



BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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Application of EMF Safety Network for Modification  
of D.06-07-027 and D.09-03-026.

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

**APPLICATION OF EMF SAFETY NETWORK  
FOR REHEARING OF DECISION 10-12-001**

January 5, 2011

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**APPLICATION OF EMF SAFETY NETWORK  
FOR REHEARING OF DECISION 10-12-001**

**1. Introduction and Summary**

On December 2, 2010, the Commission signed Decision (D.) 10-12-001, which dismissed the application of EMF Safety Network (Network) for modification of D.06-07-027 and D.09-03-026, in which the Commission approved installation of Smart Meters by Pacific Gas and Electric Company (PG&E). The Commission mailed D.10-12-001 to parties of record on December 6, 2010.

Pursuant to Rule 16.1 of the Commission's Rules of Practice and Procedure<sup>1</sup>, Network submits this application for rehearing of D.10-12-001. The due date for applications for rehearing is January 5, 2011. Network will file this pleading electronically on the due date.

The Commission has an obligation to ensure safe delivery of gas and electric service and has committed legal error by neglecting and deferring its utility regulation duties to the Federal Communications Commission (FCC). This Commission, not the FCC, mandated Smart Meters in the California. The Commission previously investigated the health impacts of radio frequency radiation (RF) emissions. In D.95-11-017, the Commission recognized public perception of harm, warned that financial interests should not trump health impacts, and ordered follow-up workshops on the subject. The basis for these outcomes was the possibility that a public health hazard could exist.

In 2006 the Commission upheld a mandate to carry out no and low cost electromagnetic field (EMF) reduction measures. However, the Commission failed to follow its own precautionary mandate by allowing PG&E and other utilities throughout California to deploy RF Smart Meters.

The Commission's decision to dismiss Network's application relies heavily on

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<sup>1</sup> Rule 16.1 provides that an application for rehearing shall be filed within 30 days after the date the Commission mails the order or decision.

PG&E's unsubstantiated claim that the RF emissions 10 feet away from a Smart Meter are 1/6000 of the federal standard. Network asserts that a single RF number cannot adequately describe RF exposure, due to variations in duty cycles, reflections and number of meters in the vicinity. Network provides a declaration based on a study that includes evidence of violations of the FCC standard. Network further alleges that Smart Meters in the manner deployed violate one or more conditions for FCC compliance. Network provides a declaration supporting these assertions.

The mandatory installation of radiation-emitting Smart Meters violates basic rights granted by the State of California, overburdens utility easements and violates local laws. Network asserts its legal right to practice prudent avoidance of EMF and RF devices, which the State of California advocates.

Although Network does not believe or support PG&E's position that Smart Meters are "personal wireless service facilities", if the Commission agrees with PG&E than we submit that General Order 168, Rules Governing Telecommunications Consumer Protection, applies to Smart Meters. The Consumer Bill of Rights in General Order 168 require consumer choice of vendor, full product disclosure, privacy, accurate bills, and the right to safety and security of their persons and property. Network also refers to General Order 159A, which addresses construction rules for mobile service facilities.

The Commission has a civic responsibility to address serious allegations of public health, safety and environmental impacts from RF Smart Meters. The Commission should respond to requests for a Smart Meter moratorium submitted by thousands of people, including local jurisdictions. Considering the enormity of the RF project statewide, the Commission should not bury its head in the sand by rejecting Network's application. Dismissal of the application was a wrong that must be righted.

The Commission should reopen its review of Smart Meters, order an immediate moratorium on the deployment of Smart Meters, hold public evidentiary hearings, offer shielded wire alternatives or maintain existing electromechanical meters to ensure that the Smart Meter program is consistent with delivery of safe, gas and electric service. Network requests rehearing of its application for modification of D.06-07-027 and D.09-03-026.

