

Marilynne Martin
420 Cerromar Ct. Unit 162
Venice, FL 34293
941-244-0783
mmartin59@comcast.net

Mr. Mark Futrell
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

September 20, 2012

Re: Comments Submitted for Official Record of FPSC "Workshop" on Smart Meters,
9/20/12

Dear Mr. Futrell:

The workshop being held today is not the proper forum to serve the public's best interest. I hereby demand the Florida Public Service Commission ("Commission") order formal official public hearings on the portion of the smart grid that relates to the wireless mesh network and smart meters being installed currently throughout Florida. I demand an immediate moratorium on the rollout of such meters and their associated wireless mesh network until such time public hearings be conducted and concluded. "Opt-In" or "Opt-Out" provisions are NOT acceptable resolutions to mitigate public opposition as they do not accommodate or resolve the issues of either the multi-family dwelling or the electro-sensitive population.

My opposition to the wireless mesh network and "smart" meter can be summarized as follows:

- 1) The Commission was negligent in its duties to approve a wireless mesh network with wireless "smart" meters without public hearings.
- 2) The Commission has no legal authority to allow FP&L the authority to place network equipment on my private property that infringes on my 5th amendment rights.
- 3) Neither the Commission nor FP&L has provided adequate documentation, subject to public review, which ensures the protection of my 4th amendment rights to privacy.
- 4) The Commission failed to fulfill its statutory responsibility by not evaluating the public health impact (or obtaining an opinion from other appropriate State Agencies) of the wireless mesh network and wireless smart meters.
- 5) Wireless networks are not secure. If a bunch of college kids can hack into a US military drone, they can hack into our electrical grid.
- 6) Neither the Commission nor FP&L have provided the public with appropriate substantiation to support their claims that smart meters allow customers to achieve energy savings and there are cost benefits for this project.

- 7) The current installation process being utilized by FP&L imposes a fire hazard risk as appointments are not scheduled and inexperienced personnel are performing the installations.
- 8) Insufficient and inaccurate information is being provided to the public. Customers should be notified of the role their meter plays in the mesh network and the number of daily transmissions it will make.

The Commission previously approved FP&L's (my electric utility) smart grid without public hearings. Although the Commission has been granted oversight authority through our statutes it does not have the right to fundamentally change the nature of agreement FP&L has with its customer as well as its franchise agreements and easement agreements. In addition, aspects of this smart meter and wireless mesh network infringes upon the customer's US Constitutional rights for which the Commission has not authority to do so. The wireless mesh network and the smart meters constitutes such a fundamental significant change and as such requires public input and approval for which the Commission did not seek and should have sought. The Commission has been grossly negligent in not holding public hearings prior to approval.

Electric service and easements under current agreements provides for FP&L to run their transmission line to the home. The customer provides a meter box to FP&L to connect a meter. FP&L has easements to place a meter in that meter box and has permission to service and maintain that meter and transmission line. The purpose and substance of that meter is to collect total usage by kilowatt by the customer for billing purposes.

The Commission, without public input or approval, has fundamentally changed the nature of that agreement through its approval of the wireless mesh network. The Commission is essentially allowing FP&L to place not a meter but a piece of "network equipment", called a "smart meter" on the side of a customer's home. This "network equipment" will essentially transform that meter box into an integral part of FP&L's network management system. This meter will not only measure usage but also transmit network messages and interface with other meters. This significantly changes the original terms of agreement without property owner approval and with no just compensation to the property owner. The Commission by granting FP&L the authority to operate their network management off the side of my home, without my participation in the negotiation and without compensation, has exceeded their authority granted them under Florida Statutes as well as infringed on my 5th amendment US Constitutional rights (illegal takings).

The Commission's decision to allow such "network equipment" to be placed on my home will also result in personal financial damage to me as well as impose involuntary harmful RF radiation into my home. As a multi-dwelling unit owner, who has a bank of these meters off my bedroom wall, I believe the placement of FP&L's "network equipment" on my wall will immediately devalue my dwelling due to the amount of toxic pulsed RF radiation that will be emitted into my home as well as have serious negative consequences to my health.

