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STATE OF MAINE
PUBLIC UTILITIES COMMISSION

ED FRIEDMAN, ET AL,
Request for Commission Investigation into
Smart Meters and Smart Meter Opt-Out

Docket No. 2011-00262

COMPLAINANTS' REPLY BRIEF

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COMPLAINANTS' REPLY

Complainants reply to Central Maine Power Company's ("CMP") December 13, 2014 brief as follows:

INTRODUCTION

CMP's Brief[1] is largely a reprise of past arguments asking Public Utility Commission (the "Commission") to short-circuit its investigation by adopting the findings and conclusions of other agencies and administrative bodies instead of fulfilling its obligation to make its own determinations based on a full review of the extensive evidence in the record of this proceeding. CMP contends the Commission should: 1) defer to the Federal Communication Commission ("FCC") and its guidelines for exposure to radio frequency ("RF") radiation;[2] 2) defer to the Maine Center for Disease Control (MCDC); and/or 3) adopt the findings and conclusions of various and sundry other administrative bodies and agencies that have addressed the safety of smart meter and/or radio frequency radiation.

There is one common thread running through all of CMP's arguments, through the FCC guidelines, and through the conclusions of the MCDC and the other agencies and administrative bodies cited by CMP. They all rely on reports by certain agencies reporting on the state of the science relating to the effects of RF radiation. Among the most frequently cited agencies are: the Advisory Group on Non-ionizing Radiation

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[1] CMP's and Complainants' main briefs filed on December 13, 2013 are referred to as "CMP's Brief" and "Complainants' Brief."

[2] CMP all but abandoned its preemption argument, making no mention of it in its Brief, except in a brief footnote. *CMP Brief,* p.3, n. 10.

(AGNIR 2012), the International Commission on Non-ionizing Radiation Protection (ICNIRP 2009), and the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR 2009) (referred to collectively in Complainants' Brief and here as the "Agency Reviews"). As discussed in Complainants' Brief, the conclusions about the state of the science expressed in these Agency Reviews and others can be summarized as: the science has not yet established proof to a scientific certainty that low-level RF radiation can cause adverse non-thermal biological effects.

As further discussed in Complainants' Brief, the scientists participating in these Agency Reviews employ a "weight of the evidence" analysis that weighs all uncertainties and inconsistencies in the science against the hypothesis of causation. And, many of these scientists employ this weighing process with the zeal of partisans defending their orthodox view -- that low-level RF radiation can only have thermal effects and is otherwise biologically inactive. *See* discussion of Dr. Ahlbom at pp. 32-33 below. In the process, critical evidence, including hundreds of well-designed studies reporting adverse non-thermal effects are disregarded. While this method of reviewing and weighing the scientific evidence may be appropriate for purposes of proving causation to a scientific certainty, it is not the appropriate analysis for assessing potential risk of harm; not in an administrative proceeding, where the question to be resolved is whether safety can be ensured and where the burden of proof has been allocated to the proponent of the technology, not the citizens seeking to obtain safety.

Exponent, the FCC, the MCDC, and the other agencies and bodies cited by CMP, all rely on the scientific conclusions of these Agency Reviews to decide there is no risk of

harm from non-thermal effects. They either misconstrue the conclusions -- lack of conclusive proof of causation is not proof of a lack of risk of harm -- or, they simply adopt the scientific conclusion of no proof as an assessment of no risk. By doing so, they give the industry the benefit of the doubt and allocate to the consumer the burden of all doubt and uncertainty, and ultimately the burden of proof. CMP asks the Commission to follow their lead. To do so would inappropriately shift the burden of proof from CMP to the Complainants, and the Commission would have to ignore all the evidence in the record that compels the conclusion there is a risk of harm, including but not limited to: 1) the incontrovertible evidence of DNA damage cited by Dr. Phillips; 2) the many other well-designed studies in the record showing adverse non-thermal effects from low-level RF radiation that get ignored or disregarded in the Agency Reviews on the basis of inconsistencies between studies; 3) the conclusions about carcinogenicity expressed by the International Agency for Research on Cancer ("IARC") and Dr. Hardell, both assessing the scientific evidence in a manner more appropriate to the question to be resolved in this proceeding; and 4) the unrebutted, first-hand testimony from hundreds of people suffering symptoms related to RF exposure from smart meters and other RF emitting devices.