## **2. Background**

In D.10-12-001 the Commission granted the motion of PG&E to dismiss the application of the EMF Safety Network for modification of D.06-07-027 and D.09-03-026. The Decision Summary states that RF emissions from Smart Meters are 1/6000 of the Federal standard at 10 feet from a Smart Meter.<sup>2</sup> In its discussion the Commission deferred its responsibility to the FCC then concluded that it was not reasonable to reopen a review of Smart Meters based on alleged health impacts.<sup>3</sup>

In the application, Network alleged that the RF from Smart Meters poses serious public health, safety and environmental impacts.<sup>4</sup> Network challenged PG&E's inconsistent and unreliable claims. Network stated it did not ask for regulation of RF by the Commission.<sup>5</sup> Network asked for an independently prepared RF Emissions Study; public hearings on RF health, environmental, and safety impacts; review of actual Smart Meter program performance; authorization for customers to opt out of Smart Meter installation; and an immediate moratorium on PG&E Smart Meters.<sup>6</sup> These requests and allegations of harm are backed by substantial peer-reviewed science, anecdotal evidence, and widespread community expressions of concern.

## **3. Standard of Review**

Public Utilities Code Section 1757 provides that, when a court reviews the validity of a Commission decision, it considers, among other things, whether “the findings in the decision of the commission are not supported by substantial evidence in light of the whole record.” Rule 16.1 of the Commission’s Rules of Practice and Procedure directs applicants for rehearing to “set forth specifically the grounds on which the applicant considers the order or decision of the Commission to be unlawful or erroneous.”

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<sup>2</sup> D.10-12-001, p. 1.

<sup>3</sup> D.10-12-001, pp. 9, 15.

<sup>4</sup> D.10-12-001, p. 14, Finding of Fact 1.

<sup>5</sup> D.10-12-001, p. 5.

<sup>6</sup> Application, p. 2.

#### 4. Legal, Technical and Factual Errors

##### 4.1 The Commission Has a Responsibility to Ensure and Protect Public Safety

The Commission has the primary authority and responsibility to protect the health and safety of California ratepayers by ensuring that gas and electric utility service is safe and reliable. See Public Utilities Code § 451<sup>7</sup>, 761<sup>8</sup>, 762<sup>9</sup>, and 768<sup>10</sup>.

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<sup>7</sup> § 451 (Just and reasonable charges; Service; Rules) provides in relevant part: “Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, including telephone facilities, as defined in Section 54.1 of the Civil Code, as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public. All rules made by a public utility affecting or pertaining to its charges or service to the public shall be just and reasonable.”

<sup>8</sup> § 761 (Authority to regulate by order or rule following finding of unjust, unsafe, or inadequate practices; Requirement of compliance) provides: “Whenever the commission, after a hearing, finds that the rules, practices, equipment, appliances, facilities, or service of any public utility, or the methods of manufacture, distribution, transmission, storage, or supply employed by it, are unjust, unreasonable, **unsafe**, improper, inadequate, or insufficient, the commission shall determine and, by order or rule, fix the rules, practices, equipment, appliances, facilities, service, or methods to be observed, furnished, constructed, enforced, or employed. The commission shall prescribe rules for the performance of any service or the furnishing of any commodity of the character furnished or supplied by any public utility, and, on proper demand and tender of rates, such public utility shall furnish such commodity or render such service within the time and upon the conditions provided in such rules.” (Emphasis added.)

<sup>9</sup> § 762 (Authority to require changes in physical property of public utilities) provides in relevant part: “Whenever the commission, after a hearing, finds that additions, extensions, repairs, or improvements to, or changes in, the existing plant, equipment, apparatus, facilities, or other physical property of any public utility or of any two or more public utilities ought reasonably to be made, or that new structures should be erected, **to promote the security or convenience of its employees or the public, or in any other way to secure adequate service or facilities**, the commission shall make and serve an order directing that such additions, extensions, repairs, improvements, or changes be made or such structures be erected in the manner and within the time specified in the order.” (Emphasis added.)

<sup>10</sup> § 768 (Authority to direct use of safety devices) provides in relevant part: “The commission may, after a hearing, require every public utility to construct, maintain, and operate its line, plant, system, equipment, apparatus, tracks, and premises **in a manner so as to promote and safeguard the health and safety of its employees, passengers, customers, and the public.**” (Emphasis added.)



## **4.2 The Commission Wrongly Defers to the FCC**

The Commission commits legal error by deferring its responsibility for the deployment of Smart Meters to the FCC. The Decision defers to the FCC, stating, “The Commission generally does not delve into technical matters which fall within the expertise of another agency, in this case, the FCC.”<sup>11</sup>

Commission President and Assigned Commissioner Michael Peevey clearly makes the case for deferral to the FCC in his statements regarding dismissal of Network’s Application<sup>12</sup>. At the Commission’s December 2 public meeting, Peevey stated, “I believe that relying on the FCC in this case is reasonable, prudent and fully consistent with our responsibilities to provide safe and reliable electric service to ratepayers. We’re relying on the federal agency in this regard.” Commissioner Peevey concluded his statements by telling the audience at the hearing, “You should take these concerns to the FCC, it’s the proper body.”

