

January 24th, 2013

FORTISBC INC ADVANCED METERING INFRASTRUCTURE CPCN
EXHIBIT C19-8

Ms. Erica Hamilton,
Commission Secretary,
British Columbia Utilities Commission.

Re: Intervener Filed Evidence for West Kootenay Concerned Citizens

Dear Ms. Hamilton;

The information contained in today's submission and Document C19-4, C19-6 is the filed evidence for the WKCC. This evidence substantiates the missing science linking the frequencies to adverse health effects and additional problems for the Fortis BC application on a wireless smart grid. The frequencies are now illegal as applied.

Alex Atamanenko Document C1-3 supported a suspension of proceedings or an outright denial of the Fortis BC application. Alex confirmed as a Member of Parliament that Health Canada has committed to reviewing Safety Code 6 as well as committing to establishing a formal, independent Expert Panel. The appointment of an Expert Panel of the Royal Society of Canada has been selected as the means for obtaining independent expert assessment of the review of Safety Code 6. The Expert Panel report and recommendations is anticipated to be released in 2013. Safety Code 6 will be updated.

Fortis response in B-13 dismissed the review information in C1-3. Fortis states that Safety Code 6 is presently subject to review and that there is no basis to assume that any revisions of the Code would be recommended or, if recommended, significant.

Safety Code 6 admits to missing science linking the frequencies to adverse health effects and the Code will be changed if deemed necessary once science is submitted. Although science is missing the Code states **"the predominant health effect to be avoided is the unintentional stimulation of tissue as is the heat effect."** Intentional stimulation of tissue is medical imaging in a controlled environment in an intended position of use.

Fortis is not accurate by stating there is no basis for revisions in Safety Code 6 or their significance. September 14th 2010, the errors or omissions in Safety Code 6 linking the frequencies to adverse health effects was reported to Health Canada. I was the reporting government certified professional.

October 26th, 2010 the errors or omissions in Safety Code 6 linking the frequencies to adverse health effects was reported by expert witness **at the request** of Canadian Parliament's Standing Committee on Health. I was the reporting professional providing expert witness.

December 2010 the Standing Committee on Health's report included the NDP's Complimentary Report included the errors or omissions reported in Safety Code 6 being thoroughly investigated by Health Canada given my credentials. Refer to page 33 of this report. <http://www.thermoguy.com/pdfs/Report-of-The-Standing-Committee-on-Health.pdf>

January 2011 the dangers of the wireless frequencies was lectured in medical education for education credits required for ongoing medical licensing. I lectured the missing mechanisms linking the frequencies to adverse health effects in that program.

http://www.thermoguy.com/pdfs/Medical_Education_Letter_on_Wireless_Lectured_in_Medical_Academia.pdf

"Bringing the Invisible to Light Since 1979"

The basis for revisions and the significance is that smart meters were only considered as an end use device. Relays, smart meter routers, antennas radiating large geographical areas were left out of safety standards. Humans were treated as heating tissue and bio electricity, vulnerability as well as millions(billions of frequencies) were left out of a frequency equation. Lower power densities is limited electrical information, it still means you are under load.

As soon as the information above is incorporated in frequency exposure, it substantiates causality, biological plausibility and reproducibility missing in Safety Code 6.(Fortis Exhibit B-1, Appendix B-6, page 9)

The incorporation of the errors or omissions in Safety Code 6 links the frequencies to adverse health effects and substantiates reporting on health effects. The Royal Society of Canada didn't have this information for their original consultation on Safety Code 6. Incorporating the errors and omissions in the revision will make the wireless smart meters illegal as applied because the frequencies will stimulate tissue. Land use will change as well and towers will not meet the requirements for licensing by Industry Canada.

