

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

And

In the matter of FortisBC
and
An Application for a Certificate of Public Convenience
and Necessity (CPCN) for the Okanagan Transmission
Reinforcement Project (OTR Project)

Penticton, B.C.
June 24, 2008

PROCEEDINGS AT HEARING

BEFORE:

A. W. K. Anderson,	Chairperson
N. F. Nicholls,	Commissioner
M. Harle,	Commissioner

VOLUME 3

APPEARANCES

G.A. FULTON, Q.C.	Commission Counsel
G.K. MACINTOSH, Q.C.	FortisBC Inc.
B. SCHWARZ	Regional District of Okanagan Similkameen
S.Y. KAHN	B.C. Old Age Pensioners' Organization et al (BCOAPO)
R. ARMSTRONG	Golden Hills Strata Plan K268
K. CAIRNS	South Okanagan for Alternate Route (SOFAR) Wiltse Holdings Ltd. Chris Danninger
H. KAROW	Coalition to Reduct Electropollution (CORE)
C. HARLINGTON	Self
D. FEHR	Self
A. WAIT	Self
P. KREEFT	Self
L. DENBOER	City of Penticton

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CAARS
PENTICTON, B.C.
June 24, 2008

(PROCEEDINGS RESUMED AT 8:29 A.M.)

THE CHAIRPERSON: Thank you, good morning.

MR. FULTON: Good morning, Mr. Chairman, Commissioners.

THE CHAIRPERSON: Mr. Fulton.

MR. FULTON: I said that I would come back to you this morning on the subject of the view. I have had discussions with counsel, with Mr. Karow and Mr. Harlinton, who had had expressed positions on the Commission taking a view. And you'll recall that I said that one thing that we needed to resolve was whether or not there would be conditions on that view.

Where we have landed is all parties who had previously expressed positions on the view are in agreement that the Commission take an aerial view by helicopter, if it wishes, and I understand that a helicopter can be made available tomorrow for that view to take place. The arrangements I will make in coordination with Mr. Dufour at Fortis, and then the costs of the aerial view will be billed to Fortis but treated as a hearing cost.

The other aspect of the view is that those who took positions on the view are content as well that the Commission Panel adopt a boots-on-the-ground

1 approach in the Heritage Mountain and Sunnybrook areas
2 to take a view of those areas. And it will be up to
3 the Commission Panel in terms of how extensive that
4 view is, but it will give them an idea of what the
5 ground looks like at that point.

6 THE CHAIRPERSON: Just so I'm clear, it's not intended
7 that the boots-on-the-ground portion be necessarily
8 restricted to those areas? Or was that --

9 MR. FULTON: No, no, but those were minimum areas that
10 people wanted the Commission Panel to view.

11 THE CHAIRPERSON: Thank you. And since you mentioned the
12 helicopter, the Panel will take comfort in the fact
13 that you said you'd landed somewhere.

14 MR. FULTON: Thank you, Mr. Chairman.

15 COMMISSIONER NICHOLLS: Mr. Fulton.

16 MR. FULTON: Yes.

17 COMMISSIONER NICHOLLS: If we did the helicopter view, we
18 obviously can't be accompanied by somebody from Fortis
19 who's involved in the hearing without the intervenor.
20 So who would be showing us where the line ran?

21 MR. FULTON: My understanding is that the pilot is
22 familiar with the area because he's flown it with the
23 Fortis people in the past.

24 COMMISSIONER NICHOLLS: So he could point it out in a
25 neutral manner.

26 MR. FULTON: Yes.

1 COMMISSIONER NICHOLLS: Okay, thank you.

2 COMMISSIONER HARLE: Might that include the upland route
3 as well?

4 MR. FULTON: Yes, I understand that to be the case as
5 well, Commissioner Harle.

6 COMMISSIONER HARLE: Thank you.

7 MR. FULTON: So it's over to the Commission to decide
8 what it wants to do in terms of the view. And I'm not
9 asking for a decision immediately on that, but if we
10 could know by the end of the day. And if it's any
11 assistance to the Commission Panel in terms of my
12 view, as it were, of the shape of things to come from
13 a hearing standpoint, is that I think that we will
14 finish no later than noon tomorrow, and depending on
15 the length of the EMF panels and the SOFAR panels,
16 there is some possibility that we will finish today.
17 But that possibility isn't as good a possibility or is
18 as much of a probability as we will finish by noon
19 tomorrow, in my view.

20 **Proceeding Time 8:33 a.m. T02**

21 THE CHAIRPERSON: My preliminary reaction is that the
22 panel, I think, would like to take the opportunity to
23 do the view. We'll chat about it possibly at the
24 break, and we'll have to monitor that as we go along,
25 just in terms of timing. And hopefully we'll be able
26 to get a better sense for that, so that whatever

1 arrangements are necessary can be put in place perhaps
2 later today, depending on how well we progress.

3 MR. FULTON: Thank you. And in terms of scheduling
4 today, then, we will finish with the Wiltse panel. We
5 will then hear the Fortis EMF panel, followed by the
6 Harlington EMF panel and then the SOFAR panel.

7 With the completion of those panels, there
8 remains one last potential panel, and that is Mr.
9 Karow. Mr. Karow indicated to me that he's quite
10 content to have his opening statement remain on the
11 record as it is. He will make himself available to
12 answer questions if people have them, but if people
13 don't have questions for him, then there is no need
14 for him to make himself available in terms of an oral
15 hearing witness, in my view.

16 And just to complete the Mr. Karow part of
17 my opening this morning, Mr. Karow did provide me with
18 a *curriculum vitae* for himself, and if I could ask
19 that that *curriculum vitae* be marked the next exhibit,
20 which will be Exhibit C4-21.

21 THE HEARING OFFICER: C4-21.

22 **(CURRICULUM VITAE OF HANS KAROW, MARKED EXHIBIT C4-21)**

23 THE CHAIRPERSON: Mr. Fulton, just to assist in
24 scheduling and logistics, when you have an opportunity
25 you just might canvass some of the others and
26 determine whether or not they do wish to put questions

1 to Mr. Karow at some point.

2 MR. FULTON: Yes, I will, Mr. Chairman.

3 THE CHAIRPERSON: Thank you.

4 MR. FULTON: And in terms of the cross-examination of the

5 EMF panels, that cross-examination is limited to a

6 very few parties.

7 THE CHAIRPERSON: Thank you.

8 MR. FULTON: Having made those opening statements, Mr.

9 Chairman, I'll turn the mike over to Mr. Cairns and

10 his first panel.

11 THE CHAIRPERSON: Mr. Cairns?

12 MR. CAIRNS: Mr. Chairman, thank you. The panel is ready

13 to resume their questioning.

14 **WILTSE PANEL:**

15 **ED GRIFONE, Resumed:**

16 **TED WILTSE, Resumed:**

17 **Proceeding Time 8:37 a.m. T03**

18 THE CHAIRPERSON: Did you have anything on a preliminary

19 basis, Mr. Cairns, or are we ready to --

20 MR. CAIRNS: We're ready for cross-examination.

21 THE CHAIRPERSON: Thank you. I think we finished up with

22 Ms. Khan yesterday.

23 MR. CAIRNS: I thought Mr. Macintosh was next up.

24 THE CHAIRPERSON: Mr. Fulton? Is there anyone else

25 before --

26 MR. FULTON: No, Mr. Chairman. Mr. Macintosh is next.

1 THE CHAIRPERSON: Fine, thank you. Mr. Macintosh?

2 MR. MACINTOSH: Thank you, Mr. Chair.

3 **CROSS-EXAMINATION BY MR. MACINTOSH:**

4 MR. MACINTOSH: Q: Mr. Wiltse, I'll direct my first
5 questions to you, sir. Your family, Wiltse family
6 people, sold the right-of-way on your property to West
7 Kootenay Power?

8 MR. WILTSE: A: Back in 1965, that's correct.

9 MR. MACINTOSH: Q: And when I say "you", obviously I --
10 sometimes I'll just be referring to the Wiltse family.

11 MR. WILTSE: A: It was my father and my uncles --
12 probably made an error when they allowed the line to
13 go there, but yes, we sold that property back in '65.

14 MR. MACINTOSH: Q: And when you sold the right-of-way
15 to West Kootenay in '65, that was sold at fair market
16 value, wasn't it?

17 MR. WILTSE: A: I'm not sure. I mean, in hindsight, we
18 should have pushed it up the hill at that time.

19 MR. MACINTOSH: Q: I understand that. I understand
20 that to be your wish today, and I completely
21 understand why you're taking that position. But I
22 just want to go, if I could, one step at a time.

23 So, in '65, your family sold the right-of-
24 way to West Kootenay and I was suggesting that that
25 was a sale at fair market value. And you don't know
26 whether that's the case or not.

1 MR. WILTSE: A: I was younger at that time, I wasn't
2 involved, so I can't say one way or the other. I
3 mean, \$250 an acre, I'm not sure whether that was fair
4 market value or not.

5 MR. MACINTOSH: Q: It was \$1100 for the right-of-way at
6 that time.

7 MR. WILTSE: A: Well, there was two right-of-ways, or
8 two different properties.

9 MR. MACINTOSH: Q: There are three right-of-ways.

10 MR. WILTSE: A: Three ways, yes.

11 MR. MACINTOSH: Q: And I understand that the first one
12 was one that West Kootenay paid \$1100 for. And I'm
13 told that at that time, back in '65, that would
14 reflect fair market value. And you're just not in a
15 position to know that or not.

16 MR. WILTSE: A: No, I'm not.

17 MR. MACINTOSH: Q: All right. Now, the Wiltse
18 companies, the companies you mentioned yesterday,
19 obviously what you'd like to do now is develop this
20 area, correct?

21 MR. WILTSE: A: That's correct, over the next 10 to 15
22 years.

23 MR. MACINTOSH: Q: And you want to put in, as I
24 understand it, you want to put in residential
25 development.

26 MR. WILTSE: A: That's correct.

1 MR. MACINTOSH: Q: And I gather that -- and forgive my
2 ignorance, but I gather that your family are -- have
3 development experience. You've been doing
4 development.

5 MR. WILTSE: A: Probably since back in the 70s, yes.

6 MR. MACINTOSH: Q: I beg your pardon?

7 MR. WILTSE: A: Back in the -- since the 70s, yes.

8 MR. MACINTOSH: Q: Since the 70s. All right. And
9 obviously, I think, when you're doing a development
10 project, you want to maximize your development --
11 maximize your profit as best you can.

12 MR. WILTSE: A: That's correct.

13 MR. MACINTOSH: Q: And of course when you do a
14 development, you incur a variety of development costs.

15 MR. WILTSE: A: Correct.

16 MR. MACINTOSH: Q: And the most obvious one that you
17 incur is the cost of acquiring the land itself.

18 MR. WILTSE: A: Well, I mean, the land was purchased
19 back in '45, so at the present time, that's not one of
20 our concerns, no.

21 MR. MACINTOSH: Q: No, fortunately not. But whenever
22 it was bought, the first thing you have to do to be a
23 developer is to have the land to develop.

24 MR. WILTSE: A: That's correct.

25 MR. MACINTOSH: Q: All right. And so, the first
26 acquisition, the first cost for a developer is land

1 acquisition cost.

2 MR. WILTSE: A: Correct.

3 MR. MACINTOSH: Q: And when you do a development, if
4 the land isn't cleared, you have clearing costs.

5 MR. WILTSE: A: As you proceed, yes.

6 MR. MACINTOSH: Q: And oftentimes, it depends, of
7 course, on the particular development, but you have
8 roadways and streets and lighting, water -- other
9 costs to bring the lots up to market, right?

10 MR. WILTSE: A: I mean, that's developing, yes.

11 MR. MACINTOSH: Q: Of course. And those are
12 expenditures that a developer knows that he or she has
13 to incur in order to make the profit, to bring the
14 lots for sale to the public, right?

15 MR. WILTSE: A: Correct.

16 MR. MACINTOSH: Q: And in this area, are you wanting to
17 bring lots for sale to the public un-built? Or do you
18 build yourselves and then sell units that are built?

19 **Proceeding Time 8:42 a.m. T4**

20 MR. WILTSE: A: I mean we can go either way.

21 MR. MACINTOSH: Q: All right. And in the area of land
22 we're talking about on the Wiltse property, how many
23 units are you hoping to bring to market?

24 MR. WILTSE: A: That'll depend on density. I could let
25 Ed answer.

26 MR. GRIFONE: A: The area structure plan has not been

1 completed yet, nor has it been adopted by counsel and
2 the public.

3 MR. MACINTOSH: Q: What's your ballpark? Have you got
4 any number of lots?

5 MR. GRIFONE: A: We indicated the ballpark yesterday.

6 MR. MACINTOSH: Q: And what was that?

7 MR. GRIFONE: A: It could be anywhere between 300 and
8 2,000, but we're thinking the area structure plan
9 approves around 800 to 1,000.

10 MR. MACINTOSH: Q: 800 to 1,000 unit lots?

11 MR. GRIFONE: A: Units.

12 MR. MACINTOSH: Q: Units?

13 MR. GRIFONE: A: Units, not unit lots.

14 MR. MACINTOSH: Q: And I know we're talking ballpark,
15 but have you got a number, a revenue number you're
16 hoping per unit?

17 MR. GRIFONE: A: No, definitely not.

18 MR. MACINTOSH: Q: No bottom figure?

19 MR. GRIFONE: A: No.

20 MR. MACINTOSH: Q: \$10?

21 MR. WILTSE: A: No.

22 MR. GRIFONE: A: No.

23 MR. MACINTOSH: Q: No top figure?

24 MR. WILTSE: A: No.

25 MR. GRIFONE: A: No.

26 MR. MACINTOSH: Q: So you don't have any idea of any of

1 your costs?

2 MR. GRIFONE: A: Yes, we have idea of costs, but we

3 have no idea of revenues.

4 MR. MACINTOSH: Q: No idea of revenues.

5 MR. GRIFONE: A: No.

6 MR. MACINTOSH: Q: Very well. Now, you want to

7 relocate the right of way in order to maximize the

8 development potential of this area, is that right?

9 MR. WILTSE: A: That's part of it, and plus getting rid

10 of the stigma of the power line.

11 MR. MACINTOSH: Q: All right. Now, the stigma of the

12 power line is a stigma that you sold to West Kootenay

13 Power back in '65 for money, right?

14 MR. WILTSE: A: No, no, it's the fact that people --

15 it's just as we sit at this meeting, I mean a lot of

16 people are starting to stand up and say that we do not

17 want to live near power lines.

18 MR. MACINTOSH: Q: Yes.

19 MR. WILTSE: A: So I mean, that has a value, or a

20 detrimental value to our property in my mind.

21 MR. MACINTOSH: Q: Yes.

22 MR. WILTSE: A: I mean --

23 MR. MACINTOSH: Q: Yes, and --

24 MR. WILTSE: A: The buyers, we may have four buyers but

25 once they look at the power line, the properties that

26 abut the power line, we may only have one.

1 MR. MACINTOSH: Q: Yes, and so because of your
2 perception, and if I may say with respect, I think
3 it's a reasonable perception, that power line -- the
4 existence of a power line can adversely impact a
5 purchaser's perception, right?

6 MR. WILTSE: A: Correct.

7 MR. MACINTOSH: Q: You want to relocate the power line.

8 MR. WILTSE: A: Correct.

9 MR. MACINTOSH: Q: And you want to relocate the power
10 line in order to maximize the development potential of
11 the area, right?

12 MR. WILTSE: A: And remove the stigma, yes.

13 MR. MACINTOSH: Q: Very well. And so those are
14 developer's costs, aren't they?

15 MR. WILTSE: A: Correct.

16 MR. MACINTOSH: Q: And so you would accept readily that
17 as between Fortis customers elsewhere in the Fortis
18 service area, and you the developer wanting to
19 maximize your development potential for this property,
20 it's you as the developer who should bear the develop
21 the costs of relocating the line.

22 MR. WILTSE: A: The only thing that I'm concerned with
23 is the escalation of the estimated costs.

24 MR. MACINTOSH: Q: I can understand that completely,
25 because your profit is an issue and you want costs to
26 be as low as possible.

1 MR. WILTSE: A: No, no, no, it was the meeting we had.

2 I mean --

3 MR. MACINTOSH: Q: Fair enough, fair enough.

4 MR. WILTSE: A: -- there was discussions on cost, and
5 part of that cost included a hearing.

6 MR. MACINTOSH: Q: Fair enough. But let me -- before
7 we get to the amount of the money, let me put to you
8 again that you would accept that for you as a
9 developer to maximize your development potential on
10 this property, if you want to relocate the right of
11 way which was there, the lawful right of way, that's a
12 developer's cost, correct?

13 MR. WILTSE: A: Yes, I think we've agreed to -- we've
14 agreed with that with Fortis.

15 MR. MACINTOSH: Q: Very well. And so then, on the
16 money end of it, it just comes down to how much it's
17 going to cost to get the line relocated, correct?

18 MR. WILTSE: A: That's correct.

19 MR. MACINTOSH: Q: All right. Now, there's another
20 element besides money, of course, and that is timing.
21 That is the timing for relocating the line. And do I
22 understand it correctly that you accept the need for
23 this project overall, the OTR project?

24 MR. WILTSE: A: Repeat the question, please?

25 **Proceeding Time 8:46 a.m. T05**

26 MR. MACINTOSH: Q: Yes, sorry. You don't quarrel with

1 the fact that this line is needed, wherever it gets
2 located. You don't quarrel with the fact that that
3 line is needed more or less.

4 MR. WILTSE: A: I don't think I can quarrel with that,
5 no.

6 MR. MACINTOSH: Q: All right. And so, given that,
7 there of course is a time element associated with
8 relocating the line. And when the Commission is
9 trying to wrestle with competing interests, do you
10 accept that there would have to be some end date for
11 deciding where the line's going to be? If it's
12 anywhere near your property, you would agree that that
13 is not a discussion or a debate that can go on
14 forever, because the project cannot be held up
15 forever. That's -- you would accept that, wouldn't
16 you?

17 MR. WILTSE: A: Well, yes, I would accept that.

18 MR. MACINTOSH: Q: All right. All right. So, the
19 timing of your relocating the line, you could have --
20 and this is not a criticism, and I emphasize that, but
21 in terms of impediments or rights, you could have
22 relocated the line in past years, correct? Or you
23 could have approached the company if it was
24 appropriate, you could have approached West Kootenay
25 or Fortis ten years ago to say, "I want to relocate
26 the line." There was no impediment to doing that, was

1 there?

2 MR. GRIFONE: A: Yes, there was.

3 MR. MACINTOSH: Q: What was that?

4 MR. GRIFONE: A: If I may?

5 MR. MACINTOSH: Q: Yes.

6 MR. GRIFONE: A: The City of Penticton did not approve
7 going into that area until very recently.

8 MR. MACINTOSH: Q: Did not approve what?

9 MR. GRIFONE: A: Approve servicing that area for urban
10 development until very recently. It wasn't strictly
11 up to the Wiltse's as a land developer, it was up to
12 the municipality to determine when they would extend
13 services into that area.

14 MR. MACINTOSH: Q: Fair enough. Fair enough. So, what
15 you're saying, I think, is that although you might
16 have been allowed to go to West Kootenay to say,
17 "Relocate the line," I think you might have been able
18 to do it a few years ago, there was no point in doing
19 so because you couldn't market and develop that area.

20 MR. GRIFONE: A: Correct.

21 MR. MACINTOSH: Q: Fair enough. Fair enough. And now
22 you're thinking, for a bunch of reasons that you've
23 put in evidence, that the timing is getting good for
24 developing that area, correct?

25 MR. GRIFONE: A: Correct.

26 MR. WILTSE: A: Well, that's really not the case. I

1 mean, the case is that Fortis is building a new line,
2 so if we're going to look at moving the line --
3 MR. MACINTOSH: Q: Yeah.
4 MR. WILTSE: A: -- we have to do it at this time. I
5 don't think we're look -- I mean, isn't that why we're
6 here?
7 MR. MACINTOSH: Q: Okay. So, and this isn't -- I
8 wasn't trying to be argumentative on this. Are you
9 saying that now is the time when you'd be developing?
10 Or just that, because of this hearing, now is a good
11 time to get this issue on the table.
12 MR. WILTSE: A: Well, because there's a new line going
13 to be constructed.
14 MR. MACINTOSH: Q: Sure.
15 MR. WILTSE: A: I mean, there's got to be benefits to
16 both of us, to put -- to do the relocation at this
17 time.
18 MR. MACINTOSH: Q: There has to be benefits to both of
19 us. Who's "both of us"?
20 MR. WILTSE: A: Well, Fortis, and Wiltse.
21 MR. MACINTOSH: Q: Well, Wiltse is seeking the benefit
22 of the line getting relocated, correct?
23 MR. WILTSE: A: That's correct.
24 MR. MACINTOSH: Q: And you've agreed already that,
25 because you're seeking to change this legal right,
26 that you'll -- you know you have to bear that as a

1 developer's cost, right?

2 MR. WILTSE: A: That's correct.

3 MR. MACINTOSH: Q: Okay.

4 MR. WILTSE: A: But it also -- it seems to me when we
5 had a meeting with Pierre Dufour, working on a non-
6 live line is a lot easier than working on a live line.

7 MR. MACINTOSH: Q: Fair enough.

8 MR. WILTSE: A: So there's benefits to Fortis as well.

9 MR. MACINTOSH: Q: Oh, I see. I see. All right, okay.
10 I understand.

11 Now, coming back to what I was saying a bit
12 -- a few minutes ago. When the Commission has to
13 address the timing of the line going in, if it decides
14 to approve the project, and if it decides that the
15 line will be not on the upland route but down below,
16 timing is a factor. You appreciate that.

17 MR. WILTSE: A: I appreciate that.

18 MR. MACINTOSH: Q: All right. Now, is there some time
19 frame that you can commit to for getting the line
20 relocated?

21 MR. WILTSE: A: I guess it's going to come down to
22 negotiations on costs, et cetera. We have to sit down
23 and negotiate with Fortis.

24 MR. MACINTOSH: Q: Okay. So, supposing you and Fortis
25 sit down and you're both there in good faith, and I
26 have no doubt about that, and Fortis says \$10 and you

1 say, "No, it's \$7," what happens then?

2 **Proceeding Time 8:50 a.m. T06**

3 MR. WILTSE: A: What happens then? I guess it's
4 possible we come to a disagreement. We have to
5 resolve it somehow.

6 MR. MACINTOSH: Q: I think so. And what if, just by
7 ordinary agreeing, you don't get to an agreement in
8 three months. I mean, do you have any sense of how
9 long the Wiltse re-routing ought to be able to take
10 before the thing gets settled?

11 MR. WILTSE: A: Well, I think what Fortis said, that
12 they would -- you know, they would provide their
13 expertise and help us through the re-routing.

14 MR. MACINTOSH: Q: All right. And it's fair to say,
15 and I'm sure this is right, you will work as hard as
16 you can in good faith with Fortis to get it done as
17 soon as possible.

18 MR. WILTSE: A: As long as costs don't continue to
19 escalate, and the costs are reasonable, you know, I
20 don't -- when I see the 1.5 and then they say there's
21 additional costs coming, I see environmental studies
22 of 100,000, native issues, 100,000. I'm just
23 beginning to wonder are those costs legitimate.

24 MR. MACINTOSH: Q: Fair enough. So, supposing you get
25 to audit the costs, you have your own accountant audit
26 the costs, or you hire a utility accountant to audit

1 the costs, or you use your own good judgment in
2 auditing the costs. There comes a time when you think
3 the costs are too high to just be worth it. You say
4 it's just not worth it. And you leave the line where
5 it is.

6 MR. WILTSE: A: You know, I would like -- I would like
7 the costs nailed down, so that we know exactly what
8 the costs are.

9 MR. MACINTOSH: Q: All right. So the idea is that both
10 sides will work in good faith with complete
11 transparency to get the costs on the table, and then
12 you will make a decision ASAP as to whether that's
13 worth it or not for you, so that we can get this done
14 in a reasonable time. Is that fair?

15 MR. WILTSE: A: I think our family is a reasonable
16 family. I mean --

17 MR. MACINTOSH: Q: Sure.

18 MR. WILTSE: A: -- I don't know where this line of
19 questioning is going, but you're very hung up on the
20 timing.

21 MR. MACINTOSH: Q: Yes, I am. Yeah.

22 MR. WILTSE: A: You know, our intention is to work with
23 Fortis and to get this development going, and get the
24 line moved.

25 MR. MACINTOSH: Q: Now, when we looked at one of the
26 exhibits that Mr. Cairns put in yesterday, it was one

1 of the ones with the mapping on it, and it's C1-20.
2 Do you have a copy of that?
3 MR. WILTSE: A: I don't have a copy with me here.
4 MR. GRIFONE: A: I'm familiar with which one you're
5 talking about.
6 MR. WILTSE: A: The ultimate corridor route?
7 MR. MACINTOSH: Q: I'm sure you are. But it wouldn't
8 be a bad thing, I think, if you had it in front of
9 you. Perhaps Mr. Cairns can help out.
10 MR. CAIRNS: When I handed out that [inaudible].
11 MR. MACINTOSH: We do. We do have it.
12 MR. WILTSE: A: I actually have a copy. So, thank you.
13 MR. MACINTOSH: Q: Thank you. So, on there, perhaps
14 these questions are for Mr. Grifone, I don't know but
15 you'll let me know. This has the proposed realignment
16 on the Wiltse property, the red -- the dark areas are
17 Wiltse property, correct?
18 MR. WILTSE: A: The two blocks -- the two coloured
19 blocks are Wiltse property.
20 MR. GRIFONE: A: It's encircled in red.
21 MR. MACINTOSH: Q: Yes.
22 MR. GRIFONE: A: The subject property.
23 MR. MACINTOSH: Q: And there's just a technical problem
24 that I want to discuss with you. If you look in the
25 lower right corner, you'll see a small space where it
26 would look as if an easement, probably an aerial

1 easement, because you wouldn't need structures there,
2 but in any event it looks like there would be a small
3 space just off your property to the lower right where
4 you would need an aerial easement. Do you see that?

5 MR. GRIFONE: A: I'm not sure where -- which area
6 you're referring to.

7 MR. WILTSE: A: You're talking on the lower west --
8 southwest corner?

9 MR. MACINTOSH: Q: Right. Let me get my geography
10 right. I think it's the northeast corner. No, I've
11 got my directions wrong. It's the lower southwest
12 corner.

13 MR. GRIFONE: A: No, it would be south.

14 MR. MACINTOSH: Q: But it's --

15 MR. WILTSE: A: Southwest?

16 MR. MACINTOSH: Q: -- on the page, the way the page has
17 been presented, it's the lower right.

18 MR. GRIFONE: A: Yes.

19 MR. MACINTOSH: Q: And maybe it's just a matter of how
20 it's drafted, but is the concept there that the yellow
21 line, the proposed realignment, would be entirely on
22 Wiltse property? Or is there a small portion that
23 would require the consent of someone else?

24 MR. WILTSE: A: Okay, on that, somebody else has a map.
25 And do you have the map, Ed? That shows the full
26 Wiltse property?

1 MR. GRIFONE: A: This is -- this does show the full
2 Wiltse property.
3 MR. WILTSE: A: No, no, we have that corner we bought.
4 Or where was that --
5 MR. GRIFONE: A: That was down in here.
6 MR. WILTSE: A: Hmm?
7 MR. GRIFONE: A: Down in here.
8 MR. WILTSE: A: How far did it go to the corner,
9 though? Do we have a map that shows?
10 MR. GRIFONE: A: No, we don't have that.
11 MR. MACINTOSH: Q: Again, this isn't -- I don't mean to
12 be --
13 MR. GRIFONE: A: I think I can clarify and answer your
14 point.
15 MR. MACINTOSH: Q: Yes.
16 MR. GRIFONE: A: This was conceptual.
17 MR. MACINTOSH: Q: Yes.
18 MR. GRIFONE: A: This was not exactly -- we are not the
19 Hydro engineers, telling you where to put your poles.
20 That is up to Fortis to determine exactly. This was
21 conceptual, showing generally how to take the line to
22 an upper route on the property.
23 MR. MACINTOSH: Q: All right.
24 MR. GRIFONE: A: And also that the flat -- off of the
25 steeper slope -- oh, I should say off of the flatter
26 slopes where we would like to develop. And that was

1 the intent of this particular map and this particular
2 concept.

3 MR. MACINTOSH: Q: All right.

4 MR. GRIFONE: A: So it's not exactly defined where that
5 route was to go.

6 **Proceeding Time 8:56 a.m. T7**

7 MR. MACINTOSH: Q: That's helpful. So this map is
8 indicative of the concept of the proposed route being
9 on Wiltse property entirely.

10 MR. GRIFONE: A: That's correct.

11 MR. MACINTOSH: Q: Very well. And that is a proposal
12 that you're prepared to work toward, Mr. Wiltse? That
13 is, realignment on your property entirely?

14 MR. WILTSE: A: Well, I mean, it's a simple matter. I
15 mean we just have to move the, you know, the corner.

16 MR. MACINTOSH: Q: That's fine. That's fine. I mean I
17 --

18 MR. WILTSE: A: Yes, that's our intention.

19 MR. MACINTOSH: Q: Very good. Now, just a few more
20 questions, and Mr. Grifone, these may be directed more
21 directly at you. Can you put in front of you your
22 report dated June 19, and that's part of Exhibit C1-
23 14.