Although the Conclusions of Law in D.10-12-001<sup>13</sup> only mention reasonableness generally, Commissioner Peevey made it clear that deferring to the FCC was the primary reason for dismissal.

The Commission, not the FCC, mandated RF Smart Meters in California. It is the responsibility of the Commission to “serve the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.”<sup>14</sup>

The Division of Ratepayers Advocates (DRA) concurs with Network about Commission responsibility, stating, “The FCC’s authority to regulate RF emissions does not deprive this Commission of its authority under state law to ensure that the in-state

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<sup>11</sup> D10-12-001, p. 9, Section 4.3

<sup>12</sup> CPUC meeting Archive video <http://www.californiaadmin.com/cpuc.shtml>

<sup>13</sup> D.10-12-001, p. 15.

<sup>14</sup> CPUC home page: <http://www.cpuc.ca.gov/puc/>

utility infrastructure does not jeopardize public health and welfare. As the appellate courts have consistently recognized and recently reiterated, this Commission's authority in this area is very broad. See, e.g., *SDG&E v. Covalt* (1996), 13 Cal. 4th 893; *PG&E Corp. v. CPUC* (2004) 118 Cal. App. 4th 1174, 1198 (Section 701 of the Public Utilities Code 'allows the PUC to 'do all things ... necessary and convenient' in the exercise of its authority over public utilities whether or not 'specifically designated' in the Public Utilities Code. Where the authority sought is 'cognate and germane' to utility regulation, the PUC's authority under section 701 has been liberally construed [citations omitted].)"<sup>15</sup>

#### **4.3 The Commission Has Previously Investigated EMF and RF Health Impacts**

In 1991, Commission Order Instituting Investigation 91-01-012, the Statement of Scope includes, "With this order, the Commission begins an investigation of its potential role in mitigating possible health effects of electric and magnetic fields created by electric utility power systems, or in mitigating possible health effects from fields emitted by cellular radiotelephone towers."<sup>16</sup> This investigation led to a Commission mandate to adopt EMF reduction measures. (See Section 4.4 below.)

Decision 95-11-017, which followed the investigation, states, "This order addresses the cellular phase of our EMF investigation, which considers the Commission's role in mitigating health effects, if any, of RF radiation generated by cellular utilities within the Commission's jurisdiction. Article XII, Section 6 of the California Constitution empowers the Commission to establish rules for the utilities it regulates."<sup>17</sup> Public Utilities Code Sections 451 and 1002 require the Commission to consider the impact of utilities' services on the environment and human health and

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<sup>15</sup> DRA Comments p.4 <http://docs.cpuc.ca.gov/efile/CM/126712.pdf>

<sup>16</sup> <http://www.cpuc.ca.gov/Environment/emf/emfopen.htm>

<sup>17</sup> "The commission may fix rates, establish rules, examine records, issue subpoenas, administer oaths, take testimony, punish for contempt, and prescribe a uniform system of accounts for all public utilities subject to its jurisdiction."

safety.<sup>18</sup> ... CACD [Commission Advisory and Compliance Division] shall hold informal cellular EMF and RF radiation workshops as additional health information becomes available and upon preparation of any updated EMF reports, and shall report the results of such workshops to the Commission through the resolution process.<sup>19,20</sup>

In D.95-11-017, Appendix A, Section C, Issues for Future Consideration, Issue #3, Public Perception of the Problem, states in part, “The economic considerations of this issue are significant. CACD raises the equally, if not more, important issue of health and safety of the public. Public Utilities Code Section 451 requires regulated utilities to furnish and maintain facilities as necessary to promote the health and safety of its patrons, employees and the public. Furthermore, Section 1002 requires the Commission, in granting any certificate, to consider the potential effects of the project on community values and on the environment. The Commission is clearly responsible for ensuring that the utilities it regulates are providing service and facilities that do not constitute a threat to the public or the environment. As mentioned earlier, the current research on the matter has left many questions unanswered and therefore difficult to conclude that a health and safety problem does or does not exist. Until clearer answers emerge, the Commission should consider the possibilities that a health hazard could exist and that careful monitoring as well as some interim measures would