The following 3 page document is a letter for Peachland City Council on BC Hydro's smart meter program but is applicable to all municipalities. The document shows illustrations of the archaic science used around the world for human exposure and a diagram of BC Hydro's smart grid showing blanket coverage of the frequencies. That diagram clearly demonstrates how these frequencies would go through people, buildings, ecosystems and infrastructure. That peer reviewed science substantiating that interaction is basic electricity.

Health Canada isn't the only country revising the Specific Absorption Rate which is used for testing exposure limits. The United States FCC uses the same science standards as Safety Code 6. Congressman Dennis Kucinich sponsored Bill H.R. 6358 on wireless exposure(draft bill attached). The bill was supported by the American Academy of Pediatrics(60,000) because of the vulnerability of children and pregnant women.

http://www.thermoguy.com/pdfs/American_Academy_of_Pediatrics_Supports_Child_Cell_Phone_Protection.pdf

The Fortis Application for wireless smart meters should be denied because Safety Code 6 will change when it incorporates the errors and omissions. The least that should happen is a suspension of the wireless application for smart meters. Evidence will show the meter program will not meet the objectives of the utility or the Provincial Government's Energy Plan.

Sincerely,

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January 23rd, 2013

Peachland City Council
5806 Beach Ave,
Peachland, B.C.

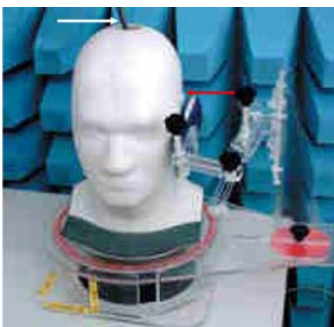
Att: Mayor & City Council

Re: BC Hydro's Wireless Smart Meter Program is Illegal and Violating Municipal Land Use

Dear Mayor & Council:

I was asked by concerned residents to represent the missing science in Health Canada's Safety Code 6 that link the frequencies to adverse health effects. Governments, BC Hydro, BC Utilities Commission, Industry Canada and the Canadian Wireless Telecommunications Association all have to comply with Safety Code 6. **When it comes to towers, compliance with Safety Code 6 is mandatory and a condition of license by Industry Canada.** Safety Code 6 uses the same science standards as the FCC and other international governing bodies.

Safety Code 6 determines the limits of human exposure to radio frequency EMFs and even though science standards are based on decades of scientific literature, safety standards admit science is missing linking the frequencies to adverse health effects. Missing science doesn't change the fact Safety Code 6 states **“the predominant health effect to be avoided is the unintentional stimulation of tissue as is the heat effect”**. Intentional stimulation of tissue is medical imaging in a controlled environment in an intended position of use.



This picture is the Specific Absorption Rate used to determine exposure limits. The red arrow shows the position of the cell phone and the white arrow highlights the hole in the test model where liquid that simulates tissue is poured. The black wire inside the head is the temperature probe measuring for heat effect. This is the science used globally and because smart meters or wireless computers aren't held against the head like a cell phone, 24/7 exposure is considered safe for everyone including children and pregnant women.

The missing mechanisms linking the frequencies to health effects was reported by expert witness **at the request** of Canadian Parliaments Standing Committee and changed the safety of wireless applications. The Specific Absorption Rate didn't include smart meter routers, relays, tower antennas and other wireless infrastructure radiating large geographical areas to communicate with wireless devices. Health effects didn't incorporate the bio electricity of humans, their vulnerability and left out millions of frequencies in a frequency equation. When you incorporate the errors or omissions in safety, you have causality, biological plausibility and reproducibility which links the frequencies to adverse health effects.

Tissue is being stimulated and can cause nerve and muscle depolarization. That depolarization by an EMF trigger affects the nervous system, hormonal system and immune systems. The frequencies hitting people from head to toe will have health effects and the dangers of the frequencies is now lectured in medical education for education credits required for ongoing medical licensing. The education program is applicable in North America and wireless exposure needs to be considered in medical diagnosis.

