BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of EMF Safety Network for Modification of D.06-07-027 and D.09-03-026.
Application No. 10-04-018
(Filed April 6, 2010)

PACIFIC GAS AND ELECTRIC COMPANY'S MOTION FOR IMMEDIATE DISMISSAL OF APPLICATION 10-04-018 AND DECLARATION OF DANIEL M. PARTRIDGE IN SUPPORT OF PACIFIC GAS AND ELECTRIC COMPANY’S MOTION FOR IMMEDIATE DISMISSAL OF APPLICATION 10-04-018

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Dated: May 17, 2010
PACIFIC GAS AND ELECTRIC COMPANY’S MOTION FOR IMMEDIATE DISMISSAL OF APPLICATION 10-04-018 AND DECLARATION OF DANIEL M. PARTRIDGE IN SUPPORT OF PACIFIC GAS AND ELECTRIC COMPANY’S MOTION FOR IMMEDIATE DISMISSAL OF APPLICATION 10-04-018


I. INTRODUCTION

Network's Application seeks to reopen PG&E's SmartMeter™ proceedings for the purpose of examining the health, environmental and safety impacts of radio frequency ("RF") emissions. Network asserts that it wants the CPUC to address RF issues because it is dissatisfied with the Federal Communications Commission ("FCC") regulations related to RF exposure.

Network's Application should be dismissed immediately. The field of RF regulation is pre-empted by federal law. The FCC is the body that is responsible for RF regulation. All meters with SmartMeter™ technology have been licensed or certified by the FCC. Under the Supremacy Clause of the United States Constitution, the CPUC is precluded from regulating RF emissions. Any proceeding on this subject would be a waste of the CPUC's time and resources. The CPUC has recognized this point in a prior proceeding.
Furthermore, Network's alarmist attitude about SmartMeter™ technology is misplaced. Under normal conditions at a distance of 10 feet, the momentary exposure to RF energy during a transmission burst from a meter with SmartMeter™ technology is less than $\frac{1}{6000}$ of the safety limits set by the FCC. (Decl. para 7) Network admits repeatedly in its Application that there has been a proliferation of RF devices in our society. There are many, many RF devices, such as cell phones, that could have a far greater potential impact on human beings than the SmartMeter™ technology. If Network nevertheless wishes to address its concerns about SmartMeter™ RF emissions it should be directed to the FCC.

II. FACTUAL BACKGROUND

A. History of the SmartMeter™ Project

On July 20, 2006, PG&E's original AMI Project was approved in D.06-07-027, and on March 13, 2009, PG&E’s SmartMeter™ Upgrade Program was approved in D.09-03-026. Since then over 5.5 million meters have been installed. Deployment is scheduled to be completed in 2012. (Decl. para 3)

B. Description of a SmartMeter™

PG&E’s electric SmartMeter™ technology is a sold-state electric meter that includes two low power radios embedded in it. It is capable of both transmitting and receiving a signal. The primary radio uses RF signals in the 902-928 MHz band to communicate with PG&E over the SmartMeter™ electric mesh network. The secondary radio, not currently in use but which can be made operational in the future, operates in the 2.4-2.5 GHz band. The secondary radio is only enabled if the customer decides to implement an integrated Home Area Network (“HAN”) that uses utility and meter data. A customer may in the future choose this option to support home energy management systems and radio-enabled smart appliances. Additionally, PG&E’s SmartMeter™ gas meter technology uses low power radio frequency signals in the 450–470 MHz band.
PG&E’s gas SmartMeter™ module does not communicate with a Home Area Network. (Dec. para 4)

SmartMeter™ employs commonplace radio technology similar in nature to the radio technology used in the myriad of radio devices that are in widespread use in our homes, businesses, commercial establishments, and public facilities. Meters with a SmartMeter™ radio are typically located on the outside of buildings at some distance away from human inhabitants, and transmit for a very short duration. In contrast, many of the other radio devices used in our society operate in close proximity to humans and emit radio frequency energy for extended time periods.

Exposure to radio frequency energy from SmartMeter™ technology is considerably less than the exposure from other radio devices in widespread use.