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<sup>18</sup> PU Code Section 1002, “(a) The commission, as a basis for granting any certificate pursuant to Section 1001 shall give consideration to the following factors: (1) Community values.(2) Recreational and park areas.(3) Historical and aesthetic values. (4) Influence on environment, except that in the case of any line, plant, or system or extension thereof located in another state which will be subject to environmental impact review pursuant to the National Environmental Policy Act of 1969 (Chapter 55 (commencing with Section 4321) of Title 42 of the United States Code) or similar state laws in the other state, the commission shall not consider influence on the environment unless any emissions or discharges there from would have a significant influence on the environment of this state.”

<sup>19</sup> D.95-11-017, Ordering Paragraph 2.

<sup>20</sup> D.95-11-017 is not directly available on the Commission’s web site. See 1995 Cal. PUC LEXIS 842; 165 P.U.R.4<sup>th</sup> 403. The document can be found at the web address in footnote 16 herein.

be appropriate.” The Commission explicitly adopted the language in this appendix.<sup>21</sup>

#### **4.4 The Commission Has a Mandate to Reduce EMF**

The California EMF Program Short Factsheet on EMF states, “In 1993, the California Public Utilities Commission (CPUC) authorized the state’s investor-owned utilities to carry out ‘no and low cost EMF avoidance and measures’ in construction of new and upgraded utility projects.” A report of the history behind this authorization states, “On January 15, 1991, the PUC began an investigation to consider the Commission's potential role in mitigating health effects, if any, of EMFs created by electric utility power lines and by cellular radiotelephone facilities.”<sup>22</sup> In D.06-01-042, issued in 2006, the Commission again ordered electric utilities to implement low-cost/no-cost EMF mitigation measures, which affirmed the 1993 policy.<sup>23</sup> The Commission clearly recognized public concern and mandates EMF reduction measures in the State of California. The Commission should apply the same precautionary approach to Smart Meters.

#### **4.5 Smart Meters Violate FCC Safety Regulations**

PG&E has based its RF health and safety claims on their assertions that Smart Meters comply with all FCC regulations. In D.10-12-001 the Commission upheld – without question or investigation – PG&E’s unproven claims. The Commission wrongly accepted PG&E’s assessment of RF safety at ten feet from a single Smart Meter. Multiple factors affect RF exposure in the environment, including duty cycle, reflections and number of nearby meters. The “Assessment of Radiofrequency Microwave Radiation Emissions from Smart Meters”<sup>24</sup> demonstrates that RF levels transmitted by RF Smart Meters can violate FCC guidelines under normal conditions of installation and operation. See attached Declaration of Cynthia Sage.

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<sup>21</sup> D.95-11-017, Ordering Paragraph 1.

<sup>22</sup> Application, p. 8, footnote 7, citing PUC Actions Regarding EMFs: <http://www.cpuc.ca.gov/PUC/energy/Environment/ElectroMagnetic+Fields/action>

<sup>23</sup> D.06-01-042, p. 22, Ordering Paragraph 2.

<sup>24</sup> Sage Associates, 2011, <http://sagereports.com/smart-meter-rf/>

Furthermore, the FCC Grants of Equipment Authorization, which govern the rules upon which FCC compliance is based, warn that RF exposure compliance depends on specific conditions. As stated in Network's reply comments to the proposed decision that preceded D.10-12-001, Network further alleges that RF Smart Meters in the manner deployed by PG&E violate one or more conditions for FCC compliance.<sup>25</sup> See also attached Declaration of Sandi Maurer. The CPUC must ensure the utilities adhere to the necessary FCC conditions, within those Grants of Authorization.

#### **4.6 The Commission Decision to Mandate Smart Meters Violates State and Local Laws**

The mandatory installation of radiation-emitting Smart Meters violates basic rights granted by the State of California, overburdens utility easements and violates local laws. The California Constitution, Article 1, Declaration of Rights, Section 1 states, "All people are by nature free and independent and have inalienable rights. Among these are enjoying and defending life and liberty, acquiring, possessing, and protecting property, and pursuing and obtaining safety, happiness, and privacy." Mandatory installation of Smart Meters infringes on people's rights to protect their property, life and liberty. The radiation emitted by Smart Meters is an environmental toxin which infringes on people's rights to obtain safety. Existing utility franchise agreements generally lack specific provisions regarding RF emissions. PG&E's installation of Smart Meters and associated infrastructure goes far beyond the intentions of utility easements incorporated into most if not all franchise agreements. Furthermore, standard homeowner's insurance policies explicitly exclude RF damage from coverage, putting ratepayers at risk for hazards not contemplated in utility franchise agreements. PG&E's RF system violates at least one local wireless ordinance. For example, a City of Sebastopol wireless facility ordinance<sup>26</sup> requires that minor antennas cannot be installed within 10 feet of power lines, cannot be installed on wood structures, and are limited to

