

BRITISH COLUMBIA UTILITIES COMMISSION
IN THE MATTER OF THE UTILITIES COMMISSION ACT
R.S.B.C. 1996, CHAPTER 473

And

Re: FortisBC Energy Inc.
Application for a Certificate of Public Convenience and
Necessity for the Advanced Metering Infrastructure Project

Kelowna, B.C.
March 14, 2013

PROCEEDINGS

BEFORE:

L. Kelsey,	Commission Chair / Panel Chair
N. MacMurchy,	Panel Member
D. Morton,	Panel Member

VOLUME 10

ERRATA

Volume 4, March 6, 2013

- Page 579, Line 23 "power incentive" should be PowerSense incentive"
Page 737, Lines 5, 7, 9, 11 "MR. WARREN" should be "DR. BAILEY"

Volume 6, March 8, 2013

- Page 910, Line 22 "DR. BAILEY" should be "MR. WARREN"
Page 1013, Line 5 "EMS" should be "EMF"
Page 1064, Line 10 "MR. WARREN" should be "MR. LOSKI"
Page 1173, Lines 17,
19 and 23 "MR. LOSKI" should be "MR. WARREN"
Page 1186, Line 1 "realty" should be "reality"
Page 1186, Line 6 "off of the square" should be "off as the square"
Page 1186, Line 19 "MR. WARREN" should be "MR. LOSKI"

Volume 7, March 11, 2013

- Page 1247, Lines 18 through to 22 Should be deleted (duplicated)
Page 1262, Line 5 Line number "5" should be "3"
Page 1262, Line 3 "EMI" should be "AMI"
Page 1322, Line 19 "CC" should be "CEC"
Page 1322, Line 20 "father" should be "farther"

Volume 9, March 13, 2013

- Page 1682, Line 9 "infection" should be "induction"
Page 1684, Line 8 "Rippicolti" should be "Repacholi"
Page 1865, Line 2 "physiology" should be "epidemiology"
Page 1695, Line 26 "Netlands" should be "Netherlands"
Page 1696, Line 7 "Netlands" should be "Netherlands"
Page 1701, Line 9 "risk by a" should be "risk by"

APPEARANCES

G.A. FULTON, Q.C.	Commission Counsel
G.K. MACINTOSH, Q.C. and L.. HERBST	FortisBC Inc.
I. WEBB and C. FOLKESTAD	British Columbia Hydro and Power Authority
C. WEAVER	British Columbia Municipal Electric Utilities and Commercial Energy Consumers Association of British Columbia
E. KUNG and T. BRAITHWAITE	B.C. Pensioner and Senior's Organization, BC Coalition of People with Disabilities, Counsel of Senior Citizens' Organizations and the Tenant Resource and Advisory Centre
W. ANDREWS	B.C. Sustainable Energy Association and Sierra Club of British Columbia
D.M. AARON	Citizens for Safe Technology
C. BENNETT	West Kootenay Concerned Citizens
A. ATAMENENKO	Riding of B.C. Southern Interior
A. SHADRACK	Electoral Area D, Regional District, Central Kootenay
J. FLYNN	On his own Behalf
K. MILES	On his own Behalf
M. ENNS	On her own Behalf

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CAARS

KELOWNA, B.C.

MARCH 14, 2013

(PROCEEDINGS RESUMED AT 8:00 A.M.)

THE CHAIRPERSON: Please be seated.

Well, good morning, everyone. Mr. Fulton,
do you have anything to deal with this morning?

MR. FULTON: I do not, Mr. Chairman.

THE CHAIRPERSON: Okay, thank you. In that case, I'll
say good morning to Dr. Jamieson.

Dr. Jamieson, we're going to pick the
laptop up and move it around here a little bit just to
introduce a few people, give you a sense of the
environment that we're working in here.

I'm Len Kelsey. I'm Chair of the Panel for
the B.C. Utilities Commission. And on my right is
Commissioner MacMurchy, on my right, over there.
Commissioner MacMurchy. On my left, Commissioner
Morton. Again, both with the B.C. Utilities
Commission.

I'm also going to introduce Gordon Fulton,
the legal counsel for the B.C. Utilities Commission.
Presumably you know Mr. Aaron. There he is. And
other individuals who will cross-examine will
introduce themselves when they appear. And so we'll
leave that to evolve as the morning cross-examination

1 continues.

2 THE WITNESS: Thank you.

3 THE CHAIRPERSON: I will ask the Hearing Officer, Mr.
4 Bemister, to swear you in, please.

5 THE HEARING OFFICER: Please state your full name for the
6 record.

7 THE WITNESS: My name is Isaac Adam Jamieson.

8 **CITIZENS FOR SAFE TECHNOLOGY PANEL 4**

9 **ISAAC ADAM JAMIESON, Affirmed:**

10 THE CHAIRPERSON: Thank you. Mr. Aaron, please.

11 **EXAMINATION IN CHIEF BY MR. AARON:**

12 MR. AARON: Q: Good day, Dr. Jamieson.

13 DR. JAMIESON: A: Good day.

14 MR. AARON: Q: I'm going to start by spending just a
15 few minutes with you, canvassing your qualifications.
16 And then I'm going to hand the microphone over to
17 counsel for other intervening parties who will ask you
18 questions in the nature of cross-examination.

19 DR. JAMIESON: A: Right.

20 MR. AARON: Q: So, I'm going to start by referring to
21 your CV, which you provided to me along with your
22 expert report in these proceedings. That CV is in
23 evidence. And I'm just looking at the first page, and
24 I see you have a Ph.D. in environmental science, 2008.
25 What was your thesis associated with that degree?

26 DR. JAMIESON: A: It was electromagnetic fields,

1 environmental effects.

2 MR. AARON: Q: Could you repeat that? And we're just
3 going to play with your sound and see if we can
4 improve the quality. Oh, let me just stop and just a
5 technical note or two. We have found that we get a
6 better Skype connection when the witness has turned
7 off their e-mail program and internet browser.

8 DR. JAMIESON: A: Okay. One moment. No, nothing's up
9 just now.

10 MR. AARON: Q: All right. Perhaps we're just going to
11 tinker with the volume and the treble and the base and
12 see if we can --

13 DR. JAMIESON: A: Okay. Right.

14 MR. AARON: Q: So you were saying that thesis was in?

15 DR. JAMIESON: A: It was looking into field ions,
16 electromagnetic fields and environmental effects.

17 MR. AARON: Q: All right.

18 DR. JAMIESON: A: With regards to the built
19 environment, but also I was looking into the effects
20 of natural electromagnetic fields on biological
21 parameters.

22 MR. AARON: Q: And you used the word "ions". Is that
23 I-O-N-S?

24 DR. JAMIESON: A: Yeah. Charged particles. Charged
25 molecules in the air.

26 MR. AARON: Q: All right. Right. What about -- I

1 think --

2 DR. JAMIESON: A: -- fields, magnetic fields
3 interacting with them.

4 MR. AARON: Q: What we in Canada would call ions.

5 DR. JAMIESON: A: Well, that's what I was trying to
6 say. And maybe it's the language difference between
7 Scotland and Canada, I don't know, or it could just be
8 a dodgy connection.

9 MR. AARON: Q: All right. And you're an architect.

10 DR. JAMIESON: A: That's right, yes.

11 **Proceeding Time 8:04 a.m. T2**

12 MR. AARON: Q: But you apply that trade in the field of
13 environmental science.

14 DR. JAMIESON: A: That's right.

15 MR. AARON: Q: All right. Under Professional
16 Affiliations -- well, actually let's not go there yet.
17 Under Policy and Research Development on your CV, you
18 say that you're a member of regulatory bodies and I'm
19 wondering what the particulars of that are.

20 DR. JAMIESON: A: Well, I've been on the stakeholder
21 group for the Health Protection Agency in the U.K.
22 with regards to ELF electromagnetic fields. The
23 Health Protection Agency?

24 MR. AARON: Q: Yes.

25 DR. JAMIESON: A: With regards to electromagnetic
26 fields. I've been on the stakeholder group for that,

1 representing the RIBA, the Royal Institute of British
2 Architects on that. I'm also an expert group member
3 at the European Commission on the DG SANCO Group on
4 Electromagnetic Fields.

5 MR. AARON: Q: And the first reference you made with
6 respect to ELF, you used that acronym to refer to?

7 DR. JAMIESON: A: The Health Protection Agency.

8 MR. AARON: Q: No, the ELF.

9 DR. JAMIESON: A: Oh, sorry. Extra low frequency.

10 MR. AARON: Q: Sorry?

11 DR. JAMIESON: A: Extra low frequency.

12 MR. AARON: Q: Oh, Extra low frequency.

13 DR. JAMIESON: A: Extra Low Frequency.

14 MR. AARON: Q: All right. And under Professional
15 Affiliations, you've listed a few. One I note is the
16 Institute of Physics, that you're a member of the
17 Electrostatics, Environmental Physics and Medical
18 Physics Groups.

19 DR. JAMIESON: A: Yes.

20 MR. AARON: Q: But you're not a medical man *per se*, are
21 you?

22 DR. JAMIESON: A: No, no, I have -- my chief interest
23 is in environmental science, creating healthy
24 environment. So as part of that I look into
25 biological factors, so how the environment interacts
26 with the individual. So hopefully we're able to

1 create healthier environments.

2 MR. AARON: Q: All right. You've organized a
3 conference called "Electromagnetic Phenomena and
4 Health - Continuing Controversy?"

5 DR. JAMIESON: A: Yes.

6 MR. AARON: Q: And that was organized on behalf of that
7 Electrostatics Group of the Institute of Physics in
8 2008?

9 DR. JAMIESON: A: Yes.

10 MR. AARON: Q: All right. The Court Reporter keeps
11 reminding me everything is being written down, so be
12 careful what you say. But also we should try not to
13 overlap and speak as if we were on walkie-talkies.
14 Over.

15 DR. JAMIESON: A: Over.

16 MR. AARON: Q: All right. On page 2 of your résumé
17 you've a heading Stakeholder Committee Member and you
18 list about seven bullets. They're all quite
19 interesting to me and I'm curious about them. Would
20 you mind going through them and particularizing them
21 for us?

22 DR. JAMIESON: A: Right.

23 MR. AARON: Q: Starting with RIBA role?

24 DR. JAMIESON: A: Right. That's the Royal Institute of
25 British Architects I previously mentioned, and I'm a
26 committee member on that group. And as part of my

1 duties with that, I was on the U.K. Health Protection
2 Agency's ELF EMF communication working group. So,
3 basically for a one-year period.

4 **Proceeding Time 8:08 a.m. T03**

5 MR. AARON: Q: ELF EMF communication working group.

6 DR. JAMIESON: A: Yes.

7 MR. AARON: Q: All right. And the -- oh, did we
8 already hear about the EU DG SANCO Stakeholder
9 Dialogue Group?

10 DR. JAMIESON: A: Yes.

11 MR. AARON: Q: On EMF. That's a present position. And
12 then the Electrostatics Group Institute, you're
13 involved with that. You're the treasurer.

14 DR. JAMIESON: A: I was the treasurer.

15 MR. AARON: Q: Oh.

16 DR. JAMIESON: A: That was up to 2011.

17 MR. AARON: Q: All right. And what's that one, B-E-M-
18 R-I?

19 DR. JAMIESON: A: That's the Bioelectromagnetic
20 Research Initiative. So, it's a group that is
21 interested in electromagnetic field research for
22 designing healthier environments. So I'm a scientific
23 advisor on that.

24 MR. AARON: Q: And the EM Radiation Research Trust?
25 You're an advisor to that?

26 DR. JAMIESON: A: Yes, and that's the same kind of

1 organization.

2 MR. AARON: Q: All right. And -- all right. Now,
3 you've got a section called "Peer reviews". We've had
4 some indication in these proceedings as to what a peer
5 review is all about. Are you a person who actually
6 has been asked to conduct peer reviews?

7 DR. JAMIESON: A: Yes.

8 MR. AARON: Q: And who has made those requests of you?

9 DR. JAMIESON: A: Well, the Institute of Electrical and
10 Electronic Engineers. And also the Electrostatics
11 Group in the Institute of Physics for the two
12 international conferences that are shown on that CV.
13 So that's Electrostatics 2011, and Electrostatics
14 2007. And I'm also involved in the committee group
15 presenting at the next international electrostatics
16 conference.

17 MR. AARON: Q: And with respect to your peer review for
18 the IEEE --

19 DR. JAMIESON: A: Yes.

20 MR. AARON: Q: -- are you allowed to say what topic you
21 --

22 DR. JAMIESON: A: That's on ear ions.

23 MR. AARON: Q: Sorry?

24 DR. JAMIESON: A: It's on ear ions and infection.

25 MR. AARON: Q: Oh, ions. Okay.

26 DR. JAMIESON: A: Yes.

1 MR. AARON: Q: And, all right, we already talked about
2 the conference you organized. And I see under
3 "Presentations" you've made various presentations on
4 EMF and risk, one in Brussels just this year already?

5 DR. JAMIESON: A: Yes, that's right.

6 MR. AARON: Q: And one on EMF in high schools, last
7 year.

8 DR. JAMIESON: A: Yes.

9 MR. AARON: Q: And what's the one before the European
10 Parliament?

11 DR. JAMIESON: A: That was a presentation of the RRT,
12 smart meter, smarter practice document which I wrote,
13 that I presented at the European Parliament, to
14 European MPs.

15 MR. AARON: Q: Okay, that pertained particularly to
16 smart meters.

17 DR. JAMIESON: A: That did indeed.

18 MR. AARON: Q: And that was 2011.

19 DR. JAMIESON: A: Yes.

20 MR. AARON: Q: All right. Now, you've got a section on
21 research documents and articles, and another section
22 on scientific research papers. What's the difference
23 between those two categories on your CV?

24 DR. JAMIESON: A: One set is peer-reviewed, and the
25 other set, research documents and articles, are
26 articles that I've written which have not gone through

1 the standard peer review process, but have generally
2 been checked by people who are experts in the field.

3 MR. AARON: Q: So the non-peer-reviewed category on
4 page -- bottom of page 2.

5 DR. JAMIESON: A: Yes.

6 MR. AARON: Q: "Jamieson, 2012, draft communications
7 data bill, call for evidence, evidence prepared for
8 the EM Radiation Research Trust".

9 DR. JAMIESON: A: Yes.

10 MR. AARON: Q: Then you did one on schools and best
11 practice EMF legislation. Does that have to do with
12 WiFi at schools?

13 DR. JAMIESON: A: It did, yes.

14 MR. AARON: Q: All right. And you did one on 2012
15 smart meters, smarter practices.

16 DR. JAMIESON: A: Yes.

17 MR. AARON: Q: EM radiation research trust, again. All
18 right. Smart meters and weather extremes. Is that an
19 article you wrote about smart meter and weather?

20 DR. JAMIESON: A: Yes, it is. It's basically talking
21 about smart meters -- well, smart meters operational
22 temperatures and the fact that some weather extremes
23 experience of below their operational temperatures.

24 **Proceeding Time 8:12 a.m. T4**

25 MR. AARON: Q: Okay. We don't have that problem in
26 Canada. The weather's always very nice.

1 DR. JAMIESON: A: Well, you're listening to the Tourist
2 Board, I think. I heard you have some low
3 temperatures there.

4 MR. AARON: Q: Over onto the next page, page 3, that's
5 the top heading there, those are your articles that
6 have been peer reviewed.

7 DR. JAMIESON: A: That's right.

8 MR. AARON: Q: Any notable ones that you'd like to
9 point out?

10 DR. JAMIESON: A: "Building Health: the Need for
11 Electromagnetic Hygiene" I think is quite an important
12 one. That was from the conference that was held at
13 the Institute of Physics.

14 MR. AARON: Q: "Building Health: the Need for
15 Electromagnetic Hygiene". That's dated September --
16 sorry, what is the date on that article?

17 DR. JAMIESON: A: Right. Well, the actual conference
18 itself was in 2008. The conference proceedings came
19 out in 2010.

20 MR. AARON: Q: All right. Very well, okay. Well,
21 thank you. That concludes my review of your CV.

22 DR. JAMIESON: A: Okay.

23 MR. AARON: Q: Just a couple more questions for you.
24 Dr. Jamieson, you authored paper in response to my
25 correspondence, and that paper is dated January 24th,
26 2013.

1 DR. JAMIESON: A: Right.

2 MR. AARON: Q: You entitled it "Comments on Health,
3 Human Rights, Environmental and Security Concerns With
4 Regard to FortisBC Application for a CPCN for the
5 Advanced Metering Infrastructure Project". Do you
6 stand by the contents of that paper?

7 DR. JAMIESON: A: I do stand by the contents.

8 MR. AARON: Q: Would you adopt those contents as part
9 of your testimony, your evidence in these proceedings?

10 DR. JAMIESON: A: I do, I stand by what has been
11 written there. If there's been any further
12 elaboration that has been required it has been written
13 in the supplementary evidence that was given at a
14 later date. But yes.

15 MR. AARON: Q: All right, that's a yes to the adoption
16 question.

17 DR. JAMIESON: A: That is a yes. If there's anything
18 that I have seen that is incorrect there, I have noted
19 that and I've changed that, and I've also got a
20 disclaimer on that dealt that basically everything
21 that has been written in there has been written in
22 good faith, and as further evidence becomes available,
23 some of the comments and opinions may need to change.
24 But as far as I'm aware, the document is good to go.

25 MR. AARON: Q: And can I get the same adoption with
26 respect to the answers to information requests that

1 you authored? Is it true that you authored answers to
2 information requests from three different parties?

3 DR. JAMIESON: A: That's correct.

4 MR. AARON: Q: And you adopt them as part of your
5 testimony.

6 DR. JAMIESON: A: That's correct.

7 MR. AARON: Q: Well then, thank you, Dr. Jamieson. I'm
8 going to address myself to the Panel now.

9 I seek to qualify Dr. Jamieson as an expert
10 to provide opinion evidence as an expert, as an
11 environmental scientist with expertise in
12 environmental health, in particular expertise in
13 exposure to radio frequency emissions and the
14 environmental health implications of same.

15 THE CHAIRPERSON: Thank you, Mr. Aaron.

16 Does Fortis have a comment to make?

17 MS. HERBST: No comment, thank you, Mr. Chair.

18 THE CHAIRPERSON: Okay, thank you. We'll accept then --
19 Mr. Andrews.

20 MR. ANDREWS: I'm going to propose a caveat that the
21 witness is not an expert in the law. I understand my
22 friend doesn't take exception to that.

23 THE CHAIRPERSON: Thank you. That caveat then is noted
24 and we'll accept the witness under the terms that you
25 describe and call the first party to cross-examine.

26 MR. FULTON: British Columbia Pensioners' and Seniors'

1 Organization, Ms. Braithwaite.

2 **CROSS-EXAMINATION BY MS. BRAITHWAITE:**

3 MS. BRAITHWAITE: Q: Good morning, Commissioners and
4 Dr. Jamieson.

5 DR. JAMIESON: A: Good morning.

6 THE CHAIRPERSON: Good morning.

7 MS. BRAITHWAITE: Q: Dr. Jamieson, I'm a lawyer for a
8 group of residential ratepayers here in British
9 Columbia. I just have two areas that I'd like to
10 explore with you a little bit arising out of the
11 report that you prepared for Mr. Aaron's clients. You
12 speak early in your report of an online survey that
13 was conducted by the EMF Safety Network, in which
14 sleep problems were identified by a majority -- sorry,
15 not a majority. By 49.1 percent --

16 **Proceeding Time 8:18 a.m. T05**

17 DR. JAMIESON: A: Yes.

18 MS. BRAITHWAITE: Q: -- of respondents reporting issues
19 with EMF. I'm going to give you a fair bit of
20 background here leading up, just so you know where I
21 -- what I am speaking of. And a smaller percentage of
22 the respondents to that survey, it was 12.6 percent,
23 also reported skin problems related to EMF exposure.

24 You then refer to a Bavarian study
25 involving survey responses to people who are exposed
26 to DECT phones. I understand those are a type of

1 cordless phone used in Europe. Is that right?

2 DR. JAMIESON: A: Yes, that's right.

3 MS. BRAITHWAITE: Q: And DECT phones and base stations,
4 is the base station the unit that you set the cordless
5 in? Or are you speaking of the base station that
6 sends the signals?

7 DR. JAMIESON: A: The paper itself was actually
8 referring to the large base stations that send the
9 signals, but you are correct, the DECT does have a
10 small base station unit.