24 MR. GRIFONE: A: I have it.

25 MR. MACINTOSH: Q: And that is the two-page report, and
26 with 15 numbered paragraphs.

1 MR. GRIFONE: A: Correct.

2 MR. MACINTOSH: Q: And in point 5 you observe that the
3 current OCP for Penticton, the official community
4 plan, recognizes the developable land supply in
5 Penticton is finite, which you've printed in all bold
6 type. And obviously you've emphasized that word to
7 show that it really is finite, right?

8 MR. GRIFONE: A: Correct.

9 MR. MACINTOSH: Q: And you list the things that make
10 you come to that conclusion, and two of them -- or one
11 of them is First Nations. And why does First Nations
12 drive you to conclude that land supply is "Finite"
13 with a capital F?

14 MR. GRIFONE: A: This is First Nations around
15 Penticton. It's in the Penticton area, not within
16 Penticton.

17 MR. MACINTOSH: Q: Is that the Penticton Indian Band?

18 MR. GRIFONE: A: That is correct.

19 MR. MACINTOSH: Q: And you say that the interests of
20 the Penticton Indian Band are a constraint against
21 there being any concept of infinite land supply.

22 MR. GRIFONE: A: That's correct.

23 MR. MACINTOSH: Q: And why do you say that?

24 MR. GRIFONE: A: The City -- I mean the Penticton
25 Indian Band has gone on record saying that they -- for
26 numerous years now, when we, myself on behalf of the

1 City of Penticton have negotiated with them to try to
2 get access to their land, to develop their land, they
3 have not been interested in developing their land.
4 And that has no relevance whatsoever to land claims or
5 to that area next to Wiltse. It's strictly with
6 regard to their land on the other side of the lake.
7 MR. MACINTOSH: Q: Fair enough, and you haven't been
8 able to do an agreement with them.
9 MR. GRIFONE: A: The City of Penticton has not, not
10 until just recently did they reach an agreement
11 between the City and First Nations to extend services
12 to that site.
13 MR. MACINTOSH: Q: And the environmentally sensitive
14 reference refers to what?
15 MR. GRIFONE: A: Lands within the City of Penticton.
16 MR. MACINTOSH: Q: And within the City of Penticton?
17 And why would that make land supply finite?
18 MR. GRIFONE: A: Because there are certain areas that
19 we just -- they won't give as easily as say the Wiltse
20 lands where the City is, and approving authorities are
21 much more willing to service that area.
22 MR. MACINTOSH: Q: And the bottom part of that
23 paragraph 5, it says that the City's identified growth
24 areas will be developed to their maximum in 25 years.
25 This demand is assumed even at a slower growth rate of
26 2.1. And do I gather from there, that paragraph, that

1 what you're saying is that the estimate is that land
2 development, or at least the claim for residential
3 land, will continue to be high in the Okanagan in the
4 long term?

5 Proceeding Time 9:00 a.m. T8

6 MR. GRIFONE: A: No, I'm not saying that at all.

7 MR. MACINTOSH: Q: So you don't think that --

8 MR. GRIFONE: A: What we're saying is that the actual
9 land supply is finite.

10 MR. MACINTOSH: Q: Yes.

11 MR. GRIFONE: A: Coming to an end within the City of
12 Penticton.

13 MR. MACINTOSH: Q: Coupled with -- well, let me ask
14 you. Do you think there's going to be a high demand
15 for residential property in the Okanagan in the coming
16 years?

17 MR. GRIFONE: A: I don't have the crystal ball, but we
18 have projected that at either 2.1 or 2.5 percent,
19 growth rate is -- all of the City's documents show.

20 MR. MACINTOSH: Q: All right. And if you're asked
21 whether the Okanagan is likely to continue to be a
22 high growth area, what do you say?

23 MR. GRIFONE: A: I definitely think so. As a planner,
24 yes.

25 MR. MACINTOSH: Q: Yes, into the long term.

26 MR. GRIFONE: A: Yes.

1 MR. MACINTOSH: Q: And so wherever one finds a right of
2 way for electricity, one is going to eventually find
3 houses near it, correct?

4 MR. GRIFONE: A: Not necessarily.

5 MR. MACINTOSH: Q: Of course not necessarily. But
6 Golden Hills, Golden Hills strata council is above
7 Heritage Hills, isn't it?

8 MR. GRIFONE: A: I can't speak on behalf of that
9 particular area.

10 MR. MACINTOSH: Q: You don't know -- I'm not asking you
11 to. Do you know where it is?

12 MR. GRIFONE: A: Yes, I do.

13 MR. MACINTOSH: Q: All right. And are you aware that
14 Golden Hills wants the line to be down below and not
15 up above?

16 MR. GRIFONE: A: I cannot -- I'm representing Mr.
17 Wiltse here. I cannot --

18 MR. MACINTOSH: Q: Okay, well, take my word for it.
19 Golden Hills doesn't want it up top.

20 MR. GRIFONE: A: Okay.

21 MR. MACINTOSH: Q: It doesn't want a line near it.

22 MR. GRIFONE: A: Okay.

23 MR. MACINTOSH: Q: And isn't the problem that wherever
24 a line is built, with a 50-year life, people are going
25 to be living there and no one ever wants it in their
26 back yard, right?

1 MR. GRIFONE: A: Correct.

2 MR. MACINTOSH: Q: Okay. Now, on page 2 of your
3 report, at item 12 --

4 THE CHAIRPERSON: Mr. Macintosh.

5 MR. MACINTOSH: Yes.

6 THE CHAIRPERSON: Excuse me. I'm having a little
7 trouble, I think, with the reference you use. Which
8 exhibit are you looking at?

9 MR. MACINTOSH: Oh. It is Exhibit C -- my marking for
10 it, Mr. Chair, is C1-14.

11 THE CHAIRPERSON: 14?

12 MR. MACINTOSH: Yeah, C1-14. And what that contains
13 partly is a two-page report on the letterhead of CTQ,
14 which is Mr. Grifone's company.

15 THE CHAIRPERSON: Is that the one dated May 20, 2008?

16 MR. MACINTOSH: No. No. The one that I'm using that
17 came in yesterday, I believe is when it was marked,
18 it's dated June 19, 2008 and it's what Mr. Grifone was
19 speaking to yesterday.

20 THE CHAIRPERSON: Thank you.

21 MR. MACINTOSH: Yeah, and it's marked as Mr. Grifone's
22 opening statement.

23 THE CHAIRPERSON: Ah, thank you.

24 MR. MACINTOSH: Yeah, and marked as Exhibit C1-14.

25 THE CHAIRPERSON: Thank you.

26 MR. MACINTOSH: And where we had been, Mr. Chair, and I

1 need not go through it again, but where I had been
2 referencing, do you have that handy now?

3 THE CHAIRPERSON: I do not. I think I've got a filing
4 system problem but --

5 MR. MACINTOSH: All right.

6 THE CHAIRPERSON: -- I'll catch up to you.

7 MR. MACINTOSH: All right. I was referencing, if you
8 could just make a note, point 5 on page 1.

9 THE CHAIRPERSON: Thank you.

10 MR. MACINTOSH: Q: And I just want to ask one more
11 question, I believe, before I conclude, and that is
12 over on page 2. Do you have this report with you,
13 sir? And in paragraph 12 you reference the power
14 line. And as I understand it, the power line has been
15 there in place for some decades. I just want to see
16 the Commission getting this in front of them. Sorry,
17 I just don't want to have you troubled by looking for
18 that and then me questioning, so I wonder is it
19 helpful if we --

20 THE CHAIRPERSON: You now have my undivided attention.

21 MR. MACINTOSH: What I can do also, I don't need to
22 reference this report.

23 THE CHAIRPERSON: Fair enough.

24 MR. MACINTOSH: Thank you very much. I'll reference it
25 orally, but I don't need to have you have it in front
26 of you.

1 THE CHAIRPERSON: Fair enough.

2 MR. MACINTOSH: Q: So Mr. Grifone, in page 2 of the
3 report at paragraph 12, you point out that the power
4 line in connection with the Wiltse property, right?

5 MR. GRIFONE: A: Yes, correct.

6 MR. MACINTOSH: Q: And it's correct, from what you've
7 said, the power line has been operating there for
8 decades before Penticton even would open up this land
9 for residential development.

10 MR. GRIFONE: A: Correct.

11 MR. MACINTOSH: All right. Thank you very much, those
12 are my questions.

13 MR. FULTON: I have no cross-examination of this panel,
14 Mr. Chairman.

15 **Proceeding Time 9:04 a.m. T09**

16 THE CHAIRPERSON: Thank you. Commissioner Nicholls. No
17 questions?

18 Mr. Grifone, a couple of questions. I
19 think when you made your opening statement, you did
20 refer to the fact that you were acting for the Wiltse
21 Group, if I can call it that, and indirectly the City
22 of Penticton.

23 MR. GRIFONE: A: Correct.

24 THE CHAIRPERSON: And I'm -- can you just sort of clarify
25 what that meant, by -- that the relationship that you
26 have with the city, or how that interfaces with what

1 we're doing here, and whether you're speaking on
2 behalf of the city at this point, or --

3 MR. GRIFONE: A: Indirectly, I am speaking on behalf of
4 the city. I have done a lot of e-work, a lot of the
5 planning work for the city over the last 17 - 18
6 years, and I have gotten the approval from Mr.
7 Denboer, who I believe is sitting here in the back,
8 the City Manager, to in fact indirectly represent the
9 city -- the city's facts, if you will. So it's as if
10 I'm speaking on behalf of the city because I know the
11 planning policies of the city, and that's as far as it
12 goes.

13 THE CHAIRPERSON: Thank you. Mr. Macintosh was exploring
14 with Mr. Wiltse the impact of relocating to the
15 proposed or preferred -- and I'll come back to that in
16 a minute, different routes, rather than using the
17 existing right-of-way or ROW.

18 I'd be interested in your view on the
19 benefit to the city of that, and some idea of what
20 additional property development there would be, in
21 terms of whether it's number of units or what it has.
22 I also presume that there is a financial impact on the
23 city, in the sense that it would have some enhanced
24 value and/or quality in terms of number of lots and
25 taxation revenue. Could you just give us some view of
26 that?

1 MR. GRIFONE: A: I'm not an appraiser, but I will say
2 that the -- again, I reiterate the point that the city
3 is in need of land supply for residential development,
4 especially single-family, and obviously the more
5 residential lands that they have, the better. Because
6 of what is happening, so much of the new single-family
7 development is being developed outside the city
8 boundary right now, and consequently losing the tax
9 value and incremental tax, and all the benefits of
10 having that development inside the city. And of
11 course, accruing all the dis-benefits of sprawl and so
12 forth associated with development throughout the
13 Regional District of Okanagan Similkameen, and I
14 believe even the Regional District of Okanagan
15 Similkameen would attest to the fact that they do not
16 like the sprawl that's occurring out there right now
17 in that -- in a traditionally rural area.

18 THE CHAIRPERSON: So can we take it that there are both
19 qualitative and financial benefits, through taxation
20 revenue and that sort of thing, to the city of
21 realigning this line?

22 MR. GRIFONE: A: Yes, I'm assuming there will be.

23 THE CHAIRPERSON: Thank you. Mr. Wiltse, can you
24 indicate whether or not you've had any discussions
25 with the city in terms of their maybe participating in
26 whatever the costs are of realigning this -- arising

1 out of, for example, the enhanced value to the city,
2 whether it be --

3 MR. WILTSE: A: The only discussions we had, Mr.
4 Denboer has indicated that they're behind us, but they
5 do not have the time and the resources to put money
6 and time into the project. That it's up to us to.

7 THE CHAIRPERSON: So, you're on your own hook --

8 MR. WILTSE: A: Yes.

9 THE CHAIRPERSON: -- when it comes to whatever the costs
10 come to.

11 MR. WILTSE: A: Yes.

12 THE CHAIRPERSON: So the city has indicated to you that
13 they will not participate in a financial way. Is it
14 that clear?

15 MR. WILTSE: A: I believe that's correct. You can ask
16 that of Mr. Denboer, if you like. Mr. Denboer, I
17 believe he's going to be speaking, so --

18 THE CHAIRPERSON: But you're not aware of any such thing.

19 MR. WILTSE: A: I'm not aware of any contribution.

20 THE CHAIRPERSON: Thank you.

21 MR. GRIFONE: A: Please be aware, Mr. Chairman, that we
22 have just entered into the preparation of the area's
23 structure plan, and that will be a forum for
24 discussion on land use, access, servicing and so
25 forth.

26 THE CHAIRPERSON: But that would be a matter between, Mr.

1 Wiltse, your organization and the city.

2 MR. GRIFONE: A: That's correct.

3 THE CHAIRPERSON: I think I understood the conversation

4 you had with Mr. Macintosh to be that whatever costs

5 are associated with this, that's between your people

6 and Fortis. Is that correct? That the city isn't

7 part of that. It wouldn't become a three-way

8 negotiation.

9 MR. GRIFONE: A: We don't know yet.

10 MR. WILTSE: A: We don't know about that, but as far as

11 compensation, I believe it's a two-way --

12 THE CHAIRPERSON: Thank you. I'm a little confused just

13 in terms of the description of -- there was a

14 preferred route which I think circled around your

15 property, or outside your property, and then a

16 proposed route, and I just want to be clear on -- if

17 you go back to the map we were looking at earlier, if

18 I can put my hands on it.

19 MR. GRIFONE: A: The proposed route as indicated on the

20 last map that Mr. Macintosh referred to was the

21 proposed on the Wiltse land. Preferred -- the

22 ultimate, the ideal, obviously, would be to take it

23 right off the land as far as away from the new

24 neighbourhood as possible, so that you're not dealing

25 with the issue 50 years from now, or whatever.

26 THE CHAIRPERSON: But you're quite prepared to accept

1 what's described as the proposed realignment as
2 distinct from the original -- what was described as
3 preferred realignment, that went outside your
4 property.

5 Proceeding Time 9:10 a.m. T10

6 MR. WILTSE: A: I was -- two thoughts here. Could you
7 repeat the question please? Sorry.

8 THE CHAIRPERSON: I just want to be clear that you're
9 quite prepared to accept what's described on C1-20,
10 the map we were looking at, as the proposed
11 realignment, all of which, as I understand it, would
12 take place on your property rather than what was
13 earlier described as the preferred routing, which
14 would be virtually all outside your property.

15 MR. WILTSE: A: Our preferred is outside the property.

16 THE CHAIRPERSON: But you're prepared to accept --

17 MR. WILTSE: A: If the Commission rules against outside
18 the property, then we're prepared to look at this
19 particular proposal with the altered route.

20 THE CHAIRPERSON: Thank you. Commissioner Nicholls has
21 a --

22 COMMISSIONER NICHOLLS: Just wanted to clarify something.
23 On C1-20, that's not the same proposed as proposed in
24 the IRs, is it? This is modified?

25 MR. WILTSE: A: I can't hear.

26 COMMISSIONER NICHOLLS: Are there three Wiltse routes,

1 the preferred, the proposed, and what was just being
2 discussed as proposed but was called modified?

3 MR. WILTSE: A: I'll let Ed answer that. Ed gave some
4 schematics.

5 MR. GRIFONE: A: I believe, Mr. Cairns, this one here
6 was modified since the RI, correct?

7 MR. CAIRNS: I know I'm not supposed to answer questions,
8 but perhaps I can clarify. That exhibit was in
9 response to a BCUC IR, I forgot the number off the top
10 of my head, but the BCUC Staff asked whether or not
11 there was a conceptual line that could be located
12 entirely on the Wiltse property.

13 COMMISSIONER NICHOLLS: And the IR, was that the one
14 referred to as modified as opposed to the proposed
15 that came up earlier?

16 MR. CAIRNS: I'll have to check the IR. Just give me a
17 minute.

18 COMMISSIONER NICHOLLS: If you look at C1-16, that's what
19 I thought was proposed in the IRs until BCUC Staff
20 asked about a modified.

21 MR. CAIRNS: Yes, there's a preferred and a proposed, and
22 that was language that we developed or Wiltse
23 developed. And then subsequent to that in IR 1.2 from
24 BCUC to Wiltse, the phraseology that was adopted, they
25 used "existing", you know what that is, "preferred" --
26 or sorry, "proposed", and "preferred" which we've just

1 discussed. Then the BCUC IR is "Please confirm that
2 an alternative alignment," that's the phraseology they
3 used, "that is entirely within the Wiltse property is
4 possible, and provide a diagram showing this routing."
5 So that's the alternative alignment within the Wiltse
6 property, which we see reflected in --

7 THE CHAIRPERSON: That's in C1-20.

8 MR. CAIRNS: That's correct.

9 COMMISSIONER NICHOLLS: Yes. I just wanted to make sure
10 we weren't confusing the two proposed.

11 MR. CAIRNS: No, very good.

12 COMMISSIONER NICHOLLS: Thank you.

13 MR. WILTSE: A: Something that came up yesterday was
14 that we would be negotiating on the easements. I
15 mean, I'm not sure who drew the maps of where we would
16 be negotiating on the northwest corner of our
17 property. Our intention is not to negotiate with
18 those individuals down there. The power line runs
19 through the centre of that individual's property.
20 Possibly Fortis should contact that individual and
21 find out if he has any intention of wanting to move
22 the line. But it's something that we are not
23 preparing to pay for.

24 Is that what you're discussing from the
25 discussions yesterday? That we would have to require
26 three new right of ways?

1 COMMISSIONER NICHOLLS: I'm not sure about that. That
2 wasn't what I was asking about now.

3 THE CHAIRPERSON: So can I just follow up on that and
4 refer you to C1-20, which I understand is the
5 response, as Mr. Cairns pointed out, to the
6 Commission's request for -- to provide us with an
7 alignment that was all within your property. And did
8 I understand you, Mr. Wiltse, to say that's really
9 what you're talking about now? And on C1-20, just
10 from the visual conceptual diagram we have in front of
11 us at that, that the point where the exist -- or I'm
12 sorry, the proposed -- what was the term, Mr. Cairns?
13 Modified realignment or modified proposed or whatever
14 it was, that we see in C1-20, the interconnection
15 there where it leaves off the old existing alignment,
16 is on your property.

17 MR. WILTSE: A: That's our intention, yes.

18 THE CHAIRPERSON: Right. And there was on the earlier --
19 there was a little jog that went up into other
20 property and came back down. You've now dropped that
21 and got a line that goes all within your property and
22 goes down to the southwest corner, and the intention
23 conceptually is that the reconnection with the
24 existing line would again be within your property.

25 **Proceeding Time 9:16 a.m. T11**

26 MR. WILTSE: A: No, we're talking -- I think we're

1 talking on the north.

2 THE CHAIRPERSON: No, I'm just --

3 MR. WILTSE: A: Are you talking north or south?

4 MR. GRIFONE: A: He said the connection would be --

5 THE CHAIRPERSON: I'm talking northwest and southwest,

6 and that the interconnection -- or the point where the

7 new line would leave the existing line is on your

8 property, on the northwest corner.

9 MR. WILTSE: A: That's correct.

10 THE CHAIRPERSON: And then the point where it reconnects

11 with the existing line --

12 MR. WILTSE: A: Would be on our property.

13 THE CHAIRPERSON: -- would be on the southwest corner of

14 your property.

15 MR. GRIFONE: A: He's saying break it down here like

16 that.

17 MR. WILTSE: A: Southwest or northeast, whichever you

18 want to --

19 THE CHAIRPERSON: I'm sorry. Northeast. I'd better not

20 go sailing this weekend. Yes, I'm sorry, northeast

21 and then southwest.

22 MR. WILTSE: A: Yeah, I think the only way we can

23 connect there is to connect into the existing. I

24 mean, we're not prepared to acquire rights-of-way that

25 Fortis were insisting upon yesterday, that we would

26 have to look after acquiring those easements, turning

1 the easements over to Fortis.

2 THE CHAIRPERSON: So, simply put, it's all going to be on
3 your land.

4 MR. WILTSE: A: I believe.

5 THE CHAIRPERSON: Thank you.

6 MR. WILTSE: A: That's our second preference, but our
7 first preference is completely off the land.

8 THE CHAIRPERSON: Understood. Understood. Thank you.

9 Mr. Cairns, anything in re-direct?

10 MR. MACINTOSH: Mr. Chair, if I may assist -- you were
11 asking whether the City of Penticton would chip in, so
12 to speak, financially on the project. And what the
13 evidence indicates thus far is a sort of a silence.
14 And what I mean by that is that in Appendix A in the
15 application, which is in Exhibit B1-2, is a letter
16 from Fortis to Penticton to the mayor and council,
17 June 15 of '07, querying whether the city would be
18 prepared to accept all incremental relocation costs.
19 And there's just been no response. So that's as far
20 as the evidence goes in that regard.

21 And just one moment, if I may, Mr. Chair.

22 That's all. Thank you very much.

23 THE CHAIRPERSON: Thank you. Mr. Cairns?

24 MR. CAIRNS: On re-direct, Mr. Chairman, if I could have
25 just half a minute to a minute to confer with my
26 panel. Mr. Macintosh raised a couple of questions

1 that might be less than -- give us less than all of
2 the information. But I need to check with the panel
3 first, and I know my friend yesterday had lunch,
4 probably, to confer with his witnesses. And I just
5 need to do that, with your leave.

6 THE CHAIRPERSON: That's fine with us, sir. Take a
7 moment or two, unless Mr. Macintosh has some problem
8 with that.

9 MR. MACINTOSH: No, I don't, thank you.

10 THE CHAIRPERSON: Fair enough. Do you just need a moment
11 here? We don't need to adjourn or anything?

12 MR. CAIRNS: No, no need to adjourn.

13 THE CHAIRPERSON: Fair enough.

14 **Proceeding Time 9:20 a.m. T12**

15 MR. CAIRNS: Thank you, Mr. Chairman.

16 RE-EXAMINATION BY MR. CAIRNS:

17 MR. CAIRNS: Q: Mr. Grifone, Mr. Macintosh had a line
18 of questioning referring to the Penticton Indian Band
19 expressing lack of support for development. And you
20 replied "Yes on Penticton," that they took that
21 position. Was that on reserve land, or land claims
22 areas?

23 MR. MACINTOSH: They already said that.

24 MR. GRIFONE: A: Yes, I clarified it was reserve land
25 only, on one side of the lake.

26 MR. CAIRNS: Apparently I'm the only one who was not

1 clear on that, Mr. Chairman. Thank you, that's all I
2 have.

3 THE CHAIRPERSON: That's everything? Unless there's
4 anything else, I think this panel can be released.
5 Thank you, gentlemen.

6 MR. GRIFONE: A: Thank you.

7 THE CHAIRPERSON: Appreciate your contribution.

8 (PANEL ASIDE)

9 THE CHAIRPERSON: Mr. Fulton, we have the Fortis EMF up
10 next?

11 MR. FULTON: Yes, we do, Mr. Chairman, thank you.

12 MR. MACINTOSH: I'll ask the Fortis EMF panel to come up,
13 then, Mr. Chair. It will take a moment or two for
14 people to get their tackle in order.

15 THE CHAIRPERSON: That's fine, thank you.

16 FORTISBC EMF PANEL:
17 WILLIAM BAILEY, Affirmed:
18 PAUL CHERNIKHOWSKY, Resumed:
19 GARY SHTOKALKO, Resumed:
20 DOYLE SAM, Resumed:

21 MR. FULTON: Before Mr. Macintosh starts, Mr. Karow just
22 wants to do a test so that he can hear what is being
23 said. So I believe Mr. Bemister knows what needs to
24 be done.

25 MR. KAROW: I'm sorry about this. One, two, three.

26 THE CHAIRPERSON: That's fine, Mr. Karow.

1 MR. MACINTOSH: As you can see, Commissioners, the Fortis
2 EMF panel is assembled, and three of the panel are
3 known to the Commission. Mr. Shtokalko from B.C.
4 Hydro is seated second from you, and Mr. Doyle Sam
5 from Fortis third from you. And furthest from you is
6 Mr. Paul Chernikhowsky, an engineer from Fortis. And
7 I'll introduce, if I may, Dr. Bailey, who is seated
8 nearest to you. And Dr. Bailey's report is filed and
9 will probably be the subject of questioning. It is in
10 Exhibit B-12 -- or, B1-2, and within B1-2 it is
11 Appendix R.

12 THE CHAIRPERSON: Thank you.

13 **Proceeding Time 9:24 a.m. T13**

14 MR. MACINTOSH: Let me correct myself, Mr. Chair. It's
15 within Exhibit B-12, and the report is found as
16 Exhibit B-12 and what it was was a response to a
17 request for this report to be produced. So it's not
18 Appendix R, but it's Exhibit B-12. And it's on the
19 letterhead of Exponent, prepared for BCTC by Exponent
20 Health Services, dated October 30th, 2007.

21 THE CHAIRPERSON: Just so I'm clear, is that -- Appendix
22 57.3 I have on my document here.

23 MR. MACINTOSH: Let me have Mr. Fulton assist me if I
24 may, Mr. Chair.

25 COMMISSIONER NICHOLLS: Appendix R in the ILM hearing, so
26 that's why it's doubly marked.

1 MR. MACINTOSH: Thank you.

2 THE CHAIRPERSON: There's double labelling there. It was
3 confusing me.

4 MR. MACINTOSH: Sorry. And it is submitted with a cover
5 letter from Fortis to the Commission dated May 29 of
6 '08 and marked as Exhibit B-12 in this proceeding.

7 THE CHAIRPERSON: Thank you.

8 MR. MACINTOSH: Thank you.

9 **EXAMINATION IN CHIEF BY MR. MACINTOSH:**

10 MR. MACINTOSH: Q: And since the Commission knows of
11 the other panel members, if I may, I'll just introduce
12 Dr. Bailey to you. And perhaps you can advise, Dr.
13 Bailey, you're a principal scientist in Exponent
14 Health Sciences, and what is that, sir?

15 MR. BAILEY: A: It's a group within Exponent which is a
16 scientific research and engineering consulting firm.

17 MR. MACINTOSH: Q: And you specialize in applying
18 assessment methods to environmental and occupational
19 health issues?

20 MR. BAILEY: A: Yes, that's correct.

21 MR. MACINTOSH: Q: You have 30 years of training and
22 experience including lab and epidemiologic research,
23 health risk assessment, and comprehensive exposure
24 analysis.

25 MR. BAILEY: A: Yes, I do.

26 MR. MACINTOSH: Q: And your work particularly is with

1 respect to research on potential health effects of
2 electromagnetic fields.

3 MR. BAILEY: A: Yes, it's been a major part of my
4 research and investigation.

5 MR. MACINTOSH: Q: And in that work you have served as
6 an advisor to numerous United States federal and
7 international agencies?

8 MR. BAILEY: A: Yes, that's correct.

9 MR. MACINTOSH: Q: And you are a visiting scientist at
10 Cornell University Medical College.

11 MR. BAILEY: A: Yes, I am.

12 MR. MACINTOSH: Q: And you have lectured at Rutgers
13 University and at other universities in the United
14 States and the Harvard School of Public Health.

15 MR. BAILEY: A: Yes.

16 MR. MACINTOSH: Q: And you formerly were head of the
17 Laboratory of Neuropharmacology and Environmental
18 Toxicology at the New York State Institute for Basic
19 Research in New York.

20 MR. BAILEY: A: Yes.

21 MR. MACINTOSH: Q: All right. And your full résumé,
22 Dr. Bailey, has been submitted and I'll just review
23 your formal education. You received your BA at
24 Dartmouth College in 1966?

25 MR. BAILEY: A: Yes.

26 MR. MACINTOSH: Q: And your MBA at the University of

1 Chicago in 1969, and your PhD. in Neuropsychology at
2 the City University of New York in 1975.

3 MR. BAILEY: A: Yes, and I continued my training for
4 two additional years of postdoctoral study in
5 neurochemistry at the Rockefeller University.

6 MR. MACINTOSH: Q: Thank you. Your full résumé, as I
7 was saying, was filed with the Commission on June 18
8 of this year, and you can confirm that the full résumé
9 is accurate?

10 MR. BAILEY: A: Yes, it's not my most recent but it's
11 -- except for a number of publications it's
12 essentially up to date.

13 MR. MACINTOSH: Q: Very well. And also could you
14 please acknowledge that you adopt as being correct
15 what is contained in the report we were referring to
16 from your company, and dated October 30, 2007 and
17 marked as Exhibit B-12.

18 MR. BAILEY: A: Yes.

19 MR. MACINTOSH: Thank you, sir. Subject to any questions
20 to me from the Commission, Mr. Chair, this panel is
21 available for questioning now.

22 THE CHAIRPERSON: Just to clarify what is perhaps the
23 obvious, I take it you're suggesting that Dr. Bailey
24 be qualified as an expert witness in that category?

25 MR. MACINTOSH: Yeah, and never overlook the obvious.
26 Thank you for reminding me.

1 THE CHAIRPERSON: Thank you.

2 MR. MACINTOSH: I am asking that Dr. Bailey be qualified
3 as an expert witness capable of giving opinion
4 evidence with respect to the impact of electric
5 magnetic fields on human health.

6 THE CHAIRPERSON: Thank you.

7 MR. MACINTOSH: Thank you very much.

8 **Proceeding Time 9:30 a.m. T14**

9 MR. FULTON: Mr. Chairman, we will continue to use the
10 order of cross-examination that we used for the first
11 Fortis panel, but we can start much further down the
12 list, and the first cross-examination will be by Mr.
13 Karow on behalf of CORE, and I believe Mr. Karow
14 wanted Mr. Harlingten next to him when he was asking
15 the questions. So if they can both come forward now.

16 And just to remind people as we saw
17 yesterday, that the purpose of cross-examination is to
18 ask questions and attempt to get answers to the
19 questions, and not to state positions. That's
20 something for argument.