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<sup>25</sup> "Reply Comments of EMF Safety Network on Proposed Decision of ALJ Sullivan," November 22, 2010, pp. 1-3.

<sup>26</sup> Chapter 17, General Provisions Relating to Telecommunications Facility and Minor Antenna, Sections 17.100.010 (A) through (C).

six antennas in a single location. Smart Meters clearly contain minor antennas.

Network believes that EMF, and specifically RF emitted by Smart Meters, is a hazard to be avoided because it is dangerous. Network believes the forced installation of RF devices in our homes and cities is discrimination based on our beliefs and rights to practice prudent avoidance of EMF, which the State of California advocates. The California Constitution, Article 1, Declaration of Rights Section 4, states, “Free exercise and enjoyment of religion without discrimination or preference are guaranteed. This liberty of conscience does not excuse acts that are licentious or inconsistent with the peace or safety of the State. The Legislature shall make no law respecting an establishment of religion ....” One example of rights associated with personal beliefs is the right to refuse immunization of schoolchildren.<sup>27</sup>

#### **4.7 General Order 168, Consumer Bill of Rights**

In its motion to dismiss the application, PG&E asserted Federal preemption. PG&E implied that Smart Meters are personal wireless service facilities. PG&E quoted this language pertaining to preemption, “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.”<sup>28</sup>

Network disputes Federal preemption, and Network does not believe that Smart Meters are mobile services facilities. However, if the Commission accepts PG&E's

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<sup>27</sup> California Health and Safety Code, Section 120365. Immunization of a person shall not be required “for admission to a school or other institution ... if the parent or guardian or adult who has assumed responsibility for his or her care and custody in the case of a minor, or the person seeking admission if an emancipated minor, files with the governing authority a letter or affidavit stating that the immunization is contrary to his or her beliefs. However, whenever there is good cause to believe that the person has been exposed to one of the communicable diseases listed in subdivision (a) of Section 120325, that person may be temporarily excluded from the school or institution until the local health officer is satisfied that the person is no longer at risk of developing the disease.”

<sup>28</sup> PGE Motion For Dismissal, p. 10, citing 47 U.S.C. §332 (c)(7)(b)(iv).

position that Smart Meters are mobile services facilities, then Network submits that the Commission's General Order 168,<sup>29</sup> which includes a Consumer Bill of Rights, should apply to Smart Meters. The Consumer Bill of Rights states, "The Commission declares that all consumers who interact with telecommunications providers must be afforded certain basic rights, and those rights shall be respected by the Commission-regulated providers with whom they do business." The Consumer Bill of Rights includes the following directives:

"Disclosure: Consumers have a right to receive clear and complete information about rates, terms and conditions for available products and services, and to be charged only according to the rates, terms and conditions they have agreed to.

"Choice: Consumers have a right to select their services and vendors, and to have those choices respected by the industry.

"Privacy: Consumers have a right to personal privacy, to have protection from unauthorized use of their records and personal information, and to reject intrusive communications and technology.

"Public Participation and Enforcement: Consumers have a right to participate in public policy proceedings, to be informed of their rights and what agencies enforce those rights, and to have effective recourse if their rights are violated.

"Accurate Bills and Redress: Consumers have a right to accurate and understandable bills for products and services they authorize, and to fair, prompt and courteous redress for problems they encounter.

"Non-Discrimination: Every consumer has the right to be treated equally to all other similarly-situated consumers, free of prejudice or disadvantage.

"Safety: Consumers have a right to safety and security of their persons and property."

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<sup>29</sup> General Order 168, Rules Governing Telecommunications Consumer Protection.

#### **4.8 General Order 159A, Mobile Services Facilities Rules**

PG&E Smart meters use RF technology in a microwave radio system that widely exposes the public to an unprecedented increase in RF exposures. However, PG&E is not a registered telecommunications provider.