11 MS. BRAITHWAITE: Q: Okay. So would there be actually
12 EMF from both the small base unit and the large base
13 station?

14 DR. JAMIESON: A: Yes.

15 MS. BRAITHWAITE: Q: Okay. In that study, as I
16 understand it, there was a highly significant
17 correlation found between exposure to EMF and sleep
18 problems, which is consistent with the survey results.
19 And also a highly significant correlation between the
20 EMF exposure and skin problems. Is that right?

21 DR. JAMIESON: A: Yes.

22 MS. BRAITHWAITE: Q: And that study involved 251
23 participants, is my understanding. Is that right?

24 DR. JAMIESON: A: As far as memory is.

25 MS. BRAITHWAITE: Q: Okay. And the next study that you
26 refer to is the Spanish study, and you note that study

1 involved 97 participants --

2 DR. JAMIESON: A: Yes.

3 MS. BRAITHWAITE: Q: -- and involved -- it involved

4 exposure to cell phones and cell phone base stations.

5 DR. JAMIESON: A: Yes.

6 MS. BRAITHWAITE: Q: And I'm not sure I understand the

7 table setting out the results correctly. So, you

8 identified -- do you have that table in front of you?

9 I think it's on page --

10 DR. JAMIESON: A: It's -- sorry. I'll just look it up

11 for a minute.

12 MS. BRAITHWAITE: Q: Start about page 11 of your

13 report.

14 DR. JAMIESON: A: So, I'm just trying to determine

15 which page that's on.

16 MS. BRAITHWAITE: Q: I think it's page 11. The page

17 numbers are a bit cut off.

18 DR. JAMIESON: A: Yes. Okay. Right, yes. I'm with

19 you.

20 MS. BRAITHWAITE: Q: Okay.

21 DR. JAMIESON: A: Okay. Yes. Right.

22 MS. BRAITHWAITE: Q: So, am I correct to believe the

23 table first divides the 97 participants into two

24 groups, depending on the level of exposure?

25 DR. JAMIESON: A: That's correct, yes.

26 MS. BRAITHWAITE: Q: And in the lower level, lower

1 exposure level group, you've got three headings across
2 the top. You've got "OR". What does "OR" stand for?
3 DR. JAMIESON: A: Pardon me? "OR". Sorry, what about
4 it?
5 MS. BRAITHWAITE: Q: Under -- you've got the two broad
6 groups --
7 DR. JAMIESON: A: Oh, odds ratio.
8 MS. BRAITHWAITE: Q: The odds ratio, okay. And then
9 your next column is headed "95% - CI". What does that
10 refer to?
11 DR. JAMIESON: A: That's talking about the confidence
12 interval.
13 MS. BRAITHWAITE: Q: Okay. So the odds ratio at a 95
14 percent confidence interval is what we're talking
15 about.
16 DR. JAMIESON: A: Mm-hmm.
17 MS. BRAITHWAITE: Q: And the next column is headed "P".
18 DR. JAMIESON: A: That's probability.
19 MS. BRAITHWAITE: Q: Okay.
20 DR. JAMIESON: A: So basically you have a very low
21 number, that's a very highly -- it actually shows the
22 degree of significance. So you've got a very low
23 number, it means there is a very strong association
24 between the factor and the actual symptom that is
25 being investigated.
26 MS. BRAITHWAITE: Q: Oh, I see. A low number is a high

1 probability.

2 DR. JAMIESON: A: That's right, yes.

3 MS. BRAITHWAITE: Q: Okay. And so when -- in the lower
4 exposure group, the probability of correlation with
5 sleep problems is .0016?

6 **Proceeding Time 8:23 a.m. T6**

7 DR. JAMIESON: A: Basically that is comparing the
8 ratios between reported problems between the two
9 groups. So you're getting a rate, you know, a
10 probability of problems being reported and it's
11 showing in the high field group, you're having far
12 more sleep problems being reported than you are in the
13 people who are in the low field group.

14 MS. BRAITHWAITE: Q: Okay, for most of the items listed
15 in the chart there's a much larger difference between
16 the probabilities in the two groups.

17 DR. JAMIESON: A: Yes, that's right. So basically it's
18 showing with -- all by the last two items which are on
19 that list in Table 1.2, it is a highly significant
20 difference between people experiencing those problems.
21 So a higher field you have it, in that study you're
22 showing higher numbers of sleep problems, depression,
23 headaches, cerebral affections, concentration
24 difficulties, joint problems, affections, skin
25 problems as you mentioned, cardiovascular problems,
26 audio system disturbance of equilibrium, and visual

1 and gastrointestinal problems.

2 MS. BRAITHWAITE: Q: Okay, so the Spanish study, I may
3 have misunderstood what the Spanish study is showing.
4 It does show a high correlation between sleep problems
5 and EMF exposure levels?

6 DR. JAMIESON: A: Yes, that's on page 12 of the Spanish
7 study. It's showing the same thing. So I was
8 actually speaking about Eger and Jahn study. The
9 Spanish study is showing the same thing. So you're
10 having the same basic problems which are being shown
11 when people are exposed to raised field situations.

12 MS. BRAITHWAITE: Q: Okay.

13 DR. JAMIESON: A: So raised RF microwave fields.

14 MS. BRAITHWAITE: Q: Are you familiar with how these
15 two studies were carried out, the Bavarian study and
16 the Spanish study? Did you have any involvement in
17 them or --

18 DR. JAMIESON: A: I didn't, no.

19 MS. BRAITHWAITE: Q: Okay, but I think before I cut you
20 off you were about to say you did -- you were familiar
21 with how they were carried out.

22 DR. JAMIESON: A: I'm familiar with how they were
23 carried out. I wasn't involved in the actual study
24 design or carrying out the studies myself.

25 MS. BRAITHWAITE: Q: Okay.

26 DR. JAMIESON: A: So I was familiar to a degree but I

1 wasn't actually on the ground taking measurements or
2 doing any of the questionnaires for that.

3 MS. BRAITHWAITE: Q: Okay. Am I correct to assume that
4 in each of the two cases, the participants in the
5 study would have been people who lived or worked,
6 spent considerable time around a single base station?

7 DR. JAMIESON: A: Well, no, because the idea of the
8 studies was to look at people who were in different
9 exposure levels. And the Spanish study in particular
10 was very keen to go and look into ways to avoid bias.
11 That is trying to design the possibilities of
12 psychological effects being taken on board, people
13 thinking because there was a base station they had a
14 health problem. So they were trying to very much iron
15 out those kind of problems with the study itself.

16 MS. BRAITHWAITE: Q: Okay, so are you saying, if we
17 just look at the Bavarian study for now, for example.

18 DR. JAMIESON: A: Right.

19 MS. BRAITHWAITE: Q: Would those 251 participants be
20 people who were exposed to a variety of different base
21 stations? So we're not talking about a geographically
22 isolated group?

23 DR. JAMIESON: A: That study, as far as I remember,
24 there was a single point at -- there was a main base
25 station and then it was basically being taken for
26 distances further out from that central point, a

1 reduction in field intensity as the people who were at
2 a greater distance from the base station itself.

3 MS. BRAITHWAITE: Q: Okay. And were there efforts to
4 control for what I'll call confounding factors? That
5 is, if you're a geographically concentrated group
6 would be exposed to a number of similar environmental
7 factors.

8 **Proceeding Time 8:27 a.m. T07**

9 DR. JAMIESON: A: Right.

10 MS. BRAITHWAITE: Q: Were there efforts to control for
11 that possibility, that there was other causal factors?

12 DR. JAMIESON: A: Well, there was a control taken into
13 account as well with that, and also with regards that
14 they sent out 1,077 questionnaires for that, to get
15 respondents back, which they had a 23 percent
16 response. Which is comparable to the kind of response
17 that would be expected for a large cohort study.
18 Right.

19 MS. BRAITHWAITE: Q: Okay. So were -- do you know
20 whether the -- were the questionnaires sent randomly
21 to those 1100 people?

22 DR. JAMIESON: A: I'd have to check back on that. I
23 think they were sent randomly.

24 MS. BRAITHWAITE: Q: Okay.

25 DR. JAMIESON: A: I can get back to you on that if you
26 wish. Oh, it's -- in fact, it would be easier to --

1 I'll look at that, if we can take it just now that it
2 most probably was. If I find anything different, I
3 will get back to you in the course of your examination
4 to me.

5 MS. BRAITHWAITE: Q: Okay, thank you. And then moving
6 to the Spanish study.

7 DR. JAMIESON: A: Yes?

8 MS. BRAITHWAITE: Q: Do you know whether the same
9 system was used? That is, surveys were sent to a
10 portion of the population surrounding a single cell
11 phone base station.

12 DR. JAMIESON: A: Sorry, bear with me. I don't have
13 those details handy just now, I'd have to go back and
14 look at the original paper. Sorry, bear with me.

15 MR. FULTON: Mr. Chairman, while Dr. Jamieson is looking
16 for the document, it would help the record if there is
17 going to be a request for an undertaking that that
18 request was specifically referred to in the earlier
19 exchange that Ms. Braithwaite had with Dr. Jamieson.
20 He was going to get back to her, but during the course
21 of her examination. I understand her examination will
22 finish some time within the next 15 minutes or so.

23 So, if I could ask all parties if they've
24 got a specific undertaking that they're requesting,
25 that they use the word "undertaking" on the record so
26 everybody will know and we will have a date to work

1 towards for which Dr. Jamieson can reply.

2 DR. JAMIESON: A: Okay. Right, okay. Sorry to keep
3 you for that. I'm sorry. It's just taking a while to
4 go through the paper. I wasn't expecting to have to
5 go through this in detail at this stage. Okay.
6 Right. Okay.

7 For Eger & Jahn, there was standardized
8 health questionnaires sent by mail to 1,080 persons
9 within the municipality and surrounding areas. The
10 participants were aware that they could receive a
11 questionnaire when they lived in a 40 -- outside a 400
12 metre radius of the cell phone base station, or also
13 outside of this radius. There were no personal
14 interviews. A total of 88 sets of information on
15 health symptoms were gathered using a quantitative
16 scale of zero to five. The system -- the symptom
17 groups based on clinical entities were summarized as
18 clusters for the assessment.

19 So, the questionnaires were sent out out
20 over the whole (inaudible).

21 **Proceeding Time 8:33 a.m. T8**

22 MS. BRAITHWAITE: Q: Okay.

23 DR. JAMIESON: A: Okay, and then for --

24 MS. BRAITHWAITE: Q: And so just to clarify, so in the
25 Spanish study there were 1,080 questionnaires sent out
26 to residents in the area.

1 DR. JAMIESON: A: I'll just interrupt you. That was in
2 the Eger & Jahn, not the Spanish study. Eger & Jahn
3 was 1,080 persons that a survey was sent out to. In
4 the Spanish study -- I would need to go through the
5 details. No, I'm not getting that -- detail son that
6 just now, so bear with me. Basically the
7 questionnaire for the Spanish study confirmed the
8 (inaudible) demographic data --

9 MS. BRAITHWAITE: Q: I'm going to stop you there.
10 We're having some difficulty hearing you. The
11 connection is breaking up a bit. If you could just
12 start that bit over again.

13 DR. JAMIESON: A: Right. Basically the -- all right.
14 The data was collected between the 5th of November 2000
15 and collected November-December 2000. There were 144
16 questions returned, 97 measurements done in 2001.
17 There's no -- this is actually a follow-up study. So
18 it seemed that there's a -- the questionnaire with
19 regards to how the participants were (inaudible) in
20 that earlier study, but I have (inaudible).

21 MS. BRAITHWAITE: Q: I'm sorry, I have to stop you
22 again. We're having difficulty hearing again.

23 THE CHAIRPERSON: Yes, I think we need to take a moment
24 and just sort out the audio problem. I'll give the
25 individuals here a few minutes to do that. We'll just
26 wait while you do that. If that's not resolved we'll

1 questionnaires were sent out on a random basis. So
2 they were seeking to obtain information on health
3 effects that individuals were noting themselves. And
4 then they were also going to be taking measurements of
5 the field levels that were experienced in the bedrooms
6 of the people who had completed the study.

7 So, electrosensitivity would not count as a
8 potential issue. They were basically assessing the
9 health effects of the individual and then they were
10 also doing measurements as to the actual field levels
11 that were experienced in the sleeping quarters of
12 those people. And then from that they were
13 correlating the data to see what (inaudible)
14 associations there could be between raised health
15 effect -- raised fields and the health effects that
16 respondents were reporting.

17 MS. BRAITHWAITE: Q: Okay. So in what sense is it a
18 follow-up study? What is being followed up?

19 DR. JAMIESON: A: Well, there had been a previous study
20 which had done much the same with regards to sending
21 out the questionnaire with regards to people -- health
22 symptoms, and then taking measurements in the areas
23 where they were. So it's basically another study
24 doing the same kind of thing as the previous study.

25 MS. BRAITHWAITE: Q: Okay. And is it being done with a
26 different group of people? Or the same group of

1 people.

2 DR. JAMIESON: A: As far as I'm aware, it was done with
3 a different group.

4 MS. BRAITHWAITE: Q: Okay. And have you been able to
5 find how many surveys were sent out? I believe you
6 said 144 were returned.

7 DR. JAMIESON: A: Yeah. Let's have a look again. Bear
8 with me. No, it says the questionnaires were
9 distributed in Lanora, in frequently used locations.
10 Hairdressers, pharmacies, and then they were
11 collected. So, the questionnaires were distributed
12 within an area itself and then they were -- as I
13 mentioned earlier, they had 144 questionnaires
14 returned. From that they did 97 sets of (inaudible).

15 MS. BRAITHWAITE: Q: Okay. And in your experience, is
16 it fair to say that people who are experiencing health
17 issues would be more likely to respond to a survey
18 involving health issues than people who are not?

19 DR. JAMIESON: A: It depends how the actual
20 questionnaire itself is designed. I mean, that's
21 become quite evident with regards to the smart meter
22 surveys that have been done online. Because with
23 them, the one potential problem if you're not actually
24 getting a prevalent survey. So you're not finding out
25 the actual number of people who are -- or proportion
26 of the actual population that is being potentially

1 negatively affected by such fields. You're getting
2 people who are already interested in the potential
3 problem replying.

4 So great care was taken with the Oberfeld
5 study to try and avoid such biases.

6 MS. BRAITHWAITE: Q: And, sorry, the Oberfeld study?
7 Is that the Spanish study?

8 DR. JAMIESON: A: That's the Spanish study, yes.

9 MS. BRAITHWAITE: Q: I'm sorry, I don't understand what
10 precautions were taken to avoid biases if
11 questionnaires were randomly distributed and there
12 were 144 returned. We don't know how many were
13 distributed and they seem to have just been
14 distributed across the general area.

15 DR. JAMIESON: A: Yes. As far as I'm aware they were
16 just distributed across the actual area.

17 MS. BRAITHWAITE: Q: And so when you say steps were
18 taken to avoid biases, what steps were taken?

19 **Proceeding Time 8:42 a.m. T10**

20 DR. JAMIESON: A: I'd really have to go back into the
21 study design to tell you that. The document is
22 available on the web, but at the moment it would take
23 me quite a bit of time to actually answer that
24 question, simple though it would seem. I apologize
25 for that.

26 MS. BRAITHWAITE: Q: Okay. Well, you answered the

1 question earlier that led Mr. Fulton to get up and ask
2 me to use the word "undertaking" online, or on the
3 transcript. I'll ask you now if you are able to give
4 an undertaking to provide the answer to that question
5 later. You don't have to do it right now. You can
6 provide it through Mr. Aaron.

7 DR. JAMIESON: A: Right. If you can give me the
8 complete details of the question you'd like answered,
9 I will do my best to get an answer back to you through
10 Mr. Aaron.

11 MS. BRAITHWAITE: Q: Okay. I'd like to do it with both
12 the Bavarian study and the Spanish study that you
13 refer to, and that is the question is: If steps were
14 taken to control for biases in responses to the
15 survey, what steps those were.

16 DR. JAMIESON: A: Okay. Right.

17 **Information Request**

18 MS. BRAITHWAITE: Q: Yeah. As I say, you don't have to
19 do that now, Dr. Jamieson.

20 DR. JAMIESON: A: All right, thank you.

21 MS. BRAITHWAITE: Q: You can do that through Mr. Aaron.

22 DR. JAMIESON: A: Right, that's appreciated.

23 THE CHAIRPERSON: I'm just going to interrupt for a
24 moment because I think just to close the loop on this,
25 we should probably also agree on a deadline. And it's
26 probably not a bad time to just check our calendars

1 and I don't see any reason why we shouldn't line this
2 deadline up with the other ones that we had, which I
3 believe were noted as Friday the 21st, but I think
4 Friday is the 22nd. Is that correct, Mr. Fulton?
5 MR. FULTON: You're quite correct, Mr. Chairman.
6 THE CHAIRPERSON: So we'll say Friday the 22nd then for
7 this undertaking and the previous undertakings that we
8 noted yesterday.
9 MR. FULTON: Thank you, Mr. Chairman.
10 MS. BRAITHWAITE: Q: Dr. Jamieson, did you hear and
11 understand the direction from the Commission Chair?
12 DR. JAMIESON: A: I did indeed and I very much
13 appreciate the opportunity that's been given to look
14 into your questions further and get back to you in as
15 great detail as I can on that. Thank you all for
16 that.
17 MS. BRAITHWAITE: Q: Thank you.
18 I'd like to move on to a different area
19 now. Moving on to page 49 of your report.
20 DR. JAMIESON: A: Right. Okay.
21 MS. BRAITHWAITE: Q: And you say on page 49:
22 "Even in situations where wired smart meters
23 are used, RF radiation can be created from
24 their Switched Mode Power Supply..."
25 DR. JAMIESON: A: Yes.
26 MS. BRAITHWAITE: Q: And you go on to describe how the

1 switch mode power supply can create high frequency
2 voltage transients, which are sometimes referred to as
3 dirty electricity?

4 DR. JAMIESON: A: That's right.

5 MS. BRAITHWAITE: Q: Does this say essentially that for
6 people who are sensitive to EMF radiation, that we're
7 likely to see the same issues, health issues for those
8 people as we do with radio frequency transmissions?

9 DR. JAMIESON: A: Well, it's a different frequency
10 range. The thing is, some people have actually
11 reported that they've experienced problems from smart
12 meters when they've not actually been activated to
13 give wireless transmissions. So looking at the
14 literature related to the frequencies that are
15 actually created, it's been -- there is occasion in
16 peer-reviewed scientific research of those field
17 frequencies being biologically active.

18 **Proceeding Time 8:47 a.m. T11**

19 So that's -- the past research has
20 generally been based on natural electromagnetic
21 fields, either saturation of experience out of doors,
22 with particular frequency patterns very similar to the
23 ones that you get during some thunderstorms, causing
24 adverse symptoms. So, there have been -- as you can
25 see in the rest of the report, there have been
26 biological effects linked with frequency range that

1 have been noted to be created by the switch mode power
2 supply, and the research on those frequencies has gone
3 back quite a long while.

4 The frequency -- the actual research was
5 related to high voltage -- high frequency voltage
6 transients from smart meters has not been done to any
7 real extent. As far as I'm aware, it has been some
8 people who have been taking measurements indoors and
9 they've been finding out that you're having these
10 high-frequency voltage transients being created.
11 There doesn't seem to be any real information
12 available yet on the actual distance that the
13 transients actually drop off by, so when they're
14 actually down to quite low, they can carry on to the
15 wiring, et cetera.

16 So since this is very much in its infancy.
17 It's an area which looks like it should be looked into
18 further so, it can be addressed.

19 MS. BRAITHWAITE: Q: Okay. Are there other types of
20 technology that is currently commonly in use that
21 create these high frequency voltage transients?

22 DR. JAMIESON: A: Yes, there is. A good example of
23 that is the compact fluorescent light. There are
24 people who report problems with them. A part of that
25 as well could be with the actual spectrum of light
26 that's being (inaudible) et cetera. So it's most

1 factual for that.

2 It would be very good if some proper
3 testing could be done with regards to this, could be
4 taken onboard or discounted as is necessary.

5 MS. BRAITHWAITE: Q: Okay. Further down that same
6 page, page 49, you say:

7 "Analog meters with chips and antennae to
8 operate wirelessly helps avoid a number of
9 problems."