Commercial radio devices in common use include:

- Cellular Telephones – Held in contact with the human body while transmitting radio frequency energy for extended periods of time
- Bluetooth Earpieces for Cellular Telephones – Inserted in the ear while transmitting radio frequency energy for extended periods of time
- Cordless Telephones – Held in contact with the human body while transmitting radio frequency energy for extended periods of time
- Laptop Computers – “Wi-Fi” radios are incorporated into laptop computers to provide network and/or Internet access, and are used close to the human body while transmitting radio frequency energy for extended periods of time
- “Wi-Fi” Access Point – “Wi-Fi” radios are incorporated into routers, cable modems, DSL modems, and other consumer electronic equipment, and are used in the same room as humans while transmitting radio frequency energy for extended periods of time
Remote Keyless System – Used to lock and unlock automobile doors, held in the human hand while transmitting a burst of radio frequency energy

Remote Garage Door Opener – Operated at arm’s length from the human body while transmitting radio frequency energy to open and close overhead door

Microwave Oven – Used in residential kitchens in the same room as humans, while producing high power levels of radio frequency energy for extended periods of time, with some RF energy leakage from the oven door

Wireless Baby Monitors – Used in the presence of babies to transmit sound to a remote monitor, emitting radio frequency energy for extended periods of time

Wireless Holter Monitors – Used in hospitals and home health care situations, worn on the human body, to record and transmit medical data to a remote monitor through radio frequency transmissions

Wireless Infusion Pumps – Used in hospitals and home health care situations, in close proximity to the human body, to control the infusion of drugs

Motion Detectors – Used in residential and industrial settings to detect the presence of intruders through the transmission and reflection of radio frequency energy from a human body

Wireless Security Systems – Used widely in residential settings to alert inhabitants of intrusions through doors and windows while transmitting radio signals through the home

Wireless Thermostats – Used in residential and industrial settings, in the same room as humans, to transmit sensed temperature to a remote controller
• Wireless Smoke Detectors – Used in residential and industrial settings, in the same room as humans, to transmit a warning signal to a remote controller

There are many other wireless devices in commonplace use in addition to the radio devices listed above. These devices often involve more frequent radio transmission, emit radio frequency energy for longer periods of time and operate in closer proximity to humans, than PG&E SmartMeter™ devices. (Decl. para 6)

C. Regulation of Radio Frequency Devices

In the United States, the Federal Communication Commission (FCC) has regulatory authority over radio frequency equipment and the use of the radio spectrum. FCC regulations are pervasive and comprehensive. Before any commercial radio device can be used in the United States, the device must be certified and in some cases licensed by the FCC.

Certain devices such as cell phones operate in frequency bands that are licensed specifically and exclusively (or at least preferentially) for such use. Other devices such as Bluetooth earpieces, Wi-Fi radios, and the SmartMeter™ technology operate in “unlicensed” frequency bands that are made available by the FCC for public use. Certification is required regardless of whether the radio operates in licensed or unlicensed frequency bands. In both cases, the FCC specifies the limit of operating conditions for the radio transmitters. Radio designs are tested in independent, accredited laboratories to verify that they meet the operating conditions imposed by the FCC. FCC operating specifications take both safety and radio interference issues into consideration.

The FCC was established by the Communications Act of 1934 as the successor to the Federal Radio Commission and is charged with regulating all non-federal government use of the radio spectrum (including radio and television broadcasting), and all interstate telecommunications (wire, satellite and cable) as well as all international communications that originate or terminate in the United States. FCC regulation is an important factor in
U.S. telecommunication policy. The FCC took over wire communication regulation from the Interstate Commerce Commission. The FCC's mandated jurisdiction covers the 50 states, the District of Columbia, and U.S. possessions. The FCC also provides varied degrees of cooperation, oversight, and leadership for similar communications bodies in other countries of North America. It has 1,899 "full-time equivalent" federal employees.\(^{1/}\)

Since 1996, the FCC has required that all wireless communications devices sold in the United States meet minimum guidelines for safe human exposure to RF, and coordinates with other federal health, safety and environmental agencies to help determine safe levels for human exposure to RF energy. In adopting its guidelines for RF exposure, the FCC considered opinions from these agencies as well as limits recommended by two non-profit, expert organizations, the Institute of Electrical and Electronics Engineers (IEEE), and the National Council on Radiation Protection and Measurements (NCRP).