The Commission's General Order 159A outlines rules for construction of mobile radio services facilities in California. Network asserts that several of General Order 159A goals remain unaddressed by the Commission's decision to dismiss Network's application, including compliance with the California Environmental Quality Act (CEQA). General Order 159A requires that "affected citizens, organizations and local government are given reasonable notice and opportunity for input into the review process" and that "the public health, safety, welfare, and zoning concerns of local government are addressed." Network asserts that the Commission must address these considerations.

#### **4.9 The Commission Must Address Serious Public Concerns**

The Commission has received complaints from thousands of individual ratepayers and tens of city and county jurisdictions, including, but not limited to: the City and County of San Francisco; Santa Cruz County and Marin County Boards of Supervisors; Sonoma County Supervisors Efren Carrillo and Shirley Zane; the cities of Belvedere, Berkeley, Bolinas, Camp Meeker, Capitola, Cotati, Fairfax, Monte Sereno, Morro Bay, Novato, Piedmont, Richmond, Ross, San Anselmo, San Clemente, San Rafael, Santa Cruz, Sausalito, Scotts Valley, Sebastopol and Watsonville; the Peace and Freedom Party; the Marin Association of Realtors; and the Sonoma County Republican Central Committee. These organizations have called for a moratorium, a ban, the right to opt out, or are opposing Smart Meters.

Considering the serious and growing community concern over Smart Meter problems, including health, safety and environmental impacts from RF Smart Meters, Network believes the Commission has a civic obligation to investigate this issue in a public proceeding.



## 5. Conclusion

The Commission should reopen its review of Smart Meters, and provide relief to Network and other jurisdictions by ordering an immediate moratorium on the deployment of RF Smart Meters. The Commission should convene public evidentiary hearings on health, safety and environmental impacts, in order to provide ratepayers and interested parties an opportunity to ensure that Commission policies are consistent with delivery of safe gas and electric service.

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Rule 16.4(b) requires that allegations of new facts must be supported by a declaration or affidavit. Network has researched FCC regulations and has reviewed PG&E's compliance with FCC conditions. The Declaration of Sandra Maurer asserts that FCC Grants of Equipment Authorization, which govern the rules upon which FCC compliance is based, warn that RF exposure compliance depends on specific conditions, and that PG&E Smart Meters violate one or more conditions for FCC compliance. The Declaration of Cynthia Sage summarizes a report titled "Assessment of Radiofrequency Microwave Radiation Emissions from Smart Meters," which demonstrates that RF levels transmitted by publicly accessible PG&E Smart Meters can violate FCC guidelines under normal conditions of installation and operation.

Dated January 5, 2011, at Sebastopol, California.

/s/

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### **Declaration of Sandra Maurer**

I, Sandra Maurer, declare as follows:

1. I reside in Sebastopol, California. My mailing address is 200 Frankel Lane, Sebastopol, California 95472.
2. I am a residential electric and gas customer of Pacific Gas and Electric Company (PG&E). I am aware that PG&E is currently installing Advanced Metering Infrastructure gas and electric meters, known as Smart Meters, in Sonoma County and throughout PG&E's service territory.
3. I am the founder of the EMF Safety Network (Network), which is a coalition of PG&E ratepayers, business and property owners, and concerned citizens in Northern California who address health, environmental, and safety impacts associated with EMF and RF technologies.
4. In its filings in Application 10-04-018, PG&E based its radio frequency radiation (RF) safety claims on their assertions that Smart Meters comply with all Federal Communications Commission (FCC) regulations. California Public Utilities Commission Decision 10-12-001 relied on PG&E's unproven claims in its dismissal of Network's application.
5. FCC Grants of Equipment Authorization, which govern the rules upon which FCC compliance is based, warns that RF exposure compliance depends on specific conditions.
6. Network has researched FCC conditions for the following meters that PG&E is deploying: FCC ID numbers OWS-NIC514, OWS-NIC507, and LLB6327PWM.
7. Network believes that PG&E Smart Meters violate one or more FCC conditions that determine RF exposure compliance. The conditions include one or more of the following, depending on the specific make and model of Smart Meter:
  - limited single module approval requires professional installation;
  - antenna(s) must provide a separation distance of at least 20 centimeters (cm) from all persons;

- antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter;
- end-users and installers must be provided with antenna installation and transmitter operating conditions to satisfy RF exposure compliance.