21 THE CHAIRPERSON: Thank you for pointing that out, sir.

22 Just so I'm clear on the process here, at
23 this point, Mr. Harlingten, I gather you are here to
24 assist Mr. Karow, quite apart from whatever
25 participation you're going to have on your own behalf?
26 Or is this a combined effort.

1 MR. KAROW: Mr. Chairman, I asked Mr. Harlingten to
2 assist me with follow-up questions, in case if I can't
3 understand the responses from the panel. Mr.
4 Harlingten will know follow-up questions because we
5 were working quite a bit together, so I ask for that
6 exception, please.

7 THE CHAIRPERSON: So this is -- yes. So just so we're
8 clear, this is a combined effort, then? Is that
9 correct, that you're combining your --

10 MR. KAROW: Well, I will first ask my list of questions,
11 and during -- well, I'll ask the question number one,
12 then I don't understand the response, then Mr.
13 Harlingten he might then jump in and have a follow-up
14 question.

15 THE CHAIRPERSON: Fair enough.

16 MR. KAROW: If not, that's fine too.

17 THE CHAIRPERSON: Thank you.

18 MR. FULTON: I should say, Mr. Chairman, that it's my
19 understanding, though, that Mr. Harlingten will have
20 his own questions following Mr. Karow's questions, but
21 he's here now to help Mr. Karow conduct his -- Mr.
22 Karow's cross-examination.

23 THE CHAIRPERSON: Thank you. Understood.

24 MR. KAROW: May I first ask whether I address the
25 technical panel, or the health panel?

26 THE CHAIRPERSON: I'm sorry, could you repeat that, sir?

1 MR. KAROW: May I ask first, the technical panel -- the
2 EMF technical panel? I have split up my question as
3 EMF technical and EMF health.

4 MR. FULTON: I believe, Mr. Chairman, Mr. Karow has some
5 technical questions for the technical witness on the
6 panel.

7 MR. KAROW: Related to the EMF issue, just basic EMF.

8 MR. FULTON: Yes.

9 **CROSS-EXAMINATION BY MR. KAROW:**

10 MR. KAROW: Q: Good. I will start with the technical
11 questions. Mr. Sam, it is my understanding that the
12 transmission line from Penticton Anderson terminal to
13 Kelowna is also being dealt in this hearing? The
14 transmission line from Anderson terminal station in
15 Penticton towards Kelowna. Is it also being dealt in
16 this application?

17 MR. SAM: A: No. The lines in question are from
18 Penticton south down to Vaseux and into Bentley.
19 There's nothing in line between Penticton and Kelowna
20 that's being dealt with in this hearing. There are
21 some equipment being installed in some Kelowna
22 substation, but nothing as far as the line is
23 concerned.

24 MR. KAROW: Q: The transmission part in question now,
25 meaning the transmission line from Oliver to
26 Penticton, which is now before the Commission, has

1 that something to do also with transmitting power to
2 another Canadian province or to any U.S. destination?

3 MR. SAM: A: No, there is no intentions of using any of
4 the facilities for any export out of our service
5 territory. As was explained yesterday, it's fully to
6 use for servicing of our own customers within our
7 service territory.

8 Proceeding Time 9:34 a.m. T15

9 MR. KAROW: Q: With the project in question, now, will
10 there be any NAFTA rule reply?

11 MR. SAM: A: I'm sorry, could you repeat the question?

12 MR. KAROW: Q: You know, NAFTA, North American Free
13 Trade -- that is --

14 MR. SAM: A: I'm aware of the acronym.

15 MR. KAROW: Q: Will there be any possible compensation
16 in case of a -- in case of a compensation? Like,
17 there is a NAFTA rule and it could become before a
18 NAFTA court, and the Canadian, B.C., West Kootenay
19 Power that Fortis could be then charged with
20 compensation?

21 MR. SAM: A: The company doesn't have any view that the
22 line would be used for anything that would be
23 associated with NAFTA.

24 MR. KAROW: Q: Have you read my opening statement?

25 MR. SAM: A: Do I have my opening statement?

26 MR. KAROW: Q: Yeah.

1 THE CHAIRPERSON: His opening statement, Mr. Karow's.

2 MR. KAROW: Q: Okay, there's a certain section there --

3 MR. HARLINGTON: Excuse me, I think he actually meant Mr.
4 Karow's opening statement.

5 MR. SAM: A: Yes, yes, I have that.

6 MR. KAROW: Q: Mr. Chairman, do you agree that I read
7 it? There might be slight changes, but I'm reading
8 this opening statement without prejudice.

9 "Mr. Chairman, Commissioners. My name is
10 Hans Karow and I live in Naramata. As a
11 ratepayer, I'm directly affected by any of
12 the Fortis existing and proposed projects
13 and Commission positions and decisions. I
14 am appealing as intervenor on behalf of the
15 Coalition to Reduce Electropollution, CORE.
16 CORE's mission is to inform the general
17 public about and, as the name states, to
18 reduce electropollution, which includes the
19 now ever increasing power line frequency
20 electromagnetic field radiation."

21 MR. FULTON: Mr. Karow, if I could ask you to stop for a
22 minute.

23 This is cross-examination. It's asking
24 questions. So, as I said prior to the start of your
25 questioning, it's not a time for giving your position.
26 If you have a question that arises out of your opening

1 statement, you can reference your opening statement
2 and ask the panel a question about it. But please do
3 not read your entire opening statement. It already
4 forms part of the record.

5 MR. KAROW: Q: I'm sorry. Page number one. I have
6 written:

7 "FortisBC has tendered as their EMF expert
8 Dr. Bailey from Exponent, New York.
9 Exponent, a corporation itself is one of the
10 world's leading industry consultants. Dr.
11 Bailey has been contracted to serve the best
12 interests for FortisBC and the main
13 interests the applicant in this hearing
14 process is pursuing is to please the
15 corporations and its shareholder profit,
16 even in an unethical way, leaning on the
17 expense of the general public's health and
18 well-being.

19 Since first addressed in the 1998 West
20 Kootenay Power Oliver Osoyoos 63 kV
21 transmission line hearing, the
22 electropollution is ..."

23 THE CHAIRPERSON: Excuse me, sir. Are you getting to a
24 question, or are you still just reading your
25 statement?

26 MR. KAROW: I'm getting to the question.

1 THE CHAIRPERSON: Thank you.

2 **Proceeding Time 9:38 p.m. T16**

3 MR. KAROW: Q: Since first addressed in the 1998 West
4 Kootenay Power Oliver/Osoyoos 63 kV transmission line
5 hearing, the electromagnetic pollution issue has
6 slowly but steadily become a greater and greater
7 evolving concern to the general public, and I dare to
8 say even more than just power lines otherwise harmless
9 as stated. Indeed the EMF issue is now for FortisBC
10 quite an obstacle, starting here out of the Exponent's
11 website on the capabilities it raised via -- to
12 overcome seemingly insurmountable obstacles.

13 Can you give a position to that section
14 please, Mr. Sam?

15 MR. SAM: A: Our only position would be we hired Dr.
16 Bailey as an expert witness to share facts about EMF
17 and their potential health impacts associated with
18 electromagnetic fields. That's the only position I
19 can give.

20 MR. KAROW: Q: Okay. Mr. Sam, assuming you have 1
21 milligauss magnetic field on clothes on one side of
22 your baby's head, how many milligauss would you read
23 on the other side of your baby's head? If you have 1
24 milligauss right here on this side here, if you have a
25 baby, how much will read to you on that side?

26 And another question to --

1 MR. BAILEY: A: If we could respond, if I understand
2 the question is whether a 1 milligauss field on one
3 side of the head, what would the field be on the
4 opposite side of the head? Is that the question?
5 MR. KAROW: Q: How much would be produced on the other
6 side?
7 MR. BAILEY: A: How much would be produced on the other
8 side?
9 MR. KAROW: Q: Reduced, the magnetic field level,
10 whether it will be reduced. If you had 1 milligauss
11 here and it's going through that hat and here, would
12 you agree it's the same amount?
13 MR. BAILEY: A: It would be essentially the same
14 amount.
15 MR. KAROW: Q: Good. Is it correct to say that DC,
16 meaning direct current, magnetic field, do not induce
17 a current in conductive material not in motion?
18 MR. BAILEY: A: If the material is not in motion,
19 that's correct.
20 MR. KAROW: Q: Good. Is it correct to say that AC,
21 alternative current magnetic field -- is it correct to
22 say that AC, alternative current magnetic field
23 inducing a current in conductive not material?
24 MR. BAILEY: A: I couldn't hear the last part of the
25 statement. If you could read it again.
26 MR. KAROW: Q: Whether AC magnetic field induce a

1 current in conductive material.

2 MR. BAILEY: A: Correct.

3 MR. KAROW: Q: And living tissue of plants, animals and
4 humans are conductive materials as well?

5 MR. BAILEY: A: Yes.

6 MR. KAROW: Q: So magnetic field induced changes in
7 cell components?

8 MR. BAILEY: A: There are reports in the literature at
9 sufficient intensity and other conditions that
10 magnetic fields can induce currents and voltages in
11 conductive materials that include cells, and there are
12 reports in literature of biological changes.

13 MR. KAROW: Q: I didn't quite get that, but I want to
14 know whether there is any biological effect on the
15 cellular level. If you can explain it a little bit
16 shorter for me.

17 MR. BAILEY: A: I'm not sure what your question is,
18 sir.

19 MR. KAROW: Q: If magnetic fields on the cellular level
20 induce any changes.

21 MR. BAILEY: A: Yes, there are reports in the
22 literature to that effect.

23 MR. KAROW: Q: So there are changes, right?

24 MR. BAILEY: A: Under the appropriate conditions and
25 intensities, yes.

26 Proceeding Time 9:43 a.m. T17

1 MR. KAROW: Q: Okay. Is it correct to say that if an
2 underground transmission line or distribution line is
3 not shielded, that the magnetic field exposure would
4 be higher than above -- than coming from above power
5 lines, because above power lines are further away from
6 humans when walking over the undergrounded unshield
7 power line?

8 MR. BAILEY: A: You're talking about an underground
9 versus overhead lines?

10 MR. KAROW: Q: Yeah. An underground unshielded power
11 line versus overhead power line.

12 MR. BAILEY: A: Okay. It would depend upon the
13 distance. If you were standing directly underneath
14 the overhead conductors and directly over the
15 underground conductors, depending upon the design of
16 the line, the current, the magnetic field, it could be
17 higher from the underground line than from the
18 overhead line. But the magnetic field from the
19 underground line, again depending upon the specifics
20 of the design, might diminish with distance more
21 rapidly than for an overhead line.

22 MR. KAROW: Q: Is it correct to say that magnetic
23 fields or magnetic forces cannot normally be shielded?

24 MR. BAILEY: A: Most materials would not be effective
25 in shielding magnetic fields, whether they're AC or
26 DC.

1 MR. KAROW: Q: So it cannot be shielded with metal?
2 Not with wood? Not with glass? Not with cement?
3 Plastic? And even by undergrounded power lines
4 magnetic fields, is it penetrating the soil without
5 any reduction?

6 MR. BAILEY: A: Essentially yes. I think -- did I hear
7 "metals" at the beginning of your statement? Because,
8 of course, there are some materials such as ferro-
9 magnetic materials and other materials that have
10 properties of minimizing or reducing magnetic fields.
11 But the other materials you listed would not have an
12 appreciable effect on -- in shielding the magnetic
13 field.

14 MR. KAROW: Q: Could you provide the formula and the
15 distance result down to .3 milligauss for the magnetic
16 field reduction for a hundred milligauss rating at the
17 distance of five inches from 110 volt to 12 volt
18 voltage converter pack, could not plug you --
19 converter plug for laptops and whatever, TVs. Like
20 for radio alarm clock, or (inaudible) phone,
21 Playstations. And could you provide the same formula
22 also for a 100 milligauss reading at the distance of 5
23 metres of the centre for 160 kilovolt transmission
24 line?

25 **Proceeding Time 9:47 a.m. T18**

26 If you don't find the formula, I'm happy if

1 you can have that as an undertaking. What I basically
2 wanted to know is, from this sample of the hundred
3 milligauss converter plug, of five inches, where it
4 can test or measure hundred milligauss, I would like
5 to have a formula for the reduction of the milligauss
6 with the distance. And the same with hundred
7 milligauss under a power line, somewhere under the
8 power line, out of a 160 kV and the reduction of
9 hundred milligauss -- the formula for the hundred
10 milligauss reduction with the distance.

11 MR. BAILEY: A: I think in simplest terms what may be
12 helpful to you is -- and if there's some more specific
13 calculation, the other members of the panels can
14 provide it, is that the -- for most appliances and
15 perhaps this AC plug might qualify, something like
16 this, depending on the design, the fields tend to fall
17 off with the cube of the distance. Whereas fields
18 from an overhead line would in general fall off as the
19 square of the distance.

20 MR. KAROW: Q: Okay.

21 MR. BAILEY: A: And I think that's the general answer
22 to your question.

23 MR. KAROW: Q: So in other words, the hundred
24 milligauss without this plug falls off very quickly.
25 If it's at five inches, hundred milligauss, probably
26 the next five inches is probably ten milligauss and

1 the next five inches probably only one milligauss. Is
2 that correct, just about?

3 MR. BAILEY: A: Well, essentially for the appliances I
4 reviewed, essentially the fields would be one
5 milligauss or less by the time you got maybe seven
6 feet away.

7 MR. KAROW: Q: Good. And a power line, can you give
8 roughly the formula from hundred milligauss to one
9 milligauss, the distance? Just roughly.

10 MR. BAILEY: A: It would be -- again, it would be a
11 function of the configuration. But in general, they
12 would decline as the square of the distance.

13 MR. KAROW: Q: But you agree that the magnetic field is
14 falling off very, very slow? Because I always read in
15 -- even in your Exponent submission, submitted in the
16 Vancouver case, I always read diminishes quickly or
17 diminishes slowly. So, what I wanted to do is, I want
18 to print this under that context. And that is why I
19 was asking for the formula.

20 And you agree that electric fields can be
21 shielded with any objects?

22 MR. BAILEY: A: Yes.

23 MR. KAROW: Q: Evidence B-8, it is Karow Information
24 Request No. 1, B-8. My IR number one. Question
25 answer three, that is on page 1.

26 **Proceeding Time 9:52 a.m. T19**

1 In that -- in the answer that Fortis
2 provided, it is not necessary that you need to look up
3 because I can say it here. In the answer I was
4 referred to the CANCSA website about the transmission
5 line overhead system standards, and I was asking for
6 the code, how power lines, how close they can be built
7 or constructed to homes and roads, and so you referred
8 me to that website and I wanted to download it, but I
9 have to pay \$165 for that and I refuse that.

10 But if you could provide the information
11 for this hearing that the info out of that standard,
12 how close transmission lines, terminal stations and
13 substations can be constructed to roadways, public and
14 private properties, residential buildings, hospitals,
15 schools and nursery. This is kind of an outstanding
16 question for me. Could you provide that information
17 please?

18 MR. SHTOKALKO: A: That information would be referring
19 to electrical safety standards, which are not related
20 to magnetic fields. So those would be relative to
21 electric contact type of concerns. But those could be
22 provided if requested.

23 MR. KAROW: Q: Nevertheless, whether it's related to
24 EMF, but could you provide that information please?

25 MR. SAM: A: I think Mr. Shtokalko has referred to that
26 the standards are related only to electric contact

1 safety and likely do not refer anything to magnetic
2 field and separation between power lines and buildings
3 associated from a magnetic field concern.

4 MR. HARLINGTON: I think Mr. Karow would like the
5 information anyway.

6 MR. SAM: A: Just for the record, Mr. Chairman, we're
7 understanding that those documents are copyrighted, so
8 we would be able to file them in confidence to the
9 Commission but not for general public consumption.

10 THE CHAIRPERSON: Is that acceptable, Mr. Karow? Just a
11 moment, please.

12 Mr. Fulton, I'm not sure what use the
13 Commission would make of this document if we did take
14 it in confidence. Can you help us with that a bit?

15 MR. FULTON: I have that concern as well, Mr. Chairman,
16 and further to that, I wanted to make sure that Mr.
17 Karow understood that if something is filed in
18 confidence with the Commission, that means that he
19 doesn't get to see it.

20 THE CHAIRPERSON: Correct.

21 MR. FULTON: And if this information is not relevant to
22 the proceedings, then in my mind there's no usefulness
23 in having it filed with the Commission even on a
24 confidential basis.

25 MR. KAROW: Mr. Chair, I object. I think this should be
26 at least confidential for me. I asked that question

1 and the answer was not provided, and I want to know
2 what the standards are, never mind the EMF issue. I
3 want to know the standards how close roads and
4 buildings can be constructed to power lines.

5 MR. FULTON: This is an EMF panel, Mr. Chairman. We're
6 dealing with EMF issues. And so to the extent that
7 this request does not relate to EMF issues, in my
8 submission it's not relevant and there's no usefulness
9 in having it filed, even on a confidential basis with
10 the Commission, but as I understand it, Mr. Karow
11 wants to see it on a confidential basis. There's just
12 no usefulness in doing that, Mr. Chairman.

13 THE CHAIRPERSON: Mr. Karow, if you are seeking that
14 information, I think we'll just leave it that you can
15 do what you can to get it on your own, because I don't
16 think we'll accept it on that basis. So please carry
17 on.

18 Proceeding Time 9:56 a.m. T20

19 MR. KAROW: Q: Mr. Sam, could you define the field as
20 such, yeah? The field of a magnetic field. We have a
21 magnetic field. Can you define that field?

22 MR. SHTOKALKO: A: Are you referring to modeling the
23 field around a transmission line?

24 MR. KAROW: Q: Pardon me?

25 MR. SHTOKALKO: A: Are you referring to defining the
26 field by the method of modeling a magnetic field

1 around a transmission line?

2 MR. KAROW: Q: Maybe the next question will help. I'm
3 talking there about the electromagnetic radiation.
4 And the electromagnetic radiation is within the field,
5 or is demonstrating a field. So, if I get you to
6 radiation, could you define radiation? Within that
7 field, there is a radiation. Could you define
8 radiation?

9 MR. BAILEY: A: Mr. Karow, at a frequency of 60 Hertz,
10 these fields do not have practical radiating
11 properties. And so they're not typically referred to
12 as "radiation". And I think the simplest answer for
13 the magnetic field, it's a zone in which charges --
14 moving charges can influence one another.

15 MR. KAROW: Q: Would you agree -- I looked it up on the
16 Internet. A definition is of the -- radiation
17 definition, is emission and propagation and emission
18 of energy in the form of waves, rays or waves. Would
19 you agree to that?

20 MR. BAILEY: A: Could you repeat that again? I'm
21 having trouble hearing you.

22 MR. KAROW: Q: Okay. I'm reading what I got out from
23 the website, the definition of radiation. Would you
24 agree to --

25 MR. BAILEY: A: From -- excuse me, from which website?

26 MR. KAROW: Q: Out of the internet.

1 MR. BAILEY: A: From --

2 MR. KAROW: Q: Out of the internet. If you -- if I
3 Google search for radiation, the meaning of radiation.
4 So, and I got one definition, it says emission and
5 propagation, propagation and emission of energy in the
6 form of rays or waves. Is that correct?

7 MR. BAILEY: A: That's a definition that you've pulled
8 up -- I don't -- I would have to parse it more
9 carefully, but essentially that's trying to describe
10 what a field is. And what I was explaining to you
11 earlier was that at these frequencies, that the
12 radiation properties of the field are minimal compared
13 to and better considered as a zone of influence, as
14 compared to something like an electromagnetic field
15 like light or radar, which is a true propagating
16 field.

17 MR. KAROW: Q: I have another definition, if you can
18 tell me whether you agree to that statement. Energy
19 radiated or transmitted as rays, waves, in the form of
20 particles. You agree with that definition?

21 MR. BAILEY: A: I understand it, yes.

22 **Proceeding Time 10:00 a.m. T21**

23 MR. KAROW: Q: Good. On the same top of my info
24 request I referred before, question number 8, page 4,
25 Table A-8, it's a foldout with the cross-sections, I
26 guess, yeah. And Karow info requests, do you have it?

1 MR. SHTOKALKO: A: Is that referring to the diagram
2 showing cross-sections of the power lines?

3 MR. KAROW: Q: May I be excused and get my bundle?

4 MR. FULTON: Karow Attachment A-8, it's the diagram that
5 we've looked at in other sources yesterday with
6 different power pole structures.

7 MR. SHTOKALKO: A: That block is typical basic
8 structural configurations for EMF calculation, in the
9 lower right-hand side?

10 MR. FULTON: Yes, it is.

11 MR. SHTOKALKO: A: Okay.

12 MR. KAROW: Q: On that sheet, could you provide the
13 phasing orientation of the power lines for the
14 existing 160-161 kV and the alternatives 1A, 1B, 1C,
15 and incorporate the phasing into the structure in this
16 attachment?

17 MR. SHTOKALKO: A: I can do that for most of the
18 structures. There's one I'd have to go refer with one
19 of my colleagues. But for cross-section A, depending
20 which direction you're looking at, it would be
21 typically A, B, C from left to right. Same with
22 cross-section B.

23 For cross-section C we would have from the
24 top to the bottom -- and one of my colleagues may step
25 up to correct me; it would be A, B, C on the left-hand
26 side. On the right-hand side of that cross-section C

1 structure would be C, B, A.

2 MR. HARLINGTON: I'm sorry, could you repeat.

3 MR. SHTOKALKO: A: So cross-section C, the left-hand
4 side of the tall brace post structure, left-hand side
5 at the very top, the lower side of the triangle, will
6 be phase A. Next triangle down, left-hand side, B.
7 Lowest triangle, left-hand side, C phase. Going back
8 to the top triangle, right-hand side, C phase; middle
9 phase B phase; the bottom A phase.

10 MR. KAROW: Q: Thank you. That same sheet, is it
11 correct that the cross-section C as per that
12 attachment has the least magnetic field of all cross-
13 section system on that page?

14 MR. SHTOKALKO: A: Correct.

15 MR. KAROW: Q: Could you explain what causes the
16 reduction of the magnetic field within a that double
17 split configuration?

18 MR. SHTOKALKO: A: For the 1C cross-section there are
19 several features that reduce the magnetic field
20 relative to different -- using the same low currents.
21 The primary improvement on reducing magnetic fields
22 and the sundry electric fields is the opposing phasing
23 configuration. Compared to other phasing
24 configurations it's about -- the worst mitigation to
25 the best is about 33 percent of the maximum. So this
26 configuration gives us the maximum phase opposition

1 which reduces the magnetic field.

2 Proceeding Time 10:04 a.m. T22

3 And in addition, the structure as you see
4 compared to the other structures is fairly tight in
5 the horizontal direction. So we have compaction of
6 the phase spacing. So again that enhances the
7 cancellation between the phases that are imposing
8 themselves in the sequence.

9 MR. KAROW: Q: So in other words, double-split
10 configuration is with guards of electromagnetic field
11 reduction the best solution?

12 MR. SHTOKALKO: A: It is. And we have several tables
13 that indicate its relative performance. And if I
14 could refer you to BCUC IR response 103.3, I believe
15 that is in B-11, there is a table on A-103.3A.

16 MR. HARLINGTON: Excuse me, is this in IR number one?

17 MR. SHTOKALKO: A: This is in BCUC IR number three.

18 MR. HARLINGTON: Number three.

19 MR. SHTOKALKO: A: I believe it's Exhibit B-11. I
20 would refer you to the -- primarily to the middle
21 column, where it talks about the average case magnetic
22 field. And if we go down, and looking at the rows,
23 the first row is the magnetic field calculations for
24 the existing 40 Line at annual average loading. The
25 second one is 76 Line on the forecast 2010 average
26 annual loading. And then for -- referring to the

1 cross-section C, or alternative 1A, if you go down, I
2 think it has 57.7 in the far left-hand column. Going
3 across you can see the calculated magnetic fields.
4 Maximum on the right are 8, on the east side of the
5 right-of-way 1, on the west side of the right-of-way,
6 again 1, since we relocate the pole to the middle.
7 You'll note that that is less than the magnetic fields
8 calculated for the existing transmission line.

9 And again, that's benefiting because of in
10 part the structure with the cancellation advantages of
11 the phase arrangements, as well as the reduced current
12 required to transmit the same amount of load by using
13 the higher voltage. As well as the compact
14 configuration of that particular structure.

15 If you compare that to -- to show the major
16 differences there, I can refer you down to the one
17 labeled 5710, which was cross-section F. That was in
18 response to the Commission's suggestion of a high-
19 capacity single circuit. You see that the magnetic
20 fields are similar, although it's centred on -- are
21 quite similar to the existing line. However, that
22 points up -- the advantage there is, is primarily due
23 to the reduced amount of current for transmitting the
24 same amount of load. So, you see the fields are
25 higher than the preferred solution of using
26 alternative 1A.

1 MR. KAROW: Q: On the page 4, the same question, it is
2 defined as table A-8. Please provide an extra column
3 next to the each alternative of the percentage of
4 magnetic and electric field reduction compared to the
5 existing 161 kilovolt line typically around the
6 Heritage Hill area. Could you incorporate that?

7 MR. SHTOKALKO: A: Sorry, you're asking that at this
8 time?

9 MR. KAROW: Q: The same page, yeah. IR 1, on page 4.
10 It says Karow table A-8. If you could provide extra
11 columns for each power line alternative, the reduction
12 of the percentage reduction of the magnetic and
13 electric field. Of the 161 kilovolt line typical
14 around the Heritage Hills area. Am I -- I mean, for
15 all the lines, which will be when the -- in the area
16 of Heritage Hills.

17 **Proceeding Time 10:10 a.m. T23**

18 MR. SHTOKALKO: A: The numerical values are provided in
19 other responses to the Commission, but we can take
20 those out separately and provide those calculations as
21 an undertaking.

22 THE CHAIRPERSON: Thank you.

23 MR. SAM: A: So, just so I'm clear on the undertaking,
24 you're asking us to compare a table for the
25 electromagnetic fields, comparing to the existing 161
26 kV line and the percentage reductions of the

1 alternatives that are shown in Table A-8.

2 MR. KAROW: Q: Yeah, I want the other -- extra column
3 there, beside, yeah.

4 MR. SHTOKALKO: A: Yeah. We should point out, though,
5 that that information, at least for the magnetic
6 fields, is also provided graphically in 103.3 in the
7 following tables, where you can see the difference
8 between the existing line and the proposed
9 alternatives. But if you want to see it numerically
10 and a percentage, we can provide that as well.

11 **Information Request**

12 MR. KAROW: Q: And in -- on page 7, I question 13, and
13 the response to that question, the average ambient
14 magnetic field level is addressed and encountered by
15 children in B.C. at home by 1.18 milligauss daytime,
16 and 0.97 milligauss during sleep.

17 Does Fortis agree that, with certain
18 measures, the electric magnetic field in homes can be
19 reduced by informed homeowners to near zero, like
20 moving appliance away from the other bedside walls, or
21 turning off panel breakers during night?

22 MR. SHTOKALKO: A: Which question were you referring to
23 in your IR, please?

24 MR. KAROW: Q: My question 2 -- my question 13 on page
25 7.

26 MR. SHTOKALKO: A: IR 1?

1 MR. KAROW: Q: IR 1, yeah.

2 MR. CHERNIKHOWSKY: A: I think it should be noted that
3 the only way for a homeowner to reduce magnetic field
4 within their home to zero, due to equipment in their
5 home, is simply to not use electricity. Moving
6 equipment around in your home may have some effect on
7 reducing the field, but there will still be some field
8 present.

9 MR. KAROW: Q: -- on the countryside, away from power
10 lines, measuring during the daytime 1.18 milligauss
11 and night time 97 milligauss. If I can measure that,
12 can I do something in the home when I'm in front that
13 I can bring it to near zero? Is that correct? Is it
14 under my influence that I can change it to zero?

15 MR. CHERNIKHOWSKY: A: No, I would still take exception
16 with the "near-zero" characterization. It's certainly
17 possible to reduce it somewhat. For example, you
18 could put your bed in one end of the house, and all of
19 the electrical equipment at the other end. That will
20 reduce it. That does not mean it will be near zero,
21 though.

22 MR. KAROW: Q: Let's say .1 milligauss.

23 MR. CHERNIKHOWSKY: A: It depends on the equipment that
24 you have in your house.

25 MR. KAROW: Q: That's right. But I can do it. If I
26 knew what to do.

1 MR. CHERNIKHOWSKY: A: There are measures you can take,
2 yes.

3 MR. KAROW: Q: Yeah, thank you.

4 **Proceeding Time 10:14 a.m. T24**

5 THE CHAIRPERSON: Mr. Karow, excuse me, we're about 10:15
6 and I wonder if this would be a reasonable point for
7 us to take a break for a few minutes>

8 We'll adjourn and reconvene at 10:30.

9 Thank you.

10 **(PROCEEDINGS ADJOURNED AT 10:15 A.M.)**

11 **(PROCEEDINGS RESUMED AT 10:33 A.M.)**

12 THE CHAIRPERSON: Thank you.

13 Mr. Karow, just before we get underway, I
14 should just say that the Panel during the break did
15 consider the matter of taking a view, and our
16 conclusion is that we are interested in taking a view
17 on the boots or tires on the ground, but don't know
18 that there's all that much to be added in terms of the
19 kind offer for a helicopter ride. So that's what our
20 preference would.

21 In order to facilitate that, it would be
22 very useful if somehow we could be provided with a
23 more detailed map than is usually available from the
24 local service station or whatever, so that we have
25 some idea where the various properties are and know
26 what we're looking at. So if that could be

1 facilitated that would be very useful.

2 MR. FULTON: I understand that Mr. Danninger can supply
3 something, so subject to Fortis's input on whether or
4 not that's appropriate for the Commission to have,
5 then that's the route we should go.