A succinct explanation of FCC’s policy regarding radio frequency safety is found on the FCC Web site\(^{2/}\):

**FCC Policy on Human Exposure to Radiofrequency Electromagnetic Fields**

*The FCC is required by the National Environmental Policy Act of 1969, among other things, to evaluate the effect of emissions from FCC-regulated transmitters on the quality of the human environment. Several organizations, such as the American National Standards Institute (ANSI), the Institute of Electrical and Electronics Engineers, Inc. (IEEE), and the National Council on Radiation Protection and Measurements (NCRP) have issued recommendations for human exposure to RF electromagnetic fields. On August 1, 1996, the Commission adopted the NCRP's recommended Maximum Permissible Exposure limits for field strength and power density for the transmitters operating at frequencies of 300 kHz to 100 GHz. In addition, the Commission adopted the specific absorption rate (SAR) limits for devices operating within close proximity to the body as specified within the ANSI/IEEE C95.1-1992 guidelines. (See Report and Order, FCC 96-326) The Commission's requirements are detailed in Parts 1 and 2 of the FCC's Rules and Regulations [47 C.F.R. 1.1307(b), 1.1310, 2.1091, 2.1093]. The potential hazards associated with RF electromagnetic fields are discussed in OET*  


D. Regulations Specifically Applicable to SmartMeter™

All SmartMeter™ technology radios are regulated by the FCC\(^3/\) and certified under CFR Title 47. Part 15 of this regulation applies to electric meters and Part 90 applies to gas meters. Certification is an authorization issued by the FCC for equipment, based on representations and test data from a sample unit submitted by the applicant. Certification attaches to all of the units which are identical to the sample tested when subsequently marketed by the grantee. Consumer and various industrial electronic equipment in the U.S. are also regulated under FCC Part 15. Part 15 is applicable to any intentional, unintentional, or incidental radiator that can be operated without an individual license. FCC Part 15 also covers technical specifications, administrative requirements and other conditions relating to the marketing of FCC Part 15 devices. (Decl. para 8, 9)

The unlicensed Part 15 electric SmartMeter™ technology radios operate in the frequency ranges (e.g. 902-928 MHz and 2.4 -2.5 GHz) designated by the FCC as the “Industrial, Scientific, and Medical or ISM bands.”\(^4/\) These radios are regulated as intentional radiators under FCC Part 15 Subpart C, Section 247.\(^5/\) Thus, certification is the process used to ensure compliance. (Decl. para 10)

An FCC identification number is issued to show compliance. The identification number is included on a label that must be attached to each wireless device when it is produced. FCC Part 15 Subpart A contains specific information regarding testing and

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\(^3/\) The Electronic Code of Federal Regulations applicable to the FCC can be viewed online at [http://ecfr.gpoaccess.gov/](http://ecfr.gpoaccess.gov/), under Title 47 – Telecommunications.

\(^4/\) The detailed technical requirements under which the unlicensed Part 15 radios operate can be viewed online at [http://www.access.gpo.gov/nara/cfr/waisidx_00/47cfr15_00.html](http://www.access.gpo.gov/nara/cfr/waisidx_00/47cfr15_00.html), under Part 15.247.

\(^5/\) As defined by the FCC, an intentional radiator is “a device that intentionally generates and emits radio frequency energy by radiation or induction.”
certification, such as the scope of the rules and legal implications, definitions, and labeling. (Decl. para 11)

The various types of intentional radiators covered by Subpart C include cable-locating equipment, cordless telephones, remote control and alarm transmitters, field-disturbance sensors for opening doors, and spread-spectrum systems for wideband data transmission. The FCC Part 15 Subpart C rules for operation of radio transmitters, for the most part, are very detailed regarding fundamental field strength, power and/or power density, frequency accuracy, and permitted harmonic and spurious emissions. (Decl. para 12, 13)