8. I doubt that several weeks of installer training qualifies PG&E installers as “professionals” and also doubts that Smart Meter installers are given accurate information about RF operating conditions.

9. Many PG&E Smart Meters are installed within 20 cm of public access. In some cases the meters are installed inside homes and businesses. In many situations Smart Meters are easily accessible to the public.

10. PG&E Smart Meters are widely co-located in banks of multiple meters. Co-location also occurs within Smart Meters because electric Smart Meters include at least two internal RF antennas. One antenna is used for the mesh network system and the other is for Home Area Network (HAN) systems. Antennas are designed to work in conjunction with HAN and RF appliances and with other Smart Meters in a mesh network.

11. Antennas have separate Grants of Equipment Authorization, which suggests that manufacturers have tested antennas in isolation and individually, and not in combination, which is how the Smart Meter and the Smart Grid system were designed to operate.

12. Network believes that “end users” are utility customers. PG&E has not provided end users with antenna installation and transmitter operating conditions to satisfy RF exposure compliance. FCC conditions that specify that end users are to have no manual instructions to remove or install the device confirm Network’s belief that the end user is the customer.

13. Research into other Smart Meter Grants of Equipment Authorizations indicates there are similar violations in other utility districts in California.

Under penalty of perjury, I declare that the facts set forth above are true and correct to the best of my knowledge.

Dated January 5, 2011, at Sebastopol, California.

/s/

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Sandra Maurer

### **Declaration of Cynthia Sage, Sage Associates**

I, Cynthia Sage, declare as follows:

1. My name is Cynthia Sage. I am the owner of Sage Associates, an environmental consulting firm. My business address is 1396 Danielson Road, Montecito, California, 93108. I am providing this declaration in support of Application 10-04-018.
2. I have been a professional environmental consultant since 1972. I hold an M.A. degree in Geology, and a B.A. in Biology (Zoology) from the University of California, Santa Barbara. I am a Senior Fellow, Department of Oncology, School of Health and Medical Sciences, Örebro University, Örebro, Sweden (2008-2011).
3. I served as a member of the California Public Utilities Commission (CPUC) EMF Consensus Group (1990-1991), the Keystone Center Dialogue for Transmission Line Siting (a national group developing EMF Policy 1991-1992), and the International Electric Transmission Perception Project. Between 1977 and 1981, I served as a member of the California Board of Registration for Professional Engineers (Department of Consumer Affairs). I am a full member of the Bioelectromagnetics Society. I am the co-editor of the BioInitiative Report, and a founding member of the BioInitiative Working Group, an international scientific and public health research collaboration. I was a Lecturer in the Environmental Studies Program, University of California, Santa Barbara and a founding member of that program, and developed and taught classes in environmental impact assessment from 1972 – 1981.
4. My professional involvement in this area includes constraint analysis, environmental planning, and impact assessment on EMF and radiofrequency radiation siting issues for more than 30 years. My company has provided professional consulting services to city and county planners, private developers, state and federal agencies and schools with respect to measurement and assessment of EMF as a part of land planning and environmental constraints analysis since 1972. I have been an expert witness who testified on EMF computer modeling, impacts on people and property, EMF policy, public perception, visual impairment and land use issues, and have qualified both in state and in federal court proceedings as an expert witness in this area.

5. Sage Associates has prepared the report “Assessment of Radiofrequency Microwave Radiation Emissions from Smart Meters” (<http://sagereports.com/smart-meter-rf/>) to document radiofrequency radiation (RF) levels associated with wireless Smart Meters in various scenarios depicting common ways in which they are installed and operated.
6. The report includes computer modeling of the range of possible smart meter RF levels that are occurring in the typical installation and operation of a single Smart Meter, and also multiple meters in California.
7. FCC compliance violations are likely to occur under normal conditions of installation and operation of smart meters and collector meters in California, because the public has access to Smart Meters installed on their homes.
8. In addition to exceeding FCC public safety limits under some conditions of installation and operation, Smart Meters can produce excessively elevated RF exposures, depending on where they are installed. RF levels are predicted to be substantially elevated within a few feet to within a few tens of feet from the meter(s).
9. RF levels associated with Smart Meters under some conditions of installation and operation will produce RF power density levels that exceed those reported in some scientific studies to result in adverse health impacts, including headache, sleep disruption, restlessness, tremor, cognitive impairment, tinnitus, increased cancer risk, and cardiac problems at distances less than 500 meters from cell antennas, or at levels over 0.1 microwatts per centimeter squared. <sup>1.2.3.4.5.6</sup>
10. Consumers may also have already increased their exposures to radiofrequency radiation in the home through the voluntary use of wireless devices (cell and cordless phones), PDAs like BlackBerry and iPhones, wireless routers for wireless internet access, wireless home security systems, wireless baby surveillance (baby monitors), and other emerging wireless applications.
11. People who are afforded special protection under the federal Americans with Disabilities Act are not sufficiently acknowledged nor protected. People who have medical and/or metal implants or other conditions rendering them vulnerable to health