6 THE CHAIRPERSON: Fair enough, thank you.

7 Mr. Karow.

8 MR. KAROW: Thank you very much, Mr. Chairman.

9 MR. KAROW: Q: I wanted to get over to the next sample
10 of the exposure in homes, and compared to the Heritage
11 Hills transmission line exposure, the question -- the
12 answer at 13 mentions that high magnetic field levels
13 are measured with distribution and transmission lines.
14 Does Fortis agree that someone living in a home and
15 exposed to 1, 2, 4 or more milligauss magnetic field
16 radiation emitted by nearby power lines cannot reduce
17 force radiations by any means, if the homeowner
18 objects to those radiations?

19 MR. SHTOKALKO: A: I believe the question was, can a
20 homeowner mitigate magnetic fields emanating from a
21 power line in their house, to their house.

22 MR. KAROW: Q: Again please.

23 MR. SHTOKALKO: A: Is the question, can a homeowner
24 reduce magnetic fields entering a house that emanate
25 from a power line outside his house? And the question
26 [sic] to that is no.

1 MR. KAROW: Q: Could you please provide a rough
2 percentage, just a rough percentage of the general
3 public (a) that no part magnetic and electric field
4 from any appliances, including power lines, and (b)
5 would they have knowledge to reduce in room
6 electromagnetic radiation caused by home appliances,
7 house --

8 MR. BAILEY: A: I understand the question to be the
9 approximate percentage of exposure from outside power
10 lines and appliances, is that what I understand your
11 question to be?

12 **Proceeding Time 10:37 a.m. T25**

13 MR. KAROW: Q: I meant in general, whether the general
14 public knows about magnetic and electric fields in
15 homes coming from appliances. Are they aware of that?
16 So, could you give me a rough percentage what you
17 think they know about?

18 MR. BAILEY: A: I don't have any speculation about what
19 percentage of the people are aware of fields from
20 sources within the home. I would imagine that people
21 would have some recognition that electric sources
22 produce fields, although they may not know the
23 particular magnitudes.

24 MR. KAROW: Q: You wouldn't say that hundred percent of
25 the population knows about electromagnetic field from
26 the house?

1 MR. BAILEY: A: I think that would be -- I couldn't
2 assume that about many things, that a hundred percent
3 of the people would know about it.

4 MR. KAROW: Q: And hundred percent of the population
5 knows about power line radiation?

6 MR. BAILEY: A: Again, it's total speculation. I have
7 no data on this.

8 MR. KAROW: Q: I'm -- I just -- I'm saying just
9 roughly, is it hundred percent, or is it 80 percent or
10 50 percent or 30 percent? But I'm just asking you.

11 MR. BAILEY: A: I don't know.

12 MR. KAROW: Q: Pardon?

13 MR. BAILEY: A: I don't know.

14 MR. KAROW: Q: So could it be possible that hundred
15 percent of the population knows about electromagnetic
16 fields from power lines? Yes or no?

17 MR. BAILEY: A: I think that's an unreasonable
18 assumption, but I couldn't give you a specific
19 percentage.

20 MR. KAROW: Q: Are you afraid to tell the truth?

21 MR. BAILEY: A: Could you repeat that?

22 MR. KAROW: Q: Are you afraid to tell the truth?

23 MR. BAILEY: A: I don't have the data, sir, to respond
24 to you.

25 MR. KAROW: Q: So it could be possible that hundred
26 percent of the population knows about electromagnetic

1 fields from power lines and other appliances?

2 MR. BAILEY: A: I suppose it's possible, but it seems
3 to me unlikely. Again, as I said, I have no data on
4 this.

5 MR. KAROW: Q: Thank you. Mr. Sam, give you a turn.
6 Assume we were both neighbours and you sat on one side
7 on the fence, and I on the other side, and we are
8 talking, and all of a sudden I swing a little hammer
9 on your shoulder, bruising you. What would you do?

10 MR. SAM: A: I'm sorry, if you did which?

11 MR. KAROW: Q: If I swing a little hammer on you, on
12 your shoulder, and I'm bruising you, I'm hurting you.
13 What would you do? Would you sue me?

14 MR. SAM: A: There's a lot of speculation in that
15 incident that you have. I'm not sure if I'm prepared
16 to answer that.

17 MR. KAROW: Q: So I can keep on going with the hammer
18 and hit you? Or would you then finally sue me?

19 MR. SAM: A: I think there's too many variables for me
20 to answer the question.

21 MR. KAROW: Q: Well, would you maybe sue me for bodily
22 injury? Is that possible? That tells me enough.

23 Now, the next day, I walk over onto your
24 property, without permission. Is it correct that you
25 legally could sue me for trespass if you object?

26 MR. MACINTOSH: Mr. Chair, I object on the simple point

1 --

2 MR. KAROW: I'm getting very close now to the EMF issue.

3 MR. MACINTOSH: Excellent.

4 MR. KAROW: Q: It's just a little preparation.

5 MR. MACINTOSH: Very good. If you go there, then I'll
6 sit down.

7 MR. KAROW: You can sit down.

8 MR. MACINTOSH: Thank you.

9 MR. KAROW: Q: So, now, if I object five milligauss
10 coming from a close-by power line, onto my property,
11 into my home, into my body, to (inaudible) Mr. Sam,
12 isn't that trespass (inaudible)?

13 MR. SAM: A: The company doesn't believe that magnetic
14 fields are trespass, do not believe that they
15 interfere with the property owner's private use of
16 their land and, as such, are not causing any nuisance
17 to that land, and as such the company is of the
18 position that magnetic fields are not a form of
19 trespass.

20 Proceeding Time 10:41 a.m. T26

21 MR. KAROW: Q: Did you understand, if I object five
22 milligauss coming from a close by power line onto my
23 property, would that considered trespass and/or
24 nuisance if I object to that?

25 MR. MACINTOSH: Mr. Chair, it's a legal point, but I
26 believe that when Mr. Sam answered it the first time

1 he did a pretty good job of it. And obviously as a
2 matter of law, if there was an assertion that there
3 was any harm, then there would have to be a claim made
4 and someone, whether it was a court or a commission or
5 someone, would have to assess whether indeed there was
6 any harm. And prior to that, it becomes all
7 theoretical and academic and speculative.

8 The threshold issue -- I think the
9 foundation issue Mr. Karow is seeking to pursue is
10 whether the EMF causes harm. That's a threshold
11 issue. Perhaps that should be the line of the
12 questioning.

13 MR. KAROW: Not if it causes harm. I'm just talking
14 about trespass, a nuisance.

15 THE CHAIRPERSON: Mr. Karow, I think you put a question
16 to Mr. Sam that certainly was more of a legal in tone,
17 and I don't think Mr. Sam is the one who might best be
18 able to respond to that. He did give you an answer
19 with respect to the company's position and I think you
20 should be satisfied with that.

21 MR. KAROW: Thank you.

22 MR. KAROW: Q: On the question 19 and answer 19, same
23 IR 1, page 10, line 20, there is mentioned, "These
24 currents are not equivalent to a force." Is it
25 correct to say that magnetic field is a force?

26 MR. BAILEY: A: It's a zone in which these charges

1 interact with one another, as we discussed before.

2 MR. KAROW: Q: Pardon me?

3 MR. BAILEY: A: I have already answered that question.

4 MR. KAROW: Q: I want to know, because it's mentioned
5 here, that a magnetic field is a force.

6 MR. BAILEY: A: And the answer I've -- you've
7 previously answered that it's not. It is a -- a
8 magnetic field is a zone in which the charges can
9 interact.

10 MR. KAROW: Q: I want to investigate -- I wanted to
11 know from you, I've got a definition here are also
12 from the internet, the definition that you agree to
13 that, I want to know, just to know, magnetic field is
14 a condition found in the region around a magnet or an
15 electric current characterized by the existence of a
16 detectable magnetic force at every point in the
17 region, and by the existence of magnetic poles.

18 So here in this definition it is said that
19 a magnetic field is a force. Do you agree?

20 MR. BAILEY: A: No. I would accept the definition that
21 you'll find in the standard dictionary used by
22 electrical engineers, *The IEEE Dictionary of Terms*,
23 and I think you'll not find a magnetic field defined
24 as a force in that dictionary. And I would refer you
25 to that.

26 MR. KAROW: Q: Mr. Sam, you have a family and kids,

1 right?

2 MR. SAM: A: Yes.

3 MR. KAROW: Q: And you have a house.

4 MR. SAM: A: Yes.

5 MR. KAROW: Q: Do you have this house insured, right?

6 MR. SAM: A: Yes.

7 MR. KAROW: Q: The insurance is as high as your
8 basement cost of the house, in case, let's say,
9 complete burn down by fire.

10 MR. SAM: A: Yes.

11 MR. KAROW: Q: It is correct to say that most people
12 have a life insurance?

13 MR. SAM: A: I don't about most, but a number of people
14 have life insurance, yes.

15 MR. KAROW: Q: Maybe the order of one million?

16 MR. SAM: A: Sorry?

17 MR. KAROW: Q: Maybe in the order of one million? Just
18 roughly. One million life insurance.

19 MR. SAM: A: Yeah, I would agree with that.

20 **Proceeding Time 10:46 a.m. T27**

21 MR. KAROW: Q: Good. Is that insurance of one million
22 representing the true replacement costs for a human
23 being as well? In case you get killed by an accident.

24 MR. SAM: A: I don't think I can comment on the value
25 of a human life, in financial terms.

26 MR. KAROW: Q: Well, I want to know whether you are

1 worth more than just one million. Compared to the
2 house.

3 MR. SAM: A: Okay, is there a question, sir?

4 MR. KAROW: Q: That is a question, yeah.

5 MR. SAM: A: So could you repeat it?

6 MR. KAROW: Q: You think your life is more worth than
7 just one million.

8 MR. SAM: A: Well, I think my life is worth a lot more
9 than that, but other people probably think it's worth
10 less, so --

11 MR. KAROW: Q: Okay. Could you tell me a reasonable
12 cost to build one kilometers of 230 kV line,
13 transmission line? What is the cost roughly in labour
14 of --

15 MR. SHTOKALKO: A: Sorry, as to which type of 230 kV
16 transmission?

17 MR. KAROW: Q: If you build -- if you construct one
18 kilometers of the 230 kV line, transmission line, how
19 much does it cost, roughly?

20 MR. SHTOKALKO: A: Is that double circuit? Double
21 circuit, as proposed between --

22 MR. KAROW: Q: Well, let's say double circuit, yeah.

23 MR. SHTOKALKO: A: The total loaded cost is
24 approximately just under two million dollars per
25 kilometre.

26 MR. KAROW: Q: A million dollars.

1 MR. SHTOKALKO: A: Two.

2 MR. KAROW: Q: Two. And going by one kilometres of
3 this transmission line, going through Heritage Hills,
4 how many people live, all family members included, in
5 the Heritage Hills such there are 75 metres on either
6 side together -- just roughly. How many people are
7 living there?

8 MR. SHTOKALKO: A: In the entire Heritage Hills area,
9 my understanding there's approximately 206 homes. I
10 do not know how many of those are within 75 metres of
11 the line, so I can't offhand proportion that down to
12 some percentage. But probably --

13 MR. KAROW: Q: A figure. Five? Hundred? Two hundred?

14 MR. SHTOKALKO: A: Well, there's approximately, what,
15 26 properties are immediately adjacent to the right-
16 of-way. So if those are occupied, say an average of
17 2.5 people -- what might be 75 to 100 people. That's
18 a real off-the-cuff guess, you have to recognize.

19 MR. KAROW: Q: Okay. And normally the cost of a new
20 transmission line as being amortized over a span of
21 how many years?

22 MR. SAM: A: I believe it's 45 to 50 years.

23 MR. KAROW: Q: And if the new line is being constructed
24 between Oliver and Osoyoos, or between Oliver and
25 Penticton, will the burden of the costs be put on all
26 ratepayers in the complete Fortis service area? Or

1 just Penticton area? Or heritage area?

2 MR. SAM: A: The present project considers that all
3 FortisBC ratepayers will pay for it.

4 **Proceeding Time 10:51 a.m. T28**

5 MR. KAROW: Q: BCUC IR 3, evidence B-11, attachment A,
6 103.3. Which is four pages after page 40.

7 Where it says magnetic fields at five-metre
8 intervals. On this page, you please highlight
9 magnetic field barriers for all alternative -- for all
10 alternative lines, for homes that are exposed to 1
11 milligauss and up? And include the number of homes
12 that are exposed to this level?

13 MR. SHTOKALKO: A: If you're referring -- sorry, 1
14 milligauss and higher?

15 MR. KAROW: Q: Yeah.

16 MR. SHTOKALKO: A: Within -- I can't tell you the
17 number of homes based on that, but I can refer to --
18 we're looking at BCUC IR 3, attachment 103-3, it's the
19 fold-out table. This was prepared in response to Mr.
20 Karow's request to do magnetic field calculations down
21 to approximately .3 milligauss emanating from the
22 line. And again, if we review the average case, which
23 is the average annual load on the line, if you look at
24 the edge of the right-of-way for the existing line, it
25 would be about -- we have decimal places. It would be
26 about 5 milligauss here on the one side of the

1 existing line, and 19 or 20 milligauss on the other,
2 and about 28 in the centre of the line.

3 In the proposed 1A solution for that area,
4 at the average loading, you'd see we're right on the
5 break point of 1.4 to 1 at the 20 to 25 metre range of
6 the right-of-way. So we're almost at the 1 milligauss
7 level at the edge of the right-of-way with the
8 proposed alternative. So I would assume there
9 wouldn't be that many residence within the right-of-
10 way, so the exposure under 1A under average conditions
11 would be pretty low, or in that 1 milligauss range.

12 MR. KAROW: Q: Well, I'm talking about specifically
13 about the Heritage Hills area. If on that map you
14 could highlight --

15 MR. SHTOKALKO: A: This would be using the type of
16 structures proposed in the Heritage Hills area. They
17 are a mixture which determine the space in between the
18 conductors. If you look at 1A, if we were looking
19 near the structure of the brace post, it's about 1.46,
20 on the edge of the right-of-way, or if it's a davit-
21 arm structure, in the order of 2.1. To get down to 1
22 would be another 10 metres out on the right-of-way.
23 So the magnetic fields using the single-pole type of
24 structures are quite small and fairly confined to the
25 right-of-way, and close to 1 milligauss level.

26 The other alternatives, like the 1B

1 structure, which is cheaper to some degree to build,
2 has somewhat higher levels at the edge of the right-
3 of-way, or if we were compelled to build the single-
4 circuit H-frame structure as opposed to a double-
5 circuit, you note the values again are higher under
6 the 1C column, going up to about 10 to 11 milligauss
7 at the edge of the right-of-way.

8 So, I would say in proposing alternative 1A
9 FortisBC has brought forward a very EMF-reducing and
10 containing solution in this project. It comes apart
11 -- in part, due to the fact that it's a narrow right-
12 of-way and we're able to use the abilities to impose
13 -- of opposing phasing with the double circuits, but
14 the result is in us paying attention to the
15 opportunity to use opposing phasing is, we are able to
16 mitigate EMFs fairly dramatically using alternative
17 1A.

18 **Proceeding Time 10:55 a.m. T29**

19 MR. KAROW: Q: If people buy a piece of property and
20 put a house there, can they go by these numbers, the
21 distance and the magnetic field how high they are
22 exposed?

23 MR. SHTOKALKO: A: They will be -- these are run for a
24 specific type of representative elevation of the
25 conductor. The elevation does vary somewhat through
26 the subdivision. We picked a fairly conservation one

1 so that elevation is representative.

2 You do have some variation due to the side
3 slope elevations between the individual locations.
4 Those might vary for 1A up another milligauss or down
5 a milligauss or almost a milligauss if you're on the
6 downhill slope. So it will be definitely within that
7 range.

8 MR. KAROW: Q: Volume Number 2, the SV -- Exponent
9 paper.

10 MR. MACINTOSH: It's Exhibit B-12. It's Dr. Bailey's
11 report.

12 MR. KAROW: Q: Page number 27, line 22-24.

13 MR. BAILEY: A: Okay, what line number again?

14 MR. KAROW: Q: Page 27, line 22-24.

15 MR. BAILEY: A: 22 to 24?

16 MR. KAROW: Q: Yeah.

17 MR. BAILEY: A: Okay.

18 MR. KAROW: Q: I'm not reading this, but what I want to
19 address is what is the threshold level in percentage
20 of project cost for Fortis, allowing for low to modest
21 cost measures? Do you see what I mean? The project
22 cost is here, and how much percentage would Fortis
23 allow for low to modest cost measures?

24 MR. SAM: A: He hasn't taken the approach to set a
25 percentage for the low cost, but what we've presented
26 in the structure that we've shown as a preferred

1 solution has additional cost to it, but that cost is
2 attributed to both benefits from an EMF perspective as
3 well as an environmental perspective. And also there
4 is obviously, in our opinion, some aesthetic benefits
5 associated with it. So we can't particularly say that
6 we spent 2 percent or 10 percent in particular for
7 EMF. We have a solution that we believe is in the
8 balance of addressing all of those, and those are the
9 costs compared between 1A and 1B predominantly.

10 MR. KAROW: Q: Is that cost already included in the
11 project costs?

12 MR. SAM: A: The costs are included and those would be
13 the low-cost measures that Mr. Shtokalko mentioned.
14 Obviously the poles a little bit higher, the compact
15 design, the phasing, those are costs already embedded
16 in the project, so there is a cost to do that
17 obviously.

18 **Proceeding Time 10:59 a.m. T30**

19 MR. KAROW: Q: Page number 29, line 124. National
20 authorities should implement an effective and open
21 communication strategy to enable informed decision-
22 making by all stakeholders. This should include
23 information on how individuals can reduce their own
24 exposures.

25 Please state further and how far Fortis has
26 provided information on how individuals can reduce own

1 electromagnetic exposures.

2 MR. SAM: A: The company is a member of the Canadian
3 Electric Association, and our manager of environmental
4 health and safety is the member for that. And with
5 that we're lined up with the CA working task force on
6 the transmission, and they monitor all of the
7 scientific research that is happening around the
8 world, and update us, obviously, in accordance with
9 that. So that really brings us the world picture,
10 from a Canadian perspective. And any new information
11 that we gather from that is uploaded to our website.
12 So the information is available on the FortisBC.com
13 website.

14 And obviously as we approach projects, as
15 part of the public consultation process for those
16 projects, EMF is obviously one of the topics that we
17 always talk about. So that's our communication
18 strategy, and that's one of the things that we feel
19 we're doing to inform the public of bringing facts, if
20 they have any concerns associated with electric and
21 magnetic fields.

22 MR. KAROW: Q: I've just got to say that you are not
23 pushing this measure to provide the information to the
24 people or to the ratepayers, with an extra pamphlet in
25 your bills.

26 MR. SAM: A: We do not currently provide a pamphlet in

1 our bills. Obviously customers access our FortisBC
2 website on a regular basis, and obviously as projects
3 that might change from an infrastructure perspective,
4 we do push the EMF information to the potentially
5 affected stakeholders associated with that project.
6 But we do not do a mass mail-out on an annual basis as
7 part of our bills for all of our FortisBC customers.

8 MR. KAROW: Q: Well, on request, could anyone ask
9 Fortis to come to their home and do measurements?

10 MR. SAM: A: Yes, we have entertained those before, and
11 our manager of environmental health and safety has
12 actually taken a milligauss meter to the home, or
13 school, or anywhere there is concerns. So we do offer
14 those services.

15 MR. KAROW: Q: 528 reads, local authorities should
16 improve planning of health EMF in facilities,
17 including better consultation between industry, local
18 government and citizens, and citing major EMF-emitting
19 sources.

20 Has Fortis undertaken any kind of planning
21 and consultation with local authorities and citizens
22 when citing major emitting sources?

23 MR. SAM: A: I would say, again to my earlier answers,
24 if we look at this project, for example, all of the
25 public consultation that occurred with this, and some
26 of those were obviously with municipalities and other

1 government authorities, through that process obviously
2 there's been discussion around electric and magnetic
3 fields. So in that part, I would say we have informed
4 and had discussions with at least the local
5 authorities associated with this project.

6 MR. KAROW: Q: Would you give me an explanation -- as
7 we all know, there are new emission standards in North
8 America for exposure to power line frequency EMR
9 exposures. Several US states -- communities have
10 addressed the EMI issue, usually during regulatory
11 proceedings for proposed transmission lines. For
12 example, (inaudible) country. Audiences have adopted
13 -- have been adopted or other actions aimed to
14 regulate EMI emission and emission from power lines.

15 Could you give me an explanation why, for
16 instance, in Penticton or the Okanagan Valley, we do
17 not have ordinances?

18 **Proceeding Time 11:03 a.m. T31**

19 MR. SAM: A: I can't speak specifically to the City of
20 Penticton, obviously. Our company's position is that
21 the World Health Organization has adopted the ICNIRP
22 Guidelines and believes those guidelines are
23 appropriate for governments and such to consider in
24 the absence of other scientific evidence to say they
25 should be different than that. Can't specifically
26 speak for the City of Penticton or others. I can only

1 suggest that they may not be as concerned about it as
2 other people might be.

3 MR. KAROW: Q: If Penticton would have had an ordinance
4 here, a bylaw, 100 would be the lines 115 kilovolt,
5 you probably would have done the -- put the power line
6 up high.

7 MR. SAM: A: I can't agree with that statement.
8 Obviously the company wishes to work with local
9 municipalities, whether it's their bylaws or the
10 official community plans, but we need to consider that
11 we can't do that at the detriment of all of our other
12 FortisBC customers to deal with what could potentially
13 be a local issue, be it aesthetics or undergrounding
14 or something. So I can't agree with your statement in
15 full, other than we'd like to work with them but not
16 to the detriment where it affects other FortisBC
17 ratepayers outside of that respected municipality.

18 MR. KAROW: Q: Mr. Sam, you are member of Association
19 of Professional Engineers, Geoscientists of B.C. as
20 well as of Alberta?

21 MR. SAM: A: That's correct.

22 MR. KAROW: Q: Are you aware of the association code of
23 ethics?

24 MR. SAM: A: Yes, I am.

25 MR. KAROW: Q: Hold paramount the safety, health and
26 welfare of the public, the protection of the

1 environment, and promote health and safety within the
2 workplace.

3 MR. SAM: A: Yes, I'm aware of that.

4 MR. KAROW: Q: You feel you're doing enough of that?

5 MR. SAM: A: Yes, and I think it's evidence of what's
6 on record here, we've brought forth a project that is
7 shown to actually reduce magnetic fields, if that is a
8 concern for people. Obviously my opinion and
9 obviously the company's opinion is that we go to the
10 World Health Organization and other scientific bodies
11 for that guidance, but we have brought a project forth
12 that if it is a concern for the public that will
13 actually reduce magnetic fields from the current
14 levels, and albeit the company would also just go on
15 the record that even the existing line is well below
16 any guidelines that are adopted by the World Health
17 Organization. So yes, I believe that myself
18 personally and on behalf of the company, that we are
19 complying with that code of conduct.

20 MR. KAROW: Q: But you have a certain background that
21 the EMF levels is allowed up to 833 milligauss, is
22 that correct?

23 MR. SAM: A: I'm sorry, could you repeat the question?

24 MR. KAROW: Q: The magnetic field level allowed up to
25 833 milligauss under the present guidelines. Is that
26 correct?

1 MR. SAM: A: Yes, the World Health Organization has
2 referenced the ICNIRP Guidelines which reference an
3 upper limit of 833 milligauss.

4 MR. KAROW: Q: But in your opinion, if you have a home
5 close by a power line, would you say it's a high
6 magnetic field from the power line?

7 MR. SAM: A: I'm sorry, what is your question? If I
8 have a house near --

9 MR. KAROW: Q: If you say it's a high magnetic field in
10 the order of how many milligauss.

11 MR. SAM: A: I have no reason to believe that my home
12 wouldn't be safe if I'm less than 833 milligauss. I
13 wouldn't have any concerns with that. 833 milligauss.

14 MR. KAROW: Q: You call it safe?

15 MR. SAM: A: I have no reason to believe it wouldn't be
16 safe.

17 MR. KAROW: Q: So you would live with 833 milligauss?

18 MR. SAM: A: Yes, if everything else was equal, the
19 house that I want and everything else, I have no
20 reason to believe that it wouldn't be safe.

21 **Proceeding Time 11:08 a.m. T32**

22 MR. KAROW: Q: In 1998 was a power line hearing,
23 Oliver/Osoyoos, 63 kV line. Where the Commission
24 invited independent EMF expert Dr. Richard Gallagher
25 from the B.C. Cancer Research, and he testified there,
26 and then legal counsel of West Kootenay Power, Mr.

1 Hobbs, who is now chair of BCUC, he asked Mr. Hobbs on
2 page 186 of that transcript, he asked them, and out of
3 the context what Mr. Gallagher said, and those very
4 high magnetic fields are in the order of -- can you
5 just put that into perspective? Mr. Gallagher
6 answered, consistently exposed to, say, three
7 milligauss and up, 3.5 milligauss and up, 4 milligauss
8 and up. Dr. Gallagher said those are already high
9 milligauss levels. And EMF experts of this, and you
10 are saying 833 milligauss is high. Is that correct?
11 MR. BAILEY: A: I don't know who you're asking this
12 question to, myself or Mr. Doyle.
13 MR. SAM: A: We have to assume the reference that
14 you're reading to us correct, but I'm not sure if
15 there's a question in that, other than that.
16 MR. KAROW: Q: I wanted to know, because you realize,
17 and whether you agree that an independent EMF expert
18 stated that 3, 3.5 and 4 milligauss and up is already
19 a high -- very high magnetic field. Do you agree with
20 that, yeah? I read it to you.
21 MR. MACINTOSH: Mr. Chair, the reason I rise to object is
22 because the panel before answering that question would
23 need to see the full transcript from which that
24 extract is being read to have it in context, to know
25 what indeed was being said or not said. That's one
26 concern.

1 The second concern is, that is not evidence
2 in this hearing, and Mr. Karow should ask this panel,
3 who I think are well-qualified to help out, should ask
4 this panel what their opinion is on hurtful and not
5 hurtful levels of milligauss, for example.

6 THE CHAIRPERSON: Mr. Karow?

7 MR. KAROW: Q: I've got another question for Dr.
8 Bailey. Can I ask you how much are you paid for your
9 testimony and your appearance here?

10 MR. BAILEY: A: I am not receiving any compensation for
11 my appearance here. My company charges an hourly
12 rate, and they are compensated for my time and
13 expenses.

14 MR. KAROW: Q: So Fortis is not paid you -- paying you?

15 MR. BAILEY: A: I personally do not receive any
16 compensation from Fortis.

17 MR. KAROW: Q: But Fortis is paying to Exponent -- to
18 the Exponent company.

19 MR. BAILEY: A: Yes.

20 MR. KAROW: Q: Thank you. Can you tell me how much?

21 MR. MACINTOSH: Mr. Chair, from my own viewpoint, which
22 frankly doesn't count for too much on this issue, I
23 would say, I wouldn't care whether this becomes public
24 or not public. I just don't know. I'd have to check
25 with Mr. Fulton what the protocol is at the
26 Commission, whether this is normally disclosed, and

1 get Fortis's instructions. And I can even share it
2 with Mr. Karow during the break, if that's the way
3 it's done. I ordinarily -- that kind of compensation
4 issue isn't discussed as part of a cross, and so I
5 just raise that caveat, that's all.

6 THE CHAIRPERSON: And frankly, Mr. Karow, we would wonder
7 what relevance that has to the matter at hand. So I'm
8 not sure what purpose is served by pursuing that.

9 MR. KAROW: Okay.

10 **Proceeding Time 11:13 a.m. T33**

11 MR. KAROW: Q: According to your CV, you last published
12 a paper in 2003?

13 MR. BAILEY: A: No. Well, let me turn to that. I have
14 a copy of the CV that was filed in the -- at the top
15 it lists on page 2, lists two publications as being
16 "in press". Those have subsequently appeared in
17 publication. There is another paper that appeared
18 about a month ago, which is published in the *Journal*
19 *of Exposure Science and Environmental Epidemiology* and
20 it's an editorial entitled "ICNIRP Evaluation of ELF
21 Magnetic Fields, Public Understanding of the 0.4
22 Microtesla Exposure Metric". And there is another
23 publication which has been accepted for publication,
24 which is a major review of research on guideline
25 setting.

26 MR. KAROW: Q: In the application, Exhibit B1-1, you

1 don't need to look it up. I can read this. Tab 4,
2 page 48 it says under line 4-5:

3 "Electric magnetic fields (EMF) - All route
4 line designs will meet the ICNIRP reference
5 levels for public exposures."

6 Is it correct that those guidelines only apply for
7 short-term acute exposure with terminal effects?

8 MR. BAILEY: A: No. The ICNIRP has reviewed all of the
9 research on the topic and determined that the only
10 reliable evidence for potential adverse effects was
11 related to short-term exposures, and so they set a
12 limit to protect the public and entire levels of
13 workers against potential adverse effects of very high
14 exposures. They did not in their assessment of the
15 evidence feel that there was evidence that lower
16 exposures would be harmful, whether they were of a
17 short-term or long-term nature.

18 MR. KAROW: Q: But 833 milligauss is the threshold for
19 terminal effects if they are getting higher.

20 MR. BAILEY: A: Well, I wouldn't call it a threshold,
21 because 833 milligauss is what we call a reference
22 level. It's a level that under all foreseeable
23 exposure conditions, that would not produce an
24 internal electric field current density within the
25 body which would be greater than 2 milliamps per
26 metered square. That is the amount of current passing

1 through a cross-section of the body. Higher exposures
2 than that may be permitted under certain circumstances
3 where it could be demonstrated that you haven't
4 exceeded this internal exposure reference limit, or
5 exposure -- basic restriction of 2 milliamps per
6 metered square. But that's the nature of that
7 guideline.