The licensed Part 90 gas SmartMeter™ technology radios operate in a frequency band (e.g. 450-470 MHz) designated by the FCC for “Public Safety, Industrial/Business Radio Pool, and for Radiolocation Radio Services.” Licensing relates to FCC permission to use a particular frequency. Certification is one of the methods of enforcement to ensure that equipment complies with FCC regulations. Part 90 states the conditions under which such radio communications systems may be licensed and used. In a manner analogous to Part 15 radios, the licensed Part 90 SmartMeter™ radios are also certified by an accredited laboratory to operate within the technical guidelines imposed in the Part 90 regulations. Certification attaches to the units subsequently marketed by the grantee, and an FCC identification number is issued to show compliance. (Decl. para 14, 15)

If the FCC determines that exposure from an approved wireless device exceeds its guidelines, it can withdraw its approval. In addition, if the FDA determines that RF exposure from a device is hazardous, it can require the manufacturer of the device to notify users of the health hazard and to repair, replace, or recall the device. (Dec. para 16)

6/ The detailed technical requirements under which the licensed Part 90 radios operate can be viewed online at http://www.access.gpo.gov/nara/cfr/waisidx_00/47cfr90_00.html, under Part 90.203-219.

7/ FCC identification numbers for certified radio devices can be researched on the FCC equipment authorization system at https://fjallfoss.fcc.gov/oetcf/eas/
E. **Nature of Relief Requested by Network in its Application**

Network admits that the FCC has safety standards for RF emissions. It asserts that Network believes the FCC RF Safety Standards are "inadequate to protect public health from long-term chronic RF exposures to Smart Meters." (Application at p. 10) Network clearly hopes to convince the CPUC to adopt RF standards that are more stringent and thus inconsistent with the FCC's standards. Network admits that there has been a proliferation of RF devices in our society (Application pp. 5, 10, 14), and further states that a "SmartMeter™ is similar to a cell phone." (Application p. 14).

III. **THE ISSUE OF RF RAISED BY APPLICANT IS PREEMPTED BY FEDERAL LAW**

Network's alleged interest in the SmartMeter™ case and the issue it wants the CPUC to consider is the "... safety impacts of chronic RF exposure from the SmartMeter™ program ..." This subject is both specifically covered by federal legislation and is comprehensively regulated by the FCC. Any effort by the CPUC to regulate in this area would be preempted by federal law. Because action by the CPUC in this area would be contrary to federal law, it should dismiss the application. As discussed infra, the CPUC has already recognized this proposition, and there is absolutely no reason to revisit it here.

As articulated in the case of Capitol Cities Cable, Inc. v. Crisp⁸, "Under the Supremacy Clause, U.S. Const., Art. V, cl.2, the enforcement of a state regulation may be pre-empted by federal law in several circumstances: first, when Congress, in enacting a federal statute, has expressed a clear intent to pre-empt state law, . . .; second, when it is clear, despite the absence of explicit pre-emptive language, that Congress has intended, by legislating comprehensively, to occupy an entire field of regulation and has thereby left no room for the states to supplement federal law, . . ., and finally when compliance with both state and federal law is impossible, . . ., or when the state law stands as an obstacle to the

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⁸/ 467 U.S. 691, 698 (1984)
accomplishment and execution of the full purposes and objectives of Congress." By any of these standards, CPUC efforts to regulate RF emissions would be preempted.

Section 151 of The Communications Act\(^9\) both articulates the interstate nature of the act and also creates the FCC. Section 151(i) describes the FCC's duties and powers as follows: "The Commission may perform any and all acts, make such rules and regulations, and issue such order, not inconsistent with this Act, as may be necessary in the execution of its functions." In 1996 Congress amended the act and specifically pre-empted state and local governments from regulating wireless service facilities based on concerns about the RF emissions that those facilities produce.