CMP tried once before to convince the Commission to disregard the scientific evidence of non-thermal effects. In August, 2012, CMP filed a motion to limit the scope of this investigation arguing the Commission is legally required to adopt the FCC guidelines on the theory of federal preemption. The Commission unequivocally rejected that effort to short circuit the Commission's investigation. In its October 10, 2012 Order

denying the motion, the Commission found it was not preempted and decided it must hear and review all the evidence before making its own determinations on the question of health and safety. A lengthy investigation proceeded establishing a voluminous record of scientific evidence establishing the health and safety risks of RF radiation.

Remarkably, CMP once again seeks to circumvent the investigation. Once again it argues the Commission should not draw its own conclusions about the safety of CMP's equipment; not because it is preempted from doing so, but because it should fall in line with the FCC, the MCDC and the other agencies and administrative bodies that have relied on the Agency Reviews. CMP has the burden to prove safety. It must do so based on the evidence in the record. Yet, its Brief all but ignores the record evidence. If the Commission accepts CMP's arguments, its two-year investigation into the safety of CMP's AMI system will have been a waste of the Commission's time, the parties' time, and the ratepayers' money, most of which has funded the high-priced testimony of CMP's experts from Exponent, Inc. ("Exponent"). More importantly, the Commission will have abdicated its public trust obligation to ensure the safety of each and every one of CMP's customers, particularly those who may be more vulnerable to the adverse effects of RF radiation, including children, the elderly, and those with immune deficiencies and other compromising medical conditions.

While the Commission may have the discretion to *consider* the findings and conclusions of other agencies and administrative bodies, it may not blindly defer to or adopt such findings and conclusions as its own. *See Complainants' Brief,* p.29. Having engaged the parties in a lengthy investigation, having heard extensive testimony, and

having admitted into the record a voluminous body of documentary evidence, the Commission is duty bound to assess and weigh that evidence and draw its own conclusions.

CMP does not meaningfully address the evidence in the record or the fundamental issue in this investigation -- whether the record evidence proves that low-level RF radiation does not pose a risk of adverse health effects. The only evidence cited by CMP (besides administratively-noticed reports and decisions of others) is the testimony of Exponent about "measured" and calculated exposure levels emitted by CMP's meters. It mentions this evidence in two contexts: 1) to support its contention that smart meters comply with FCC guidelines, which is irrelevant if the Commission concludes there is a risk of adverse non-thermal effects; and 2) to support its contention that the intensity of smart meter radiation is lower than radiation associated with record evidence showing adverse non-thermal effects from RF radiation. As explained in Complainants' Brief (pp. 32-36), Exponent's testimony about exposure levels is fatally flawed for a number of reasons and does not reliably support either contention.

Instead of providing a persuasive analysis of the record evidence, CMP argues that other administrative bodies and agencies have heard similar evidence and have not been persuaded by it. First, no other administrative bodies or agencies cited by CMP have conducted a thorough investigation or received as much expert testimony as received in this proceeding. And, CMP makes no persuasive effort to demonstrate the administrative bodies it cites are sufficiently qualified and disinterested; that the body considered all the relevant evidence; that it employed adequate procedures to reliably review and assess the

evidence; that the issue being resolved by the body is the same as the issue to be decided here; and that the issue is governed by the same legal framework and standards. Instead of addressing these points in its Brief, CMP blithely cites the findings and conclusions of these other bodies as if they were all eminently qualified and disinterested, addressing the identical issue to be decided here, and applying the same set of legal standards.

Most, if not all, of these bodies base their findings and conclusions on the Agency Reviews, either directly or indirectly, but as discussed in Complainants' Brief, CMP has not provided sufficient evidence to prove the Agency Reviews are reliable. The record is devoid of information from which the Commission could conclude the Agency Reviewers are qualified and disinterested and there is extensive evidence that some key Agency Reviewers are not disinterested. And, the Agency Reviews are not sufficiently transparent about the review process to conclude they have adequately and fairly assessed the evidence.