10 Is it not the case that if analog meters are operating
11 wirelessly that they are transmitting using RF?

12 DR. JAMIESON: A: Sorry, I'm not actually seeing that.
13 But bear with me.

14 Sorry, that's the bottom of page 49?

15 MS. BRAITHWAITE: Q: I believe so, yes.

16 DR. JAMIESON: A: Well, should actually be reading that
17 they shouldn't be wireless, because you -- and you'd
18 still be likely to get a detrimental -- the same
19 detrimental health effects.

20 MR. AARON: Excuse me. My request is just that we get a
21 definitive reference to the provision in the report
22 that's being referred to. Because I don't want the
23 witness asking -- answering the question based on a
24 speculative reference.

25 THE CHAIRPERSON: Yes, thank you. I'd ask you to, Ms.
26 Braithwaite, to be more specific on the reference.

1 MS. BRAITHWAITE: Q: It's the last -- it's on page 49.

2 DR. JAMIESON: A: Right.

3 MS. BRAITHWAITE: Q: And it's the last sentence of the
4 first paragraph under point -- sorry, 1.16.2, "High
5 frequency voltage transients". @

6 DR. JAMIESON: A: Oh, right. Okay, I've got it
7 actually showing on a different page. So, a slightly
8 different set-up for that. Okay, then. I'm in
9 Section 1.16.3.

10 Right, yes. So it's basically saying the
11 use of traditional analog meters helps avoid a number
12 of problems, so it would help avoid the creation of
13 high voltage -- high frequency voltage transients.
14 So, in brackets it was saying that some analog meters
15 had actually been retrofitted with chips and antennae
16 to operate wirelessly. And if you were having that
17 kind of analog meter that had been retrofitted, you'd
18 be likely to have the problem of the high frequency
19 voltage transients.

20 MS. BRAITHWAITE: Q: I see.

21 **Proceeding Time 8:53 a.m. T12**

22 DR. JAMIESON: A: Sorry about that. It's just the
23 document that I have. That's appearing further up the
24 page.

25 MS. BRAITHWAITE: Q: Okay. So if I understand your
26 evidence, the only real solution for people with

1 electro hypersensitivity is wired analogue meters.
2 DR. JAMIESON: A: That would help a lot for the group
3 of the population it would appear who are
4 electrosensitive. There may be a way to actually help
5 cancel out the high frequency voltage transients on
6 the smart meter if the smart meter itself was not
7 wireless, because the wireless emissions also, as you
8 seem to be aware, can be part of the thing that can
9 cause or potentially cause problems with the people
10 who are experiencing health problems or said to
11 experience health problems.

12 So I'll recap that. High frequency voltage
13 transients, it is possible to screen some of it. But
14 the actual extent to which that is able to be done
15 hasn't been properly analyzed yet as far as I'm aware,
16 but it was -- it looked into doing that to try and get
17 rid of that problem. I have not heard of the success
18 rate on that.

19 So it would be worthwhile for you checking
20 the potential biological activity of those transients
21 and also into the potential solution for that to see
22 if people are having a wired meter, a wired smart
23 meter, whether they would still be experiencing
24 problems or not. But he does come down to testing,
25 and some of these tests are quite simple to do. And
26 with the scale of the rollout that is being proposed

1 both in B.C. and worldwide, it would seem a very
2 sensible measure to take on board.

3 MS. BRAITHWAITE: Q: Okay, thank you, Dr. Jamieson,
4 those are my questions.

5 DR. JAMIESON: A: Thank you.

6 MR. FULTON: British Columbia Sustainable Energy
7 Association and Sierra Club of British Columbia, Mr.
8 Andrews.

9 THE CHAIRPERSON: Thank you, Mr. Fulton, and while Mr.
10 Andrews is getting ready I'll just cover a
11 housekeeping item that I didn't speak to earlier, and
12 that is we will plan to take a break at 10:00, give or
13 take a few minutes depending on the flow of questions
14 at that time.

15 MR. FULTON: And that's Kelowna time, Mr. Chairman, and
16 not the time in Aberdeen.

17 THE CHAIRPERSON: That's correct.

18 DR. JAMIESON: A: Bless you.

19 THE CHAIRPERSON: That's correct. Thank you for that
20 clarification. Good morning, sir.

21 MR. ANDREWS: Good morning, members of the Panel.

22 **CROSS-EXAMINATION BY MR. ANDREWS:**

23 MR. ANDREWS: Q: Good morning, Dr. Jamieson.

24 DR. JAMIESON: A: Good morning.

25 MR. ANDREWS: Q: Or whatever time it is for you.

26 DR. JAMIESON: A: Well, it beats the time.

1 MR. ANDREWS: Q: Q: My name is Bill Andrews. I
2 represent the B.C. Sustainable Energy Association and
3 the Sierra Club of British Columbia. Before I get
4 into my set of questions, I'd like to follow up a
5 particular point that was raised by my friend, Ms.
6 Braithwaite, concerning the Eger and Jahn 2010 report.
7 DR. JAMIESON: A: All right.
8 MR. ANDREWS: Q: That was E-G-E-R, J-A-H-N. And on the
9 topic of the responses to the invitation to
10 participate in the survey, can you confirm that on
11 Table 2 of that report, it lists groups 1, 2, 3, and 4
12 and the control group 5.
13 DR. JAMIESON: A: All right.
14 MR. ANDREWS: Q: One is the closest to the base
15 station, and 2, 3, and 4 are in successively larger
16 distances away from the base station.
17 DR. JAMIESON: A: That's correct. It's running from
18 100 metres to 200 metres, 300 metres, 400 metres, and
19 greater than 400 metres.
20 MR. ANDREWS: Q: Okay. Can you confirm --
21 THE CHAIRPERSON: Mr. Andrews, I apologize. Could you
22 restate the page number, please?
23 MR. ANDREWS: I don't have a page number in Jahn and
24 Eger.
25 THE CHAIRPERSON: I see. Okay, thank you.
26 MR. ANDREWS: And so I'm just going to that table

1 directly.

2 THE CHAIRPERSON: Thank you.

3 MR. ANDREWS: Q: So if one can imagine a table with
4 group 1, 2, 3, 4, and then the control group 5, is it
5 correct that the percentage of responses for group 1
6 was 36 percent. For group 2 was 25.7 percent, for
7 group 3 was 21.4 percent. And for group 4 was 14
8 percent.

9 DR. JAMIESON: A: I'm sorry, bear with me. I'm trying
10 to find that actual table.

11 MR. ANDREWS: Q: If this is hard to find, perhaps it
12 would be faster for you to add it to the undertaking
13 response to Ms. Braithwaite?

14 DR. JAMIESON: A: If you can do that, that would be
15 good. Yes. So, I'd like to hear your question fully.

16 MR. ANDREWS: Q: The question is, can you reproduce
17 Table 2 that shows the response rates for groups 1 to
18 4 and control group 5?

19 DR. JAMIESON: A: All right.

20 MR. ANDREWS: Q: And can you answer now, from your
21 knowledge of this study, that the response rates for
22 the groups 1 to 4 decreased systematically from 36
23 percent closest to the base station of concern down to
24 14 percent to the group that was the farthest away?

25 DR. JAMIESON: A: I'm not finding that detail just now.
26 I apologize for that. If I could, I would be replying

1 to you on it right now.

2 MR. ANDREWS: Q: Well, then, let's look --

3 DR. JAMIESON: A: Hold on. Let's see, now. Okay.

4 Bear with me. Okay. Right. Right, yes. So I've got
5 the groups now. I've got the number of respondents,
6 so group 5, 70 -- 71. Group 1, 45. Yes. I have that
7 detail now in front of me.

8 MR. ANDREWS: Q: Is it in the form of a Table 2?

9 DR. JAMIESON: A: It's in the form of a Table 2, yes.

10 MR. ANDREWS: Q: And does it confirm the numbers that I
11 put to you a moment ago?

12 DR. JAMIESON: A: It does indeed. And it shows that
13 there is a drop-off with regards to the further
14 distance that it goes out.

15 MR. ANDREWS: Q: Thank you. Now, I'm going to be in my
16 questions referring to a number of documents that I'm
17 sure that you have -- well, I'll ask you to confirm
18 you have handy. One is Exhibit C9-10-1, which is your
19 report.

20 DR. JAMIESON: A: All right. That one's handy.

21 MR. ANDREWS: Q: And one is Exhibit C9-12-4, responses
22 to BCSEA IR 1 to CSTS.

23 DR. JAMIESON: A: Bear with me. Okay, yes.

24 **Proceeding Time 9:02 a.m. T14**

25 MR. ANDREWS: Q: And at this point I'm going to Refer
26 you to a copy of the report by Mr. Halteman, H-A-L-T-

1 E-M-A-N, that you refer to in section 1.1 of your
2 report.

3 DR. JAMIESON: A: Mm-hmm.

4 MR. ANDREWS: And Mr. Chairman, I have had -- I
5 understand copies have been distributed and if this
6 could be marked, I understand it would be Exhibit C4-
7 21.

8 THE HEARING OFFICER: C4-21.

9 (**"WIRELESS UTILITY METER SAFETY IMPACTS SURVEY, FINAL**
10 **RESULTS SUMMARY, SEPTEMBER 13, 2011, ED HALTEMAN..."**
11 **MARKED EXHIBIT C4-21)**

12 MR. ANDREWS: Q: And the second new document, in your
13 responses to BCSEA IR 1 you refer to a report by
14 Conrad and you provide the URL, and I had that
15 distributed, a copy of that distributed as well. So I
16 assume that that would be C4-22.

17 THE HEARING OFFICER: C4-22.

18 (**"EXHIBIT D - SMART METER HEALTH EFFECTS, SURVEY AND**
19 **REPORT" MARKED EXHIBIT C4-22)**

20 MR. ANDREWS: Q: And just so everybody's clear, this is
21 a document that is bound and its title on the first
22 page is "Exhibit D - Smart Meter Health Effects and
23 Survey Report."

24 DR. JAMIESON: A: Okay.

25 MR. ANDREWS: Q: Now, Dr. Jamieson, you are not a
26 customer of FortisBC's electric service, correct?

1 DR. JAMIESON: A: This is correct.

2 MR. ANDREWS: Q: Have you read the transcript of the
3 proceedings regarding the health issues here?

4 DR. JAMIESON: A: No, I have not. I've listened to
5 some of the proceedings as they've been going on live,
6 but I haven't looked at the actual written
7 proceedings. I haven't been able to actually listen
8 to all of the oral proceedings either.

9 MR. ANDREWS: Q: Have you read the exhibits filed
10 during the course of the evidence filed during this
11 proceeding, specifically to do with health issues?
12 And I'm referring to, for example, Exhibit B-42, the
13 AGNIR report 2012?

14 DR. JAMIESON: A: Yes, I've had a look over the AGNIR
15 report.

16 MR. ANDREWS: Q: And Exhibit B-43, Undertaking No. 5
17 from Dr. Bailey and Dr. Shkolnikov in response to Mr.
18 Aaron?

19 DR. JAMIESON: A: That one I haven't.

20 MR. ANDREWS: Q: And Exhibit B-45, Undertaking No. 7 by
21 Dr. Bailey in response to Mr. Aaron?

22 DR. JAMIESON: A: I haven't yet. Can you give me that
23 last one again please?

24 MR. ANDREWS: Q: Exhibit B-45, Undertaking No. 7, Dr.
25 Bailey's response to a request by Mr. Aaron. This was
26 to identify studies in Safety Code 6 and ICNIRP that

1 consider modulation and power density windows.

2 DR. JAMIESON: A: Right. I'm still not seeing a B-45.

3 If you'd like possibly to start me off on the AGNIR?

4 MR. ANDREWS: Q: No, I'm just asking at this stage

5 whether you've read them.

6 DR. JAMIESON: A: Okay.

7 MR. ANDREWS: Q: And we may get back to them.

8 DR. JAMIESON: A: Okay.

9 MR. ANDREWS: Q: Have you read the report, first of

10 all, and secondly the information responses filed by

11 CSTS by various witnesses, and I'll go through them

12 one by one. First, Dr. Sears. Have you --

13 DR. JAMIESON: A: No.

14 MR. ANDREWS: Q: And have you read her responses to

15 information requests?

16 DR. JAMIESON: A: No.

17 MR. ANDREWS: Q: Dr. Kumar. Have you read his report?

18 DR. JAMIESON: A: No.

19 MR. ANDREWS: Q: And have you read his information

20 responses?

21 DR. JAMIESON: A: No.

22 MR. ANDREWS: Q: Dr. Blank, have you read his report?

23 DR. JAMIESON: A: No.

24 MR. ANDREWS: Q: Have you read his information

25 responses?

26 DR. JAMIESON: A: No.

1 MR. ANDREWS: Q: Dr. Maisch, have you read his report?

2 DR. JAMIESON: A: No.

3 MR. ANDREWS: Q: Have you read his information
4 responses?

5 DR. JAMIESON: A: No.

6 MR. ANDREWS: Q: Dr. Carpenter, have you read his
7 report?

8 DR. JAMIESON: A: No.

9 MR. ANDREWS: Q: Have you read his information
10 responses?

11 DR. JAMIESON: A: No.

12 MR. ANDREWS: Q: Have you read the FortisBC responses
13 to information requests on health topics?

14 **Proceeding Time 9:07 a.m. T15**

15 DR. JAMIESON: A: Not -- I've read the responses that
16 I've received directly requesting information from
17 myself.

18 MR. ANDREWS: Q: And you haven't read the responses on
19 the other health topics from FortisBC?

20 DR. JAMIESON: A: No, because I've been given quite an
21 onerous workload to go through with regards to
22 answering those questions, and in the time available
23 that was all I could do.

24 MR. ANDREWS: Q: Thank you. Now, in terms of the
25 exposure that will actually be presented by the AMI
26 smart meters if they're approved in this proceeding

1 and the project is implemented, Dr. Shkolnikov
2 testified that the AMI meters would meet not only
3 Safety Code 6 and other roughly similar standards, but
4 also standards in Russia and China and even the
5 Bioinitiative report 2007. Do you have any scientific
6 reason to disagree with that conclusion?

7 DR. JAMIESON: A: My only possible contention about
8 that would be that biological effects seem to be
9 registered at levels below those you've stated are in
10 those guidelines.

11 MR. ANDREWS: Q: Well, with respect, at this point
12 we're not talking about whether those guidelines are
13 merited or protective. We're just talked about
14 whether -- how the exposure would compare with such
15 guidelines.

16 DR. JAMIESON: A: Right.

17 MR. ANDREWS: Q: So the question is: Do you have any
18 scientific basis to disagree with Dr. Shkolnikov's
19 conclusion that I referred to earlier?

20 DR. JAMIESON: A: I would say not at this stage.
21 Unfortunately Dr. Maret would have been the best
22 person to have actually helped address that matter for
23 you, and I know that he did file a response which does
24 talk about emission levels and biological effects. So
25 perhaps you would be able to find the answer to that
26 query from his response, but I'm unavailable to

1 actually you an opinion on that at this time.

2 MR. ANDREWS: Q: Thank you. Now, on page 10 of your
3 report, Dr. Jamieson, you begin by saying:

4 "It is recognized that health risks may
5 exist with regard to new technologies..."

6 DR. JAMIESON: A: Yes.

7 MR. ANDREWS: Q: "...and that health impact
8 assessments are required as a matter of best
9 practice."

10 My question is: Do you have any scientific basis to
11 contest Dr. Shkolnikov's evidence that the RF LAN
12 transmitter in the proposed meters here is the same
13 type of transmitter as is used in GSM cell phones?

14 DR. JAMIESON: A: I have no information to contest
15 that, no. I do know that some people are saying that
16 they do get problems from GSM cell phones.

17 MR. ANDREWS: Q: Do you have any scientific basis to
18 contest Dr. Bailey's evidence that at least eight
19 peer-reviewed studies on lab animals have been
20 published on GSM cell phone exposure?

21 DR. JAMIESON: A: Well, there's been a number of
22 studies that have been published, and some are at
23 levels significantly below those emitted by GSM cell
24 phones that's been showing biological effects. Also,
25 there's the study that's --

26 MR. ANDREWS:** Q: If I may, if I may --

1 MR. AARON: Sorry, he was answering a question and he was
2 interrupted, and I ask that he have the opportunity to
3 continue his answer.

4 THE CHAIRPERSON: I agree with you, but let me just make
5 a comment first, and this is a comment I've made
6 throughout this hearing and that is, we often get a
7 long, long answer to the question which really relates
8 to the conditions that somebody wants to put on their
9 answer. And by the time we get to the end of that
10 we've forgotten what the question is.

11 So just with respect, respecting
12 everybody's point of view here, I think it's most
13 useful if the witness can answer the question, to the
14 best of their ability, with a short answer. If they
15 then want to condition their answer, then I think
16 that's the appropriate thing to do.

17 So I'd ask you to restate your question,
18 Mr. Andrews, and then we'll ask Dr. Jamieson to try to
19 give a short answer, which typically is either a yes
20 or a no or maybe or I don't know, or something in that
21 nature. If they then want to condition their answer,
22 or, yes with conditions, then let's hear the
23 conditions.

24 **Proceeding Time 9:12 a.m. T16**

25 MR. ANDREWS: Q: My question is, and I'll refer you to
26 Exhibit B-45, Undertaking No. 7, do you have any

1 scientific basis to contest Dr. Bailey's evidence that
2 at least eight peer-reviewed studies on lab animals
3 have been published on GSM cell phone exposure?

4 DR. JAMIESON: A: Right. Yes, there are at least eight
5 studies that have been published. There are also
6 studies that have been published that have shown
7 detrimental biological effects from cell phone
8 radiation.

9 MR. ANDREWS: Q: Thank you. Now, I'm going to ask you
10 some questions about anecdotal evidence. And first, I
11 want to make clear that when I refer to anecdotal
12 evidence, I am not referring to the first-hand
13 statements made by Fortis customers to the Commission.
14 Many in writing, filed in the D series of exhibits,
15 and also many in person at the community sessions.
16 Those are recorded, they're in transcripts, and I'm
17 sure they'll be given appropriate weight by the
18 Commission.

19 But, to be clear, I will be arguing in
20 evidence that anecdotal reports are (a) not evidence
21 at all, and (b) that the improper use of anecdotal
22 reports and reliance on them taints the scientific
23 credibility of the rest of Dr. Jamieson's report.

24 Now, in referring to BCSEA IR 21.1 to CSTS,
25 the question is, "Does Dr. Jamieson confirm that
26 throughout his report he supports his conclusions and

1 opinions by citing anecdotal reports of health
2 symptoms associated with smart meters, especially the
3 results of an online survey by the EMF Safety Network,
4 including at PDF pages" -- and there are 16 pages
5 listed there. Do you see that question?

6 DR. JAMIESON: A: Yes.

7 MR. ANDREWS: Q: And in your response, you begin not by
8 answering that question directly, and we'll get to
9 what you did respond, but first of all, can you answer
10 now that question? Can you confirm that you cite
11 anecdotal reports at those pages in your report?

12 DR. JAMIESON: A: Anecdotal evidence is cited at those
13 pages. There are 23 pages of references in the
14 complete document, so you can see that there is a lot
15 of peer reviewed scientific research also mentioned.

16 MR. ANDREWS: Q: Yes, thank you.

17 DR. JAMIESON: A: Thank you.

18 MR. ANDREWS: Q: And you then say that

19 "Dr. Jamieson would like to take this
20 opportunity to have it recognized that
21 throughout his report he supports his
22 conclusions and opinions by citing a
23 considerable number of peer-reviewed
24 scientific studies, anecdotal reports and
25 calls for proper scientific research to be
26 undertaken on the potential effects of RF

1 potentially be avoided, problems that need to be
2 addressed. Bias does come into it. The second smart
3 meter survey document that I asked you to refer to
4 seems to have got rid of some of the potential areas
5 for bias to come in, because of people being requested
6 to go and actually give their details when they --
7 give their actual contact details and addresses, et
8 cetera, when they were submitting that evidence. So
9 the survey is far from perfect.

10 I am basically saying that a proper survey
11 should be designed and carried out to determine to
12 what extent the information that is given may be true
13 or may be incorrect. There are a number of very good
14 survey designs that can be put together for that. One
15 of those is the guideline of the Austrian Medical
16 Association as a starting point.