Land Use Issues

I have seen and heard frustration from municipalities on wireless deployment. Municipalities have been told they have no jurisdiction in smart meter deployment or tower construction. The BC Government has mandated the meter program for their Energy Plan and Industry Canada has jurisdiction on tower installation for the wireless industry.

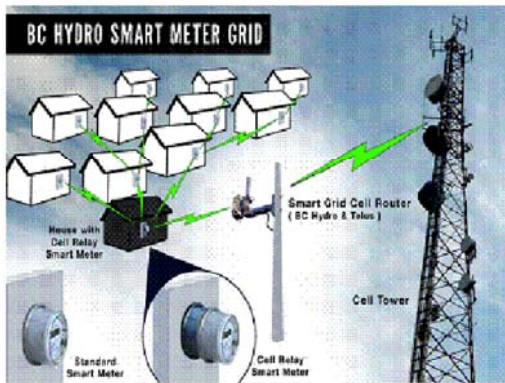
Here is my submission to the BC Utilities Commission on the Fortis BC application supporting a suspension of the utility's application to install wireless smart meters. Wireless smart meters won't address or assist the province's Energy Plan plus the frequencies are illegal as applied. http://www.bcuc.com/Documents/Proceedings/2012/DOC_32604_C19-6_WKCC-Submission-RDCK-Nelson-Creston_Suspension.pdf

If I wanted to build a gun range on a lot in your municipality, my application would be denied. The damage to buildings, infrastructure, danger to people, etc would be illegal and bring liabilities. Tower construction requires the same consideration and is the municipality's jurisdiction. The tower construction and land use isn't addressing or considering the number of antennas, the direction and coverage areas of the EMF guns hitting buildings, infrastructure, businesses, people, pets, ecosystems, etc. Texas utility Oncor admitted through their lawyer smart meter routers covered an average of 5 sq. Miles, and the collectors 125 sq. Miles. Fortis BC as an example plans to radiate 17,000 sq. Km to communicate with wireless smart meters without considering what the EMFs hit or interact with. Those frequencies will be illegal.

There are real electrical reasons we don't blast frequencies around with reckless abandon. You have to consider what the EMFs can interact with. This blanket coverage with RF EMFs that go through buildings causes real problems including to the buildings violating Part 4 of the BC Building Code under vibration. 900 MHz frequencies going through structures and fire separations will cause molecules of material to polarize(change direction 180 degrees) 1.8 billion times per second. The higher the power density, the more intense these molecular earthquakes. Here is what that looks like at 60 Hz in an insured industrial inspection. http://www.thermoguy.com/pdfs/Electrical_Frequency_Problem_in_Lumbermill.pdf

It is well known how UV affects exposed materials. These are subtle but dangerous frequencies going through materials. Andrew Michrowski(PHD) has done extensive work on accelerated corrosion of infrastructure and, making it more dangerous, is inducing electrical charges in volatile areas that could create fires or explosions. <http://media.withtank.com/42391c31ef.pdf>

Here is a diagram of BC Hydro smart grid showing what they didn't incorporate into safety.



Pacemaker recipients are told to stay out of electromagnetic fields: however, the area coverage will take the EMFs right into their homes. That is separate of BC Hydro using unqualified installers with a few hours training to swap electrical meters. Changing a meter under load on a meter base that has never been serviced is very dangerous and further compromises building owners. BC Hydro blames home owners for the fires because the homeowner owns the meter base when the electrical reality is the meter swap caused the fire.

http://www.thermoguy.com/pdfs/Smart_Meter_Fires_and_Installation.pdf

Peachland and other municipalities are going to be absorbing costs and liabilities that are not theirs. As well BC Hydro isn't incorporating health, building or infrastructure costs and haven't considered the agricultural, forestry, groundwater, fish spawning, economic or ecosystem damage. The frequencies are illegal as applied and the peer reviewed science substantiating that is electricity, engineering, medical education.

