "5.] In the near term, NHEC's only planned need for the potentiality of gateway communications capabilities provided by the Zigbee module is limited to a small volunteer pilot program. Likewise, in the long term, NHEC will be providing programs and services which involve the gateway communications made possible by the Zigbee module only to those members who voluntarily choose such programs and services. Accordingly, NHEC chose to purchase nearly all its Elster Solutions meters without the Zigbee module ("NHEC's Standard Smart Meters"). NHEC did purchase approximately 1,000 Zigbee-equipped meters ("NHEC's Advanced Smart Meters") to support NHEC's pilot program."

"6.] Because they lack a Zigbee module or other gateway communications enabling device, the Standard Smart Meters installed in NHEC's service territory can only transmit to and or receive data from NHEC's Energy Axis utility information system. NHEC's Standard Smart Meters do not serve as communications gateways or portals to electrical appliances, equipment or devices within NHEC's members' premises. Nor do these meters communicate with, monitor, or control such appliances, equipment or devices."

“10.] NHEC's Advanced Meter bears the label ‘Zigbee Meter.’ NHEC's Standard Smart Meter references the FCC identifier for the FCC-authorized 900 MHZ range transmitter used for communications between the meter and NHEC. NHEC's Advanced Smart Meter references both the 900 MHZ transmitter and the FCC identifier for the FCC-authorized 2400MHZ-range Zigbee transmitter.”

As the Utility is aware, the Itron C2SOD FCC Grantee Code SK9, Product Code AMI7, lists the OpenWay smart “Bridge” meter functioning as a dual-band transmitter, broadcasting both in the “advanced” 2405-2475MHz (2.4GHz) ZigBee bandwidth, in addition to the “basic” 902.25-927.75MHz (900MHz) radio spectrum, just like that of NHEC's “advanced” ZigBee meter described above.

If you would like more technical information about my specific meter or the OpenWay gateway network, please see the attached White Papers and manufacturer specifications. According to the manufacturer, Itron, “each OpenWay CENTRON meter comes factory-equipped with a ZigBee® radio to provide a built-in communications pathway into the home for data presentation, load control and demand response. ZigBee also provides a communication channel with 2.4GZ OpenWay Gas Modules. The OpenWay CENTRON also provides robust data storage capability to support time-of-use pricing, load profile data and other data-intensive applications, as well as the most advanced feature set available to support smart grid requirements. These features include full two-way communication, a load-limiting remote disconnect and reconnect switch, positive outage detection and restoration notification, voltage monitoring, automatic tamper and theft detection, *as well as the ability to reprogram the meter remotely and upload new firmware via the network.* The OpenWay CENTRON meter is the smart meter for the smart grid.” Further, “Itron's smart residential meters deliver the two-way communications utility customers need to build their advanced metering infrastructure. Itron's smart meters are built upon industry standards and provide unprecedented interval data storage, remote upgradeability and configuration changes, and *the gateway to consumer smart devices.*”

ZigBee® surmises their motto, “Control Your World™”, when describing their technology as, “a global, standards-based wireless mesh networking technology used to connect the widest range of devices to work together intelligently to help you control your world. ZigBee isn't about deploying dedicated networking gear, but making everyday devices (light switches, electricity meters, thermostats, or even appliances, such as dishwashers) smarter by embedding wireless networking and communications intelligence into them. *ZigBee is specifically designed to facilitate monitoring, control and sensor applications* — all key components of a smarter electrical grid. ZigBee is related to other well-known Institute of Electrical and Electronics Engineers (IEEE) standards such as Ethernet, Wi-Fi™ and Bluetooth®. These standards all share a common IEEE addressing structure, called a MAC address, and are accessible over the Internet. ZigBee Smart Energy supports functionality to meet the diverse business cases of current AMI/smart meter systems. [...] In addition to enabling home automation and control, ZigBee Smart Energy is currently being used for gas and electric sub-metering, controlling distributed energy resources, such as solar panels, on the electric distribution grid, and systems for street light monitoring and control. *Thus the ZigBee capability in AMI systems delivers energy management benefits both in front of as well as behind the meter.*”

These facts all stand in contrast to such statements from PSNH/Eversource Senior Counsel Mathew Fossum, who email correspondence claims that "They measure 'whole house' consumption only – precisely the same information measured by Eversource's legacy analog meters." This statement is even at odds with the Itron/PSNH press release entitled 'Itron Technology Selected to Streamline PSNH Operations' (dated January 7, 2014), which claims that "The Itron Bridge meter provides access to more detailed consumption data, including hourly interval data, tampers and alerts, to improve customer service and extend the value of their Itron mobile solution. With the Itron Bridge meter, PSNH will also enable advanced capabilities for some of its key commercial customers, including mobile demand resets and remote meter service switch operations. 'PSNH looks forward to significantly improving our operational efficiency and customer service with Itron's mobile solution. And, with the Bridge meter, we can benefit immediately from its advanced capabilities,' said Daniel Comer, Director of Meter Reading and Field Operations at Northeast Utilities."

