

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)	
)	
Connect America Fund)	WC Docket No. 10-90
)	
A National Broadband Policy for Our Future)	GN Docket No. 09-51
)	
Establishing Just and Reasonable Rates for Local 135)	WC Docket No. 07-
Exchange Carriers)	
)	
High-Cost Universal Service Support 337)	WC Docket No. 05-
)	
Developing an Unified Intercarrier Compensation Regime)	CC Docket No. 01-92
)	
Federal-State Joint Board on Universal Service)	CC Docket No. 96-45
)	
Lifeline and Link Up)	WC Docket No. 96-95

To: Office of the Secretary
Federal Communications Commission
Washington, DC 20554

Comment Filed of Extension of Time filed by:

The EMR Policy Institute
P.O. Box 117
Marshfield VT 05658
e-mail: info@emrpolicy.org
Telephone: (802) 426-3035

Attorney: Whitney North Seymour, Jr.
455 Lexington Avenue, Room 1721
New York, New York 10017
email: wseymour@stblaw.com
Telephone: (212) 455-7640

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EMR POLICY INSTITUTE MOTION FOR EXTENSION OF TIME TO FILE

COMMENTS UNTIL COMPLETION OF NEPA EVALUATION

AND DISCLOSURE OF MAP

INTRODUCTION

1. In 2009, The EMR Policy Institute (EMRPI) filed extensive comments and numerous exhibits and affidavits of personal injury caused by electromagnetic radiation in “A National Broadband Plan for Our Future” GN Docket No. 09-51 that should have triggered a full review of the environmental consequences of deploying wireless vs. wired broadband under the National Environmental Policy Act (NEPA) and other relevant federal environmental statutes and the Americans with Disabilities Act (ADA). Even though GN docket 09-51 is now merged with the present FCC 11-13 Notice of Proposed Rulemaking, nothing in the almost 300 pages of this NPRM acknowledges the issues raised by EMRPI in 2009. The FCC admits that companies deploying new infrastructure must comply with the NEPA and other relevant federal environmental statutes. (FCC 11-13 Notice of Proposed Rulemaking Paragraph 136). NEPA exists to create a framework for evaluating options and making wise public policy decisions on various options with differing environmental effects. The FCC proposes to proceed with “technology neutral” auctions that could result in the deployment of wireless broadband to 24 million people before any NEPA review is undertaken.

2. The EMR Policy Institute herewith resubmits its 2009 Comment and Reply Comment in GN Docket No. 09-51 as a **Motion for Extension of the Time**

Period for comments in FCC 11-13 to be extended until such time as the Federal Government has conducted a full NEPA review of the various options for the deployment of broadband. The NEPA review should disclose the anticipated frequencies, intensities, and duration of electromagnetic radiation each person might be subjected to on a daily basis, what current research discloses about the short- and long-term consequences of such radiation exposure, and compare the amount of electric power required to generate and transmit via wireless versus wired broadband.

ADDITIONAL SCIENTIFIC EVIDENCE THAT RF RADIATION AT LEVELS ACCEPTABLE TO FCC MAY HARM HUMAN HEALTH

3. This sampling of additional studies published since 2009 adds to the peer-reviewed scientific literature that demonstrates potential adverse effects from RF radiation exposures at or well below the levels permitted in the FCC's human safety guidelines.
- "Specific Health Symptoms and Cell Phone Radiation in Selbitz (Bavaria, Germany)—Evidence of a Dose-Response Relationship," published in *Umwelt Medizin Gesellschaft*, Feb. 2010: 130-139, is found at: <https://sites.google.com/site/nocelltowerinourneighborhood/home/horst-eger-manfred-jahn-study-feb-2010> . In this health survey study of 251 citizens in the Bavarian town of Selbitz, "a significant correlation was found dependent on dose-effects of insomnia, depressions, cerebral symptoms, joint illnesses, infections, skin changes, heart and circulation disorders, and disorders of the optical and acoustic sensory systems and the gastro-intestinal tract with objectively determined locations of exposure which can be related by the influence of microwaves on the human nervous system." **The mean radiation measurement of the groups exposed was 1.2 volts/meter. The FCC allowable human exposure limit for this frequency range is 47-61 volts/meter.**

This work, which has been carried out without external resources, provides a protocol for surveys of medical practitioners and municipality administrations to

estimate possible health effects of mobile telephone base stations situated near population residents.

- A February 2011 Caltech Media Relations press release announced that a Cal Tech neurobiologists' study, "Ephaptic coupling of cortical neurons," published January 16, 2011 in the advance online edition of the journal *Nature Neuroscience*, demonstrates that, "while active neurons give rise to extracellular fields, the same fields feed back to the neurons and alter their behavior," even though the neurons are not physically connected—a phenomenon known as ephaptic (or field) coupling.

