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**OPEN MEETING AGENDA
PRE-FILED TESTIMONY
OF WILLIAM J. REA, M.D.
MPUC Docket No. 2011-00262**

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1 Q. Please state your name and business address.

2 A. My name is William J. Rea, M.D. My address is:
3 Environmental Health Center
4 8345 Walnut Hill Lane, Suite 220
5 Dallas, TX 75231

6 Q. Briefly state your occupation, educational background, current employment,
7 and professional experience.

8 A. I currently serve as President of the Environmental Health Center, in Dallas, Texas.

9 I graduated from Otterbein College in Westerville, Ohio, and Ohio State
10 University College of Medicine in Columbus, Ohio. I then completed a rotating
11 internship at Parkland Memorial Hospital in Dallas, Texas. I held a general surgery
12 residency from 1963-67 and a cardiovascular surgery fellowship and residency from
13 1967-69 with The University of Texas Southwestern Medical School system, which
14 includes Parkland Memorial Hospital, Baylor Medical Center, Veteran's Hospital and
15 Children's Medical Center. I was also part of the team that treated Governor Connally
16 when President Kennedy was assassinated.

17 From 1969 - 1972, I was assistant professor of cardiovascular surgery at the
18 University of Texas S.W. Medical School; from 1984-85 I was Chief of
19 Cardiovascular Surgery at the Veteran's Hospital. I held the position of adjunct
20 professor of environmental sciences and mathematics at the University of North
21 Texas, while from 1972-82 I acted as clinical associate professor of thoracic surgery
22 at The University of Texas Southwestern Medical School. I held the First World

1 Professorial Chair of Environmental Medicine at the University of Surrey, Guildford,
2 England from 1988 – 1998. I also served as adjunct professor of psychology and
3 guest lecturer at North Texas State University.

4 **Q. Are you a member of any professional organizations? If so, please list.**

5 **A. I currently serve on the board and am president of the American Environmental**
6 **Health Foundation, vice president of the American Board of Environmental Medicine**
7 **and previously served on the board of the American Academy of Environmental**
8 **Medicine. I have also served on the Science Advisory Board for the U.S.**
9 **Environmental Protection Agency, on the Research Committee for the American**
10 **Academy of Otolaryngic Allergy and on the Committee on Aspects of**
11 **Cardiovascular, Endocrine and Autoimmune Diseases of the American College of**
12 **Allergists, Committee on Immunotoxicology for the Office of Technology**
13 **Assessment and on the panel on Chemical Sensitivity of the National Academy of**
14 **Sciences. I am a fellow of the American College of Surgeons, the American**
15 **Academy of Environmental Medicine, the American College of Allergists, the**
16 **American College of Preventive Medicine, the American College of Nutrition, and**
17 **the Royal Society of Medicine. I was awarded the Jonathan Forman Gold Medal**
18 **Award in 1987 for outstanding research in environmental medicine, The Herbert J.**
19 **Rinkle Award in 1993 for outstanding teaching, and the 1998 Service Award, all by**
20 **the American Academy of Environmental Medicine. I was named Outstanding**
21 **Alumnus by Otterbein College in 1991. Other awards include the Mountain Valley**
22 **Water Hall of Fame in 1987 for research in water and health, the Special**
23 **Achievement Award by Otterbein College in 1991, the Distinguished Pioneers in**

1 Alternative Medicine Award by the Foundation for the Advancement of Innovative
2 Medicine Education Fund in 1994, the Gold Star Award by the International
3 Biographical Center in 1997, Five Hundred Leaders of Influence Award in 1997,
4 Who's Who in the South and Southwest in 1997, The Twentieth Century Award for
5 Achievement in 1997, the Dor W. Brown, Jr., M.D. Lectureship Award by the Pan
6 American Allergy Society and the O. Spurgeon English Humanitarian Award by
7 Temple University in 2002.

8 **Q. Have you authored any papers or journal articles?**

9 **A.** I have authored five medical textbooks, *Chemical Sensitivity* (V. 1-4), *Reversibility of*
10 *Chronic Degenerative Disease and Hypersensitivity, V. 1: Regulating Mechanisms of*
11 *Chemical Sensitivity, Optimum Environments for Optimum Health and Creativity*, and
12 co-author of *Your Home, Your Health and Well-Being*, more than 150 peer reviewed
13 research papers related to the topic of thoracic and cardiovascular surgery as well as
14 that of environmental medicine. A full list is shown on my *curriculum vitae* attached
15 as Exhibit A.

