

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



FILED

11-22-10
04:59 PM

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)

**PACIFIC GAS AND ELECTRIC COMPANY'S REPLY TO
COMMENTS OF EMF SAFETY NETWORK "AND" THE
DIVISION OF RATEPAYER ADVOCATES ON ALJ
SULLIVAN'S PROPOSED DECISION GRANTING
PACIFIC GAS AND ELECTRIC COMPANY'S MOTION
TO DISMISS APPLICATION**

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Dated: November 22, 2010

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Modification of D.06-07-027 and D.09-03-026

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I. INTRODUCTION

Pursuant to Rule 14.3(d) of the California Public Utility Commission's ("Commission" or "CPUC") Rules of Practice and Procedure Pacific Gas and Electric Company ("PG&E") hereby replies to the comments of EMF Safety Network ("Network") and to the comments of the Division of Ratepayer Advocates ("DRA").

II. ARGUMENT

A. The Proposed Decision (PD) Properly Defers to the Federal Communications Commission.

The Proposed Decision "...defer[s] to the FCC, which possesses extensive expertise on its staff for evaluating and licensing or certifying SmartMeter devices..." (PD, p. 9). This is the correct legal conclusion, because, as PG&E has pointed out previously, the Federal Communications Commission (FCC) already regulates and has preempted the entire field of radio frequency (RF) emissions. (*See*, PG&E's Motion to Dismiss, pp. 5-13). Neither Network nor DRA provides any legal authority whatsoever that would justify a different conclusion. To the contrary, DRA misinterprets case

authority and misapplies the Federal Communication Act (FCA).

DRA's reference only to 47 U.S.C. § 332(c)(7) at p. 3 is misplaced. Rather, the proper reference must also be to FCC Part 15 and Part 19 regulations that establish RF emission levels for RF equipment certified under these regulations. A comprehensive review of RF-related federal regulations clearly demonstrates that federal law fully occupies the field of RF regulation.

DRA's assertion (at p.4) that the Commission's general authority over health and welfare cannot be limited by the FCC is plainly wrong. This point was previously raised by Network and addressed in PG&E's reply comments.^{1/} Although DRA characterizes the issue generally as health and welfare, the issues addressed in Network's Application fall squarely within the scope of federal FCC regulation and jurisdiction (e.g., Network challenges the sufficiency of the FCC's RF emissions safety standards and Network requests that the Commission suspend deployment while reviewing RF emissions studies and SmartMeter™-related RF impacts (pp. 2, 8)). Contrary to DRA's claim, federal law does preempt CPUC state regulation of SmartMeter™-related RF impacts. As pointed out in PG&E's reply comments, the Public Utilities Code specifically contemplates federal preemption.

DRA's assertion (at p. 4) that "The FCA does not displace state regulation completely in all areas..." is irrelevant to the specific discussion of RF emissions regulation. As PG&E pointed out previously, the entire field of RF emissions has been regulated and occupied by the FCC. *See e.g. Freeman v. Burlington Broadcasters, Inc.,*

^{1/} "Pacific Gas and Electric Company's Reply to the Response of EMF Safety Network to Motion of Pacific Gas and Electric Company to Dismiss Application", dated June 11, 2010.

204 F.3d 311, 320.^{2/}

DRA's reference (at p. 5) to §302a also has nothing to do with the discussion at hand. It only relates to radio interference, not RF health effects.

DRA's reference to *Burlington Northern Railroad Co. v. CPUC* (2003) 112 Cal.App. 4th 881, 888 is misplaced. The Court of Appeals specifically held that the CPUC had the power to "choose between two inconsistent [state] statutes" and that such a decision was reviewable by the appellate courts (p. 888-889). For this reason the provision in the California Constitution was not applicable. The issue here is that federal law preempts California state law (i.e., CPUC regulation of RF emissions), not the thwarting of the mandates of the Legislature as was discussed in the case. If anything, this decision supports PG&E's position.