17 As you say, anecdotal evidence isn't the
18 golden standard for what we need. But it shows that
19 there is a potential problem, would be very good to
20 address this before an actual roll-out is put into
21 operation, if BCUC decides to proceed with it. All
22 I'm trying to urge is caution to try and avoid
23 problems for the BCUC and FortisBC. Trying to come up
24 with potential solutions, potential matters that could
25 benefit all.

26 MR. ANDREWS: Q: Thank you. And now let's go back to

1 the actual question, which was, you are putting
2 forward these claims, asking the Commission to accept
3 that they are actually true. They are not being put
4 forward to show that complaints have been made.
5 They're being put forward to show that these
6 complaints are valid. Correct?

7 And I refer you to the fact that
8 immediately afterward you say that "from these results
9 shown, it appears possible that at least some B.C.
10 citizens' health may be put at risk as a result of
11 exposure to radio frequency and microwave emissions
12 from smart meters." You're drawing a conclusion about
13 health effects in British Columbia based on the
14 contents of these anecdotal testimonials, correct?

15 DR. JAMIESON: A: I'm suggesting in my answer to that,
16 that there may be validity in some of the claims that
17 are being put forward in those surveys. There is need
18 for further research to look into it. I'm basically
19 suggesting that there should be a proper study. There
20 should be a qualitative study on a focus group. The
21 questionnaire should be improved, and designed by a
22 scientist and authority, taking into account standard
23 questionnaires, pulling in experts from multi-
24 disciplines, not just epidemiology, and also
25 stakeholders, getting community involvements.

26 I'm not saying that that is the be-all and

1 end-all. I'm saying there is a concern there. It
2 would be very different for everybody if a proper
3 survey can be undertaken to determine the actual level
4 of truth that exists within the replies and responses
5 that have been given there.

6 Electrosensitivity is recognized in some
7 countries. There are health conditions that have been
8 noted with individuals who are not claiming to be
9 electrosensitive, at field levels which are raised.
10 So, how would you answer it?

11 MR. ANDREWS: Q: Sir, you're giving long speeches in
12 response to what I'm trying to address as a fairly
13 methodologically approached series of questions. It
14 has to do with the basis on which you're providing
15 your conclusions. And my questions have to do with
16 the source of your information and the conclusions
17 that you're asking the Commission to draw from that
18 information. And the topic is that the testimonials
19 that you've referred to, you claim ought to -- my
20 friend is standing and I'm not sure whether he's just
21 wanting to read my notes or would like to speak to the
22 Panel.

23 **Proceeding Time 9:21 a.m. T18**

24 MR. AARON: I don't want the witness to be under any
25 misapprehension that he's required to give short
26 answers, and I'm concerned that by Mr. Andrews'

1 admonishment of him for giving long speeches he's
2 getting misinformation.

3 THE CHAIRPERSON: Thank you for that, Mr. Aaron. We've,
4 through the course of this hearing, we've listened to
5 long conversations, explanations, and I think we
6 should -- within reason we should continue to be
7 tolerant of that, so --

8 MR. ANDREWS: Mr. Chair, my difficulty is not with the
9 long explanation but the lack of answer to the actual
10 question.

11 THE CHAIRPERSON: Well, that's why I encouraged and I
12 would ask again that perhaps at the beginning of the
13 conditioning or the explanation that the witness wants
14 to make, if he could provide a succinct answer. And
15 then to the extent he wants to condition that answer
16 or explain it, then we're prepared to listen to that.
17 So again I'd remind the witness to please begin their
18 response with an answer to the question, a short
19 answer to the question, and then condition it as he
20 sees fit.

21 MR. ANDREWS: Thank you.

22 MR. ANDREWS: Q: So Dr. Jamieson, I'm going to refer
23 you to Table 1.1 in your report.

24 DR. JAMIESON: A: All right.

25 MR. ANDREWS: Q: And this table presents results
26 showing various conditions and percentages of what are

1 described in the column header as Detrimental Effects.
2 Do you see the table?
3 DR. JAMIESON: A: Right.
4 MR. ANDREWS: Q: And I'm suggesting that the
5 presentation in this matter makes it look like these
6 are scientific results. You've given a percentage of
7 49.1 percent, for example, for the first item. That
8 looks like there's a considerable degree of precision
9 there, correct?
10 DR. JAMIESON: A: Well, as far as I'm aware, those
11 actual figures are taken from the survey itself.
12 MR. ANDREWS: Q: Yes, they certainly are, and I suggest
13 to you that what's provided there is precision but not
14 accuracy. Have you applied any scientific expertise
15 to judging the scientific accuracy of those figures
16 that are provided to one decimal point of precision?
17 DR. JAMIESON: A: I have actually taken Ed Halteman on
18 trust because Ed -- not that I actually personally
19 know Ed Halteman, but because he's been involved in
20 survey designs for over 20 years and he was
21 responsible for putting together the document on that.
22 MR. ANDREWS: Q: So we'll get -- well, let's turn to
23 the Halteman report which is Exhibit C4-21. On page 3
24 the report says the objectives are, one,
25 "To investigate reported public health and
26 safety complaints about wireless utility

1 meters;
2 and (2) To evaluate the impacts on health
3 and safety due to wireless utility meters;
4 and To determine whether study is
5 warranted."

6 Do you see that?

7 DR. JAMIESON: A: I do indeed.

8 MR. ANDREWS: Q: So the second point there is different
9 than the first. The first has to do with complaints.
10 The second has to do with evaluating impacts on health
11 and safety. Would you agree that there's a
12 significant distinction there?

13 DR. JAMIESON: A: I would.

14 MR. ANDREWS: Q: And the methods described on the same
15 page are a survey circulated online through various
16 social media outlets, including Networks, that is the
17 EMF safety Networks e-mail list, Facebook, and the
18 California EMF Safety Coalition (a discussion group),
19 and the survey was also posted on Network's website,
20 where visitors were invited to take the survey.

21 **Proceeding Time 9:26 a.m. T19**

22 And in response to a question from BCSEA,
23 you were asked whether that constituted a random or
24 representative approach to selecting respondents, and
25 you agreed that it was not. Is that still your
26 evidence?

1 DR. JAMIESON: A: It basically is a kind of focus group
2 that they appear to be seeking to obtain information
3 on -- from, with regards to smart meters.

4 MR. ANDREWS: Q: Thank you. And in the Information
5 Reques, you were asked to confirm that the EMS Safety
6 Network is an anti-smart meter campaign site. And
7 your response appears to avoid confirming that, and
8 you prefer to describe it as a resource and
9 information site. Why do you attempt to portray that
10 site as being resource and information instead of a
11 campaign site?

12 DR. JAMIESON: A: Right. Because you -- the way the
13 question was worded, it appeared that you were certain
14 that it was an anti-smart meter website, as opposed to
15 actually recognizing that the site itself covered a
16 variety of other issues, and as far as I'm aware, it
17 was in existence before smart meters were.

18 MR. ANDREWS: Q: Well, it does go beyond smart meters,
19 I'll grant you that. But it is a campaign site. The
20 home page menu items are "Take action!", "Advocacy
21 support" and "Legal work", and I like this one, where
22 they describe legal proceedings in which the EMF
23 Safety Network has either initiated or participated
24 in, and good on them for it. But they're an advocacy
25 group, is that not evident?

26 DR. JAMIESON: A: Well, they can be seeking to help

1 people who are feeling that they're being a neglected
2 part of society, with no one to listen to what they're
3 doing. It's not a site that I've spent that much time
4 looking at, to be honest with you, with the exception
5 of the actual survey results and the anecdotal
6 evidence. Because the anecdotal evidence is very
7 interesting in pinning down the health effects that
8 are being said to be claimed, and then also going into
9 scientific literature to see if such effects could
10 actually be backed up by peer-reviewed literature,
11 which it appears in a number of instances it has been.

12 MR. ANDREWS: Q: Well, that's all premised on the
13 validity of the testimonials in the first place. And
14 I suggest to you that although you refer in your
15 answers after referring to the anecdotal reports, you
16 then say peer-reviewed articles come to the same
17 conclusion. But the reference to peer-reviewed
18 articles is simply window dressing. The normal
19 scientific approach would be that if there was a peer-
20 reviewed study on a particular topic, that would be
21 the first place to go. Scientists wouldn't say, "This
22 proposition is supported by an admittedly biased non-
23 scientific survey, oh, and by the way, it's also
24 supported by peer-reviewed studies." Is that a fair
25 characterization?

26 DR. JAMIESON: A: I would actually tend to say that

1 DR. JAMIESON: A: Yes.

2 MR. ANDREWS: Q: And the question is

3 "Have you had a new wireless utility meter
4 installed on your home?"

5 It says "N = 409" That would be 409 responses,
6 correct?

7 DR. JAMIESON: A: Right, yes.

8 MR. ANDREWS: Q: And the answer "Yes", one to two
9 meters, is 35 percent. That's 143 respondents,
10 correct?

11 DR. JAMIESON: A: Mm-hmm, that's correct.

12 MR. ANDREWS: Q: And a few more if you add in the ones
13 that respond to three or four meters or five to eight
14 meters. Correct?

15 DR. JAMIESON: A: Correct.

16 MR. ANDREWS: Q: More than half of the respondents do
17 not answer. They answered "No" to "Have you had a new
18 wireless utility meter installed in your home?"

19 And then let's turn to page 19 again.

20 DR. JAMIESON: A: Okay.

21 MR. ANDREWS: Q: And it says, "How concerned are you" -
22 - actually, let me refer you to page 22 because we've
23 been to 19. So under the heading "New/Worsened Health
24 Symptoms" the question is:

25 "Have you, or anyone in your household,
26 experienced new or worsened health symptoms

1 since the new wireless utility meters have
2 been installed on your home, in your
3 neighbourhood, apartment building, area,
4 town or city? (Check all that apply)"

5 And it says, "N = 318". That indicates 318 people
6 answered that question, whereas only 143 plus a few
7 others said that they have had a new smart meter
8 installed on their home, correct?

9 DR. JAMIESON: A: Yes. So can you tell me which page
10 that last reference was on?

11 MR. ANDREWS: Q: The one that we were just looking at a
12 moment ago, the --

13 DR. JAMIESON: A: Yes, please.

14 MR. ANDREWS: Q: Page 13.

15 DR. JAMIESON: A: Page 13, all right. Thank you for
16 that.

17 MR. ANDREWS: Q: Page 13 shows more than half of them
18 haven't had a smart meter installed on their home.

19 DR. JAMIESON: A: Okay.

20 MR. ANDREWS: Q: And page 22 says 318 respondents
21 provided information about health symptoms.

22 DR. JAMIESON: A: Mm-hmm.

23 MR. ANDREWS: Q: Which are reported to one decimal
24 point of detail and then reproduced in Table 1.1 of
25 your report to the Commission, on which you conclude
26 the Commission should be concerned about health

1 effects on British Columbia citizens if wireless
2 meters are installed.

3 DR. JAMIESON: A: Right.

4 MR. ANDREWS: Q: You don't see an inconsistency there?

5 DR. JAMIESON: A: Well, if you're talking about the
6 difference in numbers, you've got the fact that you
7 could have people who have neighbours who have smart
8 meters installed who have those problems being opened.

9 MR. ANDREWS: Q: Right. In answer to IR 21.6, you were
10 given the opportunity to retract your assertion that
11 Table 1.1 supports the proposition that approval of
12 smart meters will put some B.C. citizens' health at
13 risk, and you declined to do that. And I would note
14 that you were not being invited to withdraw your
15 proposition, your concern about B.C. citizens. You've
16 got plenty of other items in your report that you
17 argue support that concern.

18 **Proceeding Time 9:36 a.m. T21**

19 The point was that you claim this Table 1.1
20 supports that proposition, and you were offered the
21 opportunity to react to -- to retract that argument,
22 and you didn't take it. Is that -- you say you stand
23 by -- Dr. Jamieson stands by his assertion in order to
24 emphasize the need for further investigation into this
25 area before additional smart meter roll-outs.

26 DR. JAMIESON: A: I'm seeking to state -- and --

1 THE CHAIRPERSON: Is that a question, Mr. Andrews?

2 MR. ANDREWS: Q: Fair enough. The question is, do you
3 understand the difference between the conclusion that
4 you're drawing and the evidence that you're pointing
5 to in support of your conclusion? And that if the
6 evidence is flawed, it's fair enough to retract it,
7 but you chose not to do that. And that may be a two-
8 part question.

9 DR. JAMIESON: A: Okay. I was seeking to say that the
10 anecdotal evidence that had been supplied in that
11 survey was sufficient to give grounds for caution with
12 regards to smart meters, with the need -- and trying
13 to qualify that. That there is a need for proper
14 surveys to be done to actually address the issue. I'm
15 showing -- or trying to state in what I have said that
16 there is an obvious problem recognized by some members
17 of the public which it would be good to properly
18 address. It's also a Class 2B carcinogen, we are
19 talking about, and you have to take into account --

20 THE CHAIRPERSON: I'm going to ask the folks in the back
21 of the room here to please refrain from making a
22 noise. It's disruptive. So I can appreciate you have
23 strong views on this, but I would ask you to please
24 refrain from making a noise. Thank you.

25 DR. JAMIESON: A: If I could --

26 MR. AARON: May I invite -- may I inform the witness

1 where he got cut off?

2 THE CHAIRPERSON: Yes.

3 MR. AARON: You said it's also a Class 2B carcinogen, at
4 which point we heard nothing further. Because there
5 was a communication problem. So, if you could
6 continue from that point.

7 DR. JAMIESON: A: Okay. It's also a Class 2B
8 carcinogen, so there should be some level of concern
9 being shown by the authorities with regards to its
10 mandatory roll-out. Also having to be taken into
11 consideration is, if you're advocating for wireless
12 smart meters, you're also advocating in the
13 specification for the device for wireless ZigBee
14 communication of 2.4 gigahertz. Again, highly
15 biologically active frequencies, as noted in my
16 report, and then you're also having backed up on top
17 of that wireless smart applications, smart appliances
18 within individual buildings.

19 So you're not just going to be having the
20 radiation from a wireless smart meter, you're going to
21 have -- you're going and talking to wireless
22 appliances within the building. So the actual
23 exposures that people would be receiving, 24/7, would
24 be far higher than they are nowadays, without any real
25 chance of being able to opt out because the radiation
26 goes through their walls, it goes through the

1 neighbours' walls, it goes through the floors from the
2 upstairs to the downstairs. It's greatly increasing
3 exposures to a Class 2B carcinogen. And these matters
4 really have to be taken on board.

5 It's not just a matter of the smart meter,
6 it's what the smart meter itself opens up and there
7 are far healthier alternatives that can be used that
8 reduce risk.

9 MR. ANDREWS: Q: So, in response to the questions put
10 to you in the Information Requests, that pointed out
11 these flaws in the anecdotal reports, your response
12 was that perhaps the questioner would be -- what is
13 your wording here?

14 THE CHAIRPERSON: Could you give us a reference?

15 MR. ANDREWS: Yes. In response to -- it would be C9-12-
16 4, response to 21 -- ah, 21.1. It's a long answer,
17 and it's at the end.

18 MR. ANDREWS: Q: In bold, it says:

19 "The new study by Conrad and Friedman, 2013,
20 may address some of the concerns the
21 questioner has about the EMF Safety Network
22 online survey."

23 **Proceeding Time 9:41 a.m. T22**

24 So in response to the questions about the
25 quality of the anecdotal report and the suitability of
26 the anecdotal evidence to support the proposition that

1 you were making, your response was to provide
2 essentially another online collection of anecdotal
3 reports by an anti-smart meter organization, correct?

4 DR. JAMIESON: A: I'm not actually sure that it is an
5 anti-smart meter organization.

6 MR. ANDREWS: Q: It was filed by the -- its URL is the
7 Maine, M-A-I-N-E --

8 THE CHAIRPERSON: Mr. Andrews, Mr. Andrews, I believe you
9 cut the witness off and --

10 MR. ANDREWS: Q: I didn't intend to.

11 DR. JAMIESON: A: Right. Basically the first time I
12 obtained information on it was when I saw it had been
13 submitted from Maine. I had not idea of its past
14 history. But it does help address some of the
15 concerns because the people who took part in the
16 online survey did go and give their names and
17 addresses, et cetera, so it should have been able to
18 help it to be used as a legal document.

19 But again, what I've been saying with the
20 first survey holds true with this one. It indicates
21 there is a cause for concern by some part of the
22 public, and it would seem sensible for a proper,
23 scientifically designed, multi-disciplinary group to
24 go and put such a survey together to go and allay any
25 potential concerns.

26 THE CHAIRPERSON: Mr. Andrews, please.

1 MR. ANDREWS: Q: Yes. The URL that you provide for
2 this document begins www.maine, M-A-I-N-E, as in the
3 state, coalitiontostopsmartmeters.org. Is that
4 correct?

5 DR. JAMIESON: A: That is correct, and it was an
6 exhibit that was put in for, as far as I'm aware, for
7 a court hearing much as it is going on in British
8 Columbia just now.

9 MR. ANDREWS: Q: And on the second page of the document
10 that states the survey purpose, it says:
11 "This survey was designed to discover if the
12 health effects/symptoms that many persons
13 have been attributing to smart meter
14 exposures were really caused by those
15 exposures or not."
16 Do you see that?

17 DR. JAMIESON: A: I've seen that, yes.

18 MR. ANDREWS: Q: And that actually would be the kind --
19 that would be the purpose of the kind of ideal study
20 that you were just referring to, wouldn't it, at least
21 in a general --

22 DR. JAMIESON: A: Well, it could have been better
23 designed so that you were having such potential bias
24 taken out of the initial survey itself.

25 MR. ANDREWS: Q: Yes. Go ahead.

26 DR. JAMIESON: A: You don't have mention that it's

1 actually about smart meters. You could have a survey
2 with people with regards to health effects that are
3 experiencing -- you don't have to say that it has to
4 do with electromagnetic fields. You could have it
5 done in one area where smart meters have been rolled
6 out, another area where they haven't been rolled out.
7 There are lots of ways to do it without introducing
8 bias.

9 I'm saying that these claims should be
10 taken on board and proper studies should be designed.
11 And as you are saying, it's a very good point, bias
12 should be tried to be ironed out wherever possible.
13 But it does seem that a survey should be undertaken
14 before the rollout, or at least have a control group
15 and try it there and have another one where you're
16 doing these kind of surveys. There really does seem
17 to be a need for it.

18 MR. ANDREWS: Q: I put it to you that this particular
19 study is not the scientific study that you say is
20 needed, and I --

21 DR. JAMIESON: A: Right.

22 MR. ANDREWS: Q: (inaudible). Perhaps you could repeat
23 that answer?

24 DR. JAMIESON: A: I agree with you. That study is not
25 the scientific study that is required. I am saying
26 that a scientific study is required, which helps to

1 get rid of bias and helps to address the issues that
2 you're concerned about and I am concerned about, and
3 ideally such survey should be taken before rollouts
4 are considered for BCUC with wireless smart meters.

5 MR. ANDREWS: Q: And on the page number 1 of the study,
6 which is the second page in the exhibit, it describes
7 the method by which the survey was distributed, and it
8 gives an internet site to which respondents can go to
9 participate, and it quotes the invitation that says:

10 "If you feel your health has been affected
11 by smart meters, we request your immediate
12 help in studying these effects."

13 Do you see that?

14 **Proceeding Time 9:46 a.m. T23**

15 DR. JAMIESON: A: I've seen that, yes. And again, I
16 will go back to what I originally said. There -- or
17 it might not have been originally, but anyway, my
18 feeling is that a proper study should be undertaken.
19 It should be a qualitative study on a focus group. On
20 a focus group. It should -- there are so many ways it
21 should be done. A proper scientific study that can be
22 peer-reviewed should be put together with regards to
23 this issue. There's a lot that is at stake with
24 regards to this, if you think about the percentages of
25 people who have claimed to be electrosensitive in
26 other countries. You could a knock-on on the effects

1 of Canada, on the prosperity B.C. -- British Columbia
2 itself. It really should be addressed.

3 You know, if you were able to do this study
4 and it shows there are no effects, great. Won your
5 point.

6 MR. ANDREWS: Q: So let me just point you to question
7 number 18 in this survey, which is on page 25 of the
8 report. It's also reproduced on the cover page. And
9 the question is,

10 "How sure are you that your new/worsened
11 symptoms correlated to smart meter
12 exposure?"

13 Now, this is for a study that's stated
14 purpose is to determine whether the symptoms were
15 really caused by these exposures or not. Would you
16 agree that that question is not a remotely close to
17 scientifically based way of answering that question?