No state or local government or instrumentality thereof may regulate the placement, construction and modifications of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions. (emphasis added)\(^10\)

Case law confirms that The Communications Act expressly pre-empts state law related to RF regulation. See for example, Blackburn v. Doubleday Bread Co., 353 N.W. 2\(^{nd}\), 550, 552 (Minn. 1984), Still v. Michaels, 803 P.2d 124, 125 (Ariz. Ct. App. 1990) and Metro PCS, Inc. v. City and County of S.F., 400 F3d 715, 736. The court in Blackburn stated the following:

The Federal Communications Act constitutes a plenary exercise of the federal government's power to occupy and regulate the broadcast industry. See generally Note, State Regulation of Radio and Television, 73 Harv.L.Rev. 386 (1959). Pursuant to that Act, Congress delegated comprehensive powers to the FCC to administer a "unified and comprehensive regulatory system for the industry."


Among its duties, the FCC grants licenses and allocates "frequencies, hours of operation and * * * power" to broadcasters "if public convenience, interest, or necessity will be served thereby." 47 U.S.C. § 307; see also Note, supra, at 387. In carrying out its duties, it is authorized to "[m]ake such regulations not inconsistent with law as it may deem necessary to prevent interference between stations." 47 U.S.C. § 303(f).

As previously discussed, the FCC has promulgated a comprehensive regulatory scheme that covers RF exposure. For example, it had adopted rules governing exposure to RF emissions. These FCC rules cover both the public and workers, and established maximum permissible exposure ("MPE") limits for humans in each of these categories.11 The worker or occupational limit covers persons who are exposed because of their work and who are made aware of the potential for exposure. The public category covers situations where people may not be aware of the exposure or cannot exercise control over their exposure.12

In addition, the FCC itself has made clear that its regulatory authority completely preempts state authority to regulate RF:

Pursuant to Section 332(c)(7), and consistent with the Commission's general authority to regulate the operation of radio facilities, State and local governments are broadly preempted from regulating the operation of personal wireless service facilities based on RF emission considerations. Thus, for example, a local government may not require a facility to comply with RF emissions or exposure limits that are stricter than those set forth in the Commission's rules and it may not restrict how a facility authorized by the Commission may operate based on RF emissions or any other cause. (emphasis added.)13

Network in its Application has requested that the CPUC undertake a comprehensive review of "RF health environmental, and safety impacts" (See Section 4, Requested Relief, pp. 5-6). It admits that it is seeking this action because it is dissatisfied

11/ 47 C.F.R.§1.1310
12/ 47 C.F.R.§1.1310, Note 1 to Table 1
with FCC regulations. See, for example Section 5.3 Existing Safety Standards at p. 10 wherein it states: "Network believes the FCC RF Safety Standards are inadequate to protect public health from long-term chronic RF exposures to Smart Meters." However, the law is clear that the CPUC does not have the power to second-guess the FCC in this manner. Because this field is pre-empted, any action by the CPUC would be a complete waste of its resources. The CPUC recognized this point in D.06-04-070, wherein it stated the following:

**B. Health Effects**

CARE's comments focus on the biological effects of radio frequency radiation, and possible health impacts of BPL. (CARE Opening Comments, pp. 1-8.) CARE claims that there may be adverse health effects from BPL and that evidentiary hearings are therefore warranted. (Id. pp. 4-8.)

SDG&E and CTIA oppose these hearings. SDG&E notes that the FCC has exercised jurisdiction in the area so the potential health effects of radio frequency radiation, and argues that CARE should address its concerns to that agency. (SDG&E Reply Comments, pp. 15-17.) CTIA contends that the issues identified by CARE are subject to exclusive federal regulation by the FCC, and accordingly this Commission's ability to consider such issues is preempted by federal law. (CTIA Reply Comments, pp. 1-2.) CTIA adds that CARE's claims of adverse health effects are unfounded. (Id., pp. 2-4.)