Another fundamental change I believe that has taken place is the information that is being taken from my home by this “network equipment” (aka smart meter) by FP&L. Currently FP&L has access and the right to the total kilowatts (usage) I consume. My research into discovery found in other states, indicates that the utilities may be taking through these “smart meters” much more information than “total usage”. Please read and refer to “SMART METERING & PRIVACY: EXISTING LAW AND COMPETING POLICIES, A REPORT FOR THE COLORADO PUBLIC UTILITIES COMMISSION”, Prepared by Elias Leake Quinn Spring 2009.

The above report indicates that utilities have ability through use of software to determine what appliances are being used without “smart” appliances. An article called “Experts – Smart Grid Poses Privacy Risks” in the Washington Post states “At a recent smart grid conference in Madrid, FPF co-chair Jules Polonetsky showed how researchers have already mapped unique load patterns of different equipment, showing that for instance washing machines pull power in different ways than other devices (graphic below courtesy FPF).” “In an interview with Security Fix, Polonetsky said some utilities have adopted the stance that existing regulations already prevent them from sharing customer data without prior authorization. But he noted that as power companies transition to the smart grid, those utilities are going to be collecting -- and potentially retaining -- orders of magnitude more data on their customers than ever before.”

The public has not yet been given or had the opportunity to find out exactly what information FP&L’s new “network equipment” referred to as a “smart meter” is collecting from the home. Public hearings are needed for such discovery. Any information beyond total usage from “x” hour to “x” hour constitutes a fundamental change in the agreement with the customer and requires permission from the customer in order to not violate our 4th amendment rights (illegal search and seizure).

The Commission failed to carry out proper due diligence as it relates to public health when approving the wireless mesh network and wireless smart meters. As Walter Clemence of the Commission staff stated in an e-mail to me on June 6, 2012, the Commission contends that “the FCC has jurisdiction over the health effects from smart meters.” This is not correct. The FCC does not have jurisdiction or expertise to determine health effects, especially in the State of Florida. The Commission received safety jurisdiction over all electric utilities in 1986, as stated in Florida Statute 366.04:

Jurisdiction of Commission: 366.04 (6) The commission shall further have exclusive jurisdiction to prescribe and enforce safety standards for transmission and distribution facilities of all public electric utilities, cooperatives organized under the Rural Electric Cooperative Law, and electric utilities owned and operated by municipalities. In adopting safety standards, the commission shall, at a minimum:

- (a) Adopt the 1984 edition of the National Electrical Safety Code (ANSI C2) as initial standards; and*
- (b) Adopt, after review, any new edition of the National Electrical Safety Code (ANSI C2).*

The standards prescribed by the current 1984 edition of the National Electrical Safety Code (ANSI C2) shall constitute acceptable and adequate requirements for the protection of the safety of the public, and compliance with the minimum requirements of that code shall constitute good engineering practice by the utilities. The administrative authority referred to in the 1984 edition of the National Electrical Safety Code is the commission. However, nothing herein shall be construed as superseding, repealing, or amending the provisions of s. 403.523(1) and (10)

Florida Statutes assigns responsibility to protect public health as it relates to magnetic fields from electric utility transmissions to the Florida EPA

Florida Statute 403.523(10) states:

Department of Environmental Protection; powers and duties.—The department has the following powers and duties:

(10) To set requirements that reasonably protect the public health and welfare from the electric and magnetic fields of transmission lines for which an application is filed under this act.