In Section 8 (p. 5) Network argues that the Commission has jurisdiction over RF matters because a complaint made to the FCC by Californians for Renewable Energy, Inc. (CARE) was redirected to the CPUC. While not quoted in its brief, the complaint alleged that RF from PG&E's SmartMeters caused the San Bruno natural gas pipeline accident and fire. The matter was obviously redirected because the FCC does not investigate such pipeline accidents and the CPUC was already conducting an investigation into the cause of the accident.

B. The Factual Conclusions in the Proposed Decision are well Supported.

DRA in Section D (at p. 11) argues that the findings of fact in the PD are not adequately supported by the record. This argument is incorrect. As the PD points out, the factual conclusions are supported by the PG&E declaration of Daniel M. Partridge,

^{2/} "Pacific Gas and Electric Company's Reply to the Response of EMF Safety Network to Motion of Pacific Gas and Electric Company to Dismiss Application", dated June 11, 2010.

the manager of SmartMeter™ Engineering, submitted under penalty of perjury.

Furthermore, the factual conclusions in the declaration are corroborated by a plethora of other independent information on the FCC's website and otherwise publicly available information. A detailed description of the FCC's regulatory authority and its policy towards RF safety issues is set forth in PG&E's Motion to Dismiss in the record of this proceeding.^{3/}

A good officially-noticeable, publicly available example of such corroboration is found in the FCC letter dated August 6, 2010 attached hereto.^{4/} As discussed in the letter, the FCC has taken a very conservative approach towards RF exposure compliance for low-power network devices such as Wi-Fi stations and SmartMeter radio transceivers.

Finally, the issue of factual accuracy needs to be placed into a proper context. PG&E included the declaration of Mr. Partridge with its motion in part because of the unsubstantiated assertions contained in Network's Application. This process continues in Networks' comments. Its unsubstantiated assertions contained therein should be disregarded.

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^{3/} "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", dated May 17, 2010.

^{4/} Federal Communications Commission's letter to Ms. Cindy Sage, signed by Julius P. Knapp, Chief, Office of Engineering and Technology, dated August 6, 2010.

III. CONCLUSION

Network and DRA have provided no legitimate basis for disapproving the PD.
The PD is factually and legally supported and should be adopted.

Respectfully Submitted,

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J. MICHAEL REIDENBACH

By: _____ /s/
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Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY

Dated: November 22, 2010

ATTACHMENT

**FEDERAL COMMUNICATIONS COMMISSION'S LETTER TO
MS. CINDY SAGE, SIGNED BY JULIUS P. KNAPP, CHIEF,
OFFICE OF ENGINEERING AND TECHNOLOGY,
DATED AUGUST 6, 2010**



Federal Communications Commission
Washington, D.C. 20554

August 6, 2010

Ms. Cindy Sage
Sage Associates Environmental Consultants
1396 Danielson Road
Montecito, CA 93108-2857

Dear Ms. Sage:

Thank you for your letter of March 15, 2010, in which you request that we review compliance with FCC radiofrequency (RF) exposure limits for the "Smart Meter" technology being implemented by utilities across the country. In particular, you expressed concern about multiple adjacent Smart Meter installations used to service multiple dwellings such as condominiums, and the effect of increased data traffic on exposure from collector or controller units.

The FCC Equipment Authorization (EA) program in the Office of Engineering and Technology has taken a very conservative approach to RF exposure compliance for low-power network devices such as Wi-Fi base stations and Smart Meter transceivers. For such devices that are not expected to be used close to the body, it is generally unnecessary to perform routine specific absorption rate (SAR) evaluations as field strength or power density is a sufficient and appropriate measure of exposure. The maximum field strength at a distance can be derived from the effective radiated power (ERP). Also, FCC field strength limits, like the SAR limits, are time-averaged. Accordingly, for devices that will not be used within 20 centimeters of the body, we rely on the "source-based" time-averaged ERP and require that it be less than our specified values of 1.5 or 3 watts, depending on frequency,¹ in order to ensure compliance with our exposure limits. This does not imply that FCC exposure limits will be exceeded at distances less than 20 cm, but only that detailed evaluation of the SAR is not required if the 20 cm separation distance can be maintained.

