

**STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION**

**DE 12-245**

**NEW HAMPSHIRE ELECTRIC COOPERATIVE**

**Joan Wirth Request for Hearing on Installation of Smart Meters**

**Order Denying Hearing Request**

**ORDER NO. 25,409**

**September 6, 2012**

**I. PROCEDURAL HISTORY**

On March 7, 2012, Joan Wirth, a residential electric customer residing in Bristol, New Hampshire and served by the New Hampshire Electric Cooperative (NHEC), filed a letter with the Commission requesting a meeting with the Commission's Executive Director concerning NHEC's proposed installation of new electric meters. Ms. Wirth claimed that, if installed, the new meters would pose serious health problems. On March 16, 2012, the Commission's Director of Consumer Affairs sent a letter to Ms. Wirth informing her that because there was a lawsuit pending in the Grafton County Superior Court concerning NHEC's installation of the new meters, the Commission Staff would wait to meet with her until the lawsuit was concluded. *See Grafton County Superior Court, Nelson, et al. v. New Hampshire Electric Cooperative*, Case No. 215-2012-CV-00046. The lawsuit was brought by Ms. Wirth and several other NHEC customers seeking to enjoin NHEC from installing the new meters in their homes. On March 22, 2012, the Grafton County Superior Court denied the parties' request for preliminary injunction. Following withdrawal of the case by the moving parties, including Ms. Wirth, the Superior Court dismissed the matter without prejudice.

On July 24, 2012, Ms. Wirth filed a letter with the Commission requesting a hearing on NHEC's installation of new meters and claiming that RSA 374:62 (a provision codified upon the 2012 enactment of Senate Bill 266) required customer consent before installation of the NHEC's new Advanced Metering Infrastructure (AMI) meters and, further, that the meters caused a serious health risk. On August 9, 2012, NHEC filed a response with multiple attachments to Ms. Wirth's hearing request.

## **II. POSITIONS OF THE PARTIES AND STAFF**

### **A. Joan Wirth**

In her March 7, 2012, letter requesting a meeting on NHEC's new meter installation, Ms. Wirth expressed concern about the "mandated Smart Meter NHEC AMI program." Ms. Wirth claimed that current scientific evidence indicated "potential serious public health impacts on NH citizens, especially with long term exposure." Ms. Wirth claimed that she and others were seeking an opt-out from the installation of the new AMI meters.

On July 24, 2012, Ms. Wirth filed a letter dated July 22, 2012, indicating that the Grafton County Superior Court had closed the lawsuit in which Ms. Wirth and other NHEC customers sought to enjoin NHEC's installation of new meters. According to Ms. Wirth, the Court had dismissed the case without prejudice. Ms. Wirth also referenced her letters to NHEC claiming that the new law RSA 374:62 required NHEC to obtain customer permission prior to installing new AMI meters. Ms. Wirth claimed that the new AMI meters NHEC sought to install were smart meters and were covered by RSA 374:62. Further, Ms. Wirth claimed that the new AMI meters posed serious health risks to electric customers.

In her July 24, 2012, letter Ms. Wirth claimed that:

exposure to RF and EMF radiation has now been classified by IARC as a 2B carcinogen.<sup>1</sup> Over 2000 expert scientific studies agree that the RF EMF radiation penetrates the human body, causing damage at the cellular level. Children are particularly vulnerable. This is a very critical issue in light of the current scientific evidence for potential serious public health impacts on NH citizens, especially with long-term exposure.

Ms. Wirth concluded that she was requesting a hearing at the Commission on the “NHEC smart meter installations.”

#### **B. New Hampshire Electric Cooperative**

In its August 9, 2012, response to Ms. Wirth, NHEC asserted that the Commission lacked statutory authority to grant Ms. Wirth the relief requested. Nonetheless, NHEC acknowledged the Commission’s desire to be informed about NHEC’s meter installation and to provide accurate responses to customer inquiries. NHEC also disagreed with Ms. Wirth’s allegation that its installation of meters without customer’s written consent violated RSA 374:62.