Even more critically, it bears repeating that the Agency Reviews are not material to the issue to be decided here. They do not answer the question of whether there is sufficient evidence of no risk or lack of risk to conclude safety is ensured. This point is most critical when the exposure is involuntary and the RF radiation is emitted in the home environment. It defies all notions of fairness and justice to directly or indirectly shift the burden to CMP customers to resolve the inconsistencies and uncertainties in the science and to effectively prove causation, particularly where CMP has exercised its monopoly powers to compel customers to either accept the installation of RF radiation

devices on their homes or to pay a lifetime of special fees to keep their old meters, while still being exposed to the AMI system radiation in their neighborhoods.

Complainants focused on the Agency Reviews in their Brief because Exponent cited them as the most reliable and comprehensive. As discussed below, each of the other agency and administrative bodies cited by CMP are even less reliable and/or material to this investigation than the Agency Reviews. We address these administrative bodies and CMP's arguments below, with reference to the lettered and numbered paragraphs in CMP's Brief.

ARGUMENT

I. CMP misstates the legal standard.

The question to be decided in this proceeding is whether CMP's smart meters and other AMI facilities are safe, not whether they are "reasonable and adequate." The Legislature mandates every utility "shall furnish safe, reasonable *and* adequate facilities and service." 35-A M.R.S. §301(emphasis added). CMP's facilities and services must satisfy each requirement independently. The question in this proceeding is safety, and the evidence has been limited to that question. CMP's discussion of evidence related to standards for reasonableness and adequacy is immaterial and should be disregarded.

CMP makes several assertions about alleged benefits of smart meters: "benefits to the Company of deploying its AMI project outweigh any adverse impact to ratepayers"; "the project has not identified any adverse impacts to ratepayers," and "there should be no question that CMP's AMI project will actually improve service rather than cause inadequate service." *CMP Brief* at 9. There is no evidence in the record to support these

assertions[3] and they do not relate to the question of safety. Evidence of benefits, reasonableness, and adequacy, or the lack thereof, may be relevant in a second phase of the investigation, after the Commission rules on the question of safety.

With respect to safety standards, CMP claims the Legislature "prescribed the specific safety standards" in an "unambiguous directive to the Commission" when it enacted Section 3143 in 2010. Section 3143(7) is not a prescribed safety standard; nor is it an unambiguous directive to take any particular action. It is merely an unremarkable statement of policy requiring all applicable safety, security and reliability standards be met in the implementation of any smart grid functions. This policy does not supersede the more general and fundamental legislative mandate that the Commission ensure safety (Section 101) or that the utility provide safe facilities (Section 301). It is not a directive that the Commission abdicates its most fundamental obligation to ensure safety or that it is precluded from exercising its independent judgment about safety. The Legislature states very clearly in Section 3143 that "nothing in this section limits any other authority of the commission with respect to smart grid implementation. 35-A M.R.S. §3143(11).

CMP correctly states that "under Maine's smart grid statute, the Company must demonstrate that it meets applicable regional, national or international safety standards." *CMP Brief at 6.* That does not mean that CMP gets a free pass on its burden of proof in this investigation to prove safety from the risk of non-thermal adverse effects. Indeed,

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[3] And, the assertions are not supported by facts outside the record. CMP is currently before the Commission in an attempt to gain a rate increase in part due to the AMI system (PUC Docket 2013-00168)

there are no applicable regional, national or international standards protecting CMP's customers from the risk of non-thermal adverse effects of RF radiation.

We think the MCDC would be quite surprised by CMP's assertion that the November 8, 2010, MCDC Report has established a "regional safety standard" for RF radiation. As discussed below in Section III.A, the MCDC does not have special expertise on low-level RF radiation safety; it conducted only a cursory review of other science reviews, it did not conclude CMP's facilities are safe, it has not reviewed the most recent scientific developments, and it declined to participate in this investigation.

II. Issues identified by the Hearing Examiner.

1. Legal standard. See discussion above.

2. Noncompliance with FCC, including meter bank exposures.

Complainants object to CMP's submission of a memorandum (CMP Exhibit 3) from Yakov Shkolnikov on this issue. It is dated November 6, 2013, after the final hearing was held and the record was closed. Complainants had no advance notice of this Memorandum and certainly had no opportunity to cross-examine Dr. Shkolnikov about it. Reserving all rights, we briefly respond to it.