SDG&E and CTIA are correct that the health effects of radio frequency radiation is an issue subject to federal, rather than state, jurisdiction.48 In particular, Section 704 of the Telecommunications Act of 1996 states that "No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's [FCC's] regulations concerning such emissions."48 Moreover, "personal wireless services" and "personal wireless facilities" are defined in a

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47/ CARE was provided an opportunity to respond to CTIA's jurisdictional arguments, but was largely unable to do so. (PHC Transcript, p. 25.)

particularly broad way that includes the facilities associated with the deployment of BPL.\textsuperscript{49}
In addition, concerning the radio waves used in the transmission of the BPL within the electric wires, the FCC has jurisdiction over this service. The FCC has stated that "As Access BPL systems use radio frequencies for interstate communications purposes over wire, this Commission has full jurisdiction over such transmissions."\textsuperscript{50}

We note that the FCC, as the agency that authorizes and licenses transmitters and facilities that generate radio frequency radiation, has addressed the potential biological effects of radiofrequency electromagnetic fields through technical bulletins.\textsuperscript{51} Accordingly, we do not address the issue here, and we do not reach the substantive issue of whether there are potential health effects from the deployment and use of BPL because it clearly lies outside our jurisdiction.

On March 6, 2006, CARE filed a motion seeking CEQA review of the effects of radio frequency emissions. As this discussion makes clear, we lack jurisdiction over this matter. Accordingly, CARE's March 6 motion is denied.

Network (in Section 5.1) also criticizes the CPUC for not addressing RF in the original SmartMeter™ cases. Network's complaint is misplaced because there is no action the CPUC could have taken. Network's Application should be dismissed forthwith.

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\textsuperscript{49} 47 U.S.C. § 332(c)(7)(C) states that: C DEFINITIONS. For the purposes of this paragraph: (i) the term "personal wireless services" means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange services, unlicensed wireless services, and common carrier wireless exchange access services; (ii) the term "personal wireless service facilities" means facilities for the provision of personal wireless services; and (iii) the term "unlicensed wireless service" means the offering of telecommunications service using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services (as defined in section 303 (v)).

Thus, this Commission cannot regulate the placement of these devices based on the effects of radio frequency emissions to the extent that such facilities and devices comply with FCC regulations.

\textsuperscript{50} See in the matter of Amendment of Part 15 regarding new requirements and measurement guidelines for Access Broadband over Power Line System, ET Docket No. 04-37; Carrier Current Systems, including Broadband over Power Line Systems, ET Docket No. 03-104, Report and Order, October 28, 2004 (Final rule; 70 FR 60742; October 19, 2005; Effective date 10/19/2005; Eff. Date; 70 FR 56856, September 29, 2005; Eff. Date 7/22/05).

IV. CONCLUSION

For the foregoing reasons, PG&E respectfully requests that Network's Application be dismissed.

Respectfully Submitted,

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By: /s/ J. MICHAEL REIDENBACH

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Dated: May 17, 2010 PACIFIC GAS AND ELECTRIC COMPANY
BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application 10-04-018
(Filed April 6, 2010)

DECLARATION OF DANIEL M. PARTRIDGE IN
SUPPORT OF PACIFIC GAS AND ELECTRIC
COMPANY’S MOTION FOR IMMEDIATE DISMISSAL
OF APPLICATION 10-04-018

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Dated: May 17, 2010

Attorney for
PACIFIC GAS AND ELECTRIC COMPANY
I, Daniel M. Partridge, declare as follows:

1. I am the Manager of SmartMeter™ Engineering at Pacific Gas and Electric Company ("PG&E"). I am responsible for the technical specifications of the systems PG&E purchases for the SmartMeter™ Project, certifying that specifications are met, and resolving technical issues as systems are deployed. Various groups report to me, including the SmartMeter Project Network Engineering Group, which is responsible for Radio Frequency (RF) engineering.

2. The purpose of my declaration is to provide background about the SmartMeter™ Project, to describe the makeup of a SmartMeter™ system and to discuss how SmartMeter™ technology is regulated.

BACKGROUND ABOUT THE SMARTMETER™ PROJECT

3. On July 20, 2006, PG&E’s original AMI Project was approved in D. 06-07-027, and on March 13, 2009, PG&E’s SmartMeter™ Upgrade Program was approved in D. 09-03-026. To date, more than 5.5 million meters have been installed. Deployment is scheduled to be completed in 2012.
MAKEUP OF A SMARTMETER™

4. PG&E’s electric SmartMeter™ technology is a solid-state electric meter that includes two low power radios embedded in it. It is capable of both transmitting and receiving a signal. The primary radio uses RF signals in the 902-928 MHz band to communicate with PG&E over the SmartMeter™ electric meter mesh RF network. The secondary radio is not currently in use but can be operational in the future. This 2.4 GHz radio is only enabled if the customer decides to implement an integrated Home Area Network (“HAN”) that uses utility and meter data. A customer may in the future choose this option to support home energy management systems and radio-enabled smart appliances. Additionally, PG&E’s SmartMeter™ gas meter technology uses low power radio frequency signals in the 450–470 MHz band. PG&E’s gas SmartMeter™ module does not communicate with a Home Area Network.