NHEC described its effort to implement a major upgrade of its communications, systems management, and metering infrastructure, referred to as its Communications Systems Infrastructure and Advanced Metering Infrastructure (CSI/AMI) Project. According to NHEC, in 2010 it received a grant from the United States Department of Energy (DOE) pursuant to the American Recovery and Reinvestment Act of 2009, in the amount of \$15.9 million. The DOE grant covers approximately 45% of the projected \$35 million cost of the NHEC’s CSI/AMI Project.

NHEC claimed that the CSI/AMI Project benefits its membership and that an essential component of this project is the replacement of all analog electric meters with meters that record electric usage in a digital format and are capable of periodically transmitting meter reading

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<sup>1</sup> RF and EMF radiation refers to radio frequency and electromagnetic field radiation. IARC is the International Agency for Research on Cancer.

information to NHEC by means of short-range wireless transmissions. These low-power, short-range wireless transmissions are relayed from one meter to the next until they reach NHEC's backbone communication system. From NHEC's backbone communication system the meter readings are sent to the EnergyAxis metering information system via wireless and/or fiber optic transmission. The meter reading information communicated to NHEC is the same type of information that is collected by NHEC's old analog meters, that is whole house usage. This data is encrypted as an added precaution against unauthorized access to the data. NHEC stated that it has installed approximately 71,000 new meters with an additional 12,000 analog meters remaining to be replaced.

NHEC described two categories of smart meters, basic, or standard, smart meters and advanced smart meters. Basic, or standard, smart meters are those which record whole house electric usage in a digital format and are capable of delivering measurements of cumulative energy delivered to the meter site on a periodic basis, as described above, without the necessity of an in-person visit to the meter site. The meters selected for installation by the NHEC are Elster Type R2S meters and have single 900 MHZ frequency transmitters that can only communicate with NHEC's EnergyAxis metering information system. According to NHEC, such meters are basic, or standard, smart meters and are not advanced smart meters, or gateway devices, as defined in RSA 374:62.

According to NHEC, advanced smart meters are meters that measure cumulative energy delivered and transmit it in a digital format just as basic smart meters do; however, advanced smart meters also allow communication with specific appliances and equipment located at the customer premises. NHEC's meters do not have such capability without additional installation of a Zigbee transmitter and further programming by NHEC at the customer's request. NHEC has

purchased approximately 1000 Zigbee-equipped Elster R2S meters and has already deployed these meters to members who volunteered to have them as part of their participation in NHEC's pilot program.

According to an affidavit signed by NHEC's metering supervisor, Douglas Bergholm, the basic, or standard, smart meter it is installing at its members' premises references the Federal Communications Commission (FCC) identifier for the FCC-authorized 900 MHZ transmitter. The advanced smart meter with the Zigbee transmitter that NHEC is using for its pilot program references the FCC identifier for both the FCC-authorized 900 MHZ transmitter and the FCC-authorized 2400 MHZ Zigbee transmitter. After consultation with Elster Solutions, Mr. Bergholm stated that there is no firmware or software installed in NHEC's basic, or standard, smart meters that could provide gateway device capabilities.

Attached to NHEC's August 9, 2012, filing for comparison purposes were copies of the meter display faces of the basic, or standard, NHEC smart meter and advanced smart meter, as well as technical specifications, an RF Exposure Report, and the American National Standards Institute (ANSI) compliance test reports for both of the Elster meters.

### **III. COMMISSION ANALYSIS**

#### **A. Commission Jurisdiction**

NHEC asserts that the Commission does not have regulatory authority to consider Ms. Wirth's request to enjoin NHEC's installation of new electric meters due to health and safety concerns. Although NHEC is not a public utility pursuant to RSA 362:2, II, NHEC remains subject to RSA Chapter 374-F. RSA 374-F:3, I deals with system reliability and states that, "[r]eliable electricity service must be maintained while ensuring public health, safety, and quality of life." Thus, notwithstanding RSA 362:2, II, the Commission has retained some regulatory

authority over the NHEC's provision of reliable electric service in New Hampshire. RSA 374-F:4, XII provides guidance on the Commission's exercise of that authority:

To the extent that the provisions of this chapter are applicable to rural electric cooperatives for which a certificate of deregulation is on file with the commission, the commission shall exercise its authority with regard to such deregulated rural electric cooperatives only when and to the extent that the commission finds, after notice and hearing, that such action is required to ensure that such deregulated rural electric cooperatives do not act in a manner which is inconsistent with the restructuring policy principles of RSA 374-F:3.