Health Canada is presently revising Safety Code 6 and has retained the Royal Society as an independent body. The United States have a draft bill H.R. 6358 where congress members are asking for a revision of the scientifically ridiculous Specific Absorption Rate test.

Your residents have valid concerns for themselves and their building investment. The complete science wasn't represented to municipalities. My opinion is not singular. The margin of error is zero. The peer reviewed science qualifying the EMF interactions is called electricity. To generate electricity requires an electromagnetic field (EMF) and a conductor. In BC Hydro's as well as other utilities application, they are blanketing areas with EMFs and human/animal, vegetable/mineral kingdom – almost everything are the conductors.

Our electrical grid is 60 Hz frequencies so they can communicate with 60 Hz appliances and devices. There radio frequencies at 900 million Hz are not electrically compatible with **any** biological frequencies they are interacting with.

Sincerely,

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.....
(Original Signature of Member)

112TH CONGRESS
2D SESSION

H. R. _____

To examine, label, and communicate adverse human biological effects associated with exposure to electromagnetic fields from cell phones and other wireless devices, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. KUCINICH introduced the following bill; which was referred to the
Committee on _____

A BILL

To examine, label, and communicate adverse human biological effects associated with exposure to electromagnetic fields from cell phones and other wireless devices, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Cell Phone Right to
5 Know Act”.

1 **SEC. 2. RESEARCH PROGRAM.**

2 (a) IN GENERAL.—The Director and the Adminis-
3 trator, acting jointly, shall conduct or support a com-
4 prehensive research program to determine whether expo-
5 sure to electromagnetic fields from mobile communication
6 devices causes adverse biological effects in humans, includ-
7 ing especially vulnerable subpopulations such as children,
8 pregnant women, those with compromised immune sys-
9 tems and hypersensitivity reactions, men and women of
10 reproductive age, and the elderly.

11 (b) SPECIFIC REQUIREMENTS.—With respect to the
12 possible adverse biological effects in humans from expo-
13 sure to electromagnetic fields from mobile communication
14 devices, the program under subsection (a) shall provide
15 for—

16 (1) the collection, compilation, publication, and
17 dissemination of scientifically valid information;

18 (2) research on mechanisms by which such elec-
19 tromagnetic fields interact with human biological
20 systems; and

21 (3) epidemiological research.

22 (c) DISSEMINATION.—

23 (1) PUBLIC ACCESSIBILITY.—The Director and
24 the Administrator, acting jointly, shall ensure that
25 information and research results under such pro-

1 gram are regularly made widely available to the gen-
2 eral public.

3 (2) REPORTS TO CONGRESS.—On the date that
4 is 4 years after the date of enactment of this Act
5 and on the date that is 8 years after the date of en-
6 actment of this Act, the Director and the Adminis-
7 trator, acting jointly, shall transmit to Congress a
8 report containing the findings and conclusions of the
9 research program under subsection (a).

10 (d) WORKSHOP.—

11 (1) IN GENERAL.—The Director and the Ad-
12 ministrator, acting jointly, shall convene a workshop
13 to assist in the development of a plan for the re-
14 search to be carried out under such program.

15 (2) PARTICIPANTS.—Participants in the work-
16 shop shall include government employees, represent-
17 atives of public interest groups, and representatives
18 from the scientific community with expertise relevant
19 to health issues or other adverse biological effects in
20 humans potentially associated with the exposure to
21 electromagnetic fields from mobile communication
22 devices.

23 (e) CONFLICTS OF INTEREST.—

24 (1) IN GENERAL.—The Director and the Ad-
25 ministrator—

1 (A) may not delegate any responsibility
2 under this section to an officer or employee
3 with any significant conflict of interest relative
4 to research or activities under this section;

5 (B) shall require, as a condition on receipt
6 of assistance for research under this section, an
7 assurance that any person given responsibility
8 to carry out such research will not have any sig-
9 nificant conflict of interest relative to such re-
10 search; and

11 (C) may not, with respect to any such per-
12 son, waive subparagraph (A) or (B) in any case
13 or grant an exemption under section 208(b) of
14 title 18, United States Code.