5. SmartMeter™ employs commonplace radio technology similar in nature to the radio technology used in the myriad of radio devices that are in widespread use in our homes, businesses, commercial establishments, and public facilities. The SmartMeter™ radio is typically located on the outside of buildings at some distance and blocked by walls from human inhabitants. Also it transmits for a very short duration. In contrast, many of the other radio devices used in our society operate in close proximity to humans and emit radio frequency energy for extended time periods.

6. Exposure to radio frequency energy from SmartMeters™ is considerably less than the exposure from other radio devices in widespread use. Commercial radio devices in common use include:
   a. Cellular Telephones – Held in contact with the human body while transmitting radio frequency energy for extended periods of time
   b. Bluetooth Earpieces for Cellular Telephones – Inserted in the ear while transmitting radio frequency energy for extended periods of time
   c. Cordless Telephones – Held in contact with the human body while transmitting radio frequency energy for extended periods of time
d. Laptop Computers – “Wi-Fi” radios are incorporated into laptop computers to provide network and/or Internet access, and are used close to the human body while transmitting radio frequency energy for extended periods of time.

e. “Wi-Fi” Access Point – “Wi-Fi” radios are incorporated into routers, cable modems, DSL modems, and other consumer electronic equipment, and are used in the same room as humans while transmitting radio frequency energy for extended periods of time.

f. Remote Keyless System – Used to lock and unlock automobile doors, held in the human hand while transmitting a burst of radio frequency energy.

g. Remote Garage Door Opener – Operated at arm’s length from the human body while transmitting radio frequency energy to open and close overhead door.

h. Microwave Oven – Used in Residential kitchens in the same room as humans, while producing high power levels of radio frequency energy for extended periods of time, with some RF energy leakage from the oven door.

i. Wireless Baby Monitors – Used in the presence of babies to transmit sound to a remote monitor, emitting radio frequency energy for extended periods of time.

j. Wireless Holter Monitors – Used in hospitals and home health care situations, worn on the human body, to record and transmit medical data to a remote monitor through radio frequency transmissions.

k. Wireless Infusion Pumps – Used in hospitals and home health care situations, in close proximity to the human body, to control the infusion of drugs.

l. Motion Detectors – Used in residential and industrial settings to detect the presence of intruders through the transmission and reflection of radio frequency energy from a human body.

m. Wireless Security Systems – Used widely in residential settings to alert inhabitants of intrusions through doors and windows while transmitting radio signals through the home.

n. Wireless Thermostats – Used in residential and industrial settings, in the same room as humans, to transmit sense temperature to a remote controller.

o. Wireless Smoke Detectors – Used in residential and industrial settings, in the same room as humans, to transmit a warning signal to a remote controller.

There are many other wireless devices in commonplace use in addition to the radio devices listed above. These devices often involve more frequent radio transmission, emit radio frequency energy for longer periods of time and operate in much closer proximity to humans, than the PG&E SmartMeter™ devices.
7. SmartMeter™ emissions will result in exposures that are very small compared to existing exposure regulations. For the electric SmartMeter™, the RF fields at 10 feet or beyond will be less than 0.1 microwatts per square centimeter. When compared to the FCC regulation on exposure which is 600 microwatts per square centimeter for the 900 MHz band, the exposure at 10 feet is 1/six thousandth of safety limits set by the FCC.

REGULATIONS SPECIFICALLY APPLICABLE TO SMARTMETER™

8. All SmartMeter™ technology radios are regulated by the FCC and certified under CFR Title 47. Part 15 of this regulation applies to electric meters and Part 90 applies to gas meters.