Florida Statutes also assigns responsibility for protecting public health as it relates to non-ionizing radiation to the Florida Department of Health

*Florida Statute 501.122 Control of nonionizing radiations; laser; penalties.— 2) AUTHORITY TO ISSUE REGULATIONS.—Except for electrical transmission and distribution lines and substation facilities subject to regulation by the Department of Environmental Protection pursuant to chapter 403, the Department of Health shall adopt rules as necessary to protect the health and safety of persons exposed to laser devices and **other nonionizing radiation**, including the user or any others who might come in contact with such radiation.*

In addition, OSHA regulations need to be considered. Many dwelling that have banks of meters in a utility room may have maintenance personnel working in these rooms. How much RF radiation exposure will they be exposed to if there are 40 meters with 2 transmitters each in that room? Is it safe for them to stay in that room for 8 hours? Was it tested to comply with OSHA guidelines?

The Commission has a responsibility for safety. Recognizing that it is not qualified to determine public health hazards regarding RF radiation, the Commission should have sought the opinions and recommendations of both the State Department of Health and the Department of Environmental Protection Agency, both of which have statutory authority and responsibility to protect the health of all Floridians. The failure to seek their consultation on the public health impacts of this wireless mesh network and smart meter and hold public hearings prior to approval of this project , and rely solely on the FCC, is gross negligence in performing your duties.

As I previously made Walter Clemence of your staff aware, the GAO released a report on July 24, 2012, GAO-12-771 – Exposure and Testing Requirements for Mobile Phones Should Be Reassessed, which states that “The Federal Communications Commission’s (FCC) RF energy exposure limit may not reflect the latest research, and testing requirements may not identify maximum exposure in all possible usage conditions.”

My further research into the adequacy of the FCC Guidelines to protect Floridians found the following:

- 1) The Federal EPA has admitted as far back as 2002 that the FCC guidelines are inadequate to cover all devices. I found the following in a US EPA Memo July 2002 to Janet Newton, EMR Network – which states http://www.emrpolicy.org/litigation/case_law/docs/noi_epa_response.pdf
 - a. “I believe it is correct to say that there is uncertainty about whether or not current guidelines adequately treat non-thermal, prolonged exposures (exposures that may continue on an intermittent basis for many years).”

- b. “The FCC’s current exposure guidelines, as well as those of the Institute of Electrical and Electronics Engineers (IEEE) and the International Commission on Non-ionizing Radiation Protection, are thermally based, and do not apply to chronic, non-thermal exposure situations.”
 - c. “The FCC’s exposure guideline is considered protective of effects arising from a thermal mechanism but not from all possible mechanisms.
Therefore, the generalization by many that the guidelines protect human beings from harm by any or all mechanisms is not justified.”
(emphasis added)
- 2) The California Dept. of Health has expressed concern about RF radiation exposures from smart meters, “The reassurance that Smart Meters emit radio frequency emf’s well below cell phones ... and therefore should be considered safe, appears to be based upon an incorrect representation of cell phone emf strength that was calculated; not measured. http://encinitas.patch.com/blog_posts/california-health-department-cites-smart-meter-health-risks-in-report
 - 3) “The limits on exposure to electromagnetic fields [EMFs] which have been set for the general public are obsolete.” Dr. Olle Johansson, researcher, MD, scientist, expert in RF radiation and health, Karolinska Institute, July, 2011
http://www.scribd.com/doc/59738917/Dr-Johansson-s-letter-re-SmartGrid-Smart-Meter-dangers-to-CPUC-7-9-2011?in_collection=3023557
 - 4) The Seletun Scientific Statement has been published in Reviews on Environmental Health (2010; 25: 307-317). The article recommends that lower limits be established for electromagnetic fields and wireless exposures, based on scientific studies reporting health impacts at much lower exposure levels. Many researchers now believe the existing safety limits are inadequate to protect public health because they do not consider prolonged exposure to lower emission levels that are now widespread.” Complete press release here: http://sagereports.com/smart-meter-rf/docs/Karolinska_Institute_press_re...
 - 5) The American Academy of Pediatrics has urged the FCC to re-evaluate its standards <http://healthland.time.com/2012/07/20/pediatricians-call-on-the-fcc-to-reconsider-cell-phone-radiation-standards/>
 - 6) Cellphone-safety advocate hopes Congress forces the FCC to update its regulations http://www.washingtonpost.com/business/economy/cellphone-safety-advocate-hopes-congress-forces-the-fcc-to-update-its-regulations/2012/08/03/e534b0ca-da7f-11e1-a3f5-b4e7667a8298_story.html
 - 7) The BioInitiative Report - A Rationale for a Biologically-based Public Exposure Standard for Electromagnetic Fields (ELF and RF) “Not everything is known yet about this subject; but what is clear is that the existing public safety standards limiting these radiation levels in nearly every country of the world look to be thousands of times too lenient. Changes are needed.” <http://youtu.be/7tZDor-co0>
 - 8) EMF Safety Network claims California smart meters violate FCC standards http://emfsafetynetwork.org/?page_id=3653
 - 9) The American Academy of Environmental Medicine in a letter to the Florida Public Service Commission dated 4/12/12 states “The existing FCC guidelines for RF Exposure that have been used to justify installation of ‘Smart Meters’ only