15 (2) RELATION TO OTHER PROVISIONS.—The re-
16 quirements of paragraph (1) are in addition to the
17 prohibition in section 208(a) of title 18, United
18 States Code, and any other prohibition or require-
19 ment in Federal law relating to conflicts of interest.

20 (3) STATUS OF RESEARCHERS.—Any person
21 who is not a Federal Government employee who per-
22 forms research under the program in subsection (a)
23 shall be considered a special government employee
24 for the purpose of conflict of interest rules, including
25 section 208 of title 18, United States Code.

1 (f) CLARIFICATION OF RESEARCHER ACCESS TO IN-
2 FORMATION.—

3 (1) IN GENERAL.—Not later than 180 days
4 after the date of enactment of this Act, the Federal
5 Communications Commission shall promulgate regu-
6 lations to allow a subscriber to access personally or
7 to give consent to allow researchers with institu-
8 tional review board approval to access specific usage
9 data required to investigate the link between electro-
10 magnetic radiation exposure and potential adverse
11 biological effects in humans.

12 (2) TIME FOR REPLY.—Such regulations shall
13 provide that a company regulated by the Commis-
14 sion from whom a subscriber or a researcher, with
15 the consent of an individual subscriber, requests
16 data in accordance with such regulations shall—

17 (A) respond to and provide such data with-
18 in 30 business days; or

19 (B) be fined not more than \$10,000 per
20 account per day following such 30-day period in
21 accordance with the Communications Act of
22 1934.

23 (3) DATA PROVIDED.—The regulations shall
24 provide that, of the data described in paragraph (1),

1 all relevant data shall be accessible, including the
2 following:

3 (A) With respect to the individual sub-
4 scribe, usage data including the following:

5 (i) The date and time the call or data
6 session began and ended.

7 (ii) The outgoing and incoming phone
8 number.

9 (iii) The carrier modulation, such as
10 GSM, CDMA, UMTS, W-CDMA, or LTE.

11 (iv) The frequency band.

12 (v) The subscriber location.

13 (vi) The number of base stations used.

14 (vii) The amount and rate of data
15 transmitted and received.

16 (viii) The form of data usage, such as
17 text messaging or other data transmission.

18 (B) With respect to the base stations used
19 by each individual subscriber:

20 (i) All base stations used in the call or
21 data session.

22 (ii) The base station identifiers.

23 (iii) The date of installation.

24 (iv) The maximum, the average, the
25 total, and the effective radiated power.

1 (v) The frequencies and modulation.

2 (g) AUTHORIZATION OF APPROPRIATIONS.—There
3 are authorized to be appropriated to the Director and the
4 Administrator a total of \$50,000,000 per year for the first
5 7 fiscal years that begin after the date of the enactment
6 of this Act to carry out this section.

7 **SEC. 3. MAXIMUM EXPOSURE.**

8 (a) ESTABLISHMENT.—

9 (1) IN GENERAL.—The Administrator shall pro-
10 mulgate regulations establishing maximum exposure
11 level goals and maximum exposure levels for expo-
12 sure to electromagnetic fields generated by mobile
13 communication devices.

14 (2) GOALS AND LEVELS.—

15 (A) MAXIMUM EXPOSURE LEVEL GOAL.—A
16 maximum exposure level goal established under
17 paragraph (1) shall be set at the level—

18 (i) at which no known or anticipated
19 adverse human biological effects occur; and

20 (ii) which allows an adequate margin
21 of safety.

22 (B) MAXIMUM EXPOSURE LEVEL.—

23 (i) IN GENERAL.—A maximum expo-
24 sure level established under paragraph (1)
25 shall specify a maximum exposure level

1 which is as close to the maximum exposure
2 level goal as feasible.