8 MR. KAROW: Q: This guideline is not relevant for long-
9 term chronic exposures with non-terminal effects?

10 MR. BAILEY: A: They reviewed the literature on that
11 and did not conclude that in fact there was evidence
12 for long-term effects. And so therefore the standard
13 was based upon the information that they felt was
14 sufficient to develop a guideline for, and that was to
15 prevent against short-term effects. But they -- in
16 setting that guideline, they reviewed a wealth of
17 evidence that pertained to both short and long-term
18 exposures.

19 **Proceeding Time 11:18 a.m. T34**

20 MR. KAROW: Q: So would it be correct to say that ELF,
21 EMFs below the 833 milligauss threshold, that they do
22 not have any biological effects, even in the molecular
23 level, or on the cellular level?

24 MR. BAILEY: A: They did note that there had been
25 reports in the literature of biological responses at
26 fields below that level. But I think one thing to

1 consider is that many stimuli in our environment will
2 elicit biological responses. The electromagnetic
3 field from the light falling on my eye is producing a
4 biological response. The question is, from a
5 toxicological perspective, is whether those biological
6 responses cause harmful effects. And like everything
7 in the environment, at some sufficiently high level,
8 there can be harmful effects. And so the ICNIRP panel
9 reviewed that evidence and determined that they did
10 not find good justification in that literature for
11 adverse effects below 833 milligauss. Now, there's
12 also -- you should consider that there is a safety
13 factor, that is the actual levels at which there --
14 the highest levels at which exposures are expected to
15 occur without adverse effect are much higher. But
16 they set a safety factor and so that lowers the level
17 to 833 milligauss.

18 MR. KAROW: Q: And the Exponent paper, number 28, it
19 mentions about peer reviewing. Can you explain the
20 process of a peer review? How are the peer reviewers
21 selected?

22 MR. BAILEY: A: Excuse me. Could you repeat the page
23 number and line number again?

24 MR. KAROW: Q: It was page number 28.

25 MR. BAILEY: A: Okay. Line?

26 MR. KAROW: Q: Line -- well, all of the studies are

1 getting peer reviewed before they are published,
2 right?

3 MR. BAILEY: A: Okay, was there a line number?

4 MR. KAROW: Q: I don't have it. Line number seven.

5 MR. BAILEY: A: Okay, I'm with you.

6 MR. KAROW: Q: Basically all studies are peer-reviewed
7 before they are published.

8 MR. BAILEY: A: That's a standard practice for
9 publication of scientific research.

10 MR. KAROW: Q: Can you explain how the peer reviewers
11 are selected?

12 MR. BAILEY: A: It varies depending upon the journal.
13 The journal will have a main editor and also an
14 editorial board, and when papers of particular topics
15 come in, they are routed to the editors, and the
16 editors then will attempt to find anywhere from two to
17 five scientists who are knowledgeable with the subject
18 matter of the paper, and send the manuscript to them
19 to evaluate its scientific merit, whether it's
20 consistent with the topics of the journal, and so on.
21 And a similar process like that is carried out in the
22 evaluation of applications for research funding by
23 scientists, to agencies, will have a peer review
24 process.

25 MR. KAROW: Q: In your opinion, isn't the group of peer
26 reviewers, you think there is an equal number of

1 experts with ties to the industry and independent
2 experts -- you think they are represented in peer
3 reviews?

4 **Proceeding Time 11:23 a.m. T35**

5 MR. BAILEY: A: I can't speak generally. I am an
6 editor of the journal *Health Physics*, and I select
7 reviewers for manuscripts without regard to their
8 affiliation, but only with regard to their knowledge
9 of the scientific topic. And those reviewers could be
10 from many countries, from many different affiliations,
11 private, government, so on.

12 MR. KAROW: Q: You kept the exhibits from Mr.
13 Harlinton? The exhibits from Mr. Harlinton. They
14 are -- C3-6 to C3-17.

15 MR. HARLINGTON: C3-6 to C3-28.

16 MR. KAROW: Q: Mr. Chairman, I wouldn't mind if Mr. --
17 if Dr. Bailey is giving the comment on every one of
18 the exhibits after what's in writing, to save time.

19 THE CHAIRPERSON: I'm sorry, I didn't understand what you
20 were requesting.

21 MR. KAROW: I wanted to know his comments to those
22 exhibits Mr. Harlinton had submitted. For the --

23 THE CHAIRPERSON: You want him to provide comments
24 respecting every one of those documents?

25 MR. KAROW: Comment on those studies. Yeah. Whether he
26 has any comment and whether he realize there is some

1 positive association of magnetic fields and adverse
2 biological effects.

3 THE CHAIRPERSON: That sounds like a rather major
4 undertaking, sir.

5 MR. KAROW: No, not necessarily.

6 THE CHAIRPERSON: Well --

7 MR. KAROW: He could do them very brief.

8 THE CHAIRPERSON: Just a moment. In my view, that is a
9 major undertaking, and if that's what you were
10 requesting, it might have been useful if you'd given
11 him a little bit of advance notice that that might be
12 requested, and I just don't know where you're going
13 with this.

14 MR. KAROW: Q: Dr. Bailey, how long would you -- would
15 it take for you to comment on those files?

16 MR. BAILEY: A: It would take a considerable amount of
17 time. What I could do, rather than comment on these
18 as individual papers, I could put these listings into
19 context in several minutes, without going into each
20 individual paper.

21 THE CHAIRPERSON: I think that would be helpful to the
22 panel. Can we proceed that way, Mr. Karow?

23 MR. HARLINGTON: I think that would be okay.

24 THE CHAIRPERSON: Thank you.

25 **Proceeding Time 11:27 a.m. T36**

26 MR. HARLINGTON: If I may, there was a slight rider

1 there. Some of that evidence is not relevant to what
2 Mr. Karow is intending. Without looking it up, I
3 think you'll find that some of those are referring
4 more to the status of the WHO rather than a scientific
5 paper. Possibly C3-6A would give you the papers he
6 was referring to, plus the one that includes the
7 BioInitiative report. I think they're the major ones
8 he's looking at.

9 MR. BAILEY: A: 3-6A?

10 MR. HARLINGTON: C3-6A gives too many, but there's some
11 in there. I'd need to go look at my evidence to say
12 which ones are relevant. I would say the majority
13 are, but some are not talking about EMF as such and
14 not recent papers. I understand. I'd need to go
15 look.

16 MR. BAILEY: A: Okay, let me try and address these
17 papers in a way that will be helpful. First of all,
18 let me comment on C3-10, which is the summary provided
19 by Ms. Cindy Sage for the BioInitiative report, and I
20 will come back to that.

21 The other papers, some of these papers were
22 already covered in the Exponent report. For instance,
23 the C3-11 is discussed in the Exponent report. C3-14,
24 the Kabuto study, is discussed in the Exponent report.
25 C3-20, the Johansson report, is a review of studies.
26 And the Exponent report focused in the areas of whole

1 animal research and epidemiology research in reviewing
2 individual studies, primary studies, rather than going
3 to secondary sources. And so that was why that was
4 not reviewed.

5 Many of these other papers have been
6 discussed or reviewed by a number of the scientific
7 advisory panels. For instance, the research by Dr.
8 Blank and Dr. Goodman, C3-28, is a continuation in a
9 series of research that they've reported perhaps over
10 a decade. The same thing is true for C3-17 by Dr.
11 Persinger. Similar types of studies like this had
12 been reported. The publication C3-9 by Fedrowitz,
13 again is a publication in a long series from this
14 laboratory.

15 And I think it's important to -- all of
16 these are focusing on different questions and
17 different topics. Some are focusing in in vitro
18 research, isolated cells and tissues. Some of these
19 are human epidemiology studies that are comparing
20 exposures of people with and without diseases and
21 looking to see is there people with certain diseases
22 such as Alzheimer's, do they have higher exposures to
23 magnetic fields and controls? Or they may be animal
24 studies in which animals have been exposed in a
25 laboratory to known levels of fields.

26 So these papers that were listed by title

13 It's kind of like assembling a picture
14 puzzle, you know, on your coffee table. You take
15 those pieces of evidence and fit them together and see
16 how they all fit together, and we look in those
17 studies to review epidemiology research, these human
18 studies. We look at laboratory studies and we look at
19 individual studies of cells and tissues.

21 And by looking at all these together, as
22 explained in our report, we can do a comprehensive
23 evaluation of the research and assess potential risks.
24 So, the best way to judge where we are in the field is
25 to look at a comprehensive review that has considered
26 all these factors. One of the reviews that is

1 mentioned in our report is the World Health
2 Organization review, which was released in June, 2007,
3 which considered all of these studies.

4 I don't think that these individual studies
5 in these individual topic areas, none of them would,
6 by itself, rise to the level that would change that
7 weight of the evidence. These studies, by and large,
8 have the same kinds of strengths and limitations that
9 other studies in the literature have, and have been
10 addressed by these review panels.

11 But I would like to come back and comment
12 specifically about the BioInitiative report. If you
13 haven't printed this out, this is the BioInitiative
14 report. This report was -- consists of 17 chapters.
15 It was assembled by Ms. Cindy Sage, who is not a
16 health scientist, and Dr. David Carpenter, as kind of
17 co-editor. And they assembled submissions from a
18 number of different writers. Ms. Sage herself wrote a
19 good number of those chapters, and this was then put
20 together and published on the internet. As far as I
21 can tell, the group that has put this out, the
22 BioInitiative organization, does -- you know, exists
23 only in the aether. It doesn't have an address, a
24 telephone number, it's not affiliated with any
25 scientific or government agency. And so they have
26 assembled their views and put them out in this

1 document on the web. And so, it's a piece of
2 information that's out there. But I don't think, on
3 careful scrutiny, that this document has had the
4 degree of peer review and addressing the issues in the
5 same way that you have in reports from the World
6 Health Organization.

7 So, that's -- at the risk of going on and
8 on, I will stop there.

9 THE CHAIRPERSON: Just -- Mr. Karow and Mr. Harlingten, I
10 just would point out that this panel is certainly not
11 a scientific panel, to say the very least. And I
12 don't know what use would be served if we explored
13 this whole area very much further. We have before us
14 what we have. And I don't think it would be of
15 particular use to the Commission to -- sir?

16 MR. BLANK: May I step forward and interrupt the
17 proceedings?

18 THE CHAIRPERSON: I'm sorry, just a moment, please.
19 Would you introduce yourself, sir, for starters?

20 MR. BLANK: Yes, I'm Martin Blank. I'm -- the reason I'm
21 stepping forward is that I'm one of the organizers of
22 the BioInitiative report. I'm one of the contributors
23 of the BioInitiative --

24 THE CHAIRPERSON: Well, just -- excuse me, sir.

25 MR. BLANK: Yes. Well, I just feel that it has been
26 misrepresented, and I think perhaps it might be --

1 THE CHAIRPERSON: Well, you will have an opportunity, I
2 understand.

3 Mr. Fulton? Anything to add to that?

4 MR. FULTON: No.

5 THE CHAIRPERSON: Thank you.

6 MR. FULTON: Dr. Blank's time will come.

7 THE CHAIRPERSON: Indeed.

8 MR. KAROW: Q: Dr. Bailey, are you doing biological
9 research experiments?

10 MR. BAILEY: A: I can't -- could you repeat the
11 question?

12 MR. KAROW: Q: Are you doing research or experiments
13 with tissues and so, with the magnetic fields, or are
14 you just concentrating on epidemiology studies?

15 MR. BAILEY: A: In the past, when I was on the faculty
16 of Rockefeller University, I conducted studies with
17 electromagnetic fields. But I am not currently doing
18 that type of work, and most of the studies that I'm
19 doing now are focused on dosimetry and exposure
20 assessment.

21 **Proceeding Time 11:34 a.m. T38**

22 MR. KAROW: Q: The ICNIRP Guidelines, when have they
23 been revised the last time?

24 MR. BAILEY: A: The guidelines were published in 1998
25 and they have been reaffirmed, so to speak, by the
26 World Health Organization. But I am also aware that

1 ICNIRP has a process by which they are continually
2 examining their guidelines and updating them. Most
3 guideline setting organizations have a process like
4 that, and so I understand that they also have been
5 evaluating their guidelines and will be coming out
6 with updated versions in the next, I don't know,
7 several years, I imagine.

8 MR. KAROW: Q: In your opinion, when do you expect
9 those guidelines to come down quite a bit?

10 MR. BAILEY: A: I have no such expectation.

11 THE CHAIRPERSON: I wonder if I could just interrupt you
12 again. I'm a little concerned that we're starting to
13 stray, to some degree, from an examination of the
14 evidence before us and start to explore some other
15 somewhat more remote matters.

16 If you have questions that deal with the
17 evidence that we have, please put them and let's try
18 and be a little more focused.

19 MR. KAROW: Q: I want to address the BioInitiative
20 report. On my question IR No. 1, question 23, page
21 11, I was asking what is Fortis' position with regards
22 with the BioInitiative report, and the answer was the
23 BioInitiative report was posted to an internet website
24 and written by an ad hoc group of 14 scientists
25 unaffiliated with any scientific agency to present
26 their opinions in support of lower exposure standards

1 for electric magnetic fields.

2 Could you tell me what it means, an ad hoc
3 group?

4 MR. BAILEY: A: A group of self-assembled individuals
5 as opposed to a panel of scientists such as might be
6 convened by a government or public agency such as the
7 World Health Organization, which would invite people
8 to participate based upon their training and
9 experience. This was -- by ad hoc I was referring to
10 this is sort of a self-assembled group of individuals.

11 MR. KAROW: Q: In this group of 14 scientists, is there
12 anyone where you can claim he or she is not an EMF
13 expert?

14 MR. BAILEY: A: I haven't -- I'm just looking here at
15 the organizing committee and the participants, and I
16 think the person that best fits that category is Cindy
17 Sage, who to my understanding is not a scientist
18 trained in the health sciences. And I believe that
19 David Gee in Denmark, that EMF is not his principal
20 focus of interest. But the others will all have
21 experience or published in this area, including Dr.
22 Blank who's here today.

23 MR. KAROW: Q: So basically they are all EMF experts.

24 MR. BAILEY: A: I answered, sir.

25 Proceeding Time 11:44 a.m. T39

26 MR. KAROW: Q: Okay, I get it now.

1 The National Institute of Environmental
2 Health and Sciences working group, 1998, is that also
3 an *ad hoc* group?

4 MR. BAILEY: A: I wouldn't characterize it as an *ad hoc*
5 group, no.

6 MR. KAROW: Q: Why not?

7 MR. BAILEY: A: Because it was -- the individual
8 members of the committee did not select one another to
9 join the group. They -- the National Institute of
10 Environmental Health Sciences did its own search for
11 experts in different fields, and pulled them together
12 to review the literature.

13 MR. KAROW: Q: And that Nice group, you're aware that
14 Dr. (inaudible) Sliesen, from (inaudible), was also a
15 member?

16 MR. BAILEY: A: I seem to recall that he was.

17 MR. KAROW: Q: Yes. And he is also not unaffiliated
18 with any scientific group, or any agency. Is this
19 correct?

20 MR. BAILEY: A: To my knowledge he's not.

21 MR. KAROW: Q: Okay. On page -- no, page 12 of my IR
22 1, question 25, and I'm going directly to the answer,
23 A-25, line 15.

24 "Health Canada does not consider guidelines
25 necessary because the scientific evidence is
26 not strong enough to conclude that typical

1 exposures cause health problems."

2 Could you tell me what a typical exposure is?

3 MR. BAILEY: A: Health Canada does not give guidance as
4 to typical exposures. But perhaps they meant that in
5 the course of everyday life, individuals would not
6 have exposures that would exceed the ICNIRP
7 guidelines. And so therefore, if that was then the
8 case, perhaps they felt that there was no need to set
9 a guideline.

10 MR. KAROW: Q: And you agree that a 4 milligauss level,
11 there is a study that found childhood leukemia?

12 MR. BAILEY: A: I think what you're referring to is a
13 gathering of data from a number of different child --
14 studies of childhood epidemiology, and these results
15 were combined in a -- what we call a "meta-analysis".
16 And when they compared the exposures of children with
17 and without leukemia, in this analysis, they did not
18 find a statistical association between the level of
19 magnetic field and childhood leukemia at levels below
20 4 milligauss. That is, if you categorize children at
21 this level, and compare the number of cases and
22 controls, they were similar.

23 Above 4 milligauss, and this is not a spot
24 measurement as we might take at a point in this room,
25 or within a home, or on a playground. It's an
26 estimate of a child's long-term average exposure,

1 perhaps over months or even a year, that there was a
2 statistical association between childhood leukemia and
3 magnetic fields for estimated exposure levels above 4
4 milligauss. So what that means is that if you compare
5 all the children in that exposure category, above 4
6 milligauss, there was more cases of childhood leukemia
7 proportionately in that exposure category than there
8 were controls. And that's what the nature of the
9 statistical association was that was reported.

10 So, yes, I am aware of that.

11 MR. FULTON: Mr. Chairman, I have approached the mike
12 because I'm struggling with time frames here. And
13 Order G-35-08 spoke of what happened since the WHO
14 report in 2007. Now, I have a clear memory of
15 discussing studies on childhood leukemia, or hearing
16 discussions on childhood leukemia, in the VITR
17 proceedings which were in 2006.

18 So I'm not sure whether Mr. Karow is
19 founding his questions on earlier reports or he is
20 approaching his cross-examination of this panel, as he
21 should be, based on what has happened after the WHO
22 report in 2007. And I do really think that we need to
23 impose that discipline on the questions, because
24 otherwise it's an indirect way of circumventing the
25 Commission's order that it passed in terms of the
26 scope of these proceedings.

1 THE CHAIRPERSON: Thank you. Mr. Karow, will you respond
2 to that? In the form of what questions you have --
3 may have remaining? And may I ask you, at this point,
4 how much longer you think you might be?

5 **Proceeding Time 11:15 a.m. T40**

6 MR. KAROW: I have one more question.

7 THE CHAIRPERSON: One more?

8 MR. KAROW: Yeah.

9 THE CHAIRPERSON: Thank you.

10 MR. KAROW: Q: Dr. Bailey, are you saying that there
11 are no long terminal effects caused or induced or
12 associated by magnetic fields below 833 milligauss?
13 If there are some, could you tell me a few?

14 MR. BAILEY: A: Biological effects?

15 MR. KAROW: Q: Yes.

16 MR. BAILEY: A: There are a variety of studies that
17 have been reported in the literature. I think in 1999
18 the National Institute of Environmental Health
19 Sciences and their review of the literature commented
20 that there were few reproducible or convincing
21 effects, biological effects that have been reported at
22 levels below 1,000 milligauss. And there are a
23 variety of studies that have been reported in
24 literature, some of which have been mentioned here and
25 in previous reviews. For instance, it's been reported
26 an *in vitro* study that magnetic fields will antagonize

1 the affect of a chemotherapeutic agent, tamoxophen on
2 the response of tumour cells. And a number of
3 laboratories have reported that they appear to have
4 confirmed this finding, and this occurs at a field
5 level of about 12 milligauss *in vitro*.

6 So there are a number of such reports in
7 the literature and there is a continuing search for
8 understanding and confirmation of such claims.
9 Because as I said before, science is a cumulative
10 process and just because someone publishes a paper
11 reporting a particular fact doesn't necessarily mean
12 that scientists would necessarily accept that as
13 "truth". And so we would want to see confirmation by
14 different laboratories under different conditions of
15 that phenomena lest we wind up to be in a position
16 that physicists were in a number of years ago in which
17 there was a great deal of hoopla about cold fusion,
18 and only to find that after enough replications that
19 empirical support for those claims were vanishingly
20 small if not non-existent.

21 And so, you know, there are these reports
22 and a number of them have been replicated to varying
23 degrees, and I think scientists and agencies are still
24 looking for a body of evidence that could be
25 sufficient so that we would -- a large number of
26 scientists would agree that there is a biological

1 mechanism to explain affects of magnetic fields at low
2 levels.

3 MR. KAROW: Q: Mr. Chairman, Dr. Bailey, I was just
4 asking for -- if there are any long terminal effects
5 he's aware of below 833 milligauss. I'm completely
6 lost now with -- by his strong sentence. Either yes
7 or no, that is fine with me.

8 MR. BAILEY: A: Sir, in your previous question I did
9 not hear the word "long-term", and if that is the
10 question now, my answer is I do not know of any long-
11 term effects at levels below 833 milligauss.

12 MR. KAROW: Q: So you don't -- there are no long-term
13 exposures that cause thermal effects, long-term
14 effects.

15 MR. BAILEY: A: I just answered your question, sir, and
16 you've added thermal or non-thermal to it. Magnetic
17 field exposures at these frequencies do not have
18 thermal effects on organisms. So I think we should
19 just leave this as my response at levels below 833
20 milligauss.

21 MR. KAROW: Mr. Chairman, one question. Really a very
22 short one.

23 MR. KAROW: Q: Dr. Bailey, given all things being
24 equal, if two houses, one near a power line and one
25 not, which would you choose?

26 MR. BAILEY: A: My first response to this is that two

1 things are never equal, except in theory. In the real
2 world that will never be the case, but I will tell you
3 that when my wife and I found that we could no longer
4 afford to live in the city, New York, and we moved out
5 to the suburbs, we bought a house that was a
6 baseball's throw away from a high voltage transmission
7 corridor that has perhaps two, 345 kV transmission
8 lines on it, and I had been working and doing research
9 in this field and I discussed this with my wife and I
10 had no concerns about purchasing that house. But that
11 was my own personal judgment.

12 MR. KAROW: Q: My question was a little different. I
13 was just asking about those two houses where
14 everything was equal except the power line.

15 THE CHAIRPERSON: Mr. Karow, I think you got an answer,
16 thank you.

17 MR. KAROW: Thank you very much for your patience and
18 your understanding. Unfortunately I have a hearing
19 problem.

20 THE CHAIRPERSON: Thank you.

21 MR. KAROW: Thank you so much.

22 THE CHAIRPERSON: Mr. Harlinton, do you have anything
23 more or --

24 MR. HARLINGTON: I would like ask a couple of questions,
25 but I will be brief though.

26 THE CHAIRPERSON: That would encouraged.

1 **Proceeding Time 11:56 a.m. T41**

2 MR. HARLINGTON: My questions will refer to the Exponent
3 report.

4 THE CHAIRPERSON: Mr. Harlington, just before you
5 commence, please keep in mind Mr. Fulton's comments
6 about the scope and keep the focus very narrow.

7 **CROSS-EXAMINATION BY MR. HARLINGTON:**

8 MR. HARLINGTON: Q: Dr. Bailey, in the Exponent report
9 you look at the melatonin hypothesis and basically it
10 seems to me that you discard the effects of melatonin,
11 EMF on melatonin and the affect of that on health.
12 Would that be correct?

13 MR. BAILEY: A: I don't think that's a fair
14 characterization, sir, but let's turn to that.

15 MR. HARLINGTON: Q: That's page 44 of the exponent
16 report, B-12.

17 MR. BAILEY: A: Okay, actually the discussion starts on
18 page 43.

19 MR. HARLINGTON: Q: 43, yes.

20 MR. BAILEY: A: And continues over and goes all the way
21 to page 45. And what is summarized here is in
22 summary form what the melatonin hypothesis was.
23 Basically this hypothesis consists of the idea that
24 there is this gland in the base of the brain called
25 the pineal gland, and during the evening hours it
26 secretes a neurohormone called melatonin and during the

1 day, in large part because of ambient lighting, the
2 secretion of this melatonin is drastically reduced.
3 And so the hypothesis came about, well, because
4 visible light can -- striking the eye can lead to a
5 reduction of melatonin during the night, then perhaps
6 other electric fields or magnetic fields might
7 similarly affect the levels of melatonin.

8 Another part of the hypothesis was that
9 melatonin might influence the risk of developing
10 hormonally dependent cancers like breast cancer. And
11 so this hypothesis began to be investigated to see
12 whether electric or magnetic fields decreased levels
13 of melatonin, a next step in this hypothesis is
14 whether decreased levels of melatonin, what effect
15 that had, and then finally, is there a relationship
16 between levels of melatonin and disease.

17 Now, apart from this hypothesis people have
18 also looked independently forgetting about any
19 particular mechanism, is there a link or a causal
20 relationship between exposure to magnetic fields and
21 cancer or some other disease. So I basically
22 summarized this hypothesis and this question had come
23 up often enough in Great Britain that the health
24 protection agency, which has a specialized division,
25 which for decades has been evaluating electric and
26 magnetic field research. They put together a report

1 to examine this hypothesis and we summarized that
2 conclusion there, and then we go on to talk about some
3 of the other experiments that had been conducted since
4 that review.

5 MR. HARLINGTON: Q: Were you aware of the criticism
6 that was leveled at that -- I believe it was the HBA,
7 but it's their subsidiary that does the study.
8 There's quite a lot of criticism because of the
9 ignored data when they made their report. Were you
10 aware of that?

11 MR. BAILEY: A: I'm aware that there are individual
12 scientists who have taken issue with the Health
13 Protection Agency report and that some of these same
14 individuals have problems with every single report
15 that appears, whether it's from the Health Protection
16 Agency, the World Health Organization. And I know of
17 such individuals, but I don't know of reviews by
18 health or scientific agencies that have stepped up to
19 the plate and said, "We think that they are wrong."

20 MR. HARLINGTON: Q: Thank you. To keep in mind what
21 the order was that was mentioned earlier, I'm just
22 going to refer to these but they were raised again
23 later than the VITR decision. We had -- I believe I
24 might be spelling the name wrong, Litter, Ishido and
25 Blackmore. They did studies on melatonin and EMF and
26 they found quite significant effects on the melatonin

1 levels.

2 THE CHAIRPERSON: Excuse me, Mr. Harlingten, can you just
3 give us the dates of those --

4 MR. HARLINGTEN: Well, that's what I say, they were
5 before the date you -- but they were rementioned, and
6 as he covered melatonin and looked at -- mentioned
7 some of those studies, I refer to that. Ishido was in
8 2001. In my evidence I did mention a microwave news
9 report of late December 2005, which grouped them all
10 together. So that's why I mentioned it.

11 THE CHAIRPERSON: Well, I think we're going back to
12 ground that's already been explored, and part of what
13 we were trying to accomplish in trying to put some
14 fencing, if you wish, around this is issue is to just
15 concentrate on very recent events, and I don't see
16 what benefit there is to dragging out a 2001 study and
17 reploting that ground.

18 MR. HARLINGTEN: Okay. Thank you.

19 MR. HARLINGTEN: Q: What about -- you mentioned breast
20 cancer and tamoxophen. I didn't see in the -- I don't
21 think. I could have missed it, there was so much
22 paper. But Gatehurt did some studies, I believe,
23 where he found effects at 12 milligauss on tamoxophen.

24 **Proceeding Time 12:03 p.m. T42**

25 MR. BAILEY: A: Yeah, I'm aware of that.

26 MR. HARLINGTEN: Q: And did that -- it wasn't mentioned

1 in the report and would that not be of concern?

2 MR. BAILEY: A: Well, if you go back and read what the
3 goal of this review was, we did not focus, as is
4 stated in the outright, on *in vitro* studies.

5 MR. HARLINGTON: Q: Okay.

6 MR. BAILEY: A: And we focused on epidemiology studies
7 and studies of whole animals, and several reasons to
8 this. First of all is that the independent reviews
9 from organizations, subsequently the World Health
10 Organization, the International Committee on -- the
11 International Agency for Research in Cancer in their
12 2002 review in which I participated, we had covered
13 many of these studies. And it's also well recognized
14 by risk assessors that in order to make use of these
15 observations of isolated cells and tissues, you have
16 to figure out a way to establish their relevance to
17 whole animals or humans, and also to human health.
18 And that's a very uncertain relationship.

19 And so generally we rely on these studies
20 to, where confirmed, to help us understand mechanisms.
21 And then if we understand the mechanism, then we can
22 have a better perspective on the significance of some
23 other data that we have.

24 But absent a well-evaluated and validated
25 process for relating these *in vitro* studies to human
26 health, all the organizations that I have worked with

1 treat these as supplementary or ancillary data. And
2 so that was a secondary reason for relying on the
3 agencies to review studies in this area, and that's
4 why that study and other *in vitro* studies were not
5 reviewed in detail in this report.

6 MR. HARLINGTON: Q: Thank you.

7 MR. FULTON: Mr. Chairman, Mr. Harlington says that he
8 has about 15 more minutes' worth of questions, so --

9 THE CHAIRPERSON: 15 more minutes? I think we will take
10 a break right now and carry on, unless there's some
11 compelling reason or no one's as hungry as I am.

12 MR. FULTON: That sounds like a compelling reasons, Mr.
13 Chairman.

14 THE CHAIRPERSON: I think I'll survive. It'll be no more
15 than 15 minutes? Maybe we should just continue then.
16 I'm sorry if I changed my mind in midstream here, but
17 -- yeah.

18 MR. HARLINGTON: Q: Could I come back to the melatonin
19 part. You do cover Davis in your analysis there, on
20 page 44, the Davis study in Australia, but you don't
21 mention his reaffirm study in 2006. And this was a
22 study for the benefit -- it's not mentioned there. I
23 believe there was 115 participants, mainly women, and
24 they looked at the effects of melatonin?