It is useful in considering this issue to recognize that the power level specified on the Grants of Equipment Authorization issued by the EA program is the peak power as this is the power relevant to interference concerns. For exposure evaluations, however, the average power is relevant, which is determined by taking into account how often these devices will transmit. Since the purpose of these devices is to provide very infrequent information they transmit in occasional bursts. Thus, for exposure purposes the relevant power is maximum time-averaged power that takes into account the burst nature of transmission, and based on the typical maximum time-averaged transmitter power for many of these devices, they would generally be compliant with the local SAR limit even if held directly against the body.

With respect to multiple adjacent Smart Meter installations, since the antennas for each device are mounted individually on each utility meter, the separation distance from people for most of the transmitting antennas is relatively large compared to 20 cm and the

¹ See Section 2.1091(c) of the FCC rules.

meters' contributions to the total potential exposure at any location are small, as only the nearest few transmitters can add meaningfully to the total. Further, as a practical design matter, when several of these meters are placed in a cluster, they have to communicate with a single controller. In order to ensure that the controller receives the information properly, only one transmitter can communicate with the controller at a time, eliminating the potential for exposure to multiple signals at the same time.

The general issue of cumulative exposure from an arbitrary group of transmitter installations or from all transmitters distributed in the environment can appear to be complex, but as discussed, the need for orderly communications requires that a few sources normally dominate. In addition, the exponential decrease in signal strength over distance and additional signal losses due to non line-of-sight conditions for distant sources ensures that only the contributions of nearby transmitters are significant.

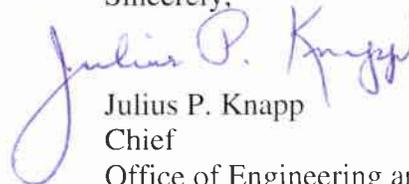
In summary, compliance for Smart Meters is determined according to the operating and installation requirements of each type of meter during equipment certification, and is based on the maximum transmission duty cycle for the device, including relay functions. Necessary installation requirements to maintain compliance for each meter are specified in the Grant. Irrespective of duty cycle, based on the practical separation distance and the need for orderly communications among several devices, even multiple units or "banks" of meters in the same location will be compliant with the public exposure limits. These conditions for compliance are required to be met before a Grant can be issued from the EA program and auditing and review of Grants is a routine function of the FCC laboratory.

With respect to interference to medical devices, which you also raise in your letter, Smart Meters typically operate under Part 15 of the FCC Rules. Those rules specify power limitations to avoid interference. The Smart Meter wireless technologies used today are not significantly different from Wi-Fi devices, cell phones and other typical consumer products. Certain medical devices may need specific precautions in many other environments; these are generally considered during FDA approval of the individual medical device.

I hope that this information will be helpful. In addition, some technical information on the subject has been developed by the Electric Power Research Institute (EPRI) and we have enclosed that information for reference.

Please know that the FCC is continually monitoring the issue of RF exposure and related health and safety concerns, both in the general terms of the continuing propriety of its regulations, and in individual cases where substantive concerns are raised.

Sincerely,

A handwritten signature in blue ink that reads "Julius P. Knapp". The signature is written in a cursive style with a large, looping initial "J".

Julius P. Knapp
Chief

Office of Engineering and Technology

CERTIFICATE OF SERVICE

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 77 Beale Street, San Francisco, CA 94105.

On November 22, 2010, I served a true copy of:

**PACIFIC GAS AND ELECTRIC COMPANY'S REPLY TO COMMENTS OF
EMF SAFETY NETWORK "AND" THE DIVISION OF RATEPAYER
ADVOCATES ON ALJ SULLIVAN'S PROPOSED DECISION GRANTING
PACIFIC GAS AND ELECTRIC COMPANY'S MOTION TO DISMISS
APPLICATION**

- [XX] By Electronic Mail – serving the enclosed via e-mail transmission to each of the parties listed on the official service list for A10-04-018 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 A10-04-018 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 this 22nd day of November, 2010, at San Francisco, California.

/s/
MARY B. SPEARMAN

THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA SERVICE LIST

Last Updated: October 27, 2010

CPUC DOCKET NO. A1004018

Total number of addressees: 31

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**THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
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