18 DR. JAMIESON: A: I will say -- I keep on saying, I
19 think we're going to be on a record loop here. The
20 questions could be better set. There is a need for a
21 proper survey to be done. But when the authorities
22 haven't done it, it's been the people who put it
23 together, and that unfortunately is all the
24 information that seems to be available on it. You
25 know, it's something that the authorities should be
26 doing. And so you do get the properly designed

1 surveys. Instead it's been left to the people. It's
2 definitely not ideal, and that is why I say there is
3 need for a proper survey to be undertaken.

4 MR. ANDREWS: Q: I direct your attention to page 123 at
5 the very end of this document. This is the study
6 report. And it ends saying, "Thank you for completing
7 the questionnaire." And it says, "Attached to this e-
8 mail is a PDF file of your survey." And then, "Most
9 importantly it includes information on how to mail us
10 an optional affidavit together with a hard copy of
11 your completed survey. The affidavit will greatly
12 magnify the influence of your survey data in legal
13 proceedings." Do you see that?

14 DR. JAMIESON: A: I've seen it. I don't have it in
15 front of me just now, but I've seen it.

16 MR. ANDREWS: Q: I suggest to you that that is not the
17 approach that any balanced or independent scientific
18 or even non-scientific survey would take to obtaining
19 information.

20 DR. JAMIESON: A: Ah, read it in. And I also again
21 once more state there is a need for a proper
22 scientific survey to be done on this issue.

23 MR. ANDREWS: Q: Thank you. Those are my questions.

24 DR. JAMIESON: A: Thank you.

25 THE CHAIRPERSON: Thank you.

26 DR. JAMIESON: A: For the board.

1 THE CHAIRPERSON: Mr. Weafer? Now, Mr. Weafer, again we
2 find you just in the small window before ten o'clock,
3 as has been the case before. And so I would ask you
4 to be mindful of that ten o'clock target and we'll
5 certainly allow you some leeway either side of that,
6 but I would ask you to stop at a point that's
7 convenient.

8 MR. WEAFER: I will do my best, sir, and it should work
9 out fine, I believe.

10 THE CHAIRPERSON: Thank you.

11 **Proceeding Time 9:50 a.m. T24**

12 **CROSS-EXAMINATION BY MR. WEAFER:**

13 MR. WEAFER: Q: Dr. Jamieson, my name is Chris Weafer,
14 and I'm a lawyer for the British Columbia Municipal
15 Electric Utilities, which are five electric utilities
16 operated by municipalities that take service from
17 FortisBC. And I represent the Commercial Energy
18 Consumers' Association of British Columbia, which are
19 a class of customers, commercial operations, apartment
20 buildings, retail stores, and that's a ratepayer group
21 that contributes to the costs of Fortis. So, we're
22 involved in this proceeding for a variety of reasons,
23 including health.

24 So I'll just start with a few questions
25 that have been heard before by this panel, but they're
26 important to our understanding of what's in issue in

1 this proceeding. If I could refer you to Exhibit B-1,
2 which is at Appendix B-6 to Exhibit B-1, which is
3 Health Canada's Safety Code 6.

4 DR. JAMIESON: A: Right, yeah.

5 MR. WEAVER: Q: And I just have a series of what I
6 think will be short questions, and will get us to the
7 morning break. And I would encourage you to follow
8 the Chair's instructions to answer the question
9 directly, and then if you wish to elaborate, that will
10 be fine.

11 But the first question, are you aware of
12 Health Canada's Safety Code 6, limits of human
13 exposure to radio frequency electromagnetic energy in
14 a frequency range from 3 kilohertz to 300 gigahertz?
15 And that's set out at page 1 of 30 of this document.

16 DR. JAMIESON: A: Yes.

17 MR. WEAVER: Q: And are you aware that Safety Code 6 is
18 prepared by the Consumer and Clinical Radiation
19 Protection Bureau of Health Canada? That's identified
20 at page 3 of 30 of the document.

21 DR. JAMIESON: A: Yes. Mm-hmm.

22 MR. WEAVER: Q: Sorry, sir, could you answer?

23 DR. JAMIESON: A: Yes, I did, sorry.

24 MR. WEAVER: Q: Thank you. And to your knowledge, does
25 Safety Code 6 specify the requirements for the safe
26 use of or exposure to radiation-emitting devices in a

1 frequency range from 3 kilohertz to 300 gigahertz?

2 DR. JAMIESON: A: Only for thermal effects, as far as
3 I'm aware.

4 MR. WEAFFER: Q: The document, in terms of the
5 responsible agency, does set out the requirements.

6 DR. JAMIESON: A: For -- yes, but it's for up to 300 --
7 the section for the microwave radiation, it appears it
8 only addresses the health effects for thermal effects.

9 MR. WEAFFER: Q: You have been following this
10 proceeding. You understand that's a topic that's
11 received a fair bit of coverage as to whether Health
12 Canada considered this issue?

13 DR. JAMIESON: A: I've picked up -- I've picked up
14 points from it, Chris. Obviously I haven't got the
15 full briefing on what's going on.

16 MR. WEAFFER: Q: You're aware it's a point of contention
17 in this proceeding.

18 DR. JAMIESON: A: Right.

19 MR. WEAFFER: Q: But in answer to this question, it is
20 the document that sets out the requirements that are
21 presently in Canada at this time.

22 DR. JAMIESON: A: That's correct, yeah.

23 MR. WEAFFER: Q: Yes. Does your report say anywhere
24 that the advanced meters and related equipment
25 FortisBC is proposing to install and operate will not
26 comply with Health Canada's Safety Code 6 exposure

1 limits?

2 DR. JAMIESON: A: No.

3 MR. WEAFFER: Q: Would you agree with me that Health
4 Canada's mandate is to, and I quote, "help Canadians
5 maintain and improve their health"? And that's set
6 out at page 4 of 30.

7 DR. JAMIESON: A: Well -- all right, bear with me.
8 They're a group -- okay. I don't --

9 MR. WEAFFER: Q: You see that statement at the top of
10 the page?

11 DR. JAMIESON: A: No. I'm sorry, Chris, I don't, on my
12 conversion.

13 MR. WEAFFER: Q: Page 4 of 30, at the top of this page.
14 This is in Appendix B-6.

15 DR. JAMIESON: A: Appendix B-6.

16 MR. WEAFFER: Q: "Health Canada is the federal
17 department responsible for helping" --

18 DR. JAMIESON: A: No, it's not printed out in mine.
19 All I've got is Appendix B-6, and then page 4, limits
20 of human exposure to radio frequency energy. It
21 doesn't state that.

22 MR. WEAFFER: Q: If you'll flip through two more pages.

23 DR. JAMIESON: A: Okay. Anyway, I'm prepared to --
24 okay, page 7, yes.

25 MR. WEAFFER: Q: Are you looking at a document that
26 says, on the top of page 4 of 30,

1 "Health Canada is the federal department
2 responsible for helping the people of Canada
3 maintain and improve their health,"?
4 Do you see that, sir?
5 DR. JAMIESON: A: Oh. I'm sorry, Chris, I'm not seeing
6 that in the printout that I have.
7 MR. WEAVER: Q: Would you agree with me that that would
8 be a logical obligation of Health Canada?
9 DR. JAMIESON: A: That would be a very logical thing
10 for them to say. Ah, right. Sorry, Chris, I do have
11 it now. It's just the way it's been printed. Yes.
12 MR. WEAVER: Q: Thank you, sir.
13 If you'd like to take the break now, Mr.
14 Chairman, this would be a good time.
15 THE CHAIRPERSON: Okay. Thank you. We will take a 15-
16 minute break. It's just five to ten, so we'll
17 reconvene about ten after or a few minutes later than
18 that.
19 MR. WEAVER: Thank you, sir.
20 THE CHAIRPERSON: Ten or twelve after. Thank you.
21 DR. JAMIESON: A: Thanks for that.
22 **(PROCEEDINGS ADJOURNED AT 9:55 A.M.)**
23 **(PROCEEDINGS RESUMED AT 10:11 A.M.)** **T25/26**
24 THE CHAIRPERSON: Please be seated.
25 Please continue.
26 MR. WEAVER: Thank you, sir.

1 MR. WEAVER: Q: Dr. Jamieson, are you back online and
2 you can hear us?

3 DR. JAMIESON: A: Yes, I am.

4 MR. WEAVER: Q: Thank you. Just a few general
5 questions in relation to the breadth of scope of your
6 paper. You'd agree with me in reviewing the Halteman,
7 the Bavarian study, the Spanish study, the health
8 effects study, they cover a wide range of health
9 issues. Sleep problems, stress, headaches, ringing in
10 ears, concentration, fatigue, eye problems, dizziness,
11 cardiac problems, leg cramps, arthritis, nausea, and
12 it carries on in the studies. Would you agree with me
13 there's a fairly broad range of health effects that
14 are being raised in those studies?

15 DR. JAMIESON: A: Yes.

16 MR. WEAVER: Q: And can you confirm that you did not
17 conduct any scientific studies in any of these areas?

18 DR. JAMIESON: A: That's true, I have not been able in
19 either of those two studies.

20 MR. WEAVER: Q: And can you confirm to me that the
21 symptoms that are identified in these studies are
22 common to many other known causes and numerous other
23 reported associations, with many other issues beyond
24 RF?

25 DR. JAMIESON: A: You're quite correct. There are so
26 many environmental factors like come into play on

1 electro (inaudible) radiation just is one of them.

2 MR. WEAFFER: Q: Thank you, sir.

3 Sir, now I'd like to turn you to your
4 responses to the CEC/BCMEU information requests. They
5 are Exhibit C19-14-2. Do you have those available?

6 DR. JAMIESON: A: CEC, can you give me that number
7 again please?

8 MR. WEAFFER: Q: Yes, sir, it's Exhibit C19-14-2.

9 DR. JAMIESON: A: Yes. Yes, I have it with me.

10 MR. WEAFFER: Q: It is Dr. Isaac Jamieson responses to
11 CEC IR 1-CSTS.

12 DR. JAMIESON: A: Right.

13 MR. WEAFFER: Q: And I just want to highlight at the top
14 of your responses the note:

15 "As the following had to be prepared on a
16 very short time scale, not all questions
17 have been answered. Some of those which
18 have been answered are not answered in full
19 because of time restrictions."

20 And you'd agree with me that there's a good number of
21 CEC IR questions that were not responded to by the
22 deadline of February 21st, 2013?

23 DR. JAMIESON: A: That's correct. There was a lot of
24 questions that are (inaudible).

25 MR. WEAFFER: Q: And can you confirm that you've not
26 filed any further responses since that date, today

1 being March 15th [sic]?

2 DR. JAMIESON: A: I wasn't actually aware I was able to
3 file any more responses, but no, I have not.

4 MR. WEAFFER: Q: Are you aware that your evidence was
5 filed late, on leave of the Commission?

6 DR. JAMIESON: A: Pardon me?

7 MR. WEAFFER: Q: Are you aware that your evidence was
8 filed late, on leave of the Commission? You had some
9 processing issues with your evidence and that was --

10 DR. JAMIESON: A: It's not -- yes.

11 MR. WEAFFER: Q: So you're aware you were able to file
12 the evidence late, but you didn't confirm whether you
13 could follow up and file your IR responses late? You
14 just assumed you could not and did not answer the
15 questions?

16 DR. JAMIESON: A: I seek to be professional. It was
17 because of matters beyond my control that I wasn't
18 able to get the first main document in in time. And I
19 certainly intended to answer the questions to the best
20 of my ability for the second set of documents. So I
21 like to perform to actual time scales, and that's why
22 questions were answered to the extent they were
23 answered.

24 MR. WEAFFER: Q: Would you agree with me that it may
25 have been helpful to the Panel and to CEC if you'd
26 made an effort to answer the questions, even after the

1 available date?

2 DR. JAMIESON: A: If I'd had available time to do that,
3 that would have been something I would have looked to
4 have done.

5 MR. WEAFFER: Q: So you haven't had time to prepare
6 responses to the questions that we put to you in the
7 information requests.

8 DR. JAMIESON: A: The information request that I
9 responded to you, I sent you the information as I
10 could at the time deadline. I was not made aware by
11 anybody that I had the ability to extend beyond the
12 time. As far as I was aware the information had to be
13 in by that time, and I worked as hard as I could to
14 that deadline, with all the questions that I'd been
15 asked to respond to.

16 **Proceeding Time 10:16 a.m. T27**

17 MR. WEAFFER: Q: Fair enough, sir, fair enough. And
18 you'd agree that you've filed a fairly comprehensive
19 set of evidence and it would be difficult for anybody
20 to have the ability to respond in a timely manner to
21 the breadth of evidence that you've filed. Would you
22 agree with that?

23 DR. JAMIESON: A: I -- we think they are the same
24 problems, because --

25 MR. AARON: I'm just going to interrupt for a moment.

26 That was such a vague question, you would agree that

1 it would be difficult for anyone to respond in time to
2 your evidence. I don't know what the -- what my
3 friend means and I don't -- I don't know what he
4 means, so I am concerned that the -- as to whether the
5 witness knows what he means.

6 And also this line of questioning doesn't
7 have to do with the facts in issue in this proceeding.
8 It has to do with procedural matters, and I don't know
9 if the witness has expertise on procedural matters.
10 Surely this is -- these are issues that could be
11 addressed in legal argument. The witness isn't
12 responsible for the procedural elements and my
13 clients' compliance with deadlines and procedural
14 requirements.

15 THE CHAIRPERSON: Mr. Weafer, are you able to continue in
16 a -- and if you do want to ask this question, perhaps
17 ask it in a more precise way, or perhaps move on to
18 another topic.

19 MR. WEAFER: I will ask in a precise way.

20 THE CHAIRPERSON: Yes.

21 MR. WEAFER: But the basis of the question, to respond to
22 my friend's objection, is, we have an expert who has
23 filed a report that he has not answered questions on,
24 and we're trying to determine why, whether because he
25 didn't know the answers or because he didn't have
26 time.

1 THE CHAIRPERSON: Okay, well --

2 MR. WEAVER: At this point, we're hearing time. So now
3 I'll go to, do you know the answers.

4 THE CHAIRPERSON: Thank you.

5 MR. WEAVER: Q: And perhaps we can deal with this more
6 directly by one of your responses. If you could go to
7 response 7.6.

8 DR. JAMIESON: A: All right.

9 MR. WEAVER: Q: And the question was, after a non-
10 response to question 7.1, 7.2, 7.4, 7.5, and this is
11 in relation to comments on autism, we asked the
12 question,

13 "Please provide any studies Isaac Jamieson
14 has conducted on autism, and explain Isaac
15 Jamieson's background and experience in
16 researching and understanding autism."

17 And I take it this is an answer that may apply to
18 other areas that you have not answered questions. And
19 the response is,

20 "Dr. Jamieson's research involves gaining
21 understanding of the potential mechanisms
22 that cause various types of ill-health,
23 including degenerative disease, and how
24 environmental factors can be adjusted to
25 reduce such risks."

26 So, I take it from that, you don't really

1 have any expertise on the studies that you've spoken
2 to, you're really looking at how you deal with the
3 issues in terms of your true expertise, which is in
4 the area of design and architectures. Is that a fair
5 summary of that response?

6 DR. JAMIESON: A: I would say it's -- in actual fact, I
7 do have answers to 7.1, 7.2, and 7.4 and 7.5. I can
8 go through them with you now.

9 MR. WEAVER: Q: Well, sir, the question was -- there
10 was a specific question with respect to this response.
11 And I'm asking you, is that general response evidence
12 of what your true expertise is, which is in relation
13 to design and architecture --

14 DR. JAMIESON: A: No.

15 MR. WEAVER: Q: -- resulting from alleged health
16 effects.

17 DR. JAMIESON: A: No.

18 MR. WEAVER: Q: Then let's go through your responses on
19 those questions.

20 DR. JAMIESON: A: Fine, thank you. Okay.

21 MR. WEAVER: Q: Yes. So, you -- so, 7.1, then. Did
22 you prepare these responses or did you get assistance
23 on these responses?

24 DR. JAMIESON: A: I prepared these responses and then
25 once I'd prepared the responses I had a hypothesis
26 that I had developed, checked by a medical

1 professional, and it has not been written by anybody
2 else but myself.

3 MR. WEAVER: Q: Sir, I didn't quite pick up that
4 response. I'm going to ask you to repeat it, please.

5 DR. JAMIESON: A: Repeat that again for you?

6 MR. WEAVER: Q: For the audio. It was bad audio, sir.
7 No criticism of the response, just it didn't come
8 through clear to me.

9 DR. JAMIESON: A: Right. The responses that I prepared
10 were responses that I'd written solely myself. There
11 was a hypothesis that I developed in answer to one of
12 the points that was asked, and I had it checked by a
13 medical expert, but before I have actually included it
14 in what I'm going to saying to you just now, but no
15 alteration was made to that text. All that text has
16 been written by myself.

17 MR. WEAVER: Q: Can you tell me, sir, who was the
18 medical expert you spoke with?

19 DR. JAMIESON: A: Well, a Dr. Edwin Mallory Blimes, the
20 medical specialist that I spoke with.

21 **Proceeding Time 10:21 a.m. T28**

22 MR. WEAVER: Q: So you required that expertise to
23 verify your response?

24 DR. JAMIESON: A: No, I did not. I had a hypothesis
25 that I developed and I wanted to check with a person
26 who has -- qualified with a full medical background,

1 whether such a hypothesis would appear to be sound.

2 MR. WEAVER: Q: Because they had the expertise to

3 verify that hypothesis.

4 DR. JAMIESON: A: In theory they have the -- yes.

5 MR. WEAVER: Q: Thank you, sir.

6 DR. JAMIESON: A: Okay then. Right, so --

7 MR. WEAVER: Q: At this point, sir, I don't need the

8 responses to the IRs. I have the evidence I require,

9 thank you.

10 DR. JAMIESON: A: Excuse me, I have actually a response

11 for this and it's with regards to a potential

12 mechanism that could relate to autism being caused

13 more amongst boys than girls. That was one of the

14 questions that you asked.

15 THE CHAIRPERSON: I'm just wondering if, to make

16 efficient use of time, if Dr. Jamieson wishes to

17 respond to these IRs, we could consider -- again, it's

18 a late date and typically we don't take responses to

19 IRs or other submissions without hearing submissions

20 on that. But perhaps we can put that off to the end

21 of your cross-examination.

22 MR. WEAVER: Mr. Chair, I could deal with that right now.

23 I'm not asking for responses to the IRs except on this

24 topic which we've had discussion on. But it would be

25 prejudicial to our position in this hearing to now,

26 three weeks after the deadline for IRs, file IR

1 responses and have no opportunity to cross-examine on
2 the evidence. So that is not proper and not
3 appropriate given the guidelines that the Chair set
4 for -- the Commission set for the procedure. And what
5 I require from this witness I have obtained.

6 THE CHAIRPERSON: Thanks. We'll just hear from Mr.
7 Aaron. We might as well deal with this right now.
8 I'll hear from Mr. Aaron.

9 MR. AARON: My friend's concern is similar to the concern
10 that I raised in relation to what we are going to
11 anticipate from Dr. Shkolnikov in response to the
12 Chair's request for an undertaking. Similarly it's
13 evidence that's coming, prospective evidence that's to
14 come in after the cross-examination process and isn't
15 subject to further questioning. And as you, Mr.
16 Chair, identified, there would be some questions of
17 weight surrounding that kind of evidence.

18 In this circumstances, my submission is
19 that by attacking the expert for not having filed
20 these responses, my friend has opened the door for the
21 expert to say, "I didn't do them on time. Here they
22 are and these are what my responses are."

23 So it's again that phenomenon of the option
24 not to have cross-examined on that. However, my
25 friend chose to cross-examine on that. He's opened
26 the door and the witness has something to say.

1 THE CHAIRPERSON: Does Fortis have a position on this?

2 MS. HERBST: I have a position insofar as it relates to
3 the fact that various IRs were also not responded to
4 by Fortis. They're not ones that I intend to cross-
5 examine on. And I agree with Mr. Weafer that at this
6 stage it would be very prejudicial to permit further
7 responses to be given. And I don't know -- I say that
8 only because I don't know how far this possibility of
9 responding further to IRs extends. If it's -- and I
10 say certainly it shouldn't extend to FortisBC's
11 unresponded-to IRs, and I agree with Mr. Weafer as to
12 his point as well. There was a process to be
13 followed. The regulatory timetable provided for when
14 information requests were to be responded to.
15 Certainly if there was an issue there could have been
16 an extension sought, as it had been for the filing of
17 Dr. Jamieson's original report. And so I support Mr.
18 Weafer's position on his IRs, and certainly insofar as
19 FortisBC, I say there should be no further responses.