25 MR. BAILEY: A: Can you turn to page 44, line 22 and
26 23?

1 MR. HARLINGTON: Q: Yes.

2 MR. BAILEY: A: There is a discussion of Davis *et al*,
3 2006.

4 MR. HARLINGTON: Q: Oh, okay, yes, but you mentioned
5 the HPA review did not consider that because it would
6 come out, I assume, after they'd made their
7 considerations.

8 MR. BAILEY: A: I would assume so.

9 MR. HARLINGTON: Q: Yes. And from what you say, that
10 didn't alter your conclusion. Thank you.

11 You mentioned earlier, I believe, that the
12 hypersensitivity report by Johansson was not included
13 in this because it wasn't part of your mandate, is
14 that correct?

15 **Proceeding Time 12:08 p.m. T43**

16 MR. BAILEY: A: It was -- what we focused on were
17 primary research studies -- reports of collection of
18 data and analyses, not secondary sources such as
19 ordinary reviews that might appear in journals.

20 MR. HARLINGTON: Q: Okay. You looked also at standards
21 set and you looked at, amongst others, a WHO, the
22 SENIHR and SSI. Was there any reason you only picked
23 the European Commission and the Swedish side, not any
24 other country, who happen to have lower standards, but
25 those don't?

26 MR. BAILEY: A: Those organizations were not primarily

1 to set standards, but to evaluate the scientific
2 evidence. And these are the major organizations that,
3 at frequent intervals, for instance, the Health
4 Council of the Netherlands on an annual basis will do
5 an update of research studies on the topic of EMF.
6 And the European Commission has been regularly
7 evaluating this issue. And so those reviews that are
8 performed for a national and international
9 organizations, where they have a multi-disciplinary
10 panel of scientists to evaluate the literature, are
11 the ones that we focused on.

12 MR. HARLINGTON: Q: Okay. You mentioned quite a lot in
13 your report there the WHO monograph of 2007. And you
14 referred to it early when Mr. Karow was questioning
15 you. The report actually, if you look into detail, a
16 lot of that was actually completed in 2005. And Mr.
17 Repichelli and Leka Kiefert were all part of the
18 organization at that time.

19 THE CHAIRPERSON: Mr. Harlington, excuse me. I'm having
20 more trouble, I'm afraid. We have an application
21 before us --

22 MR. HARLINGTON: Yes.

23 THE CHAIRPERSON: For the OTR.

24 MR. HARLINGTON: Correct.

25 THE CHAIRPERSON: And we have some specific evidence in
26 terms of what that will comprise.

1 MR. HARLINGTON: Mm-hmm.

2 THE CHAIRPERSON: I'm not seeing a whole bunch of value
3 to examining what was or was not included in a whole
4 host of studies that seem at best remotely connected
5 to the issue that we have to consider. So, if you
6 could try and focus whatever questions you have left
7 on how any of this impacts the decision that we have
8 to reach.

9 MR. HARLINGTON: Well, the reason I was going this way
10 was because the BCUC are using this report as their
11 guidelines as to what health dangers there are to the
12 public from power lines. And one of the main focuses
13 of the Exponent report is the WHO monograph. And all
14 I wanted to do was to say how reliable that document
15 was that they have used to justify their position.

16 Is this not applicable? Then I won't ask
17 the questions.

18 THE CHAIRPERSON: Well, carry on, but please be brief.

19 MR. HARLINGTON: Q: The reason I was asking the
20 question was because you do mention it quite a lot,
21 and you use it, which is fair, and people do respect
22 the WHO. But in this particular case, the individuals
23 I've mentioned, and you've mentioned Kiefert's quite a
24 lot, have industry -- they work for the industry.
25 Therefore they're not independent, which one would
26 hope. And the WHO themselves have said that they

1 should be -- have any dependence on an industrial --
2 when they do these reports. I believe.
3 MR. BAILEY: A: I think, sir, perhaps you may be
4 misunderstanding the process. The WHO review was
5 conducted by a large number of individuals
6 representing their particular expertise, whether it be
7 toxicology, epidemiology, exposure assessment,
8 engineering and so on. There was not, to my
9 knowledge, although I was not a part of this review,
10 it was not done -- knowing the processes of WHO, it's
11 not done by a single individual. And so I frankly
12 don't see how a single individual, whether it's
13 Michael Repichelli or anyone else who was at WHO,
14 could completely write a report that was acceptable to
15 everyone when those other people were there working
16 together.

17 So, I don't know the details of the -- all
18 of the WHO membership who wrote the sections of the
19 report, but the process, I don't think, would allow
20 for the kind of influence that you envision.

21 MR. HARLINGTON: Okay. Thank you. I'm finished, then,
22 in that case. Thank you.

23 THE CHAIRPERSON: Thank you.

24 MR. FULTON: Mr. Chairman, I have no questions of this
25 panel, so that concludes the cross-examinations. So
26 the next step is for the Commission panel questions,

2 Proceeding Time 12:13 p.m. T44

4 Just before -- Commissioner Nicholls does
5 have about five minutes' worth of questions. At this
6 point, Mr. Macintosh, do you have much, or?

9 THE CHAIRPERSON: Well, I think it would be useful if we
10 tried to finish this panel before we broke for lunch.
11 So Commissioner Nicholls.

15 MR. BAILEY: A: I don't know exactly what it is, but it
16 could be somewhere in the range of 2005 to 2007, maybe
17 2006. Some of the papers that come in are submitted
18 in press, so they've been accepted for publication but
19 they may be available to the reviewing panel anywhere
20 from six months to a year before they actually appear
21 in print. So there could be some late-appearing
22 studies in -- coming after 2005.

26 MR. BAILEY: A: Perhaps. After the Panel concludes its

1 work, there is a tremendous amount of work to go and
2 make sure that all of the citations that were made by
3 the -- in the report were accurate. And if the paper
4 that was cited doesn't match up then they have to go
5 back to the scientists and find out what that is. And
6 so there is -- usually in a report of this size and
7 it's, you know, printed out it's the size of this
8 report, there's a tremendous amount of work just to
9 get that ready for publication.

10 So sometimes there can be a lengthy delay
11 between the conclusion of the deliberations and
12 writing the manuscript and then having it actually
13 appear in print.

14 COMMISSIONER NICHOLLS: Have you personally or the
15 Exponent Group monitored the science since that time,
16 over the last two years?

17 MR. BAILEY: A: Yes, we do.

18 COMMISSIONER NICHOLLS: And in your expert opinion is
19 there anything you've seen since that time that, when
20 added to the other weight of evidence, studies and
21 everything, would indicate a need to revise the ICNIRP
22 Guidelines?

23 MR. BAILEY: A: I haven't seen any scientific
24 developments since that time that would prompt the
25 revision of the ICNIRP Guidelines. I do think that
26 there are -- it could be better written and clearer,

1 and the rationale be brought forth more clearly. I am
2 a member of a standards setting committee, the
3 International Committee on Electromagnetic Safety, and
4 our standard and guideline provides much more
5 information about what studies were relied on for what
6 particular aspects of the standard, an extensive
7 bibliography, and explanations that I think would be
8 beneficial for ICNIRP to include in their next
9 revision.

10 But I don't see a scientific basis of new
11 information that would lead me to conclude that the
12 ICNIRP Guidelines as they stand are not achieving the
13 health protective goals that they envision.

14 COMMISSIONER NICHOLLS: So you haven't seen anything that
15 would show the need for a set of guidelines for the
16 type of exposure that residents get, the 833 standard
17 for short-term and key exposures.

18 MR. BAILEY: A: Or long-term.

19 COMMISSIONER NICHOLLS: Yes.

20 MR. BAILEY: A: I don't see that there's been evidence
21 that would change that. And I think it's important to
22 focus, as the board has talked about, on the matter
23 before you. And it's remarkable -- I don't think I've
24 ever seen a transmission line project where the field
25 levels at the edge of the right of way for a 230 kV
26 line would be in the range of 1 or 2 milligauss. You

1 know. Quite typically that might be considerably
2 higher, higher even than what the existing line. And
3 I think that the actions the company has taken to
4 propose the project in such a configuration that it
5 addresses these multiple issues, citing environmental
6 and EMF concerns, is remarkable that they've gotten
7 this kind of reduction. And I think that type of
8 action is wholly consistent with the kind of
9 recommendations that WHO had in mind, although I would
10 caution that it's not always the case that the
11 circumstances would make it cost-effective to employ a
12 design that would result in such low fields.

13 COMMISSIONER NICHOLLS: Thank you.

14 I have one question for you, Mr. Sam. I
15 was puzzled last night at the community input session
16 with the EMF concerns, and I detected some concerns
17 from the residents that the EMF levels were going to
18 increase greatly. And I was wondering if you had an
19 explanation for that. I wasn't sure if it was a
20 misunderstanding about the effect of voltage versus
21 current, or the disbelief about how phasing can be
22 used.

23 MR. SAM: A: I did have the opportunity to speak to one
24 of the individuals that had spoken, and the
25 information we discussed was on a cross-section of the
26 section of where we actually have, and we haven't

1 proposed it for the existing right of way, but it's a
2 proposal for the upland area, where we have two 230 kV
3 H structures side by side. And so this individual had
4 the EMF profiles of that arrangement and compared to
5 the existing 161, which showed in that arrangement the
6 EMF profiles that the edge of the right were
7 increasing.

8 And so we discussed that that wasn't
9 something the company was proposing for the existing
10 right of way, wasn't possible in the existing right of
11 way, and that we would be looking at other -- there's
12 other information on file that are more representative
13 of our preferred solution, which do show that the
14 magnetic field levels at right of way are reducing.
15 So it was a case of wrong information.

16 **Proceeding Time 12:21 p.m. T45**

17 COMMISSIONER NICHOLLS: Thank you.

18 THE CHAIRPERSON: Mr. Macintosh?

19 **RE-EXAMINATION BY MR. MACINTOSH:**

20 MR. MACINTOSH: Q: Thank you, Mr. Chair. Dr. Bailey, I
21 just would ask you to explain one point. You were
22 referencing two manners -- two methods of research,
23 one being *in vitro* and one being epidemiological. And
24 for people like me, if you could just explain what
25 that difference is in the two different ways of
26 studying EMF forces.

1 MR. BAILEY: A: Okay. Well, in the laboratory we have
2 the advantage of conducting studies under controlled
3 conditions. We can look at animals or cells that are
4 genetically identical. We can maintain the
5 temperature, humidity and we can attempt to minimize
6 extraneous influences. So in the laboratory we can
7 look at the effect of changes in exposure and what
8 that results -- what biological responses result in
9 that. And we do that because we have this controlled
10 environment, and we can conduct these experiments.
11 The experiments -- *in vitro* experiments, literally "in
12 glass", are of these isolated cells and tissue. And I
13 mentioned before that the challenge there is to try
14 and extrapolate our understanding from those studies
15 back to human health.

16 The second type of laboratory studies are
17 of whole animals. And in the early 1990s, Congress
18 appropriated or tried to gather a war chest of \$65
19 million to answer a question that Congress had posed
20 to them, and Congress had said, "Please get to the
21 bottom of this and find out whether these statistical
22 associations that have been reported in some
23 epidemiological studies, what their significance are
24 for human health."

25 And so one of the most important studies
26 that the National Institute of Environmental Health

1 Sciences commissioned was a request that the National
2 Toxicology Program conduct studies in which animals
3 were exposed over their entire lifetime to levels
4 which resulted -- were between 20 milligauss and
5 10,000 milligauss. And to test the idea that perhaps
6 maybe continuous exposure was not as effective as
7 intermittent exposure, they also turned the 10,000
8 milligauss field on and off at, I think, 15-minute
9 intervals for one of the experiments.

10 And similar experiments have been carried
11 out in Canada and in Japan. And these studies have
12 not found that chronic long-term exposure to magnetic
13 fields results in excess cancer in the exposed
14 animals.

15 The third type of research that we have is
16 of looking at human beings in their natural
17 environment and their exposures and the diseases that
18 befall us, and trying to look at those patterns to see
19 if it gives us clues as to what the cause of those
20 diseases might be. The challenge is, obviously, is
21 that people in their natural environment have
22 differing genetics, different exposures, and it's very
23 difficult to make these comparisons when you're
24 dealing with a large diverse population.

25 So we have concerns -- are there other
26 factors that we're not aware of that we haven't taken

1 into account in analyzing these studies? Are there
2 systematic errors in the way that we have selected
3 people to be controls in the experiment? Have we
4 accurately measured their exposures?

5 Proceeding Time 12:25 p.m. T46

6 And so all three of these types of studies
7 are necessary to be considered in doing a health risk
8 assessment, and each of them has their strength and
9 limitations.

10 MR. MACINTOSH: Q: Dr. Bailey, then, you mentioned
11 three kinds of research, if I understood the answer,
12 and one was *in vitro*, which was in the lab in test
13 tubes, essentially. Another was laboratory study with
14 live mammals and another was a study of people in the
15 real world, so to speak.

16 MR. BAILEY: A: Yes.

17 MR. MACINTOSH: Q: And the phrase of epidemiology,
18 would that reference that latter two, or just the last
19 one?

20 MR. BAILEY: A: That would reference just the studies
21 looking at exposures of humans in the natural
22 environment.

23 MR. MACINTOSH: Q: All right, thank you. I just needed
24 to have that clarified for the record for perhaps
25 later purposes.

26 Thank you, Mr. Chair.

1 THE CHAIRPERSON: Thank you. We'll adjourn now for one
2 hour, reconvening at 1:30.

3 Anything in the meantime, Mr. Fulton?

4 MR. FULTON: Yes. Would you like to excuse the panel,
5 then, Mr. Chairman? Because we're finished with the
6 panel.

7 THE CHAIRPERSON: Oh, yes. Yes, of course. And we start
8 this afternoon with Mr. Harlingten's panel, I believe.

9 (PANEL ASIDE)

10 MR. FULTON: Yes, Mr. Chairman.

11 THE CHAIRPERSON: Thank you.

12 (PROCEEDINGS ADJOURNED AT 12:25 P.M.)

13 (PROCEEDINGS RESUMED AT 1:32 P.M.) T47

14 THE CHAIRPERSON: Thank you. Good afternoon.

15 Mr. Fulton.

16 MR. FULTON: Yes, Mr. Chairman. I have one clarification
17 that has been brought to my attention and then Mr.
18 Macintosh has an undertaking to file, and then we'll
19 go to Dr. Blank.

20 THE CHAIRPERSON: Thank you.

21 MR. FULTON: During one of the submissions I made this
22 morning, while Mr. Karow was cross-examining, I
23 believe I inadvertently said that, you know, we were
24 dealing with developments from the WHO -- after the
25 WHO 2007 report. In fact, what I should have said is
26 that developments after the VITR as Exhibit A-9 says.

1 I don't think that impacted on any of the questions
2 that either Mr. Karow or Mr. Harlingten had. I
3 certainly hope it didn't, but I need to make that
4 correction on the record.

5 THE CHAIRPERSON: Thank you.

6 MR. MACINTOSH: Mr. Chair, there is one undertaking I
7 could respond to now. And it arises in yesterday's
8 transcript, volume 2, at page 251, arising from a
9 question Mr. Fulton put to the panel, beginning at
10 line 8. And the question asked was whether the cost
11 premium for using a certain type of conductor was 6
12 percent of another -- of a number, that number being
13 39.180 million. And the answer is, yes. So the
14 undertaking is just to confirm the answer implicit in
15 Mr. Fulton's question.

16 THE CHAIRPERSON: Thank you.

17 MR. FULTON: The next witness is Dr. Blank, and Mr.
18 Harlingten will introduce Dr. Blank.

19 THE CHAIRPERSON: Thank you.

20 **C. HARLINGTEN'S PANEL:**

21 **MARTIN BLANK, Affirmed:**

22 THE CHAIRPERSON: Mr. Harlingten, just before you get
23 underway, sir, just following up on some of the timing
24 challenges that we discussed this morning. I just
25 want to make sure that it's clear that we are not
26 dealing with a generic type of hearing, having to do

1 with EMF. We want to stay very focused on what, if
2 any, impacts EMF can or should have, positive or
3 negative, or whatever, on the project at hand, which
4 you're very familiar with. So if we can please just
5 try and focus the process on that matter, rather than
6 the generic type of discussion we started to get into
7 this morning.

8 **EXAMINATION IN CHIEF BY MR. HARLINGTON:**

9 MR. HARLINGTON: Q: Okay. Mr. Chair, Commissioners.
10 I'd like to introduce Dr. Blank; and Dr. Blank, could
11 you please -- if you have your resume there, I believe
12 -- I think it's the C-32, I think, is in evidence. If
13 anybody needs a copy I have copies here. No? Okay.

14 **Proceeding Time 11:37 a.m. T48**

15 MR. HARLINGTON: Q: Perhaps, Dr. Blank, you'd like to
16 start by just giving us your background and education.

17 MR. BLANK: A: Perhaps if I could just make a statement
18 in the interests of full disclosure, I did have a
19 contract with EPRI, the Electric Power Research
20 Institute, for a number of years in which I did
21 research, and I was also a consultant for EPRI for I
22 think three or four years, I've forgotten, in which I
23 helped to choose contracts, projects for research that
24 were administered out of their headquarters in
25 California.

26 You asked about my education. I came

1 through a public education system in New York City,
2 going through a bachelor's degree up to City College
3 which is actually the same university that Dr. Bailey
4 got his PhD from. I received a PhD from Cambridge --
5 from Columbia University in New York, and I got a
6 second PhD in Cambridge University in England.

7 You might question why one does that, but
8 oddly enough the Brits didn't recognize the first one.
9 They only recognize their own and Oxford and Trinity
10 College Dublin. So it's like earning a million
11 dollars, they say the second is easier than the first.
12 Well, it's true with PhDs as well.

13 MR. HARLINGTON: Q: Amongst your many achievements
14 here, could you perhaps give us one or two of the
15 highlights that were there, that were relevant to this
16 hearing?

17 MR. BLANK: A: Well, I had a very varied kind of
18 experience being in the physical sciences to start
19 with and doing a lot of biological sciences, and I've
20 worked in industry as well, having worked for a number
21 of -- two oil companies for short periods of time, and
22 having worked for various Unilever research labs over
23 in Europe. And so I'm fairly familiar with industrial
24 research. And I also worked for the U.S. Government.
25 I worked for the U.S. Navy both in London as a liaison
26 scientist, and also in Arlington, where I was a

1 contract officer. Technically I guess I was called a
2 biologist, and the setting up of program for research
3 in membranes and electrical effects in membranes.

4 I guess I have a lot of research
5 publications, and I've edited journals and I would say
6 it's been a full and varied career. And one of the
7 highlights I guess is research in EMF because until I
8 found EMF I felt like I was more or less filling in,
9 you know, empty spaces that -- little bits and pieces
10 that were known, whereas EMF produced a real
11 challenge. EMF was an unsolved problem. In fact, I
12 went into it believing that the body is electrical, we
13 all know that, and that electrical effects were
14 responsible for the way in which it functioned. And I
15 had to convince myself, and I did, that very --
16 magnetic fields have profound effects on biological
17 systems and at very low levels. And so that's been an
18 adventure, a scientific adventure.

19 MR. HARLINGTON: Q: Okay, thank you. Dr. Blank, would
20 you like to make an opening statement?

21 MR. BLANK: A: Yes, if I would.

22 Well, let me start referring to Francis
23 Bacon 400 years ago, who set up what science should
24 be. He spoke of science as developing knowledge for
25 power, but not an abstract power but power to do good,
26 the good for humankind. And I guess it's been that

1 sort of feeling that has been motivating lots of
2 scientists and my colleagues and certainly myself, and
3 I think it's been responsible for a lot of what has
4 happened in the nature of the bioinitiative.

5 As scientists we have done a lot of
6 interesting work and important work, I think, and we
7 have seen that the science has not been presented in
8 quite the way it should be. For example, there are
9 ways in which science is presented in connection with
10 the way industry functions, that have in many ways
11 distorted the absolute findings. I take one thing in
12 particular. You take the agreement on epidemiology
13 research that there is an association of childhood
14 leukemia with exposure to magnetic fields between 3
15 and 4 milligauss, and I think it's accepted on both
16 sides of the Atlantic, there are two meta analyses
17 that were published, one by Greenland *et al* and
18 another by Albom *et al*. These contain the results of
19 many studies, reputable studies, and they all agree
20 that it's definitely a risk. Well, that's a low
21 level, 3 or 4 milligauss.

22 **Proceeding Time 1:43 p.m. T49**

23 I've been one of the few people who have
24 measured thresholds. I measure thresholds for
25 biochemical reactions. I studied the reaction of a
26 fundamental membrane component that is found in most

1 cells, the sodium/potassium ATPase, that transports
2 ions across cells. That's the material, that's the
3 protein that sets up the ionic radiance, the membrane
4 potentials, the things that make nerves fire. Nerves
5 couldn't fire if this thing didn't work.

6 Well, it turns out that very few milligauss
7 will affect this thing. It will cause this -- it will
8 accelerate this reaction.

9 I studied another reaction which -- in
10 which the ATPase is a -- gets the fuel, namely the ATP
11 synthase, the enzyme that makes ATP, in cytochrome
12 oxidase. And I found that this, too, can be
13 accelerated. And I studied another reaction which is
14 one of the classic reactions that physicists like to
15 study, the Belousov-Zhabotinsky reaction. And they
16 study this because it's a cyclical reaction, it just
17 keeps on going. You mix the reactants together and
18 you get blue colour coming -- becoming red colour,
19 becoming blue colour. Back and forth, back and forth.
20 One of the things high school demonstrations really
21 delight in. And this, too, is accelerated.

22 They are all accelerated, but they have
23 different frequency optima, and they have different
24 properties. But they're all around -- they're under
25 about 5 milligauss, they are all affected at the
26 threshold.

1 Well, these things tell me that you can
2 have profound effects, not only at the epidemiological
3 level but at fundamental biochemical reactions in
4 cells, and these are the -- and yet you have an ICNIRP
5 that sets up a safety standard, or whatever they call
6 it, a guideline, that allows fields as high as 833
7 milligauss and says that this should be allowed
8 without any, you know, reference to this other work.

9 Now, it's this kind of feeling which has
10 gotten many of us to say our work as scientists is not
11 really being represented, and that is the motivation
12 behind the bio-initiative. We are a group of
13 scientists who got together and decided that it was
14 time for us to do something independent of whatever
15 structures have been developed by society to let our
16 story go out, because part of being a scientist is to
17 publish and let the world know what we have found.

18 And this actually came about at a meeting
19 in -- of the Bioelectromagnetic Society. And I
20 organized a symposium on the precautionary principle.
21 The precautionary principle --

22 THE CHAIRPERSON: Excuse me, Dr. Blank. I think Mr.
23 Fulton would like to make a point.

24 MR. FULTON: Yes, Mr. Chairman. Some latitude now has
25 been offered on the opening statement. I say that
26 because the practice before the Commission, Exhibit A-

1 17 reflects that practice, is that the opening
2 statement is to be presented in writing at least a day
3 before the person gives their evidence. We didn't get
4 a statement from Dr. Blank, and that's -- we've let
5 him go on. But I'm hearing something now that the
6 opening statement should not include, and that is new
7 evidence. That's also reflected in Exhibit A-17.

8 And so, I'm hoping that we're going to come
9 to an end to this quickly so that Dr. Blank is made
10 available for cross-examination, rather than get into
11 all sorts of new evidence that no one has seen before.

12 THE CHAIRPERSON: Fair comment. Dr. Blank, I wonder if
13 you could just sum up.

14 MR. BLANK: A: Well, I'll -- okay. I'll try and wrap
15 this up. But I did want to make the point about the
16 Bio-initiative -- why it arose and who was responsible
17 for it, because this arose at a meeting of the
18 Bioelectromagnetic Society. Three of the contributors
19 are former presidents of the Bioelectromagnetic
20 Society. I think virtually all are members of it.
21 This is -- if you could call it "blue-ribbon", it's a
22 really very highly credentialed group, and it's not a
23 group of writers, as they were characterized earlier.
24 This is a group of scientists. Cindy Sage is -- does
25 not have a Ph.D., but she is very knowledgeable in the
26 literature and in many ways she's like Dr. Bailey,

1 except she has no Ph.D., but she does very similar
2 kind of work.

3 So, what I'm saying is, it's a first-rate
4 report, it was referenced and refereed rather by
5 people who are very well -- highly qualified, Louis
6 Slesin, the editor of *Microwave News*, that was one --

7 THE CHAIRPERSON: Dr. Blank, excuse me. This seems to be
8 a defence of the report, and --

9 MR. BLANK: A: But it's also --

10 THE CHAIRPERSON: -- we're looking for some sort of a
11 summary statement from you so that we could get on
12 with the issue at hand here.

13 MR. BLANK: A: Okay. Well, the summary -- I wanted to
14 say that the Bio-initiative report is a first-class
15 evaluation of the state of research on EMF done by a
16 very competent group aiming to try and get the
17 information before the public. Part of that
18 information says that the levels that are assumed to
19 be safe are really suspect, and one ought to look at
20 them differently. And perhaps amend them -- not
21 "perhaps", we feel that they should be amended.
22 Amended down. Now, this doesn't mean precipitous
23 action.

24 The other thing is, another point that is
25 made frequently, is that nobody seems to know of any
26 mechanism that can explain these things. It's sort of

1 -- if it happens, it happens out of thin air. The
2 fact of the matter is that there has been a lot of
3 interesting research on mechanism that not only gives
4 explanations for a lot of what we find, but can also
5 link the findings that we find at elementary level to
6 the very questions that we're worried about, namely
7 cancer. There's a whole area of DNA research that is
8 not reported in the --

9 THE CHAIRPERSON: Thank you, Dr. Blank.

10 MR. BLANK: A: Okay.

11 MR. FULTON: So, Dr. Blank is now available for cross-
12 examination. Mr. Karow has indicated that he wishes
13 to cross-examine Dr. Blank. What I've told Mr. Karow
14 and Mr. Harlinton is that we don't allow friendly
15 cross-examination.

16 So I suppose the best we can do, Mr.
17 Chairman, is listen to the question and see very
18 quickly whether we come to friendly cross-examination,
19 because again, Exhibit A-17, the procedural letter, is
20 reflective of the Commission's practice. And under
21 the heading, "Cross-examination" on page 4, it says
22 that:

23 "Cross-examination is the questioning of
24 another party's witness. The applicant and
25 intervenors have the opportunity to question
26 the other party's witnesses. Parties who

1 support the testimony of a witness or a
2 witness panel should not expect to cross-
3 examine that witness or witness panel."

4 **Proceeding Time 11:51 a.m. T50**

5 THE CHAIRPERSON: Mr. Fulton, I think you're making a
6 kind offer. I think -- I'm just wondering whether or
7 not we even need to go that far. And Mr. Macintosh, I
8 wonder whether you could share some thoughts on that.
9 I don't see Mr. Karow and Mr. Harlingten's -- no, I do
10 physically see him, but I don't see that he and Mr.
11 Harlingten are at all adverse in interest. So I don't
12 know where we're going with this.

13 MR. MACINTOSH: Probably they're not, Mr. Chair, and
14 probably it will soon be apparent, as Mr. Fulton
15 implied, that their questioning will be friendly and
16 frankly unhelpful in the way the process unfolds. I
17 don't want to take a preemptive position. Although it
18 may just be a formality, I would prefer to reserve my
19 submissions for a minute or two into the cross or a
20 little longer into the cross.

21 THE CHAIRPERSON: Fair enough. I guess we'll invite Mr.
22 Karow to come forward, but again with the caution that
23 we do wish to keep this very, very narrowly focused.
24 We don't want any sort of a generic discussion at this
25 point. We want to get on with whatever impact this
26 might have on the issue at hand, which is the OTR

1 project. @@@

2 Mr. Karow.

3 **CROSS-EXAMINATION BY MR. KAROW:**

4 MR. KAROW: Q: Dr. Blank, do you have the list of
5 exhibits in front of you? Exhibit C3-6, it is the
6 evidence number 1 filed by Mr. Harlingten, "Protein
7 and DNA Reaction Stimulated by Electromagnetic Field
8 Support". With regards of that study, could you tell
9 me at what level of electromagnetic energy could a
10 stress reaction be caused?

11 MR. BLANK: A: The stress response is a natural
12 reaction of cells to all kinds of -- well, a variety
13 of adverse physical stimuli in the environment. It
14 was first identified when temperatures rise, so it was
15 called a heat shock. And what happens is that the
16 cell starts to make proteins, a special class of
17 proteins, about 20 of them, and these are -- they help
18 the cell cope with the problem. In this case proteins
19 that get other proteins, they get out of shape and get
20 degraded, and this helps put them back into shape.

21 The stress response was identified under
22 ELF conditions, again at the order of about 5
23 milligauss or lower. And this is -- and it was found
24 that this very, very low level and believed to have
25 been an unusual thing. But then when studies were
26 done at RF, in which the energy was about 10 billion

1 times higher, a factor of about 10 to the 11th, I did a
2 comparison of the -- I calculated the thresholds for
3 this where one was about 10 to the minus 11 watts per
4 kilogram and the other was 10 to the minus 1 watts per
5 kilogram, something like that. You find exactly the
6 same biochemistry, the same proteins, the same
7 biochemical pathways, the same everything.

8 **Proceeding Time 1:55 p.m. T51**

9 This research has show very clearly that
10 the distinction between thermal and non-thermal is
11 absolutely meaningless at a biological level. And
12 that the basis for safety standards, which is used in
13 the RF range, is not -- is no basis. It's baseless.
14 It's without biological foundation.

15 So, I think that the stress response is
16 something that has turned -- has shown up the need for
17 re-evaluating the standards that are used to assess
18 the biological responses.