9. Certification is an authorization issued by the FCC for equipment, based on representations and test data from a sample unit submitted by the applicant. Certification attaches to all of the units which are identical to the sample tested when subsequently marketed by the grantee. An FCC identification number is issued to show compliance. The identification number is included on a label that must be attached to each wireless device when it is produced.

10. Consumer and various industrial electronic equipment in the U.S. are also regulated under FCC Part 15. Part 15 is applicable to any intentional, unintentional, or incidental radiator that can be operated without an individual license. FCC Part 15 also covers technical specifications, administrative requirements and other conditions relating to the marketing of FCC Part 15 devices.

11. Electric SmartMeters™ are certified under FCC Part 15 and subpart A contains specific information regarding testing and certification, such as the scope of the rules and legal implications, definitions, and labeling. Gas SmartMeters™ are similarly certified but under FCC Part 90 and its associated rules.

12. The Part 15 electric SmartMeter™ radios operate in the frequency ranges (e.g., 902-928 MHz and 2.4-2.5 GHz) designated by the FCC as the “Industrial, Scientific, and Medical or ISM bands.” These radios are regulated as intentional radiators under FCC Part 15 Subpart C, Section 247.
13. The various types of intentional radiators covered by Subpart C include cable-locating equipment, cordless telephones, remote control and alarm transmitters, field-disturbance sensors for opening doors, and spread-spectrum systems for wideband data transmission. The FCC Part 15 Subpart C rules for operation of radio transmitters, for the most part, are very detailed regarding fundamental field strength, power and/or power density, frequency accuracy, and permitted harmonic and spurious emissions.

14. The Part 90 gas SmartMeter™ radios operate in a frequency band (e.g. 450-470 MHz) designated by the FCC for “Public Safety, Industrial/Business Radio Pool, and for Radiolocation Radio Services.” Part 90 states the conditions under which such radio communications systems may be licensed and used. Licensing relates to FCC permission to use a particular frequency. These radios are licensed to assure users do not interfere with each others' transmissions.

15. The Industrial/Business Radio Pool covers the licensing of the radio communications of entities engaged in commercial activities, including activities such as SmartMeter™ data collection. In a manner analogous to Part 15 radios, the Part 90 SmartMeter™ radios are certified by an accredited laboratory to operate within the technical guidelines imposed in the Part 90 regulations. Certification attaches to the units subsequently marketed by the grantee, and an FCC identification number is issued to show compliance.

16. If the FCC determines that exposure from an approved wireless device exceeds its guidelines, it can withdraw its approval. In addition, if the FDA determines that RF exposure from a device is hazardous, it can require the manufacturer of the device to notify users of the health hazard and to repair, replace, or recall the device.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: May 17, 2010

/s/
Daniel M. Partridge
CERTIFICATE OF SERVICE BY ELECTRONIC MAIL OR U.S. MAIL

I, the undersigned, state that I am a citizen of the United States and am employed in the City and County of San Francisco; that I am over the age of eighteen (18) years and not a party to the within cause; and that my business address is Pacific Gas and Electric Company, Law Department B30A, Post Office Box 7442, San Francisco, CA  94120.

On the May 17, 2010, I served a true copy of:

PACIFIC GAS AND ELECTRIC COMPANY'S MOTION FOR IMMEDIATE DISMISSAL OF APPLICATION 10-04-018 AND DECLARATION OF DANIEL M. PARTRIDGE IN SUPPORT OF PACIFIC GAS AND ELECTRIC COMPANY’S MOTION FOR IMMEDIATE DISMISSAL OF APPLICATION 10-04-018

[XX] By Electronic Mail – serving the enclosed via e-mail transmission to each of the parties listed on the official service list for A. 10-04-018, A.07-12-009 and A.05-06-028 with an e-mail address.

[XX] By U.S. Mail – by placing the enclosed for collection and mailing, in the course of ordinary business practice, with other correspondence of Pacific Gas and Electric Company, enclosed in a sealed envelope, with postage fully prepaid, addressed to those parties listed on the official service list for A. 10-04-018, A.07-12-009 and A.05-06-028 without an e-mail address.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on May 17, 2010 at San Francisco, California.

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