16 **Q. Briefly describe your work and experience related to the study of**
17 **electromagnetic fields and radio frequency waves in the 30 MHz to 300 GHz**
18 **range ("RF"), and about their potential effects on humans. Please describe the**
19 **study you conducted on electromagnetic hypersensitivity in 1991 and the results.**

20 **A.** The 1991 study was a multiphase study that was performed to find an effective
21 method to evaluate electromagnetic field (EMF) sensitivity of patients. See Rea WJ,
22 Yagin P, Fenyves EJ, Sujisawa I, Samadi N, Ross GH. Electromagnetic field
23 sensitivity. J Bioelect 10, 241-256, 1991 (attached as Exhibit B). The first phase

1 developed criteria for controlled testing using an environment low in chemical,
2 particulate, and EMF pollution. Monitoring devices were used in an effort to ensure
3 that extraneous EMF would not interfere with the tests. A second phase involved a
4 single-blind challenge of 100 patients who complained of EMF sensitivity to a series
5 of fields ranging from 0 to 5 MHz in frequency, plus 5 blank challenges. Twenty-five
6 patients were found who were sensitive to the fields, but did not react to the blanks.
7 These were compared in the third phase to 25 healthy naïve volunteer controls. None
8 of the volunteers reacted to any challenge, active or blank, but 16 of the EMF-
9 sensitive patients (64%) had positive signs and symptoms scores, plus autonomic
10 nervous system changes. In the fourth phase, the 16 EMF-sensitive patients were
11 rechallenged twice to the frequencies to which they were most sensitive during the
12 previous challenge. The active frequency was found to be positive in 100% of the
13 challenges, while all of the placebo tests were negative. We concluded that this study
14 gives strong evidence that electromagnetic field sensitivity exists, and can be elicited
15 under environmentally controlled conditions. Since then we have studied several
16 hundred patients who complained of EMF sensitivity and have found that indeed they
17 were.

18 **Q. Have you reviewed the joint testimony of William H. Bailey, Ph.D. and Yakov**
19 **Shkolnikov, Ph.D. ("Exponent"), dated September 19, 2012?**

20 **A. Yes.**

21 **Q. Do you agree with Exponent's critique of your 1991 study? Exponent states:**
22 **"the claim that this study is a double blind study is not wholly accurate (WHO,**
23 **2007)." p. 42**

1 A. The screening tests were not double blind because you cannot screen double blind.
2 However, the group for the final tests for EMF was not only double blind but were
3 done two times. Therefore, the findings were highly significant for the presence of
4 EMF in this group of patients.

5 Smith, Monro, Choy have several studies on the existence of EMF sensitivity
6 which would confirm our observations (See Exhibit B, references 1-12). The
7 literature is very extensive on EMF sensitivity. See also, McCarty DE, Carrubba S,
8 Chesson AL, Frilor C, Gonzalez-Toledo E, Marino AA. 2011. Electromagnetic
9 hypersensitivity: Evidence for a novel neurological syndrome. Internat J Neurosci
10 121: 670-676. As a cardiac surgeon, I have seen the benefits and adverse reactions to
11 EMF in thousands of patients. We have shocked hearts or used pacemakers which are
12 electronic sources bringing the patient back to life.

13 Q. Are you familiar with other research studies and writings on the subject?
14 Briefly describe the body of research and published literature on the subject of
15 which you are familiar.

16 A. Becker's studies on the Electromagnetic Healing of bones and tissues⁽¹⁾; Marino's
17 studies on the EMF healing of tissue⁽¹⁻⁹⁾; Smith's⁽¹⁰⁾ and Monro's⁽¹¹⁾ studies on the
18 presence of EMF sensitivity; Havas studies on EMF⁽¹²⁻¹⁷⁾.

19 Q. Did some of these studies involve exposure to RF in or near the 2.4 GHz range?

20 A. Yes.

21 Q. Exponent testified that there is no scientific basis for concluding that EHS may
22 be caused by exposure to electromagnetic radiation. Here are some of their

1 **statements: "A number of well-conducted laboratory studies show no relation**
2 **between the health symptoms experienced by some individuals and RF EMF**
3 **exposure" (p. 29) . . . "that electromagnetic field hypersensitivity had not been**
4 **documented as reproducible as asserted by AAEM and the claim for improved**
5 **ability to detect fields was contradicted by a meta-analysis of the available**
6 **literature and the WHO's assessment of research on this topic." (p. 35). Do you**
7 **agree with these assertions and opinions?**

8 **A. No. Unfortunately, these studies as I understand, were not performed on sensitive**
9 **humans but on animals.**

10 **These assertions by Exponent witnesses are not true. If you have properly**
11 **environmentally controlled unpolluted rooms, you can reproduce EMF sensitivity.**
12 **The exponents show a gross ignorance of the physiology of EMF. It is well known in**
13 **the field of cardiovascular surgery the difference between life and death and the**
14 **electromagnetics. I have shocked multiple patients back to life using small amounts**
15 **of electricity. Many patients respond to heavy shocks, others to extremely small**
16 **shocks. This observation holds for the spectrum of electrosensitivity.**