19 MR. KAROW: Q: Dr. Blank, does it appear that peak EMF
20 can control and amplify biological process through the
21 effects on charge distribution?

22 MR. BLANK: A: It's not surprising that the electric
23 fields and magnetic fields interact strongly with
24 charges, and the charge that you would expect that
25 they would interact most strongly with would be an
26 electron, that has the highest charge-to-mass ratio.

1 And in fact that's what's been found. So, it's very
2 likely that the -- all of these fields would be
3 affecting the distribution of charges in various kinds
4 of biological molecules. We have found that the --
5 this -- that both electric and magnetic fields, when
6 studied separately, can affect the distribution of
7 charges in enzymes like the sodium-potassium ATPase.
8 We've actually measured the speed with which the -- an
9 electron moves in this molecule as a result of these
10 experiments with the fields, so that these are real
11 effects and they probably are occurring in all
12 molecules where electrons are free to move, and I
13 refer to things like perhaps DNA, where electrons have
14 been shown to move.

15 MR. KAROW: Q: Evidence C3-10, Bio-initiative report,
16 did I get you right, that this report was peer-
17 reviewed?

18 MR. BLANK: A: Yes, there were -- I believe about a
19 dozen referees. I think about half of them are named
20 in the report itself, and the -- they include, as I
21 mentioned earlier, Louis Slesin, the editor of the
22 *Microwave News*. They include Denis Henshaw, probably
23 the best-known physics professor in the British Isles
24 who works on the problems of EMF. The readers of the
25 individual contributors to the Bio-initiative did
26 reviews of other contributors, and someone like David

1 Carpenter, for example, who was the director of the
2 New York State power line study, the original one on
3 EMF, was one of those who did a lot of the refereeing.

4 So there was extensive review by the
5 procedures that are not uncommon to journals.

6 MR. MACINTOSH: Mr. Chair, I rise to object. Your
7 concerns were obviously well-founded. We're batting
8 zero for three with respect to cross-examination.
9 There have been three questions and three answers, and
10 it has nothing whatever to do with cross-examination.
11 It's violating the principles that the Commission has
12 established, and for those who aren't familiar with
13 the process who may be in the audience, we refrained
14 from asking Dr. Bailey equally -- if I can be frank --
15 self-serving questions. And because the rules call
16 for us not to do so. And this process is not proper,
17 in my submission, and I object to it.

18 THE CHAIRPERSON: Mr. Karow, the panel concurs with that
19 view. Unless you have something that will get us back
20 on focus with respect to the specific issue at hand, I
21 think we're done.

22 MR. KAROW: Q: I didn't quite understand. I have one
23 more question for -- another one evidence.

24 THE CHAIRPERSON: Let me hear the question before Dr.
25 Blank starts to respond, to make sure I understand
26 what the question is.

1 MR. KAROW: You ask one more question?

2 THE CHAIRPERSON: Put the question, and we'll see whether

3 or not --

4 MR. KAROW: Q: C3-28. It is the evidence filed by Dr.

5 -- by Mr. Harlinton, and the evidence number 23,

6 Blank and Goodman study, EMS, and the precautionary

7 principle. My question is, what sort measures might

8 the power industry implement in applying the

9 precautionary principle?

10 MR. MACINTOSH: On the same line, Mr. Chair, in my

11 respectful submission, and ought not to be pursued.

12 THE CHAIRPERSON: Thank you. Mr. Karow, I think we're

13 done.

14 Did I understand correctly that the next

15 person up will be Mr. Macintosh? Or do we have

16 someone else?

17 MR. FULTON: I believe that's correct, Mr. Chairman. I

18 should just canvass the room to make sure that there

19 is no one else who intends to cross-examine, Dr.

20 Blank.

21 THE CHAIRPERSON: Thank you.

22 **Proceeding Time 2:00 p.m. T52**

23 MR. FULTON: Then the mike is over to Mr. Macintosh.

24 THE CHAIRPERSON: Thank you.

25 MR. MACINTOSH: Thank you.

26 **CROSS-EXAMINATION BY MR. MACINTOSH:**

1 MR. MACINTOSH: Q: Dr. Blank, could you have --
2 MR. BLANK: A: Could I respond briefly to the question
3 that was asked before, because I think it may be of
4 interest to the power industry.
5 THE CHAIRPERSON: No, sir, you may not.
6 MR. MACINTOSH: Q: Dr. Blank, if you could have placed
7 in front of you a couple of documents, please, which
8 have been filed in this process. And perhaps Mr.
9 Karow or perhaps Mr. Fulton can assist. I need to
10 have in front of you parts of what are found in Volume
11 2 of the Fortis filings, and they are in the category
12 of BCUC Staff IRs, IR No. 3, and that's been marked,
13 as I understand it, as Exhibit B-11.
14 THE CHAIRPERSON: Thank you.
15 MR. MACINTOSH: Q: And within that material, Dr. Blank,
16 if you could turn to a portion of the Fortis response,
17 which is referenced as 103.3, and that should be
18 following a tab in that binder. You may have a tab
19 which reads "BCUC IR 3". Do you have that tab?
20 MR. BLANK: A: No, I have IR 2. Yeah, wait, no -- BCUC
21 IR, yes.
22 MR. MACINTOSH: Q: All right, and once you get to the
23 tab BCUC IR 3, if you'll turn to page 40.
24 MR. BLANK: A: Okay, thank you.
25 MR. MACINTOSH: Q: And what I want to reference in
26 particular are the two pages which follow page 40, and

1 one is a chart of numbers. And at the top of that
2 chart is "BCUC 103.3a". Do you have that?

3 MR. BLANK: A: Yes.

4 MR. MACINTOSH: Q: And the other page I want to refer
5 to is the following page, which is a diagram, and it's
6 referred to as BCUC A 103.3b. Do you have that?

7 MR. BLANK: A: Yes.

8 MR. MACINTOSH: Q: Very well. Have you had the
9 opportunity to see those before?

10 MR. BLANK: A: No.

11 MR. MACINTOSH: Q: What I'm advised is this, is that
12 the chart, which is the first of the two pages I was
13 just referencing, contains the magnetic fields as
14 measured, including measurements at the edge of the
15 rights of way, for the line which is in place now and
16 the line which is proposed, which is sometimes called
17 1A.

18 MR. BLANK: A: At what time were these fields measured?

19 MR. MACINTOSH: Q: What time of day?

20 MR. BLANK: A: Yes.

21 MR. MACINTOSH: Q: I don't know.

22 MR. BLANK: A: Do you happen to know what the load was
23 on the line?

24 MR. MACINTOSH: Q: I do happen to know that I'm not
25 supposed to answer your questions.

26 MR. BLANK: A: Oh, I'm sorry.

1 MR. MACINTOSH: Q: In the second line of this group of
2 different lines, you'll see in the second one "76 Line
3 Cross Section A at 161 kV". Do you see that?

4 MR. BLANK: A: No. Are you on a chart?

5 MR. MACINTOSH: Q: This is on the chart.

6 MR. BLANK: A: Yeah.

7 MR. MACINTOSH: Q: And that will be one of my two
8 reference points.

9 MR. BLANK: A: Say that again.

10 MR. MACINTOSH: Q: Yes. In the second line on the
11 chart you'll see "76 Line Cross Section A at 161 kV
12 (Existing)". All right?

13 **Proceeding Time 2:05 p.m. T53**

14 MR. BLANK: A: Yes.

15 MR. MACINTOSH: Q: And two down from that is something
16 with a 57.7 in the column, and it has "75 Line and 76
17 Line - Cross Section C at 230 Kv". And that is what
18 is proposed by the company. All right?

19 MR. BLANK: A: Yes.

20 MR. MACINTOSH: Q: And implicit in your two questions
21 to me are that there are numerous factors in order to
22 correctly assess and measure what the milligauss are
23 at any time and any place, correct?

24 MR. BLANK: A: Yep.

25 MR. MACINTOSH: Q: And no doubt you could have a
26 learned discussion with anyone who was purporting to

1 take the measurements in order to ascertain that the
2 measurements were reasonable and appropriate
3 measurements. Fair enough?

4 MR. BLANK: A: Mmm.

5 MR. MACINTOSH: Q: That's a "yes"?

6 MR. BLANK: A: Oh, I'm sorry. Yes.

7 MR. MACINTOSH: Q: All right. And it's safe to say,
8 and obviously this is clearly not a criticism; it's
9 safe to say you have no knowledge of the circumstances
10 in which these measurements were taken. That's
11 implicit in your two questions to me, correct?

12 MR. BLANK: A: Correct.

13 MR. MACINTOSH: Q: All right. And so, we -- all we can
14 do is just look at a series of numbers on the page and
15 take for granted that they are appropriate
16 measurements. And of course you would say, "Well,
17 that's taking a lot for granted." Right?

18 MR. BLANK: A: Well, I wouldn't say anything, not
19 having been given any information.

20 MR. MACINTOSH: Q: All right. I'll tell you what this
21 sheet purports to say. It purports to say, with
22 regard to the new line -- I'm sorry, with regard to
23 the existing line, that the average readings for
24 milligauss on the edge of the rights-of-way are 5 and
25 20 respectively, and that, when the new lines are
26 installed, the average readings on the edges of the

1 right-of-way are expected to be 1 milligauss. That's
2 simply what that page purports to state.

3 MR. BLANK: A: Five and twenty?

4 MR. MACINTOSH: Q: Yes. As --

5 MR. BLANK: A: Then you're on the wrong line.

6 MR. MACINTOSH: Q: I think no.

7 MR. BLANK: A: Oh, then I'm on the wrong line.

8 MR. MACINTOSH: Okay, so the second one down --

9 MR. BLANK: A: Yes.

10 MR. MACINTOSH: Q: -- is the existing line.

11 MR. BLANK: A: Right.

12 MR. MACINTOSH: Q: And this is Fortis's representation
13 of what the milligauss readings are at the edge of the
14 right-of-way on average readings.

15 MR. BLANK: A: Mm-hmm.

16 MR. MACINTOSH: Q: Five milligauss and 20 milligauss at
17 the edge of the right-of-way. Do you see that?

18 MR. BLANK: A: Yes.

19 MR. MACINTOSH: Q: And what the company is saying in
20 two lines down from there is that what is called 1A,
21 which is what the company proposes, is likely to have
22 readings of 1 milligauss on the edge of the right-of-
23 way. Do you see that?

24 MR. BLANK: A: Mm-hmm.

25 MR. MACINTOSH: Q: And on the next page, on the next
26 page, which is the diagram, the company has purported

1 to portray that information in the form of a graph.

2 Do you see?

3 MR. BLANK: A: Yes.

4 MR. MACINTOSH: Q: And the vertical axis, you'll see at
5 the top, is the number 200, and that represents 200
6 milligauss. And you'll see the width of the right-of-
7 way is portrayed. Do you see that as depicted on that
8 chart?

9 MR. BLANK: A: Mm, yes.

10 MR. MACINTOSH: Q: And what is purported to be
11 represented on that chart, if you look on it, is that,
12 for the new line -- and if you look in the legend box,
13 in the lower right, you'll see "230 kV average mf".
14 And what that chart purports to calculate, or to plot,
15 is the milligauss reading of 1 milligauss on the edge
16 of the right-of-way, as the average reading with the
17 new lines. Do you see that?

18 MR. BLANK: A: Yes.

19 MR. MACINTOSH: Q: Now, as I said before, you could
20 have a long and learned discussion with those who
21 created this data and portrayed it as to how it was
22 done, and whether it was done right or wrong, and so
23 on, correct?

24 MR. BLANK: A: Well, I mean, it's not an academic
25 thing. The answer always depends on what you put into
26 the equations.

1 MR. MACINTOSH: Q: Of course.

2 MR. BLANK: A: So you have to know the initial
3 conditions before you can make any kind of statement.

4 MR. MACINTOSH: Q: Of course.

5 MR. BLANK: A: But before you go on, could you tell me
6 why the -- it's eccentric in its current condition,
7 but now it's come to the centre of the right-of-way?

8 MR. MACINTOSH: Q: Well, I could. I was warning you,
9 so to speak, not to ask me questions --

10 MR. BLANK: A: Oh.

11 MR. MACINTOSH: Q: -- but any time you ask me one which
12 I know the answer to, I'm happy to change the rules.
13 And what's happening is that the line's going to be
14 built in the middle of the right-of-way now, instead
15 of on the side.

16 MR. BLANK: A: I see. So you're moving it.

17 MR. MACINTOSH: Q: Exactly. So it will be more in the
18 centre, so that the EMF will be reduced for people on
19 one side, and it will be more equal.

20 **Proceeding Time 2:10 p.m. T54**

21 And my point is only this, and I realize
22 this is frankly primitive questioning for someone of
23 your level of learning, but if the data here is
24 correct -- and I realize you're not in a position to
25 challenge that, or at least you haven't been able to
26 do so; but if the data here is correct, can it be

1 measured as contrasted with what is sometimes
2 referenced as the World Health Organization safe
3 level?

4 MR. BLANK: A: I'm not sure I know what you mean. You
5 mean would it confirm with what the World Health
6 Organization says is safe?

7 MR. MACINTOSH: Q: What does it say? What level does
8 it say?

9 MR. BLANK: A: For?

10 MR. MACINTOSH: Q: Prolonged exposure. What milligauss
11 does it say is acceptable?

12 MR. BLANK: A: The ICNIRP level, which is 833
13 milligauss.

14 MR. MACINTOSH: Q: All right. And I only want, of
15 course, to be endeavouring to put into perspective
16 what the measurements appear to be, compared with what
17 the World Health Organization or ICNIRP -- and ICNIRP,
18 as I understand, is a division of the World Health
19 Organization?

20 MR. BLANK: A: As far as I know it's an independent
21 committee.

22 MR. MACINTOSH: Q: Very well, and the World Health
23 Organization is an UN affiliate, is it?

24 MR. BLANK: A: It's part -- it's somehow one of the
25 affiliation -- I'm not quite sure how intimately it's
26 tied. I don't know who appoints whom or what.

1 MR. MACINTOSH: Q: All right, but I'm trying to, of
2 course --

3 MR. BLANK: A: No, I will grant you that there's no
4 question that these numbers, that one number is lower
5 than the other. No question about that.

6 MR. MACINTOSH: Q: I want you to grant me more than
7 that. I think we're on common ground and the
8 Commission is well aware, but I want this clarified
9 perhaps for people here and perhaps more generally for
10 final argument, but the World Health Organization or
11 ICNIRP level for safe exposure is 833 milligauss,
12 correct?

13 MR. BLANK: A: Yes.

14 MR. MACINTOSH: Q: And what is plotted on here as
15 Fortis's best evidence of what is going to be found at
16 the edge of the right of way, is 1 milligauss, right?

17 MR. BLANK: A: Yes.

18 MR. MACINTOSH: Q: So that's 1/833 of what the World
19 Health Organization in 2007 was stating to the world
20 as being a safe level, for milligauss, right?

21 MR. BLANK: A: Right.

22 MR. MACINTOSH: Q: And Dr. Bailey this morning gave his
23 opinion evidence in response to Commission Nicholls
24 that since the World Health Organization published its
25 information in '07 based on data as recent as '05 and
26 to some extent in '06, he is unaware of there having

1 been a government agency of a national government in
2 the world anywhere, or other -- who has published data
3 which has indicated that the level should be lower.
4 Are you aware of any government anywhere in the world
5 which has said that 833 should be lower?

6 MR. BLANK: A: Well, I don't think government agencies
7 are the ones who can judge a scientific question.

8 MR. MACINTOSH: Q: I couldn't hear your comment, sir.

9 MR. BLANK: A: Well, my point is that if you say that
10 government agencies are the only ones who have to --
11 who are able to judge this properly, then I would say
12 they are the only ones. But I am saying that that's
13 the whole point about the bioinitiative. The
14 scientists want to regain their ability to comment on
15 science.

16 MR. MACINTOSH: Q: Of course, and I'm not saying
17 governments are the only ones who can do anything,
18 believe me. But the advantage may be that there is a
19 complete objectivity in a government publication, and
20 whether there is or not, I mean, you and I could argue
21 that forever. My question --

22 MR. BLANK: A: Well, I think one of the points that has
23 come out recently in the news is that one cannot
24 always rely on what government spokesmen say.

25 MR. MACINTOSH: Q: Of course, of course. And again,
26 that's a debate we could be for days. But let me just

1 try and curtail the questioning to something
2 relatively limited. Since the World Health
3 Organization publication in 2007, are you aware of any
4 government agency indicating that the 833 level should
5 be instead a lower level?

6 **Proceeding Time 2:14 p.m. T55**

7 MR. BLANK: A: Well, I already answered that one today.

8 MR. MACINTOSH: Q: With a "No".

9 MR. BLANK: A: Yeah.

10 MR. MACINTOSH: Q: Very well. And indeed, with regard
11 to electromagnetic fields, there may be beneficial
12 usages of them, as I understand it. For deliberately
13 having electric magnetic fields used to treat people
14 in certain circumstances. Is that right?

15 MR. BLANK: A: Yes.

16 MR. MACINTOSH: Q: And are you affiliated with a group
17 that has achieved a patent for using electromagnetic
18 fields in any form of health treatment?

19 MR. BLANK: A: Well, in -- not necessarily health but
20 it's in activating the stress response.

21 MR. MACINTOSH: Q: Very well. Is that part and parcel
22 of a larger health cure?

23 MR. BLANK: A: That's the use that we know, but it's
24 really a magnetic switch that we're interested in
25 that's patented.

26 MR. MACINTOSH: Q: And what group has patented that?

1 MR. BLANK: A: It's Reba Goodman, Hana Lin and myself.
2 MR. MACINTOSH: Q: Is that three people?
3 MR. BLANK: A: Three people at Columbia University.
4 MR. MACINTOSH: Q: And the patent you've secured would
5 enable you to help treat people by exposing them to a
6 certain level of electromagnetic field?
7 MR. BLANK: A: It's not only a certain level, it's
8 certain kinds of signals, but if you look at my CV, I
9 think I've put it down there. We have a paper that is
10 in press now that should be coming out shortly, in
11 which we've actually shown that this is -- yeah.
12 Number 178 in my CV, in the list of papers. It's
13 "Myocardial function improved by electromagnetic field
14 induction of stress protein hsp70".
15 MR. MACINTOSH: Q: All right, so I --
16 MR. BLANK: A: So I certainly agree, and it's in print.
17 MR. MACINTOSH: Q: All right. Let me show you what I
18 think is a copy of that.
19 I'm told, Mr. Chair, that this would become
20 Exhibit B-21.
21 THE CHAIRPERSON: B-21.
22 MR. MACINTOSH: Thank you.
23 THE HEARING OFFICER: Marked B-21.
24 **(PAPER TITLED "MYOCARDIAL FUNCTION IMPROVED BY**
25 **ELECTROMAGNETIC FIELD INDUCTION OF STRESS PROTEIN**
26 **hsp70", MARKED EXHIBIT B-21)**

1 MR. MACINTOSH: Q: Is that in fact the paper you were
2 referencing, sir?

3 MR. BLANK: A: Yes.

4 MR. MACINTOSH: Q: And the marking on it by hand, I
5 should say, is my own. And in the introductory part,
6 what lawyers call the headnote and what scientists
7 probably call something else, I've underlined "Animals
8 were exposed to EMF", and then there's certain data.
9 And I've written 80 milligauss beside that. And is
10 that -- that's a fair extrapolation? It's 80
11 milligauss.

12 MR. BLANK: A: Yes, that is exactly 80 milligauss.

13 MR. MACINTOSH: Q: All right. And this is the paper
14 that is linked to the patent you've obtained for the
15 beneficial use of EMF with respect to helping treat
16 people. All right. And at page 822, just to go to
17 the summary of it, in the right-hand column, at the
18 top of the page, just above the summary and conclusion
19 it says:

20 **Proceeding Time 2:18 p.m. T56**

21 "The use of EMFs for the induction of HSP 70
22 for post..."

23 and then it's a word that I won't properly pronounce.
24 Can you help me?

25 MR. BLANK: A: Post-ischemia-reperfusion.

26 MR. MACINTOSH: Q: "...treatment has clear

1 advantages over the invasive elevated
2 temperature treatment efforts tested to
3 date."

4 And then you reference amounts of it.

5 "This non-ionization EMF induction of hsp70
6 is safe, efficient and practical."

7 And that's a statement you would stand by.

8 MR. BLANK: A: Yes.

9 MR. MACINTOSH: Q: And then --

10 MR. BLANK: A: This is the application of this 80
11 milligauss prior to the -- in this case, prior to
12 induction of ischemia.

13 MR. MACINTOSH: Q: Right. And so the patent you've
14 obtained enables you to hopefully in the years to
15 come, profitably utilize EMF at 80 milligauss to help
16 treat people.

17 MR. BLANK: A: Yes.

18 MR. MACINTOSH: Q: All right. Those are my questions.
19 Thank you very much.

20 MR. BLANK: A: Thank you.

21 THE CHAIRPERSON: I think we're finished, Mr. Fulton?

22 MR. FULTON: Subject to any questions that the Panel may
23 have, and then Mr. Harlingten has any re-examination
24 of --

25 THE CHAIRPERSON: But there are no further parties to
26 examine Dr. Blank, other than that?

1 MR. FULTON: No, Mr. Chairman.

2 THE CHAIRPERSON: Thank you.

3 MR. HARLINGTON: Mr. Chair, Commissioners, I have no
4 follow-up questions either.

5 THE CHAIRPERSON: Commissioner Harle has a question for
6 you, sir.

7 COMMISSIONER HARLE: Dr. Blank, I am interested as a lay
8 person in understanding that if world bodies like
9 World Health Organization, or in our case Canada
10 Health, has not accepted a standard below 833, as to
11 why we should place more credence in alternative
12 groups such as those involved with the bioinitiative?

13 MR. BLANK: A: I think we're talking about science and
14 it's a question of which group is the alternative. I
15 think when you have the scientists themselves coming
16 together and saying that it's -- we are the ones who
17 generated the science, and we're the ones who can tell
18 you how it's done and what it means, and we're the
19 ones who are putting it forward. Rather than to have
20 a kind of second-hand assessment by people whose hands
21 are never wet in the lab, and telling you what that
22 means or what it could mean, it just -- I would argue
23 just the reverse. That I think that scientists should
24 be the ones who present the data, and the public
25 should judge.

26 The idea of having appointed, and these are

1 politically appointed, and even though they say it's
2 scientists and so on, it is -- these are politically
3 appointed. I know it's just the nature of the way
4 things work in this world.

5 For example, I was called down early this
6 spring, the government of Brazil was presenting --,
7 was considering legislation to increase the power on
8 certain lines and certain changes in the radio
9 frequency towers and things like that. So they
10 invited people to give presentations. They invited
11 Emily Vandeventer from WHO, and Paulo Vecchia from
12 ICNIRP, and the people there are very well organized
13 and they said, "Well, we want somebody who is actually
14 involved in the research. We want to hear from people
15 who are scientists, who can tell you." I got an
16 invitation to go down there. Three people were
17 proposed but they could only afford one, and I came
18 down there. And the presentations were very
19 different.

20 The three presentations, I was the one who
21 gave a scientific presentation, showed the data, and
22 told what it meant biologically. The others told you
23 what the functions were of the different
24 organizations, the various committees, their
25 jurisdictions, the criteria that they used for --
26 that's not science. That's not telling you what will

1 hurt people or what'll harm them.

2 I mean, this is a force that affects
3 biology. There are regions where it's harmful, there
4 are regions where it's helpful. It's like any
5 medicine or any force that you use in the world.
6 There are ways in which you can use it to benefit you,
7 but if you use too much -- oxygen, you can't live
8 without it, but give it to preemie too much, you cause
9 blindness. I mean, these are just the facts of life
10 and this is the stuff that scientists can tell you
11 that the other organizations cannot.

12 **Proceeding Time 2:23 p.m. T57**

13 Because -- it's not we're a priesthood.
14 We're just trained differently. We've got -- we've
15 got this kind of hands-on knowledge. I mean, if you
16 want to have a pipe fixed in your kitchen, you call a
17 plumber, because he knows how to do it. And the thing
18 is that if you want a scientific assessment, you call
19 on scientists.

20 THE CHAIRPERSON: Commissioner Nicholls has a question
21 for you as well. Sorry.

22 COMMISSIONER NICHOLLS: Given that, what is your
23 recommendation for us?

24 MR. BLANK: A: Well, here's where I kind of part
25 company, informally, with the Bio-initiative. Like
26 all groups, you have to come to some kind of consensus

1 if you're going to put forward a recommendation, and
2 we came up with a consensus. But I think the real
3 meaning -- and we have a value down there. I mean, we
4 gave you a value of 1 milligauss and a tenth of a
5 microwatt per square centimeter. These are very, very
6 low values and certainly much lower than what's
7 accepted.

8 But what I can tell you is, I think it's a
9 really -- it's a cry -- a *cri de Coeur*. It's -- we
10 want people to recognize that it's time to see that
11 there's information out there that's warning you that
12 there are things that should be looked at and changed,
13 and do it before it's too late. The cell phone issue
14 is one that has come up in the radio frequency, and
15 people are getting more and more alarmed. They had
16 this Larry King show, which showed the story of Johnny
17 Cochrane, the lawyer in the O.J. Simpson trial.

18 COMMISSIONER NICHOLLS: Yeah, I'm aware of that. But --

19 MR. BLANK: A: And he died of a brain tumour.

20 COMMISSIONER NICHOLLS: But this isn't what this --

21 MR. BLANK: A: Pardon me?

22 COMMISSIONER NICHOLLS: That's not what this transmission
23 line is about.

24 MR. BLANK: A: Oh, I know. But I'm saying that people
25 are getting frightened, and the reason they're getting
26 frightened is that they're getting exposed to more and

1 more of this.

2 COMMISSIONER NICHOLLS: But they're not in this case, and
3 that was going to be my next question.

4 MR. BLANK: A: Yes.

5 COMMISSIONER NICHOLLS: You would like countries in
6 general, I gather, to adopt lower limits. But in this
7 case, Fortis has proposed an upgrade that would
8 actually lower EMF.

9 MR. BLANK: A: Yes, well --

10 COMMISSIONER NICHOLLS: And so why -- I'm just wondering
11 for this specific case what do you think we should do?

12 MR. BLANK: A: Well, here I say -- I'm not quite sure
13 what to do. I didn't know the details of the
14 distribution of the magnetic field. I'm not sure I
15 accept everything in here until I know what went into
16 the calculations. I've done some modeling myself, and
17 I know how, if you change the parameters, you can
18 change the curves. So, I have to know what input is,
19 and see just how appropriate the choices were on the
20 model.

21 But by and large, if you have an open mind,
22 and look at the data the way they are, I think
23 reasonable people will come to reasonable choices.
24 And I don't mean to -- this has to be balanced. You
25 guys work with economic constraints and so on, so
26 that's a different story. But science tells you

1 something, and that something should not be distorted
2 because there are money considerations involved as
3 well.

4 I mean, the -- for example, if you want to
5 come up with a certain work earlier, Dr. Bailey was
6 talking about the different kinds of information that
7 goes into finding out what science has to offer. He
8 mentioned *in vitro*, *in vivo*, animal studies, and he
9 left out modeling studies. Modeling studies are an
10 important part that can teach you a lot. But if I can
11 get back to *in vitro*, *in vitro* was left out of his
12 report. And I thought that that is a -- it's a shame,
13 because one of the things that has come from *in vitro*
14 studies is the finding that one can lower the
15 biological effects of EMF by introducing certain kinds
16 of noise into the system. There may be a whole
17 technology that's waiting to be found from the ways of
18 introducing certain kinds of noise. Other kinds of
19 noise are not good.

20 So I think my answer to you is not a real
21 answer, it's to say that -- become aware of all that
22 is known and utilize it as best you can. Regarding
23 this particular case, I don't know -- not having seen
24 all the information, I would not venture an opinion,
25 and even if I ventured an opinion, it would be just
26 one opinion and not that of an expert on line

1 construction.

2 COMMISSIONER NICHOLLS: Thank you.

3 MR. BLANK: A: But as a biologist, I would just say
4 that if you can get that low value, then that's an
5 improvement.

6 COMMISSIONER NICHOLLS: Thank you.

7 THE CHAIRPERSON: Can I just follow up on that, sir. And
8 I think you just got to the point I was wanting to
9 confirm, that based on the chart that you were looking
10 at, and making whatever magnificent assumptions you
11 have to just to accept that data, what we have, we
12 believe, in front of us, is a proposal that reduces
13 the milligauss from whatever the number was down to
14 something significantly less. And that is an
15 improvement, and that's good?

16 **Proceeding Time 2:29 p.m. T58**

17 MR. BLANK: A: If you get that value, then it certainly
18 is an improvement --

19 THE CHAIRPERSON: With that --

20 MR. BLANK: A: One milligauss, one milligauss is
21 certainly lower than what you have now at the edge of
22 the right of way.

23 THE CHAIRPERSON: And that's good.

24 MR. BLANK: A: That would be an improvement.

25 THE CHAIRPERSON: Thank you.

26 MR. BLANK: A: Can I ask you -- but I know the rules

1 don't say that.

2 THE CHAIRPERSON: You can try, but you're not going to
3 get an answer.

4 MR. BLANK: A: How strong a guarantee does one get that
5 once it's up, if you don't get that kind of a result,
6 that you tear it down?