AMI technology has been engineered to avoid multiple meters in a meter bank transmitting simultaneously. Presumably this is done to avoid the cumulative effect of a simultaneous hit from two smart meters. But, with transmissions lasting approximately 4 milliseconds, you could have 250 hits in one second. Avoidance of simultaneity becomes an academic issue that may be a distinction without a difference when determining the adversity of effects. If two hits occur within a few milliseconds, are they not sufficiently

close in time to consider them simultaneous? Is there any evidence that two literally simultaneous hits would have a greater cumulative effect than two hits 1 millisecond apart? While CMP and the agencies it cites focus on avoiding simultaneous hits, they fail to mention the increased collective duty cycle for a bank of meters. Collectively, meters in a bank are transmitting a very large number of transmissions, most likely more than they would if they were not located in proximity to each other. If they are not transmitting simultaneously, they are transmitting in series and presumably they are transmitting multiple retries when otherwise simultaneous transmissions are blocked. In a 30 meter bank there will be a minimum of 34 transmissions per meter per day plus 34 transmissions for every descendant of each meter with descendants, plus all the retries necessitated by the busy signals occurring to avoid simultaneous transmissions. Anyone within the vicinity of a meter bank will receive a massive number of hits every day resulting in significant cumulative effects not experienced near a single meter.

This is only one of several reasons why the 10% fixed duty cycle must be used when averaging power density for purposes of assessing compliance with FCC guidelines and other international guidelines. Yet, CMP and the other agencies and administrative bodies cited by CMP use unrealistically low duty cycles to assert compliance. These duty cycles do not reflect circumstances in multiple meter banks and do not reflect other factors leading to worst-case scenarios. As discussed below and in Complainants' Brief, CMP has failed to provide evidence about worst-case exposure levels sufficient to establish compliance with either national or international standards.

3. **Cumulative effects.** CMP's assertions about cumulative effects are based on Exponent's unreliable data about exposure levels. *See* discussion below and in Complainants' Brief, pp. 30-36. CMP makes the Orwellian assertion that because people may be involuntarily exposed to RF radiation from other sources in public places, CMP should be allowed to compel involuntary exposure in the privacy of its customers' home environments. CMP wants to take away its customers' ability to obtain safety in the one area where they can take some control over RF exposure, the privacy of their own homes.

4. **Remedies.** With regard to potential remedies, CMP makes numerous assertions and speculations that are unsupported by the evidence in the record, demonstrating the need for a possible subsequent proceeding to address this issue.

III. Response to CMP's Summary of Key Findings.

CMP misstates the issue to be decided. The question is whether CMP's AMI facilities are safe, not whether they are "an unreasonable utility practice." CMP also makes explicit its invitation for the Commission to ignore the scientific evidence in the record and to follow what it claims is the "overwhelming consensus" among scientists and public health policy makers. The Commission must assess the evidence in the record, not take a vote of scientists and policy makers.

CMP overstates the alleged consensus. As demonstrated by the testimony of Complainants' experts, there is no consensus in the scientific community that smart meter technology is safe. There are many scientists, physicians and public health policy makers who would disagree with this assertion. *E.g. see, BioInitiative Report 2012; Lloyd Morgan Testimony,* Exhibits G-J.

A nice example of the lack of scientific consensus is the April, 2000 EcoLog report that was commissioned by T-Mobile and subsequently ignored by T-Mobile and the various agencies and administrative bodies cited by CMP. Based on the state of the science in 2000, the EcoLog-Institut made extensive findings of adverse non-thermal effects from low-level RF radiation, including genotoxicity, disruption of cellular processes, disruption of cell transformation and cell proliferation, evidence of pathological effects on the immune system, the blood-brain barrier, neurotransmitters, cognitive functions, stress hormones, and carcinogenesis. The Eco-Log Institut scientists recommended "the precautionary limit of 0.1 W/m^2 [0.01mW/cm^2], independent of the carrier frequency." *Id.* at p. 37(brackets added). Of particular note, is the additional conclusion that the higher exposure threshold applied by the FCC for higher frequency RF (including the CMP smart meter frequency) is "not justifiable given the results of the scientific studies which conclusively prove non-thermal effects of high frequency fields." *Id.* You will not find the EcoLog report cited by the Agency Reviews, which according to Exponent, review *all* of the science.