20 THE CHAIRPERSON: Mr. Fulton?

21 **Proceeding Time 10:26 a.m. T29**

22 MR. FULTON: Mr. Aaron is correct in the sense that the
23 door has been opened at least in respect of these IRs.
24 The question is how far the door has been opened, and
25 it is for simply one IR or for all of them. I don't
26 see any concern about Mr. Weafer having asked as to

1 why Dr. Jamieson didn't provide his responses in time.
2 He's given those responses. But I'm not sure whether
3 on the record it's clear that Mr. Weafer has gone as
4 far as to ask specifically about the content of those
5 responses or not. If he has done so, then it seems to
6 me that to the extent that he's asked a question about
7 one of the responses, that's opened the door for that
8 response.

9 But I agree with Ms. Herbst that that
10 doesn't mean that if Ms. Herbst doesn't ask about any
11 of the responses that FortisBC received, that the
12 FortisBC responses, unanswered responses can now be
13 filed as well.

14 THE CHAIRPERSON: Mr. Aaron, do you wish to make any
15 final comments?

16 MR. AARON: No, thank you.

17 THE CHAIRPERSON: Let me just -- I think we've canvassed
18 the --

19 First of all, Mr. Aaron, I do not accept
20 your comparison of my request for an undertaking.
21 That request for an undertaking, and if you -- I think
22 if you go back and review the details, my request for
23 the undertaking was a request based on the need for
24 more precision around a topic that had been discussed,
25 and I think I even made reference to Dr. Shkolnikov
26 working on his calculator to try to give us kind of

1 random and quick responses to questions around other
2 -- the effects of other sources of electromagnetic
3 fields on a person in their home. And I was saying
4 well, you know, let's get some precision around that.
5 So that was related to a topic that had been in play
6 over a considerable period of time.

7 In this particular case my colleagues and I
8 agree that this subject has been, as you say, the door
9 has been open. However, I think in a restricted way.
10 And as a result of that, we will allow responses to
11 7.4, 7.5 and 7.5 which relate to the autism issue.
12 Those can be submitted by way of an undertaking, and
13 we'll use the same date for that undertaking, which is
14 March the 22nd, I believe, and ask Dr. Jamieson to
15 provide those through CSTS counsel. But beyond that,
16 we're not going to allow additional IRs, you know,
17 based on this request.

18 MR. WEAFFER: Thank you, Mr. Chairman, and that looks
19 completely acceptable to me. I absolutely was in that
20 area and that's fair.

21 In the undertaking can I specifically
22 request that Dr. Jamieson refer to which question he
23 sought confirmation by the other expert? Is that a
24 fair request?

25 MR. AARON: You can ask him now.

26 MR. WEAFFER: Fair enough.

1 MR. WEAFFER: Q: Dr. Jamieson, can you please indicate
2 which of the questions that you're going to respond to
3 as directed by the Chair, you sought confirmation of
4 your offices by another medical -- sorry, by a medical
5 doctor?

6 DR. JAMIESON: A: 7.2. It's not the one that you're
7 asking (inaudible).

8 **Proceeding Time 10:31 a.m. T30**

9 MR. WEAFFER: Q: Thank you.

10 I'd like to move on to another topic and
11 I'd like you to please go back to your credentials
12 that your counsel took you through, in introducing
13 you. And the focus was on your scientific background,
14 and I understand your job title as Architect,
15 Environmental Scientist and Consultant. And would the
16 consultancy be related to the website
17 biosustainabledesign.org?

18 DR. JAMIESON: A: It is.

19 MR. WEAFFER: Q: And as I understand, where you did give
20 a fairly responsive answer to an IR which is IR
21 9.10.1, question 17.1, you talked about shielding of
22 environments from RF radiation and gave a multi-page
23 response.

24 DR. JAMIESON: A: All right.

25 MR. WEAFFER: Q: Is that in an area that you provide
26 consultancy services through Biosustainable Design?

1 DR. JAMIESON: A: It's an area I can provide
2 information on. I could provide information on a
3 variety of environmental factors like materials,
4 basically (inaudible) environment, what is likely to
5 make healthier environments.

6 MR. WEAVER: Q: Right, and --

7 DR. JAMIESON: A: Reduce risk.

8 MR. WEAVER: Q: You'll have to repeat that, sir.

9 THE CHAIRPERSON: I'm going to just ask you to stop here.
10 I'm having trouble with the audio and it may be that
11 Dr. Jamieson doesn't have the microphone close enough.
12 I noticed earlier he was holding it close.

13 MR. AARON: In my observation, Mr. Chair, the problem
14 arises because this microphone will turn off the audio
15 we're hearing when this microphone is picking up a
16 sound. And I notice that when my friend turns a page
17 while the witness is speaking, we lose the witness, or
18 if there's overlap.

19 THE CHAIRPERSON: Okay, thank you.

20 MR. WEAVER: Thank you for that, Mr. Aaron.

21 MR. WEAVER: Q: Sorry, I'd like to get back to the line
22 of cross-examination and we were talking about
23 Biosustainable Design, and this is your consulting
24 practice, I take it.

25 DR. JAMIESON: A: It's -- well, I'm the consultant and
26 it's -- I'm like a -- a cooperative.

1 MR. WEAFFER: Q: I'm sorry, you'll have to repeat that,
2 sir. The audio is not great.

3 DR. JAMIESON: A: It's a cooperative. So basically it
4 is a -- well, it is basically -- it's a cooperative
5 where people who have skills to put together to help
6 create healthy environments can work.

7 MR. WEAFFER: Q: And that's an organization or is that a
8 business? Do you do that for compensation? Do you
9 receive payment by clients for that type of service?

10 DR. JAMIESON: A: No, everyone that works with it is as
11 an individual. It's not a money-making concern.

12 MR. WEAFFER: Q: As I understand --

13 DR. JAMIESON: A: People are contacted and there is
14 work that is required. They are hired out on the
15 basis of the work that they are able to do themselves,
16 and Biosustainable Design take any money from that.

17 MR. WEAFFER: Q: Do you ever provide services and be
18 compensated in relation to the work of Biosustainable
19 Design?

20 DR. JAMIESON: A: Basically people can contact us for
21 work. People get hired out on an individual basis, so
22 it's not anything that actually is through
23 Biosustainable Design. People just -- it's a
24 cooperative and the people just bill their time
25 individually.

26 MR. WEAFFER: Q: I don't think that's responsive to the

1 question, sir. Do you ever get compensated for --

2 DR. JAMIESON: A: No.

3 MR. WEAVER: Q: And the client does relate -- the
4 reference does say under "Services" at the website:

5 "A variety of integrated services are
6 available for clients seeking to
7 develop/refine ethical, biologically
8 friendly buildings, technologies, and
9 environments."

10 So when that refers to clients, what you're
11 saying is those are not clients of Biosustainable
12 Design, they're clients of consultants who may be
13 referred to through this website?

14 DR. JAMIESON: A: That's, I think, a good way to put
15 it, yes. So basically Biosustainable Design is a
16 meeting point for people who are wanting to help to
17 create healthier environments. People who, let me say
18 -- it's difficult to clarify. Basically, as I said,
19 it's a cooperative.

20 **Proceeding Time 10:36 a.m. T31**

21 People who have -- people approach for work
22 that is required, individuals including bills, which
23 is not on a sustainable design. I'm not sure about
24 the actual point you're trying to make.

25 MR. WEAVER: Q: Well, the point -- I'll get to the
26 point. I'm really at this point trying to understand

1 your consultancy practice, and as your CV refers to
2 this website, I'm assuming this is where your
3 consultancy practice gets some of its work. I take it
4 you consult for a fee. You don't do it for the love
5 of the work. I appreciate you love the work, but I
6 take it you also need to make a living, and would this
7 be one of the ways that you attract clients?

8 DR. JAMIESON: A: It would be a way of attracting
9 clients, but I've actually done other work from other
10 sources. I have not received commissioned work from
11 Biosustainable Design to date.

12 MR. WEAFFER: Q: I take it if you have a client, or a
13 potential client, who was attracted because they saw
14 it on your CV that this is a site -- and just to
15 confirm, in terms of -- if I go to the "About" button
16 on this Biosustainable Design, there is you and one
17 other person profiled when I go to that point. Is
18 that correct?

19 DR. JAMIESON: A: That's correct, yes.

20 MR. WEAFFER: Q: And who is the other person?

21 DR. JAMIESON: A: The other person is my wife, who is
22 an environmental scientist as well.

23 MR. WEAFFER: Q: Okay, thank you, sir. So I take it she
24 may receive consulting contracts from clients who may
25 come through this website?

26 DR. JAMIESON: A: Basically, people can contact that

1 site. If it's work that I can do, I would be
2 undertaking that myself. If it's work that my wife
3 can do, it would be work that she would be undertaking
4 herself. And if it's work that somebody else would be
5 required to do, we would call them in and ask if they
6 would like to be involved in it.

7 MR. WEAVER: Q: And would you take any compensation if
8 you directed a project, a significant project, to
9 anybody if the result was through this website?

10 DR. JAMIESON: A: Sorry, I didn't understand. Say that
11 again.

12 MR. WEAVER: Q: In commercial terms, websites are often
13 used as a referral source, where a client comes to a
14 website and the work may be referred on to somebody
15 else. But there may be consideration paid for that
16 referral. I take it from your evidence that's not
17 happening with this site.

18 DR. JAMIESON: A: That's not happening, no. No.

19 MR. WEAVER: Q: So, just to step back, then, sir, this
20 is an area that you do look to develop client
21 relationships. Would you agree with that?

22 DR. JAMIESON: A: That is correct, yes.

23 MR. WEAVER: Q: And would you agree with me that when
24 we look at issues such as matters before a hearing,
25 where we have a scientist testifying on standards,
26 that those standards change, there may be more design

1 work.

2 DR. JAMIESON: A: Well, there is always design work.
3 The approach that I take is that technology can be
4 designed in a better and a safer way, and I seek to
5 help people do that, whether it's authorities, whether
6 it's manufacturers, et cetera, or the general public.

7 MR. WEAVER: Q: I'm not sure you answered the question
8 directly, so I'll -- is there a possibility if
9 standards change there may be different design work
10 resulting from Biosustainable Design? Because you
11 consult in the area of dealing with standards, and
12 dealing with health issues.

13 DR. JAMIESON: A: Well, basically it would seem to be
14 the same, because we aim to create healthy buildings,
15 regardless of the standards. We take on board and
16 look into ways to develop best practice issues. So
17 that's -- as a role in the process, that is constantly
18 evolving.

19 MR. WEAVER: Q: And would you agree with me -- sorry,
20 sir.

21 DR. JAMIESON: A: With that -- regardless of the state
22 of standards just now, we (inaudible) to how we can
23 create the optimum solution.

24 MR. WEAVER: Q: Sir, again, I'm not challenging what
25 you said. It was quite disjointed, not through you,
26 through technology. Could you repeat what you said,

1 please?

2 DR. JAMIESON: A: Oh, sorry, I've lost the flow of it.

3 Hmm. Could you please repeat the question?

4 **Proceeding Time 10:41 a.m. T32**

5 MR. WEAVER: Q: The question related to the standards
6 changing -- regulatory standards changing, which may
7 require further consultation in relation to design
8 work.

9 DR. JAMIESON: A: Right, (inaudible) creating healthy
10 buildings, optimizing healthy buildings, and that is
11 an ongoing process we're involved in. That does not
12 particularly involve standards. It involves best
13 practice issues. And often the best practice issues
14 are quite divorced from standards.

15 MR. WEAVER: Q: Would you agree with me that standards
16 generally set the starting point in terms of an
17 architect or doing design work? That you look to the
18 standards first?

19 DR. JAMIESON: A: I actually have the majority of my
20 work nowadays as an environmental scientist. And when
21 I'm looking at the built environment I'm looking in --
22 in the health terms, which is more than your standard
23 architectural terms. So it's looking at things like
24 healthy kinds of materials, ways to reducing effects,
25 et cetera. It's not --

26 MR. WEAVER: Q: Thank you, sir, I'll move on from this

1 topic. And the last topic I wish to address with you
2 is the IR response wherein you discussed various
3 technologies that you're familiar with with respect to
4 the shielding technologies, and this is back to CEC IR
5 17.1.

6 DR. JAMIESON: A: Right.

7 MR. WEAVER: Q: And I'm particularly interested in the
8 biological effects of shielding.

9 DR. JAMIESON: A: All right.

10 MR. WEAVER: Q: Yes, thank you. Are you there? And
11 I'm looking at the peer-reviewed scientific research
12 that indicates that ferret cage conditions can help
13 protect against detrimental biological effects created
14 by exposure. And I just wanted to confirm with you,
15 sir, it does seem to be your area of expertise, that
16 there are technologies being developed to deal with
17 shielding of RF emissions, and that is an area that
18 there are opportunities to mitigate the impacts of RF
19 exposure. Would you agree with that?

20 DR. JAMIESON: A: Yes, but unfortunately not for when
21 you're outdoors.

22 MR. WEAVER: Q: I'm sorry?

23 DR. JAMIESON: A: For when individuals are indoors,
24 yes, but then there's a problem when they're outdoors.

25 MR. WEAVER: Q: Thank you.

26 THE CHAIRPERSON: I didn't hear the answer to that

1 question, I'm sorry.

2 DR. JAMIESON: A: Sorry, I'll say it again. Yes, there
3 are materials available to go and shield against RF
4 microwave radiation indoors. There's still the
5 problem of RF microwave radiation if it's (inaudible)
6 outdoors. Also the shielding solution is quite
7 expensive generally.

8 MR. WEAVER: Q: Thank you. Sir, are you familiar with
9 the backplate on the AMI meters that Fortis is
10 proposing in its application?

11 DR. JAMIESON: A: I've read of them, yes.

12 MR. WEAVER: Q: And you recognize that it does provide
13 a significant degree of RF shielding?

14 DR. JAMIESON: A: Yes, in fact it possibly presents a
15 problem as well for when you're using the ZigBee
16 radio, because if you're having the ZigBee radio they
17 used to provide signaling to smart appliances, the
18 signal strength will be reduced. Also with it being
19 2.4 gigahertz, it's going to be far less likely to be
20 able to penetrate through building materials to the
21 same degree as the 900 hertz radiation. So there's a
22 potential problem with that, with signaling from smart
23 appliances to the ZigBee radio because of the
24 backplate.

25 MR. WEAVER: Q: Sir, the question was specific to the
26 AMI meters and not the ZigBee radio, so could you

1 answer just specific to AMI meter?

2 MR. AARON: Sorry.

3 MR. WEAFFER: That was the question.

4 MR. AARON: That's misleading because the latter are
5 included in the former.

6 THE CHAIRPERSON: I would agree that Mr. Weafer can
7 continue. I think we've -- through the course of the
8 hearing there's been a clear distinction one to the
9 other in a variety of ways, including optional versus
10 non-optional and so on. So I'll ask you to continue.

11 MR. WEAFFER: Thank you, sir.

12 MR. WEAFFER: Q: So could you please respond to the
13 question as placed, which was: Can you agree that the
14 backplate on the AMI meters does result in significant
15 shielding of RF exposure in relation to the AMI meter?

16 DR. JAMIESON: A: From the indoors it reduces the
17 people's to the outdoors that are obviously
18 (inaudible) of the neighbours across the -- right from
19 the meters.

20 MR. WEAFFER: Mr. Chairman, those are my questions. Thank
21 you, Dr. Jamieson.

22 DR. JAMIESON: A: Thank you.

23 THE CHAIRPERSON: Thank you, Mr. Weafer.

24 DR. JAMIESON: A: Thank you, Mr. Chairman.

25 THE CHAIRPERSON: We do have one other cross-examination
26 and that's FortisBC Inc.

1 MR. FULTON: Ms. Herbst.

2 THE CHAIRPERSON: Thank you. Actually we potentially
3 have several more, but in terms of the interveners and
4 the applicant we have one more.

5 MS. HERBST: Before I disturb the technology, I'll let
6 Mr. Bemister fix it. And thank you, Mr. Chair, thank
7 you, Commissioners.

8 **Proceeding Time 10:46 a.m. T33**

9 **CROSS-EXAMINATION BY MS. HERBST:**

10 MS. HERBST: Q: Hello, Dr. Jamieson. My name is
11 Ludmila Herbst. I'm one of lawyers for FortisBC, and
12 I just have a very few small points to cover off,
13 given so much has been covered already. There are, I
14 think, only two documents to have handy for the
15 purpose of my questions. And one is your main filing,
16 the comments on "Health, human rights, environmental,
17 and security concerns", which is Exhibit C9-10-1. And
18 also the letter that you received, or that was dated
19 December 18th, 2012, from Mr. Aaron, to you, in which
20 he was retaining you to provide comments on behalf of
21 his client. And that's Exhibit C9-10-2.

22 And yesterday I think you received also a
23 package of some other documents, but I think we likely
24 won't need to refer to them.

25 And so, turning first of all to the letter
26 that you received on -- or that was dated December

1 18th, 2012, from Mr. Aaron, and I just want to turn to
2 that briefly. And do you have that, Dr. Jamieson, as
3 well?

4 DR. JAMIESON: A: I don't actually have that in front
5 of me just now, so if you could tell me the contents
6 of it, I'd appreciate it.

7 MS. HERBST: Q: Okay. And it was a letter from Mr.
8 Aaron.

9 "I am legal counsel representing the
10 Citizens for Safe Technology Society with
11 respect to the above-referenced proceeding.
12 I write to retain you to provide an expert
13 opinion as an environmental scientist with
14 expertise in environmental health.

15 And all I wanted to ask you about was,
16 there is a section at the bottom of the first page,
17 "Nature of opinion requested".

18 "We are requesting that you commence your
19 review of the facts and documents referenced
20 below and provide your opinion, with
21 background reasons supporting your opinion,
22 as to ..."

23 And then number 1 is,

24 "What valid security, human rights, public
25 health, and environmental concerns arise in
26 relation to Fortis's proposed AMI project?"

1 What scientific research and/or review
2 material supports your position in that
3 regard?"
4 And that's the first thing that you were asked.
5 And I just wanted to confirm that that's
6 something that you then responded to, and did answer?
7 DR. JAMIESON: A: Yes. But give me the number of that
8 document again, please?
9 MS. HERBST: Q: Oh, absolutely. It's Exhibit C9-10-2,
10 and it's just the December 18th letter that you would
11 have received from Mr. Aaron retaining you.
12 DR. JAMIESON: A: All right. Sorry to --
13 MS. HERBST: Q: No, no. It's --
14 DR. JAMIESON: A: Ten dash -- what? C9-10-2 --
15 MS. HERBST: Q: And I'm happy with -- if I was
16 sufficiently clear in my reading out, if you could
17 just confirm that that's one of the points that you --
18 or one of the --
19 DR. JAMIESON: A: So that's the --
20 MS. HERBST: Q: Sorry.
21 DR. JAMIESON: A: Asked to supply information on,
22 because that is in the document that I supplied.
23 MS. HERBST: Q: Yes. Yes. So that accurately reflects
24 one of the points that you responded to.
25 DR. JAMIESON: A: Right.
26 MS. HERBST: Q: Okay. And you'd recognize as well that

1 not all studies undertaken on the subject indicate
2 that there is a link between exposure to EMF and
3 negative health effects.

4 DR. JAMIESON: A: Indeed. Indeed. Basically the
5 approach that I've taken with regards to writing the
6 document is to raise awareness of studies where it's
7 been indicated that there may be a cause for concern,
8 so that debate can be opened up with BCUC and also
9 potential areas of blindness, and also areas of best
10 practice are taken on board.

11 MS. HERBST: Q: Absolutely. All right. Thank you.
12 Now, I just have a couple of questions stemming from a
13 comment that you make at one point in your comments,
14 and that's -- it's couched in legal terms, but I just
15 put it more generally as stating an area of concern,
16 that you identify. You say at one point that "Perhaps
17 the greatest potential breaches of individual's right
18 to life, liberty, and security of the person may be as
19 a result of FortisBC's apparent failure to adequately
20 address their proposed advanced metering
21 infrastructures' 'vulnerability to extreme weather
22 events, man-made EMP, and cyber-attack'." And just
23 with that backdrop, I wanted to touch on a spot in
24 your security chapter.