Thus, in this case, we must decide whether to conduct a hearing to ensure that NHEC is installing new meters in a manner consistent with the health, safety and quality of life of the citizens of New Hampshire.

#### **B. Health, Safety and Quality of Life Issues Regarding NHEC Meters**

NHEC has supplied information concerning the Elster Type R2S meters (basic, or standard, smart meters) it is installing in its service territory. Based upon the technical information supplied by NHEC, the manufacturer Elster has, under the authority of the Federal Communications Commission (FCC), had these meters certified as being in compliance with Section 1.1310 of the FCC's rules on radio frequency radiation maximum permissible exposure limits. The FCC is the agency of the federal government with jurisdiction over the safety of these devices. Based on this product information, we find that the NHEC basic, or standard, smart meters meet applicable FCC RF exposure limits. Having determined that the NHEC basic, or standard, smart meters meet FCC limits for exposure to RF radiation, we must consider whether we need to accept the FCC limits on exposure to RF radiation or seek other guidance on the health and safety of the Elster Type R2S meters.

In 1985, the FCC adopted limits for human exposure to RF radiation from FCC regulated transmitters and facilities. In 1992, ANSI issued a new, more restrictive health standard for

exposure to RF radiation. In response to new ANSI standards, in 1993 the FCC proposed new updated limits for human exposure to RF radiation. *Cellular Phone Taskforce v. FCC*, 205 F3d 82, 87 (2<sup>nd</sup> Cir. 2000). These new FCC limits combined the National Council on Radiation Protection and Measurements (NCRP) standard for the maximum permitted exposure (MPE) with certain other aspects of the ANSI standard. Following enactment of the Telecommunications Act of 1996 (TCA), the FCC updated its limits for RF radiation exposure using a hybrid of the Institute of Electrical and Electronics Engineers (IEEE)/ANSI standard and the NCRP standard. Parties challenging the FCC limits raised concerns over the non-thermal effects of RF radiation exposure; however, the United States Court of Appeals for the Second Circuit upheld the FCC limits which were based only upon thermal effects of RF emissions. *Id.* at 90.

In 2010, the United States Court of Appeals for the Third Circuit upheld the dismissal of a case brought by a group of consumers claiming that cellular telephones caused adverse health effects due to their RF emissions. *Farina v. Nokia Inc.*, 625 F3d 97 (3<sup>rd</sup> Cir. 2010). In *Farina*, the court found that the FCC limits on RF radiation exposure, codified at 47 C.F.R. § 2.1093(d), pre-empted state guidelines. *Id.* The court found that 47 U.S.C. § 332(c)(7)(B)(iv) expressly pre-empts state regulation of RF for permanent infrastructure supporting cellular phones, but does not expressly exempt state regulation of RF from cellular phones. *Farina* at 120. Because the NHEC meters are not infrastructure supporting cellular telephones, section 332 of the TCA does not apply and therefore does not expressly pre-empt state regulation of RF emissions from electric meters.

Nonetheless, the *Farina* court found that, absent express statutory pre-emption, state regulation of RF emissions from cellular telephones was pre-empted because it would create

conflicts with the federal regulation. *Id.* at 125, *see, e.g. Buckman*, 531 U.S. 341, 348 (2000). Because the *Farina* court found that the FCC regulations required a balance between safety and the rapid development of an efficient communications system, the court held that allowing states to rebalance that policy decision would conflict with the federal scheme. *Farina* at 125.