To the extent a consensus exists, it is primarily among scientists appointed by agencies that are influenced by the industry. The authors of the EcoLog-Institut Report, the BioInitiative Report, the Selutun Statement, Complainants' experts, and many other independent scientists are outside this "consensus." The agencies tend to be dominated by scientists who are adherents to and defenders of the classic physics explanation of interactions between RF radiation and biological systems. *See Complainants' Brief,* pp. 17, 24. And, even within this sector of the scientific community, the consensus is not

that the science proves there is no risk of adverse non-thermal effects. The consensus is that the science has not yet proven causation to a scientific certainty.

To the extent there is a degree of consensus among public health policy makers, it is a relatively uninformed acceptance of this very limited scientific conclusion, which is not a sufficient basis for concluding safety is ensured. Most, if not all, of these public health policy makers have not reviewed or investigated the science themselves, have not conducted an investigation on the scale done in this proceeding, and have not heard the testimony of preeminent scientists such as Dr. Hardell and Dr. Phillips. This is exactly why CMP implores the Commission to ignore the scientific evidence, so that it too will blithely follow the alleged "overwhelming consensus."

A. The MCDC has no special expertise, conducted only a cursory review of the science, did not determine smart meters are safe, and declined to participate in this investigation.

On November 8, 2010, the MCDC issued a brief executive summary report ("MCDC Report") to address the issues of RF radiation safety raised in a complaint filed with the PUC less than two weeks earlier on October 25, 2010. Much of the report text is expended explaining the limitations of MCDC's expertise and its inability to conduct a full review of the science. CMP contends the Commission should adopt the "determinations"[4] of the MCDC Report because the MCDC has the expertise and jurisdiction to address safety concerns related to RF radiation.

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[4] Contrary to CMP's choice of language, the MCDC summary conclusions are not "findings" or "determinations."

CMP's assertion of special expertise is contradicted by MCDS staff. "We are not experts on this . . ." *Andy Smith 11/12/2010 e-mail, see* attached Exhibit A, p. 2. ". . . regardless of whether we have expertise, we get dragged into the middle." *Andy Smith 10/2/2010 e-mail,* Exhibit A, p. 5. It is also clear that MCDC conducted only a cursory review of the literature, focusing on agency reports. "[A] full review of all the literature on . . . (RF) and health was beyond the scope of a small state's public health agency." *MCDC 11/29/2010 Eight Leading Question/Concerns of the Maine CDC's Approach to and Report on Smart Meters.*

> I think we may want to stress (again) that our intent here was to provide the Office of the Public Advocate with a compendium of evaluations by other national and international health organizations. We make the assumption that these organizations with their larger resources have indeed evaluated all of the science. We are not experts on this, so are looking to people who we view as experts.

Andy Smith 11/12/2010 e-mail, Exhibit A, p. 2. To the extent the MCDC has jurisdiction, it has declined to exercise it by not responding to the Hearing Examiner's invitation to participate in this proceeding. *See 11/5/2012 Comm'n ltr. To MCDC.*

CMP also contends that a finding of a safety risk by the PUC "would be inconsistent with the MCDC determination." This is not the case. First, the MCDC did not make any assurances or findings that smart meters are safe. "I never said, "smart meters are safe." *Director Dora Mills, 10/15/2010 e-mail,* Exhibit A, p. 1. And, any inconsistency is readily explained and justified by the extensive evidence reviewed in this lengthy investigation compared to the brief and cursory review conducted by the MCDC over three years ago without the benefit of IARC 2B classification, the IARC

Monograph, the testimony of experts in this case,[5] and many other critical studies and reports issued since 2010.