17 **Q. Are there any plausible scientific explanations for a causal link between EHS**
18 **and exposure to electromagnetic radiation?**

19 **A. Yes, the body runs on electromagnetic waves. This is the way it communicates.**
20 **Most physicians know about EEG, brain waves, EMG muscle and nerve conduction**
21 **and EKG cardiac waves. This is common knowledge in our society. Extra-cellular**
22 **barrier regulates the flow of ions Na^+ , K^+ , and Ca^{++} into and out of the cell. Influx of**

1 Ca⁺⁺ into the cell coupled with protein kinase with phosphorylation increase
2 sensitivity to 1000 times⁽¹⁸⁾.

3 **Q. Are there any peer-reviewed studies that would support such a causal link or**
4 **mechanism?**

5 **A. Yes! See attached list of studies.**

6 **Q. Please describe your work with people who report EHS symptoms? Have you**
7 **had patients who report EHS symptoms related to smart meters?**

8 **A. Yes! We have had many people who report their symptoms after the smart meters**
9 **have been installed. These are wide ranging from fibromyalgia to pain syndromes**
10 **and confusion, difficulty thinking, short term memory loss, and severe fatigue. Some**
11 **have an increase in heart arrhythmias, muscle spasms, severe numbness and tingling**
12 **in peripheral nerves. Many of my patients report that they began experiencing**
13 **symptoms before they were aware that a smart meter had been installed.**

14 **Q. How do you confirm that patients' symptoms are related to EMF sensitivity?**

15 **A. By conducting the EMF challenge testing developed in our 1991 study.**

16 **Q. What treatments do you recommend for patients with EMF sensitivities and how**
17 **do the patients respond to treatment?**

18 **A. At the present time, treatment has been avoidance of the smart meters, vitamin and**
19 **mineral supplementation, mineral intradermal neutralization. The high percentage of**
20 **patients experiencing positive results confirms that the diagnosis and treatment are**
21 **effective.**

22 **Q. Have objective guidelines been developed for diagnosing and treating people**
23 **with EHS and other EMF related health problems?**

1 A. Objective guidelines have been developed for diagnosing people's sensitive to EMF,
2 including the following.

- 3 1. History of symptoms from exposures to EMF.
- 4 2. Positive findings physical exam.
- 5 3. Symptoms away from EMF generators.
- 6 4. Reproduction of symptoms and signs on controlled EMF challenge.

7 Q. In your opinion, is there a scientific basis for concluding that RF emissions from
8 smart meters could trigger adverse symptoms in people who have developed
9 EHS?

10 A. Yes

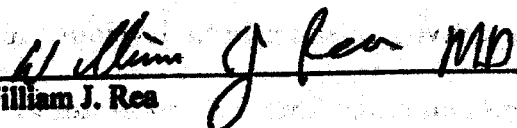
11 Q. In your opinion, is there a scientific basis for concluding that exposure to the
12 emissions from the smart meters over time could contribute to the development
13 of EHS and other adverse health effects, particularly for children, the elderly
14 and others who may be more susceptible, such as persons with immune
15 deficiencies?

16 A. Yes! People with immune irregularities such as low T-cells, low gamma globulins
17 have been seen to not tolerate EMF and nerve sensitization to sensory nerves.

18 Q. Based on your knowledge of RF and smart meter technology, would you want an
19 RF-emitting smart meter on your home?

20 A. No.

Dated this 29 day of January, 2013.



William J. Rea

STATE OF TEXAS
DALLAS, ss:

January 29, 2013

Personally appeared the above-named William J. Rea, M.D., and stated under oath that the foregoing Affidavit made by him is true and based upon his own personal knowledge, information or belief, and so far as upon information and belief, he believes the information to be true. Before me,



Eloise M. Hickey
Notary Public/Attorney-at-Law
Eloise M. Hickey
Name Typed or Printed
My Commission Expires: 12/17/14

<http://www.mainecoalitiontostopsmartmeters.org/wp-content/uploads/2013/01/Exhibit-7-Rea-Web.pdf>

Testimony	Page 1-9
References	Page 10-11
EXHIBIT A WILLAIM REA	Page 12 - 34
EXHIBIT B WILLAIM REA	Page 1-9

<http://www.mainecoalitiontostopsmartmeters.org/wp-content/uploads/2013/01/Exhibit-7-Rea-Web.pdf>

Introduction to Our PUC Filings of Expert and Lay Witness Testimony
<http://www.mainecoalitiontostopsmartmeters.org/2013/02/introduction-to-our-puc-filings-of-expert-and-lay-witness-testimony/>

Maine Smart Meter Opponents Turn Up the Heat with Filing of Expert Testimony
<http://www.mainecoalitiontostopsmartmeters.org/2013/02/maine-smart-meter-opponents-turn-up-the-heat-with-filing-of-expert-testimony/>

Respectfully Submitted,
Patricia Feare