3 (ii) SPECIFICATION.—In deriving the
4 maximum exposure levels and maximum
5 exposure level goals, the Administrator
6 may not rely on any human behavior modi-
7 fication, including an expectation of hold-
8 ing the mobile communication device a
9 specified distance away from the head or
10 body.

11 (3) REPRODUCIBILITY.—In promulgating regu-
12 lations under paragraph (1), the Administrator shall
13 ensure that any method of measurement of a max-
14 imum exposure level goal or a maximum exposure
15 level is reproducible by an independent third party.

16 (4) INITIAL GOAL AND LEVEL; PERIODIC RE-
17 VIEW.—Not later than 2 years after the date of en-
18 actment of this Act, the Administrator shall promul-
19 gate final regulations under paragraph (1) estab-
20 lishing initial maximum exposure level goals and
21 maximum exposure levels. Not later than every 2
22 years thereafter, the Administrator shall—

23 (A) review each maximum exposure level
24 goal and maximum exposure level established

1 under paragraph (1), taking into consideration
2 advances in science and technology;

3 (B) publish a determination on whether
4 the goal or level should be revised under such
5 paragraph; and

6 (C) as appropriate, revise the goal or level.

7 (5) CONSIDERATIONS.—In promulgating regu-
8 lations under paragraph (1), the Administrator shall
9 consider and account for—

10 (A) whether any research relied upon by
11 the Administrator was funded by an entity
12 whose profitability could be affected by the out-
13 come;

14 (B) health outcomes, biological effects, and
15 mechanisms, including—

16 (i) sleep disturbance;

17 (ii) depression;

18 (iii) tremors;

19 (iv) headache;

20 (v) dizziness;

21 (vi) fatigue;

22 (vii) irritability;

23 (viii) loss of memory;

24 (ix) loss of appetite;

25 (x) nausea;

- 1 (xi) visual disturbances;
- 2 (xii) hearing loss and tinnitus;
- 3 (xiii) increases in stress proteins;
- 4 (xiv) immune systems alterations;
- 5 (xv) cancers and tumors, including
- 6 brain tumors and acoustic neuromas, pa-
- 7 rotid gland tumors, eye cancer, testicular
- 8 cancer, breast cancer, head or neck mela-
- 9 noma, lymphoma, and leukemia;
- 10 (xvi) reproductive system effects;
- 11 (xvii) DNA breaks;
- 12 (xviii) blood brain barrier leakage; and
- 13 (xix) free radical formation;

14 (C) concerns raised by the Federal Radio
15 Frequency Interagency Working Group in its
16 letter dated June 17, 1999, and its subsequent
17 letter dated July 16, 2003, about the existing
18 exposure standard;

19 (D) vulnerable subpopulations, including
20 children, pregnant women, those with com-
21 promised immune systems and hypersensitivity
22 reactions, men and women of reproductive age,
23 and the elderly;

24 (E) non-thermal mechanisms of effects, in-
25 cluding low-intensity modulated fields;

1 (F) multiple exposures in indoor and out-
2 door environments;

3 (G) measurements of exposure and dose
4 including specific absorption rate;

5 (H) exposure to extremely low frequency
6 and static electromagnetic fields;

7 (I) dose-response and non-dose-response
8 analytic models;

9 (J) the practice of averaging exposures
10 over a period of time which masks peak expo-
11 sures that may cause adverse biological effects;

12 (K) individual behaviors that lengthen, in-
13 tensify, or otherwise modify exposure in a way
14 that increases exposure or spreads exposure to
15 different parts of the body;

16 (L) the rapidly changing nature of usage
17 of electromagnetic field emitting products, in-
18 cluding trends towards products that increase
19 duration of exposure, such as a wearable mobile
20 communication device;

21 (M) effects of low intensity radiofrequency
22 electromagnetic fields;

23 (N) effects of modulation of signal, pulse,
24 frequency, amplitude, and power;

1 (O) effects of different signaling character-
2 istics, such as phased array exposure;

3 (P) effects of changes reflected in
4 electroencephalographies that could lead to sei-
5 zures or mood alterations;

6 (Q) effects of exposure to multiple fre-
7 quencies of radiofrequency electromagnetic
8 fields;

9 (R) effects of extremely low frequency-
10 modulated electromagnetic fields; and

11 (S) effects of chronic exposure to radio-
12 frequency electromagnetic fields.