"Whether an externally imposed field will impact the brain also depends on which brain area is targeted," he says. "During epileptic seizures, the hypersynchronized activity of neurons can generate field as strong as 100 volts per meter, and such fields have been shown to strongly entrain neural firing and give rise to super-synchronized states." **And that suggests that electric field activity—even from external fields—in certain brain areas, during specific brain states, may have strong cognitive and behavioral effects.**

This new work by Christof Koch and neuroscientist Costas Anastassiou, a postdoctoral scholar in biology, and his colleagues, suggests that the fields do much more—and that they may, in fact, represent an additional form of neural communication.

An "unexpected and surprising finding was how already very weak extracellular fields can alter neural activity," he says. "For example, we observed that **fields as weak as one volt per meter robustly alter the spiking activity [firing] of individual neurons, and increase the so-called 'spike-field coherence'—the synchronicity with which neurons fire.** Inside the mammalian brain, we know that extracellular fields may easily exceed two to three volts per meter. Our findings suggest that under such conditions, this effect becomes significant."

- On February 23, 2011, *Microwave News* reported on a paper published the next day in the *Journal of the American Medical Association* (JAMA), in which Nora Volkow and coworkers reported that a 50-minute exposure to cell phone radiation can affect the normal functioning of the human brain. *Microwave News* reported that:

"What is particularly remarkable about the new work is that those regions of the brain that were most highly exposed to phone radiation had the largest increases in metabolic activity."

"Whether these short-term changes will lead to health consequences (and what they might be) is far from clear -- though Volkow already has preliminary indications of a long-term effect."

“Importantly, this new finding upsets the current orthodoxy because such low-levels EMF effects are thought to be impossible.”

“Nora Volkow, the lead author of the JAMA study, is the director of the National Institute on Drug Abuse. She told *Microwave News* that she recommends using a wired earpiece when on a mobile phone. **She is the most senior U.S. health official to come out for precaution.**”

"This paper is just dynamite," said [David Carpenter](#), the director of the [Institute for Health and the Environment](#) in Albany, NY, and co-editor and contributing author of *The BioInitiative Report*. "It's going to be very difficult to deny that RF radiation from a cell phone does not alter nervous system activity." Carpenter, a neurophysiologist, has been active in the electromagnetic research community for over 30 years. "This work will turn the whole issue around," he told *Microwave News*.

CALIFORNIA PUBLIC UTILITIES COMMISSION'S DIVISION OF
RATEPAYER ADVOCATES ASSERTS NEED TO EVALUATE THE
SCIENCE THAT LINKS RF EMISSION
AND NEGATIVE HEALTH IMPACTS

4. On January 31, 2011, The Division of Ratepayer Advocates (DRA) of the California Public Utilities Commission issued its Comment in response to the “Health Impacts of Radio Frequencies for Smart Meters Project” of the California Council on Science and Technology (CCST). The RF frequencies at which wireless Smart Meters operate are in the same frequency range at which mobile phones, wireless internet and wireless broadband devices operate. DRA’s Comment identified “several questions that warrant additional explanation or analysis. See: <http://www.dra.ca.gov/NR/rdonlyres/C5CBD825-1698-45DA-BFF8-7EF4E0251EDE/0/DRACommentonCCSTReportJan302011.pdf>
- Exposure from multiple co-located meters should be examined more closely.
- CCST should explain why it concluded that the available evidence does not indicate a need to limit non-thermal impacts of RF emissions.

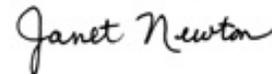
The Report states that, “there is currently no conclusive scientific evidence pointing to a non-thermal cause and effect between human exposure to RF emissions and negative health impacts. While the report cites three studies that claim adverse impacts, it does not explain why these studies are not relevant to the current debate. The same can be said about the BioInitiative Report, a research survey often cited by parties concerned about RF emissions, which is merely listed in Appendix E as an ‘unsolicited document.’

DRA recommends that the CCST Report be expanded to provide a scientific critique of the BioInitiative Report, and other reports that assert a link between RF emissions and negative health impacts. CCST should explain why, in its opinion, these sources do not constitute evidence that indicates a need to establish limits for non-thermal impacts, if only as a precautionary measure, even if conclusive findings are not yet available.”

CONCLUSION

5. EMRPI respectfully files this Motion for Extension of the Time period for Comment on FCC 11-13 NPRM in order to comply with its responsibility under NEPA to fully evaluate the impact of this major agency action – A National Broadband Policy for Our Future – on the human environment.

Respectfully submitted by
The EMR Policy Institute



by Janet Newton, President
P.O. Box 117
Marshfield VT 05658
e-mail: info@emrpolicy.org
Telephone: (802) 426-3035

Appendix A: Comment of The EMR Policy Institute in GN Docket No. 09-51 filed June 7, 2009. Complete filing with all Exhibits.

Appendix B: Reply Comment of The EMR Policy Institute in GN Docket No. 09-51 filed July 18, 2009. Complete filing with all Exhibits.