Here, the FCC has weighed the competing interests relevant to RF regulations – safety and efficiency. It has reached an unambiguous conclusion by adopting the hybrid ANSE/IEEE-NCRP set of standards, *see* 47 C.F.R. §2.1093(d), and it has implemented that conclusion via a specific mandate, requiring every cell phone sold in the United States to comply with those standards, *see* 47 C.F.R. §§ 2.803(a)(1); 24.51-.52....Because the intensity of RF emission levels and the strength and range of cell phone signals are positively correlated, allowing additional state-law restrictions on these levels could impair the efficiency of the wireless market. But given the current state of the science, the FCC considers all phones in compliance with its standard to be safe. *See FCC First Order*, 11 F.C.C.R. at 15184 (“We believe that the regulations ...represent the best scientific thought and are sufficient to protect the public health.”) These standards represent a “consensus view” of the agencies with jurisdiction over RF emissions and incorporate the views of numerous expert organizations and interested parties. *Id.* at 15124. As an agency engaged in rulemaking, the FCC is well positioned to solicit expert opinions and marshal the scientific data to ensure its standards both protect the public and provide for an efficient wireless network. Allowing juries to perform their own risk-utility analysis and second-guess the FCC’s conclusion would disrupt the expert balancing underlying the federal scheme. *See Buckman*, 531 U.S. at 348, *Id.* at 125-126.

Having determined that NHEC’s meters meet the FCC RF emissions limits, we will not explore a separate state standard for RF emissions because we find that the FCC limits pre-empt a separate and potentially conflicting state standard.

### **C. RSA 374:62 (Senate Bill 266)**

Ms. Wirth contends that the basic, or standard, smart meters NHEC is installing throughout its service territory are “smart meter gateway devices” as defined by newly enacted RSA 374:62, and as a result, NHEC must obtain a signed opt-in form from the customer before installing the smart meter gateway device at the customer premises. Further, Ms. Wirth has



notified NHEC that she does not want the new meter installed at her residence. RSA 374:62

defines a smart meter gateway device as follows:

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.

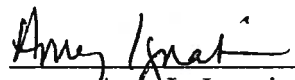
The statutory definition of a smart meter gateway device requires that the meter communicate with, monitor or control appliances, equipment or devices within the residence or business. Based upon the information provided by NHEC, the basic, or standard, smart meters it is in the process of installing through-out its service territory cannot communicate with devices behind the customer meter. Instead, these basic or standard smart meters measure only overall electricity usage at the customer's home or business. As a result, these new NHEC digital meters are not "smart meter gateway devices" as defined in RSA 374:62, and therefore, NHEC is not required to obtain an opt-in from its customers before installing these devices. 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.

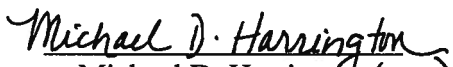
Having considered Ms. Wirth's claims of both health hazards and the applicability of the RSA 374:62 opt-in process along with the information submitted by NHEC, we find that the meters being installed by NHEC are within the FCC RF emissions limits and the RSA 374:62 opt-in process does not be apply. Accordingly, we find no basis to hold a hearing to further consider whether NHEC is acting consistent with either RSA 374-F:3, I or 374:62.

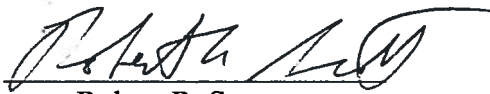
**Based upon the foregoing, it is hereby**

**ORDERED**, Ms. Wirth's request for a hearing is DENIED.

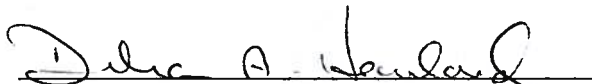
By order of the Public Utilities Commission of New Hampshire this sixth day of  
September, 2012.

  
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Amy L. Ignatius  
Chairman

  
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Michael D. Harrington (KNS)  
Commissioner

  
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Robert R. Scott  
Commissioner

Attested by:

  
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Debra A. Howland  
Executive Director