address thermal tissue damage. However, many studies demonstrate that significant harmful biological effects occur from non-thermal RF exposure and satisfy Hill's criteria of casualty. This means that there is a cause and effect relationship between RF emissions, which are the emissions from "Smart Meters", and adverse health effects".

- 10) Santa Cruz Health Dept. Report – "Health Risks Associated With SmartMeters" states "Meeting the current FCC guidelines only assures that one should not have heat damage from SmartMeter exposure. It says nothing about safety from the risk of many chronic diseases that the public is most concerned about such as cancer, miscarriage, birth defects, semen quality, autoimmune diseases, etc. Therefore, when it comes to non-thermal effects of RF, FCC guidelines are irrelevant and cannot be used for any claims of SmartMeter safety unless heat damage is involved." <http://emfsafetynetwork.org/wp-content/uploads/2009/11/Health-Risks-Associated-With-SmartMeters.pdf>

The above list is not meant to be all-inclusive. Upon research you find that the FCC guidelines you are relying on for my safety are outdated (haven't been updated in 16 years), only consider thermal Impacts, do not consider chronic long term exposure, and do not consider the accumulated exposure to RF radiation from other sources. Hence, the FCC guidelines are inadequate to protect the public health of Floridians and should not be the basis for which the Commission bases its decision on safety. By relying on such, the Commission has failed in its responsibility to protect the public and has not provided appropriate regulatory oversight to protect consumers, which is one of your stated goals.

Irrespective of current FCC RF guidelines, neither the Commission nor FP&L has the slightest clue what lies beyond that customer's wall (wireless routers, cordless phones, cell phones, etc.). Nor do they have knowledge as to how much RF radiation the customer was already exposed to that day outside the home (e.g. at work). This lack of data makes it virtually impossible for the Commission to consider the placement of "network equipment" containing RF transmitters on customer's walls, that are adjacent to living quarters, "safe". Unless the Commission believes, and can provide proof, that the human body can be exposed to an unlimited amount of pulsed RF radiation without any negative health impacts, you were negligent to approve FP&L's wireless mesh network and wireless smart meter. Can the Commission provide such proof to Florida residents? If not, the decision to allow a wireless mesh network as opposed to a safe wired alternative was irresponsible.

The wireless mesh network along with the wireless "smart" meter poses a serious public health hazard. In 2007, the BioInitiative Working Group, an international collaboration of prestigious scientists and public health experts from Columbia University and the University at Albany (New York), University of Washington (Seattle), the Karolinska Institute, Umea University and Orebro University Hospital (Sweden), the European Environmental Agency (Denmark) Medical University of Vienna (Austria) and Zhejiang University School of Medicine, (China) released a 650-page report citing **more than 2000 studies** that document health effects of EMFs from all sources. <http://www.bioinitiative.org/freeaccess/index.htm>

Prolonged exposure to radiofrequency and microwave radiation from cell phones, cordless phones, cell towers, WI-FI and other wireless technologies has been linked to interference with short-term memory and concentration, sleep disruption, headache and dizziness, fatigue, immune disruption, skin rashes and changes in cardiac function.