I see no exception to RSA 374:62 in which gateway device hardware is permitted to be installed and/or physically present permitting that the Utility has promised that the gateway device is turned-off or otherwise not being utilized, or based on a Utility's software version or casual claim "That firmware determines whether the installed components are functional, and if so how they function.", as is currently claimed by PSNH/Eversource. As previously clarified above, the Senate testimony of Rep. Manuse clearly states, "What [SB266] WILL DO is require people to opt-in to the *installation* of load control devices...as well as the technology called a gateway board [...]" The clear intent of RSA 374:62 was to require that the Utility obtain the written permission of the property owner *prior to the installation* of any "smart meter gateway device", such as the ZigBee radio chip, and to "prohibit electric utilities from *installing and maintaining* smart meter gateway devices". The law, as written, states clearly that "No electric utility [...] shall *install* a smart meter gateway device on or in a person's home or business without the written consent of the person or persons who own the home or business.", and does not indemnify or make exemption based on the Utility's alleged use, intent, or their system maintenance (ie firmware/software version).

In my circumstance, which clearly differs from that outlined in NHPUC Docket 12-245, the ZigBee radio chip is physically present, as *installed* as non-optioned standard equipment from the manufacturer, Itron. The ZigBee-equipped meters have been *installed and maintained* by PSNH/Eversource on my private property against my wishes and without my permission. The "intent" of the Utility or the semantic claim of their legal department that, "the meter(s) installed at [my] premise are not going to be used as a smart meters", is not only invalid, irrelevant, in bad faith, and independently unverifiable, but also unlawful.

As the high-power 2.4GHz 802.15.4 ZigBee (i.e., Wi-Fi) two-way communication pathway/gateway load control device is indeed physically present, and is designed to "transition to OpenWay" gateway from "Bridge-mode" via firmware upgraded over the network or by simply driving the route and switching them on, how would/could the consumer know for sure that the device is/isn't currently functioning as a "ZigBee radio for interfacing with home area networking and load control devices" as a "gateway to consumer smart devices"? As a protected party under RSA 374:62, what verification

process do we have to ensure the firmware version of the meter and/or the lawful compliance of the Utility?

Why does NHEC's definition of a "smart meter gateway device" differ so vastly from that of PSNH/Eversource? Why is it that the NHPUC seems to merely function as a mouthpiece to reiterate the position of the Utility, as opposed to serving to represent and protect the New Hampshire utility consumer? The NHPUC is choosing to turn a blind eye even to their own precedent, as well as the clear intent of SB 266 and the subsequent laws contained in RSA 374:62. Is a gateway not a gateway, regardless of corporate charter, law firm, or government office? Surely "installed" must still mean "installed", independent of active usage? Which section of RSA 374-62 indicates that the status of the gateway has to be active (i.e., open or unlocked door) as opposed to merely being present (i.e., closed or locked door), as presently claimed by the Utility?

Simply explained, a gateway operates much like that of a traditional doorway. As such, the doorway does not disappear and become nonexistent merely because the owner is not using the door and/or has claimed to have locked it. I can provide expert witnesses from the fields of networking, computer programming, electricians, HAM radio operators, engineers, and even employees of PSNH/Eversource's own meter department who can testify to the fact that a gateway does not disappear simply because it is not being actively utilized by its owner. More so, a jury of my laymen peers is certain to be just as astute.

To illustrate, the argument of the Utility can basically be surmised as, "We installed a wiretap listening device on your home, but we promise that we're not listening to it right now, so it's legal and we don't need a warrant." That does not seem within the spirit or intent of NH RSA 374:62, nor that of the Fourth Amendment of the United States Constitution. The claim of PSNH/Eversource stating that the smart meters installed at my premise "are not going to be used as a smart meters" is tantamount to a gun being placed against my head, whilst the would-be assailant claims that the gun is currently not being used as such.

I request that this letter be retained and recorded as matter of official and public record. I once again request that you please advise me on what I need to do to elevate and further this complaint; do I need to follow additional channels to have my complaints documented and fully considered and receive a hearing? I demand that my interests be served, and request that the NHPUC take immediate action on my behalf to have the aforementioned illegal gateway-equipped meters removed from my boxes on my property, as well as the removal of their new brass meter box locks previously mentioned regarding my fire emergency concerns.

Respectfully,



Jesse Mertz

Encl: Digital attachments

Ref: Prior email correspondence previously provided to NHPUC
Additional copy sent via email