B. CMP has failed to prove compliance with FCC guidelines or to prove the guidelines ensure safety.

Contrary to CMP's assertions, the FCC certification of Trilliant's smart meters does not mean the "safety of that equipment [in the home environment or within the mesh network] was established," and, it is not an "irrefutable fact" that RF exposure under all operating conditions is "orders of magnitude below" the FCC guidelines. For all the reasons stated in Complainants' Brief, the extremely outdated FCC guidelines developed from data in the 1980's and promulgated in 1996, do not protect against non-thermal effects of RF radiation, and CMP has failed to provide sufficient evidence in this proceeding to support a conclusion that its smart meters and AMI equipment comply with FCC guidelines in worst case scenarios.

FCC guidelines are designed to address thermal effects only, a fact that is readily acknowledged by virtually every scientist except CMP's experts, and which is evidenced by the averaging of exposures based on homeostatic responses to thermal heating. The only record evidence cited by CMP to support its "irrefutable fact" assertion of FCC exposure compliance is Exponent's testimony about exposures from "typical" smart meters. Typical or average smart meters do not represent worst case scenarios. And, Exponent's calculations of typical exposures are based on Dr. Shkolnikov's erroneous

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[5] Indeed, CMP fed the MCDC staff with materials from its experts during the MCDC review process, but the MCDC never had access to materials from Complainants' experts.

assumption that Trilliant's sample of 1,100 smart meters presented a statistically representative sample of CMP's 600,000 meters.

C. CMP has failed to prove compliance with international RF emission standards.

Because the ICNIRP and some other international guidelines are similar to the FCC guidelines, CMP has necessarily failed to show compliance with them as well. There are no officially sanctioned guidelines addressing safety from non-thermal effects. There are, however, a number of recommendations made by groups of scientists that recognize the risk from non-thermal effects. *See, EcoLog Institut* (0.1W/m2 or 0.01 mW/cm2); *BioInitiative Report* (0.01 mW/cm^2); *Seletun Statement* (0.00017 mW/cm^2), *London Resolution* (0.06 V/m). CMP has failed to demonstrate compliance with any of these recommended exposure limits, particularly under worst case scenarios and/or with consideration of cumulative effects.

D. Field testing by Exponent and OPA failed to provide reliable data about RF exposures or that smart meter exposures are orders of magnitude below other man-made sources of RF.

For all of the reasons cited in Complainants' Brief, Exponent's "measurements" cannot be relied upon to determine smart meter exposure levels. There is no record evidence to confirm CMP's assertion that smart meters were "operating at an extremely high communications rate" while Exponent was conducting measurements. All of CMP's assertions about the relative rates of communication among its smart meters should be disregarded as based on the Trilliant sample that is not statistically representative. And, while Dr. Shkolnikov may have used "state of the art equipment," it was not designed to reliably measure "the very brief pulses of RF energy produced by

smart meters." *Tell Associates, 2013,* p. 20. Because Exponent did not use the right equipment to measure individual transmissions and it took no steps to confirm transmissions were in fact occurring, or were occurring at a particular frequency, it is a matter of speculation whether the smart meters were transmitting when Exponent measurements were taken and whether Exponent actually measured any smart meter transmissions.

CMP engages in further speculation when it contends the relatively high measurement (13.4% of FCC guidelines) taken by the OPA consultants was not from a smart meter. Dr. Shkolnikov states with certainty: "The higher measurements, however, include signals from other RF sources." *CMP Brief* at 27. Yet, there is no evidence other sources were in fact transmitting, only the speculation by OPA consultants that the higher measurements could have "included the RF signals from a number of possible nearby sources." *CMP Brief* at 26.

Dr. Shkolnikov also makes the misleading observation that the higher (13.4%) measurements were not during the meter's "maximum duty cycle." According to Dr. Shkolnikov's own Validation Report, there is an "active period" (12:00 a.m. to 1:30 a.m.) and a "quiescent period" (1:30 a.m. to 11:59 p.m.). *Validation Report,* p. 5. There is no mention of a "maximum duty cycle" period. The higher measurements (13.4%) were taken at 12:56 a.m., during the active period. *OPA Report,* pp. 42-43. The OPA consultants identify 12:00 am – 12:05 a.m. as the "maximum duty cycle," apparently because that is one of two times during the active period when a smart meter makes its hourly transmission. This provides no rational basis for concluding that a measurement

taken during the active period but outside this alleged "maximum duty cycle" period, was not from a smart meter transmission. This suggestion by the OPA consultants is troubling, but its adoption by Dr. Shkolnikov as fact is even more troubling, not unlike his treatment, as fact, of the statistically representative nature of the Trilliant sample after Trilliant had expressly denied the "fact" on the record.