Exposure to this type of radiation over the long term will result in increased risks for cancer, neurological diseases, impairments to immune function, fertility and reproduction, and neurological function (cognition, behavior, performance, mood status, disruption of sleep, increased risk for auto collisions, etc.). Pulsed RF microwave radiation is causing damage to human DNA, harming the blood brain barrier, and producing genetic and cellular effects among other things.

The Sage Report, which can be found at <http://sagereports.com/smart-meter-rf/>, analyzed the smart meters in California and found violations of FCC limits. This report also provides the studies and expert letters that document the health hazards associated with smart meters.

In addition to human health hazards, the wireless mesh network poses a serious risk to Florida's wildlife. Electro magnetic fields can do harm to our pets, wildlife and vegetation. Many scientists believe it may be responsible for the disappearance and collapse of the honeybee colonies among other things. Florida's wildlife is one of our best assets; do we really want to jeopardize it for a wireless meter?

The wireless mesh network also poses serious security risks. All wireless networks are vulnerable to hackers. Will the IT security costs spent on maintaining and constantly updating the security on this network far exceed the projected project cost savings from eliminating meter readers? "A so-called smart grid that's as vulnerable as what we've got is not smart at all. It's a really, really stupid grid." --- Former CIA director James Woolsey in August 2011.

Since public hearings were not held on this smart grid/meters the cost-benefit analysis of this project was not subject to public scrutiny. Both the Commission and FP&L have made claims that the customer will have more information available to save energy. FP&L will be providing the customer with a dashboard that includes usage by the hour. Experts agree that this level of detail does not provide adequate information to the customer to change behaviors and hence save energy. FP&L admitted in the rate case proceedings that the traffic to this dashboard was very low, 1.9%. Smart Meters do NOT save energy. Only a change in customer behavior does.

Experts also agree that Time of Usage (TOU) rate structure is needed to provide incentives for customers to move energy usage to non-peak periods. FP&L admitted in the current rate case proceedings that the "smart meters" they are installing do not allow them to offer TOU rates to customers. A different meter or new back office software is needed in order for this to happen. Therefore the current FP&L installation of smart meters does not assist in helping to manage peak loads as claimed.

Since energy saving devices such as programmable thermostats are readily available, I fail to understand how the smart meter is cost effective. In addition, the smart meter contains a second transmitter, called a Zigbee, which will be used only for customers electing FP&L's "in-home" technologies. Why are we wasting ratepayer's money putting meters in with an additional transmitter that will not be utilized by all customers? Will all customers be forced to pay for this stranded investment or will such cost be disallowed in the rate base?

FP&L is currently installing smart meters in Sarasota. A postcard, addressed to "current resident" was sent with no specific date specifying the date they would arrive to install a meter. Many customers who had called ahead to be on the delay list had a meter installed by sub-contractors despite their request not to have one. Many customers were unaware, like my father, that a meter was installed as no one knocked on the door to alert them. A large percentage of the Sarasota residents are snowbirds and are not currently in Florida.

Installing meters without customers being home or with their knowledge that it was installed creates a fire risk, particularly if the home has old wiring. FP&L is not doing the installations. They have subcontracted the work out. In the case of Punta Gorda/Sarasota, the sub-contractors are not utilizing experienced workers and they are paying them \$2/meter. See attached copy of the Craig's List ad. These sub-contractors are telling lies to customers, such as they will be charged if they don't accept the meter or they don't have a choice. They are motivated to do as many installs a day to make money. Safety does not appear to be their priority.

As I stated earlier, the Commission is illegally allowing FP&L to place network equipment on customer's property. The Commission has failed to require FP&L to provide the customer with proper and adequate information regarding transmissions from that network equipment. FP&L is telling customers fraudulent and misleading information about the transmissions, saying they are only transmitting a few times a day.