13 (6) INTERAGENCY ADVISORY COMMITTEE.—The
14 Administrator shall—

15 (A) establish an interagency advisory com-
16 mittee of individuals who are officers or employ-
17 ees of Federal departments and agencies; and

18 (B) consult with the committee in estab-
19 lishing maximum exposure level goals and max-
20 imum exposure levels under paragraph (1), in-
21 cluding with respect to selecting a unit of meas-
22 urement.

23 (b) IMPLEMENTATION BY FCC.—The Federal Com-
24 munications Commission shall implement and enforce the
25 standards adopted under subsection (a) as if the standards

1 were promulgated by the Commission under the authority
2 of the Communications Act of 1934.

3 (c) CONFLICTS OF INTEREST.—

4 (1) PROHIBITION.—An officer or employee of
5 the Federal Government may not participate in es-
6 tablishing a maximum exposure level goal or max-
7 imum exposure level under subsection (a), may not
8 serve as a member of the interagency advisory com-
9 mittee established under subsection (a)(6), and may
10 not participate personally and substantially in the
11 implementation or enforcement of a maximum expo-
12 sure level goal or maximum exposure level under
13 subsection (b), if such person is in violation of sec-
14 tion 208 of title 18, United States Code.

15 (2) PENALTY.—A violation of paragraph (1)
16 shall be treated as a violation of section 208(a) of
17 title 18, United States Code.

18 (3) NO EXEMPTIONS.—An exemption under
19 section 208(b) of title 18, United States Code, may
20 not be granted to an officer or employee described
21 in paragraph (1).

22 (4) RELATION TO OTHER PROVISIONS.—The
23 prohibition of paragraph (1) is in addition to the
24 prohibition in section 208(a) of title 18, United

1 States Code, and any other prohibition or require-
2 ment in Federal law relating to conflicts of interest.

3 **SEC. 4. EXPOSURE STANDARD LABELING.**

4 The Commissioner shall promulgate regulations to
5 provide for labeling of mobile communication devices as
6 set forth in this section. Such labeling shall include the
7 exposure rating of the device, the maximum allowable ex-
8 posure level, and the maximum allowable exposure goal—

9 (1) in a manner that is readily accessible upon
10 regular use of the device;

11 (2) at any point of sale in a store in the United
12 States;

13 (3) at any point of sale on a Web site engaging
14 in commerce in the United States; and

15 (4) on the outside packaging and in the instruc-
16 tion manual.

17 **SEC. 5. REINVIGORATING AMERICAN RESEARCH IN ELEC-**
18 **TROMAGNETIC RADIATION AND HEALTH.**

19 (a) IN GENERAL.—The Secretary shall expand and
20 intensify the activities of the Department of Health and
21 Human Services to train, and support the training of, sci-
22 entists in the field of examining the relationship between
23 electromagnetic fields and human health. In carrying out
24 this subsection, the Secretary shall—

1 (1) increase the number and size of grants to
2 institutions for such training; and

3 (2) increase the number of career development
4 awards for such training for health professionals
5 who intend to build careers in pediatric basic and
6 clinical research, including pediatric pharmacological
7 research.