25 **Proceeding Time 10:51 a.m. T34**

26 DR. JAMIESON: A: Mm-hmm.

1 MS. HERBST: Q: Where you refer to weather extremes.
2 And in that, and I'm happy to have you go to the page,
3 or you needn't. At page 161 of your report, you have
4 a table.

5 DR. JAMIESON: A: Indeed.

6 MS. HERBST: Q: And it shows various low temperatures
7 that have been recorded in Canada, and you've fairly
8 set out the provinces involved. And for British
9 Columbia you have a minimum temperature of negative
10 58.9 degrees Celsius, recorded in 1947 at a place
11 called Smith River.

12 DR. JAMIESON: A: That's correct.

13 MS. HERBST: Q: Would you accept that Smith River is
14 very far north of the service territory of FortisBC?

15 DR. JAMIESON: A: To be honest with you, I did not have
16 the time to actually determine the location of the
17 various points where the low temperatures were
18 recorded. All I had opportunity to do in terms of
19 time was to have a look at the negative -- the lowest
20 negative temperatures that could be recorded in case
21 it was a matter for concern. The points that you
22 brought up, I think it was you, with regards to the
23 actual location of where those low temperatures were
24 is highly valid and it was something I'd been hoping
25 to be able to actually take on board in the main
26 document if I'd had time to actually address that

1 issue. But I wasn't able to actually pinpoint where
2 the location was. All I was able to show was that
3 there were really low temperatures below the apparent
4 operating temperatures of smart meters. So it's just
5 basically to raise awareness in general. If there'd
6 been time, it should be done.

7 In the -- you'll have a good idea
8 yourselves. Hopefully it's something you'll be able
9 to look for yourself for the Fortis area, through
10 maybe the GIS mapping, et cetera, for me to be able to
11 do that.

12 MS. HERBST: Q: Okay. Okay, thank you very much for
13 that.

14 THE CHAIRPERSON: Ms. Herbst, I'm just going to interrupt
15 you for a moment.

16 MS. HERBST: Yes.

17 THE CHAIRPERSON: Are you intending to continue on this
18 particular topic?

19 MS. HERBST: No.

20 THE CHAIRPERSON: Okay. Because I just think we're
21 crossing the boundary here on environmental and health
22 issues, into security and so on. So --

23 MS. HERBST: It's -- oh, absolutely. Dr. Jamieson has a
24 security chapter, and I just wanted to touch on that
25 one point, as the one thing that seemed to be vaguely
26 in the scope of the oral hearing.

1 THE CHAIRPERSON: Thank you.

2 MS. HERBST: But I'm definitely moving on. Thank you.

3 THE CHAIRPERSON: Thank you.

4 MS. HERBST: Q: And, Dr. Jamieson, I just have a couple
5 of small points to ask about three specific documents
6 cited in your report in the health section. And if we
7 could just look briefly at that, at page 24.

8 DR. JAMIESON: A: Bear with me.

9 MS. HERBST: Q: And it's towards the bottom of the
10 page, and it's just a clarification as to a reference.

11 DR. JAMIESON: A: All right.

12 MS. HERBST: Q: And so you have a section called
13 "Diabetes prevention", and then you have a paragraph
14 that says "The B.C. provincial Health Officer's 2005
15 report, and the Ministry of Health, 2008, evidence
16 review on chronic disease prevention, and the B.C.
17 provisional", which I think might be just a typo,
18 "suggests modifiable risk factors for diabetes type II
19 are being overweight/obese, smoking, and physical
20 inactivity." And then you have underlined, "It is
21 indicated that exposures to radio waves and microwaves
22 even at relatively low intensities may also be
23 categorized as risk factors for this condition or
24 these conditions."

25 And I understand, Dr. Jamieson, that you
26 have a theory as to how that might be, but I just

1 wanted to confirm the underlined portion itself,
2 that's a comment that you're making rather than taking
3 that from the 2005 or the 2008 documents.

4 DR. JAMIESON: A: Yes, sorry. Yeah, I should have been
5 clearer.

6 MS. HERBST: Q: Okay. Thank you. And just as well,
7 and I think that you've been clear in this, I just
8 wanted to confirm one more thing. On pages 18 and 19
9 of your report, there is a reference to -- there's a
10 subheading "Canadian intervention strategies on
11 Alzheimer's disease".

12 **Proceeding Time 10:56 a.m. T35**

13 DR. JAMIESON: A: Okay.

14 MS. HERBST: Q: And there's a reference as well as to
15 "To date, four interventions have been developed by
16 Canada's Alzheimer Society 2010", and then there's a
17 description. I just wanted to make sure, where you
18 have the words "Comment", so there's one at the middle
19 of the page, one later down on the page, one toward
20 the bottom, one on the next page on page 19 and then
21 again, the comment is your comment on what the
22 Alzheimer Society has said rather than what the
23 Alzheimer Society has said.

24 DR. JAMIESON: A: It is, yeah.

25 MS. HERBST: Q: Okay. And thank you very much. I'm
26 happy to report those are my questions. Thank you,

1 Dr. Jamieson.

2 DR. JAMIESON: A: Thank you.

3 THE CHAIRPERSON: Thank you very much. Commission
4 Counsel?

5 MR. FULTON: Thank you, Mr. Chairman, Commission Staff,
6 has no questions of Dr. Jamieson.

7 THE CHAIRPERSON: Thank you, and I'll turn to my
8 colleagues. Commission Morton does have a question or
9 two, I believe.

10 COMMISSIONER MORTON: Hi, Dr. Jamieson. I'd like to ask
11 you a couple of questions about switched mode power
12 supplies, please.

13 DR. JAMIESON: A: All right.

14 COMMISSIONER MORTON: And we had a discussion earlier
15 about switched mode power supplies, correct?

16 DR. JAMIESON: A: Right.

17 COMMISSIONER MORTON: And in your evidence you indicated
18 that they caused voltage spikes about 2 volts at a
19 frequency of between 4,000 and 60,000 hertz. Does
20 that sound correct to you?

21 DR. JAMIESON: A: That's right.

22 COMMISSIONER MORTON: What is the power emission of the
23 Fortis AMI meters that are associated with those
24 events?

25 DR. JAMIESON: A: Well, you know, you'll find it's the
26 switched mode power supply that's causing it, not

1 actually the WiFi emissions from the smart meter.

2 COMMISSIONER MORTON: But the power supply is inside the

3 smart meter, is that what you're inferring?

4 DR. JAMIESON: A: Well, it is the switch mode power

5 supply in the smart meter, but it doesn't make the

6 wireless -- the wireless option has got nothing to do

7 with it. If it was hardwired, there's no wireless,

8 you'd still be getting transients from the switch mode

9 power supply.

10 COMMISSIONER MORTON: So the switch mode power supply is

11 in the smart meter and it's emitting radiation in that

12 frequency range, is that what you're saying?

13 DR. JAMIESON: A: Yes, it's basically because the power

14 required for the actually digital re-vent --

15 COMMISSIONER MORTON: Right.

16 DR. JAMIESON: A: You're getting that kind of choppy

17 radiation being carried on the mains wiring. But it

18 does look like there are ways that it could be

19 (inaudible) through filtering, but that needs to be

20 tested properly.

21 COMMISSIONER MORTON: But are you saying that there is

22 electromagnetic radiation emitted by the power supply

23 that's within the smart meter?

24 DR. JAMIESON: A: That is right. It's being created

25 and it's being carried on the indoor wiring. I

26 haven't been able to take measurements, although the

1 people who I've corresponded with have. There's an
2 engineer Rob States, who gave me the figures that were
3 used.

4 COMMISSIONER MORTON: So are you saying that it's only
5 within the wire, or are you saying that there is --
6 it's a source of RF radiation that people within the
7 house would be exposed to?

8 DR. JAMIESON: A: It's a source of RF radiation that
9 people would be exposed to in the house. The actual
10 extent of how far you would actually travel from
11 wiring, I have not got details of.

12 COMMISSIONER MORTON: So you don't have any knowledge of
13 what the power level would be, either.

14 DR. JAMIESON: A: All the information I had, it's
15 information that I've provided to you on this issue.
16 It's an issue that -- that have specialists taking
17 measurements of.

18 COMMISSIONER MORTON: And you have no -- do you have
19 knowledge of what Safety Code 6's maximum exposure
20 limit is at those frequencies?

21 DR. JAMIESON: A: I could find them out offhand, but
22 they'll be far below that and there's also lots of
23 biological effects that happen at levels far below
24 Safety Code 6, you know, with regards to known thermal
25 effects.

26 COMMISSIONER MORTON: You were asked also if there were

1 that's when the human body is supposed to be healing
2 itself.

3 So, issues to be addressed, yes, that are
4 items of equipment in the house that do that. Will
5 they be operating 24/7? I don't know, and I don't
6 know the size of the fields they will be creating. It
7 will be worthwhile measuring that.

8 COMMISSIONER MORTON: Okay. Thank you, Dr. Jamieson.

9 DR. JAMIESON: A: Thank you.

10 THE CHAIRPERSON: Okay, we'll then turn things over to
11 you, Mr. Aaron, for re-examination.

12 **RE-EXAMINATION BY MR. AARON:**

13 MR. AARON: Q: Dr. Jamieson, the concern with respect
14 to the emissions from switch mode power supplies,
15 that's a concern with emissions in the nature of
16 electromagnetic fields rather than radio frequency
17 emissions, correct?

18 DR. JAMIESON: A: No, actually radio frequencies --

19 MR. FULTON: Could the witness stop, please?

20 We've had this discussion about re-
21 examination before, Mr. Chairman. And Mr. Aaron ought
22 not be leading witnesses in terms of what the
23 discussion is. He can ask -- in terms of suggesting
24 the answer in his question, he can ask what it is, and
25 Dr. Jamieson can explain, but I would ask him to
26 desist from putting the answer to the question in his

1 question.

2 MR. AARON: Noted.

3 MR. AARON: Q: A better question is what's the nature
4 of the emission, and is it RF?

5 DR. JAMIESON: A: It's radio frequency, not microwaves.
6 You have a -- you -- oh. Some people like to call
7 microwaves radio waves. Because you have the radio
8 wave spectrum continuing over quite a large bandwidth.
9 I'd prefer to call microwaves microwaves. That
10 (inaudible). That's in the range of the frequencies
11 that are being emitted by the smart meters.

12 MR. AARON: Q: And what's being emitted by the switch
13 mode power supply?

14 DR. JAMIESON: A: It's radio frequency radiation. So
15 that's pure radio frequency, not up into the frequency
16 range that the microwaves emit.

17 MR. AARON: Q: All right. The backplate that you
18 discussed in your testimony, under cross-examination,
19 what are the exposure implications of the backplate
20 for the population?

21 MR. FULTON: Well, again, before Dr. Jamieson answers,
22 the question more properly put, in my submission, is,
23 are there exposure implications, rather than what are
24 the exposure implications?

25 THE CHAIRPERSON: I think that's a reasonable discussion
26 point.

1 MR. AARON: Q: All right. Well, it's first, are there

2 --

3 THE CHAIRPERSON: We have another gentleman coming
4 forward.

5 MR. WEAVER: Mr. Chairman, I only come forward because I
6 believe it was my question, and I think that was the
7 question that he answered. And the witness talked
8 about the impact inside the house and outside the
9 house. So there was an answer to the question, and he
10 had the opportunity to give a fulsome answer.

11 MR. AARON: Right.

12 MR. WEAVER: So I'm not sure what the objection is.

13 MR. AARON: I take that as a defense on my behalf. He
14 answered -- we have established that there are
15 exposure implications. So, my question was, what are
16 the exposure implications. But to accede to Mr.
17 Fulton's objection, I will first ask what are the
18 exposure -- if there are exposure implications.

19 DR. JAMIESON: A: Okay.

20 MR. AARON: Q: With respect to the backplate.

21 **Proceeding Time 11:06 a.m. T37**

22 DR. JAMIESON: A: Right. As I mentioned previously
23 with the backplate, it's going to be reducing the
24 radiation. The figures for the levels of radiation
25 that have been encountered in some areas were covered
26 in the documentation I submitted, given the figures

1 provided by Katharina Gustavs.

2 With the backplate, as I said, there's
3 going to be a reduced amount of signal being -- would
4 be emitted by the ZigBee radio, which means that smart
5 appliances will have potentially difficulty
6 communicating to that. With that, if there is a
7 problem with the smart appliances communicating, it
8 means they could be going on a constant --

9 THE CHAIRPERSON: Mr. Aaron, I'm going to stop just for a
10 second. I think I already intervened on this
11 particular matter, that this is not about the ZigBee
12 radio chip, and I stopped the conversation when it was
13 being held in the first place. So --

14 MR. AARON: All right. I can -- I can ask the question
15 so as to exclude that.

16 THE CHAIRPERSON: Please. This is about the basic
17 functionality of the --

18 MR. AARON: Yeah.

19 THE CHAIRPERSON: -- of the AMI meter, not about the
20 ZigBee chip.

21 MR. AARON: Q: All right. Well, then, if I could --

22 MR. WEAVER: I'm just going to, for the record, make sure
23 my objection is understood. That that was the
24 question asked, and it was answered, and the witness
25 was given an opportunity to elaborate on the exposure,
26 and question's asked and answered. It's being re-

1 asked to look for different evidence. That's my
2 objection.

3 MR. AARON: Well, I want to give the witness to -- to --
4 an opportunity to answer a question arising from that.
5 And my question, as you've heard, is what are the
6 exposure implications. That question wasn't put to
7 the witness. The questioning was specific as to
8 whether there is a shielding effect inside. That may
9 be one of the exposure implications, but --

10 THE CHAIRPERSON: Well, let's --

11 MR. AARON: -- the witness certainly wasn't canvassed for
12 all the exposure implications.

13 THE CHAIRPERSON: Let's continue. But be very clear on
14 what the focus of the question is.

15 MR. AARON: Q: Dr. Jamieson, we are assuming that the
16 ZigBee chip is turned off. For the purpose of this
17 question.

18 DR. JAMIESON: A: All right.

19 MR. AARON: Q: And so the question goes to the
20 existence of exposure implications from the fact that
21 there is a backplate on the smart meter.

22 DR. JAMIESON: A: Okay. Well, with the presence of the
23 backplate, the emission size will be reduced. But it
24 is still going to be 24/7 and it's still going to be a
25 Class 2B carcinogen.

26 MR. AARON: Q: And are there any exposure implications

1 as a result of the backplate for persons other than
2 those in the home, that relates to the smart meter?
3 DR. JAMIESON: A: Well, you're going to -- it really
4 has to be measured. And this is the thing. You have
5 the radiation from the smart meter, it goes upwards,
6 it goes through holes, it goes through your
7 neighbours. So it is one of these matters we really
8 have to go and take into account. The backplate will
9 help, but the level of exposure will still not be as
10 low as if you went for a wired version. A wired
11 meter. And the biological effects have been shown at
12 levels that are comparable to what are found in the
13 home.

14 If you're putting in an additional layer of
15 radiation, you read -- you're raising the risk,
16 because the levels are cumulative.

17 MR. AARON: Q: Thank you very much. Those are all my
18 questions. Thank you.

19 THE CHAIRPERSON: Thank you. Well, Dr. Jamieson, that
20 brings us to the end of your cross-examination and
21 your participation here today. I'd like to thank you
22 on behalf of myself and my colleagues, and other
23 participants in the room. You've been helpful. This
24 is an important matter and so we do appreciate your
25 input today. Thank you very much. And I suspect it's
26 late in the day for you. What time is it, sir?

1 DR. JAMIESON: A: To tell you the truth, I've changed
2 over to Canadian time, haven't I?

3 THE CHAIRPERSON: Oh, have you? Well, I can tell you,
4 it's getting close to lunch for us.

5 DR. JAMIESON: A: Yes. And it's right, it's ten past
6 six now. So, I'm going to start to feel hungry and I
7 thank you all. Thank you again.

8 THE CHAIRPERSON: Good, well, enjoy the rest of your day,
9 sir. Thank you very much.

10 DR. JAMIESON: A: Thank you. You too, thank you very
11 much.

12 (WITNESS ASIDE)

13 THE CHAIRPERSON: Mr. Fulton?

14 **Proceeding Time 11:11 a.m. T38**

15 MR. FULTON: Thank you, Mr. Chairman, that concludes the
16 evidence for this morning and indeed for today.

17 We do have several matters for this
18 afternoon as I highlighted yesterday at the close of
19 proceedings. The first is Mr. Shadrack's application
20 to cross-examine Dr. Carpenter. The second is the
21 Panel's reasons relating to the outstanding IRs. And
22 the third is Mr. Aaron's application to renew his
23 request to have the Li reports for part of the
24 evidentiary record.

25 THE CHAIRPERSON: Okay. It's quarter after 11:00 and I
26 think we can probably, I was going to say, turn Dr.

1 Jamieson off. I don't mean --

2 MR. FULTON: He's gone.

3 THE CHAIRPERSON: -- in the literal sense. Thank you.

4 It's quarter after 11:00. I'm suggesting

5 that we deal with submissions on 1 and 3 now, if that

6 doesn't interrupt people's plans. I think we could do

7 that. We planned on spending the morning here. We'll

8 hear submissions on the first and the third item, and

9 then the Panel can deliberate on all three items.

10 MR. AARON: I will (inaudible).

11 THE CHAIRPERSON: If that's necessary, Mr. --

12 MR. AARON: (inaudible). My submissions will be very

13 brief.

14 THE CHAIRPERSON: Yes, I think we can continue. I don't

15 think it's disruptive. We can just move the laptop

16 out of the way. Will that work, Mr. Fulton?

17 MR. FULTON: Yes, I understand from Mr. Shadrack he's

18 ready to go with his application, so --

19 THE CHAIRPERSON: Okay. I'm just concerned about really

20 trying to make efficient use of time and so we'll ask

21 Mr. Shadrack to come forward then and make his

22 submissions.

23 MR. SHADRACK: Good morning, gentlemen.

24 THE CHAIRPERSON: Good morning. Just adjust that mike up

25 a little bit. That way you don't have to bend over.

26 MR. SHADRACK: Thank you. So I understand the reasons

1 why I was asked not to cross-examine. But between
2 1079 and 1086 in Volume 6 there was a lengthy cross-
3 examination on the documents submitted by Mr. Miles,
4 and I simply want to cross-examine Dr. Carpenter on
5 one point and I'll read Mr. Warren's response:

6 " And I note again and I think Mr. Loski has
7 already said this twice, but that even --
8 that Dr. Bailey's opinion is shared by the
9 WHO. It's also shared by one of the
10 intervener witnesses, Dr. Carpenter."

11 I just wish to get on the evidentiary record whether
12 or not that is true or not.

13 Now, I suppose the alternate to me asking
14 the question is for me to ask one of the other lawyers
15 to ask the question, but I want to get the record
16 straight on that issue.

17 THE CHAIRPERSON: Thank you, sir. Does Fortis have a
18 position on this?

19 MS. HERBST: Yes. We object to Mr. Shadrack being
20 permitted to ask the question. Generally speaking
21 there shouldn't be friendly cross-examination. Mr.
22 Shadrack's position is aligned with very much the side
23 that would like a particular answer, and that's
24 contrary to the one that was given by Mr. Warren. The
25 possibility of friendly cross-examination has been
26 carefully circumscribed to this point and I say it

1 should continue to be.

2 So I appreciate this is a limited point
3 that Mr. Shadrack seeks to raise, but Mr. Shadrack's
4 contention is really with Mr. Warren's
5 characterization of Dr. Carpenter's evidence. Dr.
6 Carpenter's evidence, that can be dealt with in
7 argument.

8 **Proceeding Time 11:15 a.m. T39**

9 He filed a report on that point where deals
10 with EHS, and then he gave some answers in response to
11 information requests that were put forward by the B.C.
12 Sustainable Energy Association in Exhibit C19-12-3,
13 with respect to -- by "he" I mean Dr. Carpenter. He
14 gave certain answers as to what he thought of EHS.
15 For example,

16 "Please confirm that Dr. Carpenter's
17 definition of EHS is that symptoms are
18 reported to be associated with EMF exposure,
19 not that symptoms are caused by EMF
20 exposure."