In California, PG&E was forced by a judge to disclose the truth. See attached. It was found that the average meter was transmitting 10K transmissions a day and the maximum meter was 190K transmissions a day. FP&L should be required to disclose to the customer the exact number of transmissions that this equipment will be making per day. The customer should also be aware what role their so-called "smart" meter is playing in the mesh network, e.g. a "collector". In addition FP&L should disclose the location of all other (non-meter) mesh network equipment placed in the community along with the estimated RF radiation emissions. The public should have a right to know where the sources of RF radiation reside so they can avoid exposure. Had public hearings been held the public would have been properly informed.

As I examine what has occurred in other states, the usual escape route has been for Commissions to adopt opt out policies with associated extortion fees. Please note I consider this unacceptable. I have been put through the ringer this past month as FP&L insisted I had no legal right to delay all the meters that reside behind my head at night. I only had the legal right to delay my meter. The same problem will exist

with opt-outs. They don't resolve problems they create community problems. The Commission should not put itself in the position to pit neighbor against neighbor.

Opt out's also do not help the electro-sensitive community. I want to remind the Commission that it is estimated that approximately 3% of the population fall in this category. That is approximately 570,000 Floridians that may fall ill and experience headaches, sleeping problems, dizziness, etc. from the chronic RF radiation exposure. It is amazing that 3 people get ill from eating tainted meat or broccoli and the government goes into action recalling billions of dollars of product and writing 2,000 page "Food Modernization" Legislation but on this issue – they do nothing.

I'm an old fashion accountant/auditor. After 3 months of research on this smart grid/meter issue all I can say is it doesn't give me that warm fuzzy feeling. Something stinks and stinks pretty badly about this project. From the exemption of an Environmental Impact Study made by our DC friends to the approval of this costly project by state PSC's without public hearings showing total disregard for the public. It appears to be a big waste of ratepayer's money and better alternatives to save energy and manage peak loads should have been selected. But perhaps Jeffrey Immelt wouldn't agree because he appears to be the one benefiting most from the "smart" grid.

Do right by the public and place a moratorium on the rollout of the wireless mesh network and smart meters and hold public hearings. A wired smart meter is the only safe meter.

Sincerely,

Marilynne Martin

Attachments

cc:

Gov. Rick Scott

Attorney General Pam Bondi

Florida State Surgeon General Dr. Armstrong

[sarasota craigslist](#) > [jobs](#) > [skilled trades/artisan jobs](#)

[email this posting to a friend](#)

Avoid scams and fraud by dealing locally! Beware any deal involving Western Union, Moneygram, wire transfer, cashier check, money order, shipping, escrow, or any promise of transaction protection/certification/guarantee. [More info](#)

please flag with care: [?]

[miscategorized](#)

ELECTRIC METER INSTALLER (SARASOTA/PUNTA GORDA)

[prohibited](#)

[spam/overpost](#)

[best of craigslist](#)

Date: 2012-05-08, 11:07AM EDT

Reply to: j4j4g-3003165069@job.craigslist.org [Errors when replying to ads?]

Vanguard Utility Service, Inc. has a current opportunity for AMI "Smart Meter" electric meter installers in the Sarasota/Punta Gorda Areas. The technician will be responsible for checking the existing Electric meter, replacing with a new digital electric meter and doing a final test of the meter. You will need to explain to the customer that we are doing a meter change out and answer any questions. Must accurately collect customer data and document the installations in writing and with handheld device. Complete training will be provided, but some basic understanding of field equipment installs is a plus. The technicians will work on a current meter change out project for FPL. Must be dependable, detail oriented, have good verbal skills and a neat/clean appearance. Must be comfortable interacting with customers and quality oriented. Must have the ability to use assigned tools properly and work within safety guidelines.

Compensation: \$30K-50K with benefits package.