8 (b) NATIONAL RESEARCH SERVICE AWARDS.—Sec-
9 tion 487 of the Public Health Service Act (42 U.S.C. 288;
10 relating to Ruth L. Kirschstein National Research Service
11 Awards) is amended—

12 (1) in subsection (a)(1)(A)—

13 (A) in clause (iii), by striking “and” at the
14 end;

15 (B) in clause (iv), by striking the period at
16 the end and inserting “; and”; and

17 (C) by adding at the end the following:

18 “(v) research in the field of examining the
19 relationship between electromagnetic fields and
20 human health at public entities and private
21 nonprofit academic institutions.”; and

22 (2) by adding at the end the following:

23 “(d) There are authorized to be appropriated
24 \$15,000,000 for fiscal year 2013 and each subsequent fis-
25 cal year for research under subsection (a)(1)(A)(v). The

1 amounts authorized to be appropriated under the pre-
2 ceding sentence are in addition to any other amounts au-
3 thorized to be appropriated to carry out this section.”.

4 (c) LOAN REPAYMENT PROGRAM.—Part G of title IV
5 of the Public Health Service Act (42 U.S.C. 288 et seq.)
6 is amended—

7 (1) by redesignating the second section 487F
8 (42 U.S.C. 288–6) as section 487G; and

9 (2) by inserting after section 487G, as so redes-
10 ignated, the following:

11 **“SEC. 487H. LOAN REPAYMENT PROGRAM FOR RESEARCH-**
12 **ERS IN THE FIELD OF EXAMINING THE RELA-**
13 **TIONSHIP BETWEEN ELECTROMAGNETIC**
14 **FIELDS AND HUMAN HEALTH.**

15 “(a) IN GENERAL.—The Secretary, acting through
16 the Director of the National Institutes of Health, shall es-
17 tablish a program to enter into contracts with qualified
18 individuals under which such individuals agree to conduct
19 research in the field of examining the relationship between
20 electromagnetic fields and human health, in consideration
21 of the Federal Government agreeing to repay, for each
22 year of service conducting such research, not more than
23 \$35,000 of the principal and interest of the graduate edu-
24 cational loans of such individuals.

1 “(b) APPLICATION OF PROVISIONS.—The provisions
2 of sections 338B, 338C, and 338E shall, except as incon-
3 sistent with subsection (a) of this section, apply to the pro-
4 gram established under subsection (a) to the same extent
5 and in the same manner as such provisions apply to the
6 National Health Service Corps Loan Repayment Program
7 established in subpart III of part D of title III.

8 “(c) DEFINITION.—To be qualified to receive a con-
9 tract under subsection (a), an individual shall agree to
10 conduct the research at a public or private nonprofit enti-
11 ty.

12 “(d) AUTHORIZATION OF APPROPRIATIONS.—To
13 carry out this section, there is authorized to be appro-
14 priated \$10,000,000 for fiscal year 2013 and each subse-
15 quent fiscal year.”.

16 **SEC. 6. CLARIFICATION OF LOCAL CONTROL RELATED TO**
17 **HUMAN HEALTH.**

18 Section 332(c)(7)(B)(iv) of the Communications Act
19 of 1934 (47 U.S.C. 332(c)(7)(B)(iv)) is amended by strik-
20 ing “radio frequency emissions” and inserting “radio-
21 frequency emissions, excluding the adverse human health
22 effects of emissions of radiofrequency electromagnetic
23 fields,”.

24 **SEC. 7. DEFINITIONS.**

25 For purposes of this Act:

1 (1) ADMINISTRATOR.—The term “Adminis-
2 trator” means the Administrator of the Environ-
3 mental Protection Agency.

4 (2) COMMISSIONER.—The “Commissioner”
5 means the Commissioner of Food and Drugs.

6 (3) DIRECTOR.—The term “Director” means
7 the Director of the National Institute of Environ-
8 mental Health Sciences.

9 (4) MOBILE COMMUNICATION DEVICE.—The
10 term “mobile communication device” means a device
11 defined as a portable device in section 2.1093(b) of
12 title 47, Code of Federal Regulations, and any
13 transmissions from such device.

14 (5) SECRETARY.—The term “Secretary” means
15 the Secretary of Health and Human Services.