21 He says, "This is correct." And he goes on to some
22 other points.

23 "The person's report of symptoms must be
24 considered to be accurate but proof of
25 causation is a different issue..."

26 And so on.

1 And so I say Dr. Carpenter has spoken. Mr.
2 Shadrack's issue is with Mr. Warren's characterization
3 of the comments, and that can be dealt with in
4 argument by comparing what Dr. Carpenter has said and
5 what Mr. Warren has made of it. And then, again, the
6 more general point, we don't think that the
7 possibility of friendly cross-examination should
8 arise, and that's very much what this is. Thank you.

9 THE CHAIRPERSON: Thank you. Mr. Fulton, is it
10 appropriate for me to canvas more broadly, or -- I
11 just want to make sure that we're procedurally correct
12 here.

13 MR. FULTON: Yes, well probably would have been best to
14 canvas more broadly before we called on Ms. Herbst.

15 THE CHAIRPERSON: I suspect you're right.

16 MR. FULTON: So, I think what we should do is canvas more
17 broadly, and then give Ms. Herbst the opportunity to
18 make whatever further submission she wishes to make.

19 THE CHAIRPERSON: Yes. Mr. Aaron, you --

20 MR. AARON: I take no position on the request.

21 THE CHAIRPERSON: Thank you. Are there other individuals
22 who care to speak on the matter? Ms. Braithwaite?

23 MS. BRAITHWAITE: Thank you. I'd like to speak in
24 support of Mr. Shadrack's application. I appreciate
25 that in some sense this is an adversarial process, but
26 it's maybe not a traditional adversarial process that

1 we would see in litigation, for example. And I think
2 it's in all our interests to have the record be as
3 clear and complete as possible. And if Mr. Shadrack
4 can contribute to that in a reasonable amount of time,
5 I would like to see him have that opportunity.

6 THE CHAIRPERSON: Thank you. Other individuals? Mr.
7 Fulton?

8 MR. FULTON: Yes, I will speak to the friendly cross-
9 examination issue because it is a concern that we try
10 to meet or address, throughout all the Commission
11 hearings, and the general rule is, and it's
12 articulated, not in terms of friendly, but articulated
13 in the procedural letter, Exhibit A-25, that parties
14 that support a position should not expect to cross-
15 examine.

16 And in terms of expert witness reports,
17 there may be something in an expert witness report
18 that parties agree with and they have -- because it
19 supports their position and they have no intention to
20 cross-examine on that, to undermine the statement that
21 supports their position.

22 So, if a party who is along -- if a party
23 who supports the position being advanced by the
24 expert's report, looks at the report and says "Oh,
25 that particular statement is not helpful to our
26 position, I want to get the expert to clarify that",

1 MR. FULTON: Mr. Chairman, as I indicated yesterday, this
2 matter was addressed at transcript pages 1380 to 1387,
3 and at that time the reports were being submitted, as
4 I took it, as new evidence, although Mr. Aaron did
5 acknowledge that they may or may not be in the
6 evidence. He also said,

7 "I honestly didn't have access to these
8 reports until Undertaking No. 5 materials
9 were disclosed, and I shared them with my
10 consultant, and my consultant said, 'Well,
11 there is on that topic there is this.'"

12 And that comment was at page 1384 of the transcript.

13 Now, there is a lot of material in this
14 proceeding, and I don't expect counsel to be aware of
15 all the information. But I do expect counsel to be
16 aware of information that certainly relates to their
17 case.

18 Now, I also understand the approach has
19 been -- let me back up and say this. The approach
20 that's been taken with the Texas staff report was,
21 that report was referred to. It was made available
22 and it was cross-examined on. This -- these two
23 reports, which I've not read, will not be the subject
24 of cross-examination. So, and Mr. Aaron has
25 recognized that.

26 So it becomes, then, two things from my

1 point of view. One is the question of what weight are
2 you going to put on these reports when they haven't
3 been tested through cross-examination, such as Mr.
4 Weafer did with the cross-examination of the report,
5 as I've said, with the CSTS witnesses. And secondly,
6 as a matter of principle going forward, are you going
7 to allow parties to come forward after they've
8 completed their cross-examination to put documents on
9 the record that they really should have put to the
10 witnesses in the first place?

11 And I analogize this to a situation where I
12 as counsel have asked the witness panel a number of
13 questions. I complete my cross-examination, I've put
14 the documents to them that I had in mind that I was
15 going to put to them, and I sit down. And then I
16 think afterwards, "Gee, there was another document
17 that I should have put to the panel, and I didn't." I
18 would not be allowed, in my submission, in any court,
19 to then stand up again and say, after the panel has
20 gone, or after the witness has gone, "Can you bring
21 that witness back, because I forgot to ask the witness
22 about this document, and I'd like to now put it on the
23 record?"

24 So, you do have a broad discretion under
25 Section 40(1) of the *ATA* as I have mentioned
26 previously, in terms of allowing the document in. If

1 new factual backdrop against which to make its
2 decision now -- or a different decision now or to
3 reconsider the earlier decision now.

4 I say as well that the fact that Dr. Sears
5 had referred to the material underlines that these
6 weren't documents that somehow arose out of
7 Undertaking 5 or that the need for them somehow arose
8 out of that. They were already in the record.

9 I say as well, in terms of the fact that if
10 this were -- if this did meet the criteria for
11 reconsideration, one of them is whether -- other
12 criteria for reconsideration, one of them is whether
13 it's just to do so. At this stage revisiting the
14 decision, I say, would be prejudicial. At the time
15 that this was originally brought forward, the FortisBC
16 panel was still available on Health and Environment.
17 At this point it's gone, both from the witness table
18 and literally from Kelowna, and so at this point that
19 couldn't be addressed.

20 I say as well, in terms of the Texas staff
21 report as a precedent, it's not, in my submission.
22 That was something that was raised in the course of
23 information requests, and CSTS witnesses, or at least
24 one witness directly responded to it. And it was the
25 subject of conversation and it was requested that a
26 copy indeed be provided by the CSTS witness to whom

1 the information request was directed. It simply
2 didn't happen, but there was still a conversation, a
3 live conversation about it.

4 And then finally, I say if these articles
5 can be brought in because they're referred to in one
6 of the expert's reports, likewise FortisBC could now
7 be trolling through its expert reports and thinking
8 that this would be a nice idea to have put in
9 something that's in a hyperlink or in a footnote and
10 have that in the record as well.

11 And so I say, that shouldn't be happening.
12 We're not seeking that that happen, and likewise I say
13 these two articles shouldn't be brought in. Thank
14 you.

15 THE CHAIRPERSON: Thank you. Mr. Aaron?

16 **Proceeding Time 11:30 a.m. T43**

17 MR. AARON: Three points. One, my attempt to put these
18 documents in as a separate exhibits arose because the
19 relevance -- their relevance was brought out by
20 Undertaking No. 5, by the contents of Undertaking No.
21 5, and by the fact that attached to Undertaking No. 5
22 were abstracts of studies, which had the effect of
23 drawing out the relevance of these two studies. And
24 so, through the exchange of materials, Undertaking No.
25 5 disclosed materials only in the course of cross-
26 examination, and the relevance jumped out. And it

1 wasn't immediate to me because it was through my
2 ability to consult with consultants that I had the
3 opportunity to discover that there were two studies
4 that touched on a very item which was brought out from
5 Undertaking No. 5.

6 So therein lies the explanation as to the
7 timing with which my request -- my original request
8 was advanced.

9 Secondly, I will ask the Panel to note that
10 my original request arose while the health panel was
11 still convened before the Commission. And I
12 explicitly said that I want these documents put into
13 evidence so that the health panel could have an
14 opportunity to respond to them in re-direct if
15 necessary. I made that point, and I think that's a
16 matter of record.

17 And finally, with respect to -- I just want
18 to say the documents were referenced in the Sears
19 report which was filed January 24th. And a link was
20 provided to the documents. Thereafter, Fortis had the
21 opportunity to both advance Information Requests with
22 respect to that reference, as well as the opportunity
23 to cross-examine. These are scientific reports going
24 to the impact of RF on developing fetuses. Their
25 relevance to the issues is quite strong, I submit, and
26 so the probative -- the probative value of having the

1 opportunity to read the contents of the reports is
2 quite high. And I submit they should be -- it would
3 be helpful to the resolution of the issues and they
4 ought to be marked as an exhibit. Thank you.

5 THE CHAIRPERSON: Thank you very much. We will take a
6 break now, then, and let me just confer with my
7 colleagues on a time to reconvene.

8 We will reconvene at 2:00 to deal with
9 these three items.

10 **(PROCEEDINGS ADJOURNED AT 11:33 A.M.)**

11 **(PROCEEDINGS RESUMED AT 2:59 P.M.)**

T01A

12 THE CHAIRPERSON: Please be seated.

13 Firstly, I'd like to acknowledge the delay
14 and apologize for it. We miscalculated the amount of
15 time it would take to review all the material in
16 making our decisions, and we certainly wanted to be
17 thorough. And so as I say that did take a little
18 longer than we had originally contemplated.

19 First, we have three matters to deal with.
20 The first decision has to do with the application that
21 Mr. Shadrack made, and Mr. Shadrack made an
22 application to be allowed to cross-examine Dr.
23 Carpenter on a narrow issue. The issue relates to
24 evidence at the hearing concerning a statement made by
25 Mr. Warren asserting the agreement of Dr. Carpenter
26 with members of the Fortis health panel on the issue

1 of the treatment of EHS. And to be specific, the
2 reference is T6, pages 1079 to 1086. Mr. Shadrack
3 wishes to ask limited questions on the matter.

4 Letter A-25 states, at page 3, under the
5 heading "Cross-examination",

6 "Parties who support the testimony of a
7 witness or a witness panel should not expect
8 to cross-examine that witness, or a witness
9 panel."

10 Mr. Fulton elaborated on the practice of the
11 Commission with respect to this friendly cross-
12 examination.

13 Fortis took exception to the request,
14 citing the reasons given by Mr. Fulton and citing
15 further evidence where Dr. Carpenter, in responding to
16 an Information Request seemed to be supporting the
17 evidence given by the Fortis panel. And the reference
18 there is reference C-12-3 at 9.1.

19 CSTS took no position. BCPSO supported the
20 application, stating this Commission proceeding is not
21 an adversarial process, as found in litigation
22 proceedings. Mr. Shadrack replied that he was just
23 trying to clarify the record on Dr. Carpenter's
24 position.

25 The Commission denies Mr. Shadrack's
26 request for the following reasons. The Panel notes

1 the matter issue occurred during Mr. Shadrack's cross-
2 examination of the Fortis panel, and he could have
3 challenged the Fortis panel on its assertion at that
4 time. The Commission practice, as explained by Mr.
5 Fulton and detailed in A-25, is that parties that
6 support a position should not expect to cross-
7 examination. In the Panel's view, there is a record
8 on this matter and all parties are able to address the
9 matter in argument.

10 **Proceeding Time 3:03 p.m. T2A**

11 Turning to the second matter, which had to
12 do with the Information Requests, the Commission by
13 Order G-17-13, which is Exhibit A-32, allowed a third
14 round of information requests with limited scope.
15 That scope was, and I'll quote it:

16 "Strictly limited to questions related or
17 relating to information provided in
18 FortisBC's January 22, 2013 evidentiary
19 filing..."

20 and the reference there is B-23,

21 "...on the wired market, absence of a formal
22 request for proposal process, and
23 comparative North American project cost
24 estimates."

25 This was further conditioned in the reasons
26 to include only new evidence filed or made available

1 by Fortis.

2 Fortis provided its responses to IRs from
3 the Commission and interveners according to the
4 prescribed timetable. In replying to IRs, Fortis took
5 the position that a number of the IRs were out of
6 scope. By e-mail dated February 25th, I believe is,
7 I'm having trouble reading my writing, I think it's
8 the 25th, Mr. Shadrack requested the Commission review
9 each question that FortisBC designated as falling
10 outside the scope of IR 3, and direct FortisBC to
11 respond appropriately. Mr. Shadrack's application was
12 supported by Mr. Bennett, Mr. Miles, and Mr.
13 Atamenenko. Submissions on this application were
14 received by Mr. Shadrack, Mr. Bennett, and FortisBC.

15 The Commission has considered the matter
16 and makes the following findings. We will group our
17 findings into three categories.

18 The first category is questions that the
19 Commission considers had been adequately answered when
20 comparing the answer with the scope. On these the
21 Panel makes no determination on whether these
22 questions are in or out of scope. Number two,
23 questions the Panel finds are out of scope having
24 compared the questions to the scope. And number
25 three, questions the Panel finds are within the scope
26 and must be answered.

1 more complete answer could not be provided, and Fortis
2 is to provide a more complete answer or justify the
3 adequacy of their response. Let me just repeat that,
4 and I apologize for the errors here that may -- let me
5 just read it again.

6 So this would be Shadrack 15, 16, 17 and
7 18, given the reference made by Fortis at 7.2.4 in the
8 January 22 filing. The Commission does not understand
9 why a more complete answer couldn't be provided,
10 therefore Fortis is to provide a more complete answer
11 or justify the adequacy of their response.

12 **Proceeding Time 1:12 p.m. T4A**

13 The third decision today, Mr. Aaron made an
14 application which he refers to as a second kick at the
15 can, with respect to two documents that he sought to
16 have entered as an exhibit. The Commission will deal
17 with this as a reconsideration application and follows
18 its established guidelines for reconsideration. These
19 guidelines can be found in the Commission document
20 "Understanding Utility Regulation: A Participant
21 Guide to the B.C. Utilities Commission". These
22 guidelines call for a two-step process. In the first
23 phase the Commission determines whether there should
24 be a reconsideration by the Commission.

25 The following criteria is applied to
26 determine whether or not a reasonable basis exists for

1 allowing reconsideration: the Commission has made an
2 error in law; there has been a fundamental change in
3 circumstances or facts since the decision; a basic
4 principle has not been raised in the original
5 proceedings; or a new principle has arisen as a result
6 of the decision. At its discretion the Commission may
7 consider other situations where it deems there is just
8 cause.

9 In the situation today, these guidelines
10 have been followed in the context of the oral hearing.
11 As an example, written submissions were not found to
12 be necessary, rather oral submissions were made.

13 Considering Phase 1, the Commission is not
14 persuaded that the Commission made an error in law or
15 fact, or there has been a fundamental change of facts
16 since the decision, or there has been a basic
17 principle that has not been raised in the proceeding
18 and also that there is a new principle that arises
19 from the decision. The question is: Is there a
20 fundamental change in circumstances? The Panel finds
21 there has not been a fundamental change in
22 circumstances that warrants reconsideration.

23 In the previous decision referenced, the
24 issue for accepting Dr. Bailey's document did not
25 hinge on whether the document was referenced in
26 evidence but rather the fact that it was introduced

1 during cross-examination. This is not the case for
2 the two documents that are the subject of this
3 request. The Commission stands by the reasons given
4 in its previous decision, which can be found in
5 Transcript 7 in the area of pages 1434 to 1435,
6 specifically page 1435, lines 8 to 18.

7 Mr. Fulton, I believe you have several
8 other issues to deal with.

9 **Proceeding Time 3:11 p.m. T05A**

10 MR. FULTON: Thank you, Mr. Chairman. The first relates
11 to Exhibit C17-24, which was the Public Utility
12 Commission of Texas report, filed by Mr. Weafer on
13 behalf of CEC and the Municipal Electrical Utilities.
14 It was pointed out that the copy that was entered as
15 an exhibit, and I believe as well the copies that were
16 circulated, were missing page 6. And so, to make sure
17 that the document is complete, I have asked the
18 Hearing Officer to make copies of page 6, and he has
19 done so. And I will therefore ask that page 6 be
20 marked Exhibit C17-24-1.

21 THE HEARING OFFICER: C17-24-1.

22 **(PAGE 6 FROM STAFF REPORT OF PUBLIC UTILITY COMMISSION**
23 **OF TEXAS DATED DECEMBER 17, 2012 MARKED EXHIBIT C17-**
24 **24-1)**

25 MR. FULTON: The next matter relates to an undertaking
26 that I understand that Fortis is able to answer now,

1 and in addition to that undertaking, Fortis has now
2 reduced into writing its request of Dr. Sears. I
3 understand that Ms. Herbst has provided a written copy
4 of that document to Mr. Aaron, and I would ask that
5 following speaking to the undertaking, she read the
6 request of Dr. Sears into the record.

7 THE CHAIRPERSON: Thank you.

8 MS. HERBST: Thank you very much. And before I forget, I
9 just confirm that FortisBC will be replying to those
10 Information Requests, the outstanding ones, that it's
11 been ordered to provide, further or if not already
12 answered in any event, answers to by the original
13 deadline, which was March 21st. And so that's not an
14 issue, and I just wanted to confirm that.

15 THE CHAIRPERSON: Yes, thank you. As a matter of fact, I
16 had that in my notes and I -- as I say, I was reading
17 from my handwritten notes, and I neglected to include
18 that. So thank you for adding that.

19 MS. HERBST: Thank you. And so, first of all, to go to
20 the undertaking, this is Undertaking 8. And this
21 arises out of a request by Mr. Aaron to Drs. Bailey
22 and Shkolnikov. And it was a request for a
23 calculation of whether 72 minutes of phone use per day
24 every day for 20 years put a user into the heavy users
25 category as defined in the Interphone study. And so,
26 Drs. Bailey and Shkolnikov have gone through and done

1 "While the average power density of pulsed
2 waves shall be within the limit specified in
3 Tables 5 and 6, the peak value of the
4 instantaneous electric field strength
5 (temporal peak) in the frequency range of
6 0.1 to 300,000 megahertz shall not exceed
7 100 kilovolts per metre. For exposures to
8 pulsed RF fields in the range of 0.1 to
9 300,000 megahertz, peak pulse power
10 densities are limited by the use of time
11 averaging, and the limit on peak electric
12 field, with one exception, the total
13 incident energy density any one-tenth second
14 period within the averaging time shall not
15 exceed one-fifth of the total energy density
16 permitted during the entire averaging time
17 for a continuous field."

18 And then the second bullet point, based on Safety Code
19 6:

20 "The peak pulse power densities from a
21 transmitter which does not fall into the
22 exceptions on energy and electric field in
23 section 2.2.1 is limited to the same power
24 density value and the same use of time
25 averaging as a continuous transmitter."

26 Next:

1 "A transmitter producing a peak power
2 density below the exposure limit in column 4
3 in Table 6 will not fall into the exception
4 described by equation 2.7."

5 And lastly:

6 "The proposed FortisBC AMI meters do not
7 fall into the exemption based on a pulse
8 duration for the FortisBC meter of 0.018
9 seconds to 0.125 seconds based on response
10 to CSTS Information Request No. 1, response
11 57.5, and assuming only one pulse per 0.01
12 second period based on less than one
13 transmission per minute in response to CSTS
14 IR 1, response 57.2."

15 **Proceeding Time 3:18 p.m. T07A**

16 And I've provided a hard copy of this, of
17 course, to Mr. Aaron and we will be, at his request,
18 also providing a e-mailed copy that he can forward to
19 Dr. Sears.

20 And thank you for your patience in letting
21 me read this out. Thank you.

22 THE CHAIRPERSON: Thank you.

23 MR. FULTON: Mr. Chairman, I'm assuming that
24 notwithstanding her description of her being an agent
25 of an agent, that Ms. Herbst did not want us to take
26 it that she was a double agent.

1 MS. HERBST: My true identity has been caught out, I
2 think, but -- no.

3 THE CHAIRPERSON: By referring to her as "her", she could
4 have escaped recognition there. But you did use her
5 name at the end, so unfortunately --

6 MR. FULTON: Yes. So, then, looking forward, Mr.
7 Chairman, we have no more business for today.
8 Tomorrow we have Dr. Carpenter at 7:55. We do not
9 have any outstanding applications, so the business for
10 tomorrow will probably almost entirely consist of the
11 evidence of Dr. Carpenter. And based on what has
12 happened up until now, and the estimates that I have
13 received so far, I would anticipate that we would be
14 finished with Dr. Carpenter some time around noon
15 tomorrow.

16 THE CHAIRPERSON: Okay, thank you. So we will reconvene,
17 then tomorrow morning at 7:55, and continue then with
18 -- we'll have the cross-examination of Dr. Carpenter.
19 Thank you. I think that concludes matters for today.

20 **(PROCEEDINGS ADJOURNED AT 3:20 P.M.)**

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