CMP's comparisons to exposures from other RF sources, particularly natural RF sources, are unreliable and uninformative for the issue to be decided by the Commission. Because Exponent's evidence of smart meter exposure levels is unreliable, its comparisons using this evidence are unreliable. And as discussed more fully in Complainants' Brief (pp. 40-42), Exponent provides no credible justification for comparing pulse-modulated smart meter RF to natural background RF for the purpose of assessing health risks.

E. The "Public Health Policy Makers" cited by CMP cannot be reasonably relied upon to conclude that safety is ensured.

CMP asserts that "in addition to the MCDC," all other public health policy makers, agencies and judicial bodies reviewing the question have determined smart meters are safe. The hyperbole of this assertion will become apparent as we discuss the various reviews cited by CMP. First, we simply note that, like MCDC, these other bodies have not specifically determined that smart meters are "safe," or that safety from the risk of adverse effects can be ensured. Second, we reiterate the arguments made in the introduction to this brief that the Commission should not give serious consideration to the conclusions of other bodies without compelling evidence of their competence,

disinterestedness, adequate procedures, full review of *all* the science, and identical governing law and legal standards.

California Council on Science and Technology ("CCST"), April, 2011. Exponent cites the CCST Report prominently, but Dr. Bailey was unable to offer any information about the CCST reviewers or whether the organization had any industry affiliation or funding. *11/8/12 Tr.*, p. 86 lines 9-25. A very significant limitation to the scope of the CCST Report is its date. It is now almost three years old; it did not have the benefit of the IARC 2B classification (May, 2011), or the 2013 IARC Monograph Vol. 102.

The CCST report is not as definitive in its analysis as CMP and others maintain. First, contrary to Exponent's testimony, it notes that the FCC standard provides safety against only "known thermally induced health impacts." *CCST Report, p. 4.* And, the Report does not conclude that safety from non-thermal effects is ensured, only that the present state of knowledge is insufficient to establish standards for such effects. *Id.* This conclusion is based on its inaccurate statement that "scientific studies have not identified or confirmed negative health effects from potential non-thermal impacts." *Id.* This statement is to somewhat contradicted elsewhere in the Report. "Exposure to RF emissions may lead to thermal and non-thermal effects" (*Id.*, p. 7), but is more directly contradicted by the extensive evidence in this record of studies and reports that have identified, and to some extent confirmed, negative health effects.

CCST's ultimate conclusions echo those of the Agency Reviews -- because the mechanisms remain uncertain and the adverse non-thermal effects have not been

"scientifically established" (read: "proven to a scientific certainty"), no action should be taken to protect people from the potential risks, even in their home environments. *Id.,* p. 8. It is not only the uncertainty in the science, however, that influenced the CCST reviewers. They also emphasized the uncertainty in the "relative costs and benefits" that underlie the CCST Report conclusions. *Id.*, p. 23.

Monterey County Health Department ("MCHD"). This Report is also nearly three years old. As CMP notes, its conclusion is very limited -- stating that the FCC standard protects against only known thermally induced health impacts and is based on the inconsistencies in the science. Evidence of the Board's influence by industry advocates can be found in its unquestioning acceptance of industry's dismissive characterization of the BioInitiative Report as "non-scientific literature." *MCHD Report,* p. 4. Instead of reaching a definitive conclusion about smart meter safety, the Board merely states: the expected lower levels of exposure compared to mobile phones "should provide consumers some reassurance that there is a lower potential for adverse non-thermal health effects from the operation of smart meters." *Id., p* 6. Offering some reassurance is not ensuring safety.

Health Canada 2011. The December 2011 Health Canada document is a two-page brochure touting Health Canada's Safety Code 6 Guidelines, which are comparable to FCC Guidelines. As does the FCC, Health Canada ignores the extensive evidence of non-thermal effects. And, this two-page brochure does not take into consideration the IARC 2B classification or other scientific evidence produced since December 2011.