risks at lower levels than FCC RF limits may be particularly at risk.

12. Neither the FCC, the CPUC, the utility nor the consumer know what portion of the allowable public safety limit is already being used up or pre-empted by RF from other sources already present in the particular location a smart meter may be installed and operated.

13. Consumers, for whatever personal reason, choice or necessity who have already eliminated all possible wireless exposures from their property and lives, may now face excessively high RF exposures in their homes from smart meters on a 24-hour basis. This may force limitations on use of their otherwise occupied space, depending on how the meter is located, building materials in the structure, and how it is furnished.

14. In summary, no positive assertion of safety can be made by the FCC, nor relied upon by the CPUC, with respect to pulsed RF when exposures are chronic and occur in the general population.<sup>3.5.6</sup> Indiscriminate exposure to environmentally ubiquitous pulsed RF from the rollout of millions of new RF sources (smart meters) will mean far greater general population exposures, and potential health consequences.

Uncertainties about the existing RF environment (how much RF exposure already exists), what kind of interior reflective environments exist (reflection factor), how interior space is utilized near walls), and other characteristics of residents (age, medical condition, medical implants, relative health, reliance on critical care equipment that may be subject to electronic interference, etc.) and unrestrained access to areas of property where meter is located all argue for caution.

1. Khurana VG Hardell L Everaert J Bortkiewicz A Carlberg M Ahonen M, 2010. Epidemiological Evidence for a Health Risk from Mobile Phone Base Stations. *Int Journal of Occupational Environmental Health* 2010;16:263–267.
2. Kundi M Hutter HP Mobile phone base stations—Effects on wellbeing and health. *Pathophysiology* 16 (2009) 123–135.
3. Sage C. Carpenter DO. 2009. Public Health Implications of Wireless Technologies. *Pathophysiology* 16 (2009) 233–246.
4. Hardell L Sage C. Biological effect from electromagnetic field exposure and public exposure standards. *Biomedicine & Pharmacotherapy* 2008;62:104-109. doi:10.1016/j.bipha.2007.12.004.
5. BioInitiative Working Group, Cindy Sage and David O. Carpenter, Editors. BioInitiative Report: A Rationale for a Biologically-based Public Exposure Standard for Electromagnetic Fields (ELF and RF) at [www.bioinitiative.org](http://www.bioinitiative.org), August 31, 2007.

6. Carpenter DO Sage CL. 2008. Setting Prudent Public Health Policy for Electromagnetic Field Exposures. Reviews on Environmental Health 23(2) 91-117.

Under penalty of perjury, I declare that the facts set forth above are true and correct to the best of my knowledge.

Dated January 5, 2011, at Santa Barbara, California.

/s/  
Cynthia Sage



## VERIFICATION

I, Sandra Maurer, represent EMF Safety Network and am authorized to make this verification on the organization's behalf. The statements in the foregoing document are true to the best of my knowledge, except for those matters that are stated on information and belief, and as to those matters I believe them to be true.

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

Dated January 5, 2011, at Sebastopol, California.

/s/

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Sandra Maurer, Founder  
EMF Safety Network  
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**CERTIFICATE OF SERVICE**

I certify that I have by electronic mail this day served a true copy of the original attached "Application of EMF Safety Network for Rehearing of Decision 10-12-001" on all parties of record in A.10-04-018 or their attorneys of record. I will mail paper copies of the pleading to Assigned Commissioner Michael Peevey and Administrative Law Judge Timothy Sullivan.

Dated January 5, 2011, at Sebastopol, California.

/s/

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Sandra Maurer