(Opportunity for advancement)

Pay sheet: 2.00 per meter the avg. installer complete 90-120 meters a day.

60 meters a day = 120.00 a day x 5 = 600.00 a week x 52 = 31,200 a year
 70 meters a day = 140.00 a day x 5 = 700.00 a week x 52 = 36,400 a year
 80 meters a day = 160.00 a day x 5 = 800.00 a week x 52 = 41,600 a year
 90 meters a day = 180.00 a day x 5 = 900.00 a week x 52 = 46,800 a year
 100 meters a day = 200.00 a day x 5 = 1000.00 a week x 52 = 52,000 a year
 110 meters a day = 220.00 a day x 5 = 1100.00 a week x 52 = 57,200 a year
 120 meters a day = 240.00 a day x 5 = 1200.00 a week x 52 = 62,400 a year
 130 meters a day = 260.00 a day x 5 = 1300.00 a week x 52 = 67,600 a year

Qualifications:

Must be a High School graduate, or the Equivalent.

Must have a valid Driver's License.

Must have covered Pickup truck, SUV, Van, Station wagon or equivalent vehicle.

Must be detail oriented, have good verbal skills and a neat/clean appearance.

Must be comfortable interacting with customers and quality oriented.

Must have the ability to use assigned tools properly and work within safety guidelines.

Must have the ability to travel extensively to job assignments in Sarasota to Punta Gorda area

Paid Training will be provided

Must pass drug screening and background check. If you cannot pass both DO NOT APPLY.

Vanguard Utility Service values diversity and is an equal opportunity employer.
Apply in person at: Contact Larry Newton for directions 270-570-4776
611 CHARLOTTE ST PUNTA GORDA, FL 33950

- Location: SARASOTA/PUNTA GORDA
- Compensation: \$30K-50K with benefits package and paid training
- Principals only. Recruiters, please don't contact this job poster.
- Please, no phone calls about this job!
- Please do not contact job poster about other services, products or commercial interests.

PostingID: 3003165069

Copyright © 2012 craigslist, inc. [terms of use](#) [privacy policy](#) [feedback forum](#)

Question 2:

How many times in total (average and maximum) is a smart meter scheduled to transmit during a 24-hour period?

Response 2:

Electric: Table 2-1 presents scheduled electric SmartMeter™ system messages and their durations. As noted in Response 1, the information presented applies only to the 900 MHz radio. Table 2-1 presents data for all “scheduled” messages; i.e., those inherently required to sustain communications in the network that occur routinely without user intervention. “Non-Scheduled” messages created only at non-recurring times are addressed in Response 3.

TABLE 2-1

Electric System Message Type [a]	Transmission Frequency Per 24-Hour Period: Average [b]	Transmission Frequency Per 24-Hour Period: Maximum (99.9th Percentile) [c]
Meter Read Data	6	6
Network Management	15	30
Time Synch	360	360
Mesh Network Message Management	9,600	190,000
Weighted Average Duty Cycle	45.3 Seconds⁴	875.0 Seconds

The electric system message types are defined as:

- Meter Read Data refers to the messages generated by each meter to transmit energy usage data.
- Network Management refers to network tasks that need to be performed to maintain the health of the network (e.g., route establishment).
- Time Synch refers to network administration messages needed to update the internal clock in the NIC.
- Mesh Network Message Management refers to activities required to forward routed messages.

Gas: Table 2-2 presents scheduled gas SmartMeter™ system messages and their durations.

TABLE 2-2

Gas System Message Type [a]	Transmission Frequency Per 24-Hour Period: Average [b]	Transmission Frequency Per 24-Hour Period: Maximum [c]
Meter Read Data	4.228	4.305
Weighted Average Duty Cycle	0.676 Seconds	0.689 Seconds

⁴ As stated in Response 1, a small number of electric SmartMeters™ communicate somewhat longer than 45 seconds-per-day, which resulted in an overall mean duration of approximately 62 seconds.