7 THE CHAIRPERSON: I have no response.

8 MR. FULTON: Yes, we'll treat that as a rhetorical
9 question, Mr. Chairman.

10 THE CHAIRPERSON: Thank you, thank you.

11 MR. FULTON: So that then concludes the evidence of Dr.
12 Blank. If he may be excused.

13 THE CHAIRPERSON: He may indeed.

14 (WITNESS ASIDE)

15 MR. FULTON: And the next panel is the SOFAR panel, and
16 we probably need about five minutes to get them
17 settled into --

18 THE CHAIRPERSON: Sure. Could we just take five minutes
19 then and we'll be right back.

20 MR. FULTON: Thank you.

21 (PROCEEDINGS ADJOURNED AT 2:39)

22 (PROCEEDINGS RESUMED AT 2:39 P.M.)

T59

23 THE CHAIRPERSON: Mr. Fulton.

24 MR. FULTON: Mr. Chairman, I have some current news on
25 the maps that we're all hoping to receive, and Mr.
26 Advocaat told me that they should be available at

1 least at the location where they will be available
2 around 3:00, and he's trying to make arrangements for
3 somebody to bring them in, so that ideally we will
4 have them sometime this afternoon. I'll be able to
5 speak with counsel, with Mr. Karow and Mr. Harlingten,
6 on whether or not they're fine with the Commission
7 Panel then going and viewing the areas that are
8 covered by the maps in general, leaving it to the
9 Commission Panel to decide how much time to spend in
10 any of those areas.

11 THE CHAIRPERSON: Thank you.

12 MR. FULTON: Okay, with that, then, Mr. Chairman, I will
13 turn the mike over to Mr. Cairns.

14 THE CHAIRPERSON: Thank you. Mr. Cairns.

15 MR. CAIRNS: Mr. Chairman, Panel, thank you. I'd like to
16 introduce Mr. Chris Daninger and Mr. Robert Advocatt
17 for the SOFAR panel.

18 | **SOFAR PANEL:**

19 CHRIS DANNINGER, Affirmed:

20 **ROBERT ADVOCAT, Affirmed:**

21 EXAMINATION IN CHIEF BY MR. CAIRNS:

22 MR. CAIRNS: Q: Mr. Danninger, can you tell the
23 Commission where you live, what you do for a living,
24 your professional background, and your relationship
25 with the registered intervenor SOFAR? Got all that?

26 MR. DANNINGER: A: Sure. My professional background is

1 forest management and forest sciences. I have an
2 equivalent to a Canadian master's degree from the
3 University of Freiberg, Germany, in forest management
4 and forest sciences, and a master of science of UBC
5 here in British Columbia. Specialization forest
6 management and natural resource management.

7 Since 1992 I own and since 1995 I operate
8 an orchard just south of Heritage Hills, which also
9 accommodates Line L-76. Actually three structures
10 over lengths of 250 metres dissecting the almost
11 square parcel of 46 acres into an upper third, and the
12 lower two-thirds of the property. Since 1995 I
13 renovated the orchard, which was in pretty rough
14 shape, and I bought it and I established high-density
15 sweet cherry orchards, and my products go all over the
16 world.

17 Is that sufficient?

18 MR. CAIRNS: Q: Right, and you're a member --

19 MR. DANNINGER: A: Oh, I'm a member of SOFAR. I
20 originally registered as an independent intervenor,
21 but due to the severe time constraints my current job
22 imposes at this time of the year, I work usually 14 to
23 16 hours seven days a week in the orchard to keep
24 everything on track at this time of the year. I saw
25 no possibility to remain independent, so I joined the
26 SOFAR group.

1 MR. CAIRNS: Q: Do you have a copy of Exhibit C1-12
2 which contains your written testimony?

3 MR. DANNINGER: A: Let's just see, I don't remember
4 these numbers.

5 MR. CAIRNS: Q: You can trust me on that one.

6 MR. DANNINGER: A: Yeah, okay, I do.

7 MR. CAIRNS: Q: Can you confirm that that's your direct
8 testimony filed in this proceeding?

9 MR. DANNINGER: A: That is the letter I wrote, yes, the
10 testimony I wrote.

11 MR. CAIRNS: Q: And you adopt it as your testimony in
12 this proceeding?

13 MR. DANNINGER: A: Yes, I do.

14 MR. CAIRNS: Q: Mr. Advocaat, can you tell the
15 Commission where you live, your professional
16 background, and your relationship with SOFAR?

17 **Proceeding Time 2:43 p.m. T60**

18 MR. ADVOCAT: A: My name is Robert Advocaat, I go by
19 Bob Advocaat. I presently live nowhere. I'm in the
20 process of building a house at 331 Heritage Hills.
21 It's almost done. We're kind of hoping that we're
22 going to be moving in this weekend. But in the
23 meantime, we're living with our children, both in
24 Okanagan Falls. And one of them in Aldergrove.

25 My background is primarily in law
26 enforcement and in private investigation. I am

1 currently employed -- self-employed investigator as
2 well as a RCMP analyst.

3 I believe the next question was my
4 relationship with --

5 MR. CAIRNS: Q: Yeah, SOFAR. How did that all start,
6 and what's your relationship?

7 MR. ADVOCAT: A: Well, basically, it became an
8 amalgamated concern from the residents on Heritage
9 Boulevard, in Heritage Hills. A committee was formed.
10 I volunteered to be a member of that committee. And a
11 result became the official representative for the
12 SOFAR group, which stands for the South Okanagan for
13 the Alternate Route. And at this point we represent
14 about 350 individuals.

15 MR. CAIRNS: Q: Do you have with you Exhibit C1-12,
16 which contains your written testimony?

17 MR. ADVOCAT: A: I do.

18 MR. CAIRNS: Q: And it contains the written testimony
19 of other SOFAR members, is that correct?

20 MR. ADVOCAT: A: Yes, it does.

21 MR. CAIRNS: Q: Can you confirm that's your direct
22 testimony filed in this proceeding?

23 MR. ADVOCAT: A: It is.

24 MR. CAIRNS: Q: Do you have any changes you'd like to
25 make to that testimony?

26 MR. ADVOCAT: A: No.

1 MR. CAIRNS: Q: And do you adopt it as your testimony
2 in this proceeding?

3 MR. ADVOCAT: A: I do.

4 MR. CAIRNS: Q: Mr. Advocat, you have an opening
5 statement you'd like to give, is that right?

6 MR. ADVOCAT: A: I do.

7 MR. CAIRNS: Q: All right, carry on.

8 MR. ADVOCAT: A: Good afternoon, Commissioners, ladies
9 and gentlemen. My name is Bob Advocat. I am here
10 today as a representative of the South Okanagan for
11 the Alternate Route, or SOFAR, which has the support
12 of the residents living and working in the Skaha Lake
13 area. Specifically included are the MacLean Creek
14 lowlands, MacLean Creek Road, the Parsons Road
15 agricultural bench, the Heritage Hills, Lakeshore
16 Heights and Evergreen subdivisions, wineries and
17 orchards all of which oppose FortisBC's proposal to
18 reinforce the power lines on the present right-of-way.

19 In other words, we do not oppose the need
20 for more electrical power but rather, the manner and
21 the method in which FortisBC plans to deliver it. You
22 will find as a part of the submissions in your
23 position a petition verifying this support.

24 I am also here as a normal hard-working
25 citizen, taxpayer and customer of the utility that
26 came from a large family of very modest means and,

1 after 34 years of working as a professional, has
2 finally reached my goal of acquiring a beautiful
3 property to build my dream home, with the intention of
4 retiring there. The reason why I'm recounting my
5 story is because it is typical of those that I
6 represent, and to convey and emphasize that the
7 decisions this Commission will make will impact the
8 host of families just like mine.

9 My property overlooks orchards, a winery,
10 Skaha Lake and finally the mountain range to the west.
11 It is a far cry from the view that I have of my
12 neighbourhood clothesline where I came from in
13 Richmond. However, there are these power lines that
14 run parallel to the property, through the orchards
15 below, that came very close to convincing my wife and
16 I to disregard it. But it was decided that the
17 structures of approximately 55 feet in height
18 supporting three conductors horizontally, were low
19 enough not to impact the majority of the view,
20 although they are located 150 feet from my proposed
21 home site.

22 We were just starting site preparation for
23 the foundation when we received news that FortisBC was
24 proposing to replace these structures with 100-foot
25 towers that would support six conductors configured
26 vertically in three levels of two lines, completely

1 impacting the entire view from the top of the mountain
2 range to the west to the orchard and winery below us.

3 My wife and I were devastated and, yes,
4 resentful. Had it not been for this proposal we would
5 have simply carried on in ignorant bliss, enjoying our
6 surroundings, but not understanding the impact high-
7 voltage power lines impose on us and the environment.
8 This proposal has forced me to research this issue by
9 reading studies and conversing with electrical experts
10 surrounding the field of electromagnetic radiation and
11 corona IM discharge, and the impact these exposures
12 may have on me and my family, as well as my friends
13 and neighbours. Within short order, this became a
14 primary concern as well.

15 No doubt the BCUC has received evidence
16 during the process of the hearing, other applications
17 surrounding electromagnetic radiation and its casual
18 association to most notably childhood leukemia and
19 miscarriages, and that a direct link has been
20 established that EMRs impede the production of
21 serotonin and melatonin in humans, comprising immune
22 systems, psychological well-being and even sleep
23 patterns. This Commission has received evidence
24 verifying that the presence of overhead transmission
25 lines impacts negatively on property values which
26 translates into a reduction to property taxes.

1 Hopefully, you will agree that these assessments are
2 universal. Submissions made by the Tsawwassen
3 residents against high voltage overhead lines is an
4 example.

5 In a technical sense, I am sure some of the
6 evidence did not meet the test of the Commission. But
7 you must ask yourselves, would you live adjacent to a
8 power corridor similar to the one proposed in this
9 application.

10 **Proceeding Time 2:48 p.m. T61**

11 Would the executive of FortisBC do the same?

12 What we hope to convey is the fact that I
13 am not only speaking on my behalf but on the behalf of
14 numerous others, and that other individuals will be
15 doing the same and that we ultimately represent the
16 community and the community consists of individuals
17 that work hard and pay their taxes, who are also
18 clients and customers of FortisBC

19 What we also wish to convey is the fact
20 that we are experienced fears surrounding health
21 issues imposed upon us. Whether these fears originate
22 from establish fact or from casual association is
23 irrelevant. It exists nonetheless, and that fear
24 causes stress, and that stress in itself can be
25 harmful to one's health.

26 The intent of our country's *Charter* is to

1 protect us from those things that interfere with our
2 health and state of mind. It should not be the
3 community that must prove that EMR is harmful to human
4 health but rather the Commission to put the onus on
5 utility companies and charge utilities such as
6 FortisBC to prove that they are not.

7 It is with the foregoing in mind that it is
8 beyond my comprehension, barring the complete loss of
9 one's physical senses, that the planning managers of
10 FortisBC, simply by walking the existing corridor when
11 the project was conceived in 2005, in all common
12 sense, visualized the manifest and negative response
13 such proposal would generate from their customers and
14 clients. What other profit-based organization would
15 go out of its way to enrage their customers,
16 especially when viable alternatives are so blatantly
17 available? To add insult to injury, what other
18 organization would use a profit provided by their
19 customers to legally defend what their customers do
20 not want? At the very least, in principle of
21 fairness, this Commission should charge FortisBC to
22 finance the same level of legal support to its
23 customers that wish to argue against their proposals.

24 I understand that the BCUC does mitigate
25 the financial burden placed on intervenors, but
26 historically it does not eliminate this burden

1 entirely.

2 It wasn't until last year after the
3 response they received at their open houses that
4 FortisBC actually considered the alternate of moving
5 the power corridor to the east, but they will claim
6 that should this Commission accept their alternate
7 uplands route, it will delay the project by one to two
8 years and increase the costs of the overall project by
9 5 to 10 million dollars or by 4 percent, based on
10 using the same structures identified within their
11 preferred option. We believe that had FortisBC
12 carried out its due diligence by identifying,
13 researching all of the apparent alternatives when they
14 first identified this issue five years ago, giving
15 equal emphasis to all of them, there would be no
16 significant delays. This delay is an excuse and it
17 should be weighted accordingly. In fact,
18 documentation submitted to this Commission will show
19 that this issue has been examined since 1992, and that
20 a comprehensive study completed in 2002 identified at
21 least one other route that was more suitable to
22 reinforcing the power grid in our region.

23 Personnel of FortisBC have also admitted
24 that the estimate increase in cost will translate to
25 mere pennies on their customers' utility bills over
26 the lifespan of the project, without taking into

1 consideration how the contributions from new
2 residential and commercial customers this very project
3 is meant to address will reduce these figures further.
4 Please give strong consideration to the fact that the
5 communities located near the existing right of way are
6 willing to offset the additional costs of relocating
7 the corridor. However, you have no doubt noticed that
8 the costs presented by FortisBC concerning
9 construction of their preferred option, known as 1A,
10 is virtually identical to the costs presented to
11 construction their option known as 2B along the
12 alternate uplands route, thus addressing both the low
13 to no-cost axiom associated to the precautionary
14 principle, and the prudent avoidance recommendation
15 cited within the Exponent report that this Commission
16 recently requested.

17 This Commission should give the same weight
18 to the community as it perceived to be giving to the
19 proposed Wiltse residential development area. Please
20 also take in account what groups are conspicuously
21 absent as intervenors in this process. FortisBC will
22 argue that there are a number of stakeholders that
23 have concerns about relocating the corridor to the
24 uplands route, such as the Penticton Indian Band, as
25 well as various environmental groups and other tenure
26 holders such as trappers, guiding operations, and

1 farmers, but where are they? FortisBC will claim that
2 the alternate route will impact the environment
3 significantly along the uplands route and have
4 consulted the environmental experts on this issue, yet
5 their environmental and social impact study will
6 indicate that wildlife tends to concentrate at the
7 base of valleys rather than at higher elevations, and
8 that wildlife has re-established itself along the
9 existing corridor quite nicely.

10 Whichever route is selected, there will be
11 disruption to the environment. What is admitted is
12 that clearing created within a new right of way will
13 benefit larger grazing mammals. You may also notice
14 that the same study that only fleetingly references is
15 made to the tree harvesting that has taken place, and
16 the wildfires that have affected over 50 percent of
17 the uplands route. Furthermore, from what I can
18 recall, there is no mention of other developments such
19 as the dam that exists on Derrensee Lake, or other
20 alterations that have been made to watercourses along
21 the route to provide irrigation or water -- irrigation
22 water or other pipeline easements that run eastbound
23 from Skaha Lake.

24 The utility will no doubt cite the
25 difficulties of maintaining high elevation
26 transmission lines. FortisBC has stated that within

1 the application that it owns in excess of 6,000
2 kilometres of such lines, within what I assume is
3 considered a mountainous province. Please also take
4 into account that the higher elevation route, which
5 was not FortisBC's preferred alternative, was selected
6 within the Kootenays in 2000. FortisBC continually
7 avoids mentioning that this project will impact more
8 than one community area, and that only seven
9 structures along the existing route are situated near
10 residences. Therefore we encourage you to vigorously
11 examine the entire route. You will find that the
12 number of structures located near homes, farms and
13 other businesses is considerably higher.

14 **Proceeding Time 2:55 p.m. T62**

15 Without taking into account the impact six
16 conductors configured in three tiers vertically will
17 also have. Please take the time to not only view the
18 existing corridor from the yards, orchards and fields
19 located nearby, but visualize how the increased height
20 and added conductors will affect those that do not
21 necessarily see these structures as they are today.

22 I understand the difficulties and the
23 widespread implications of adopting the precautionary
24 principles will impose on government. All that we as
25 citizens, taxpayers and customers are asking is to
26 play it safe. Give us the benefit of the doubt.

1 Think long-term, and charge FortisBC to relocate the
2 power corridor to Crown land to the east. FortisBC
3 personnel have sympathetically pointed out that the
4 existing corridor was selected in 1963 because it was
5 uninhabited and it was the cheapest route. In fact,
6 they have admitted that the existing route would not
7 be considered by today's standards.

8 What we also know today is that the
9 cheapest is not always the best, and that FortisBC
10 should continue to adopt the former when an
11 alternative exists that is placing these corridors
12 where human habitation is not expected. It is
13 FortisBC's position that moving the right-of-way will
14 involve a number of stakeholders. But what
15 consistently seems to be considered the least is that
16 no less than 85 residential and agricultural
17 properties transect the present right-of-way within
18 the MacLean Creek Valley, Heritage Hills and Lakeshore
19 Heights subdivisions. These numbers increase to the
20 hundreds if you consider the homes located within the
21 60-metre minimum set out -- minimum setback that say
22 the Sage report from the United Kingdom recommends as
23 the minimum distance residences should be located from
24 rights-of-way containing power lines of 132 kilovolts
25 and higher. This report was commissioned by that
26 country's government and it was released after three

1 years of research on April 27th, 2007.

2 Please take into account what other
3 countries are doing to protect their citizens. Our
4 Premier, on several occasions, has publicly
5 congratulated this province as being a leader in
6 technology and of being forward-thinking. Instruct
7 FortisBC to move the power corridor well away from
8 human habitation. Remember, there was a time when
9 smoking was considered a health benefit and was even
10 taught within some school systems. And it wasn't
11 until technology advances numerous years later
12 eventually proved otherwise.

13 This Commission, FortisBC, as well as every
14 level of government have been warned repeatedly of the
15 dangers of electromagnetic forces and electromagnetic
16 radiation and, should it be established in the future
17 to a standard or test that is considered beyond
18 suspicion that they are indeed harmful, this
19 Commission, FortisBC and those levels of government
20 that chose to ignore these concerns will be held
21 accountable.

22 Thank you.

23 MR. CAIRNS: Thank you, Mr. Chairman, for the opportunity
24 to have that read in. The panel is ready for cross-
25 examination.

26 THE CHAIRPERSON: Thank you. Mr. Fulton, can you help me

1 with the cross-examination? I just don't know who's
2 on the agenda at this point.

3 MR. FULTON: Yes. BCOAPO will start the cross. Beyond
4 that, and apart from Fortis, I haven't been informed
5 of anyone else who wishes to cross-examine this panel.
6 And so it looks like we will go from BCOAPO to Mr.
7 Macintosh.

8 THE CHAIRPERSON: Thank you. Ms. Khan.

9 **Proceeding Time 2:59 p.m. T63**

10 **CROSS-EXAMINATION BY MS. KHAN:**

11 MS. KHAN: Q: Good afternoon, Mr. Danninger and Mr.
12 Advocaat. I'm just wondering, are any of the private
13 property owners along the right-of-way line claiming
14 to not have known about the rights-of-way that Fortis
15 secured more than 43 years ago against their
16 properties?

17 MR. DANNINGER: A: Not that I know of. Not that I'm
18 aware of. It's pretty obvious.

19 MS. KHAN: Q: It's pretty obvious that there were --

20 MR. DANNINGER: A: It's pretty obvious if you have a
21 power line on your property.

22 MS. KHAN: Q: When purchasing a property, and in
23 particular the properties along the right-of-way and
24 the transmission line, is it possible that those power
25 line rights-of-way could have been used to secure a
26 lower purchase price for the properties?

1 MR. ADVOCAT: A: Well, I can only speak for myself.
2 We did purchase the property, and the power lines were
3 an issue. As I stated in my opening statement, we
4 almost did not select the property. However, view
5 property in the Okanagan valley is extremely limited,
6 so your options are extremely limited. We did place a
7 lower offer in on the property, and it was accepted.
8 But at no time was it ever implied to the owners of
9 the property that that was the reason we were lowering
10 our price.

11 MR. DANNINGER: A: I would like to add to this, from my
12 perspective, when I bought the property or when I
13 viewed the property the first time, the power line was
14 certainly hard to overlook, and I didn't like it at
15 that time, but I thought the scale was acceptable,
16 considering the size of the property. And I accepted
17 that it will be there, as long as I'm there.

18 Now, what I did not accept -- or expect at
19 that time is that its capacity will soon be increased
20 by a factor of five, with twice the number of wires,
21 with significant higher voltage and with tower heights
22 approximating 200 percent of what it was at the time
23 of the purchase. And you know, when I reviewed my
24 easement, I got the impression that the property owner
25 at that time, in 1965, was compensated for the
26 negative impacts the project at hand in those days

1 would have on his property.

2 Now I learn that that's not the case. That
3 basically in those days the property owner gave away
4 the rights in all future to have within that corridor
5 whatever can technically be fit into it, even if it
6 has a much greater negative impact on the whole
7 property. No matter whether the use of the land in
8 the area, the land use, changed. And I mean, that can
9 hardly be considered a fair and equitable arrangement.

10 MS. KHAN: Q: But when you purchased the properties,
11 I'm presuming that if you were purchasing large
12 acreage properties and/or view properties, you would
13 have taken a look through the rights-of-way and
14 examined the wording and possibly thought about the
15 potential for upgrades to the lines. Or maintenance
16 on the lines?

17 **Proceeding Time 3:03 p.m. T64**

18 MR. DANNINGER: A: Not an upgrade, no I didn't, not an
19 upgrade at that scale. That was -- and even if I
20 would have gone through the right of way agreement
21 without legal assistance and experience in that area,
22 I would hardly have imagined that this would be
23 legally no problem for West Kootenay Power in those
24 days to do a project at that scale, or to do a
25 reinforcement at that scale. I was not aware of that.
26 And I think most other people in my position are, at

1 the time the line was built, had no chance of knowing
2 this.

3 MS. KAHN: Q: No chance of knowing this?

4 MR. DANNINGER: A: Yeah.

5 MR. ADVOCAT: A: No, the fact remains is that this
6 particular project did not become apparent to us until
7 we received a letter in the mail. Nobody knew what
8 was happening. And this was well after we had
9 purchased our property. Had I received that letter --
10 well, I wouldn't have received the letter because
11 you'd have to be the owner of the property in order to
12 get it. But had I known that this project was
13 happening at the time I was considering purchasing
14 that property, it never would have happened.

15 MS. KAHN: Q: We've heard throughout this proceeding,
16 including at the public information session last
17 night, that some local residents with rights of way on
18 their properties are concerned the insulation of the
19 230 kV lines on their rights of way. They are
20 concerned that the insulation will lead to decreases
21 in the values of their properties.

22 Why haven't SOFAR members, who will be
23 directly by the project, commissioned an appraisal of
24 prospective property values, should the route proposed
25 by FortisBC be approved, if property values are a
26 concern for the local residents?

1 MR. ADVOCAT: A: I'm sorry, I don't quite understand
2 that question.

3 MR. DANNINGER: A: Why didn't we have an appraiser
4 award get an appraisal done? That's the question.

5 Well, in my case -- and I'm just a member
6 of SOFAR now for a couple of months, I think. First
7 of all, to get an appraiser these days, the last time
8 I tried was a few years ago and there was a waiting
9 period of about four months in the Okanagan to get an
10 appraiser to look at your property.

11 But the second, and for me, to me
12 overwhelming consideration not to do so is -- was that
13 it is simply out of financial reach for me to do that.
14 You might say, "Well, your property is worth a lot of
15 money, you know, you should do it anyway," but as long
16 as I'm a small-scale farmer, a fruit farmer, I am just
17 happy if I can pay all my bills by the end of the
18 year, and I don't have 10 or 20 thousand dollars to
19 spend with very little chance of affecting anything in
20 this hearing as it appears to me, or in this decision,
21 just to have a biased opinion. And if I hire an
22 expert, his opinion will be biased, just as any expert
23 you heard here from the Fortis panel, their opinion is
24 biased because they are interested in getting the next
25 contract from the company. I hope everybody -- I know
26 everybody is aware of that, everybody talks about

1 this.

2 So I just didn't -- I could not afford and
3 I did not want to play along with this.

4 MR. ADVOCAT: A: And the reason why I didn't get an
5 appraiser is because I carried out a fair bit of
6 research in appraisals, and common sense would tell
7 you that in my view is that an appraisal of a
8 property, especially when it comes to the factors of
9 -- well, for example, view is a pretty universal. A
10 beautiful view here is a beautiful view in West
11 Vancouver or North Vancouver or up in the Kootenays or
12 up in Kamloops a view is a view. And if you purchase
13 a property, that's 80 percent of the reason why you
14 buy it is for the view, then obviously if you put
15 something in front of it it's going to impact it
16 accordingly. I think that's pretty universal as
17 common sense.

18 And the studies that I reviewed, one of
19 them was a huge study that was conducted back in 1984
20 involved 12,000 residents in the Vancouver area,
21 showed that high voltage power lines can impact
22 values, depending on how close you are to a power
23 line, and also the purpose intended for the actual
24 property could be affected as much as 53 percent.
25 There was a document that was placed in -- two
26 documents, two affidavits that I found that was

1 submitted during the -- I believe it was the BCTC in
2 the Sea Breeze application in the Tsawwassen area.
3 One was submitted by a senior appraiser of the B.C.
4 Assessment Authority, and another one was submitted by
5 an expert, and both individuals -- that was an expert
6 I should say in real estate; and both stated that
7 depending on the location of the house and the purpose
8 of the property, that the values could be again
9 affected, I believe it was as much as 20 percent, as
10 low as 5 or 6 percent to as much as 20 percent,
11 depending on their location and the uses of the
12 property.

13 **Proceeding Time 3:09 p.m. T65**

14 MS. KHAN: Q: But you've had no appraisals done of your
15 property in the past --

16 MR. ADVOCAT: A: No, I didn't think I'd need one.
17 With that kind of information available, I didn't
18 think I'd need one, no.

19 MS. KHAN: Q: And as far as I understand as well, no
20 other SOFAR members have had such appraisals done, and
21 certainly no such appraisals have been filed in this
22 proceeding.

23 MR. KREEFT: A point of order, Mr. Chairman.

24 THE CHAIRPERSON: Excuse me?

25 MR. KREEFT: A point of order. As a SOFAR member, I have
26 had an appraisal.

1 THE CHAIRPERSON: I'm sorry. Number one, I can't hear
2 you. And two --

3 MR. FULTON: We don't use points of order, Mr. Chairman,
4 so we'll have to see if we can deal with this in some
5 other way.

6 THE CHAIRPERSON: Thank you.

7 MS. KHAN: Q: Are SOFAR members asking the B.C.
8 Utilities Commission to simply accept without any
9 independent evidence that the values of their
10 properties will be negatively affected by the new
11 lines?

12 MR. DANNINGER: A: The facts, from my perspective, is
13 so obvious that any person with common sense would
14 have no problem understanding this. And I know that
15 Fortis witnesses -- actually, even the expert on
16 Fortis's panel admitted that power lines have a
17 negative impact on property values, but that the
18 methodology to exactly measure that impact obviously
19 is not developed enough, or is hard to develop,
20 because there are so few transactions for a property
21 of -- every property is unique and of that size.

22 But, I mean, anybody who is willing to come
23 to my orchard and look at the most beautiful building
24 site and look at it with the existing power line in
25 the background, which is not very noticeable because
26 it -- the backdrop is natural vegetation on a hill,

1 and the power poles blend in fairly nicely, and that
2 compared to a much higher -- to a higher -- to a
3 structure of twice the height. You know, if -- it's
4 so obvious that that has a major impact on the most
5 beautiful building site of the property, which is one
6 of the -- which is seen -- the main -- to many
7 potential investors, the main highlight of that place.

8 MS. KHAN: Q: So I understand that in your view it is
9 obvious, then, that the property values will be
10 negatively affected.

11 MR. ADVOCAT: A: Well, that's not --

12 MR. DANNINGER: A: It is -- it is not only in my view,
13 it's in the view of any of the visitors I have, whom I
14 take for a walk through the orchard, and to view the
15 lands. I mean, they all comment on the power line and
16 that's bad enough, but if you -- you know, if you
17 increase the height of those structures, those three
18 structures, over 250 meter stretch, significantly, and
19 add twice the number of wires, I certain -- I assure
20 you that will not help.

21 MR. ADVOCAT: A: And I'm in the same view. In March
22 of 2007, I think -- I believe it was the day after the
23 first open house, one of the FortisBC's staff, Mr.
24 Barnett, attended my property and stood on the
25 building site, and he pointed across, and went, "Oh.
26 Yeah, you bet those towers are going to come right to

1 the top of that mountain, and you're going to have
2 those three lines that are going to basically cross
3 your view, yeah. Hmm." And it was obvious to him.
4 It's certainly obvious to me.

5 **Proceeding Time 3:12 p.m. T66**

6 MS. KHAN: Q: I'd like to ask each of you, what is the
7 B.C. Assessment value of each of your properties?

8 MR. ADVOCAT: A: I believe the assessed value on my
9 property is 396,000. But that is a guess at this
10 point.

11 MS. KHAN: Q: And is that without the house that you're
12 currently building?

13 MR. ADVOCAT: A: Correct.

14 MR. DANNINGER: A: My -- I can't tell you the exact
15 figure. It's around \$100,000.

16 MS. KHAN: Q: And that's with the land and all the
17 buildings?

18 MR. DANNINGER: A: They're mostly farm buildings, and I
19 live in an old -- a small old mobile home which has
20 basically no value.

21 MS. KHAN: Q: Okay. So the total value of your
22 property, from B.C. Assessment's perspective, is
23 \$100,000.

24 MR. DANNINGER: A: Roughly, yes. But that's because
25 it's farm land. It's in the ALR, and --

26 MS. KHAN: Q: Right. I believe that -- well, a number

1 of people have mentioned, including each of you, that
2 your views have been affected -- or that your views
3 will be affected by the new lines. I think, for
4 example, in response to BCUC IR 1.4 to SOFAR -- I
5 don't know the exhibit number, I think it might be
6 Exhibit C1-13. We don't need to turn to it. SOFAR is
7 concerned about views of Skaha Lake being marred by
8 the new lines. Also in response to BCUC IR 1.1 to Mr.
9 Danninger, you said that the increased pole and line
10 height will give the property more of an imposing and
11 industrial feel, and that visitors, as you said
12 earlier, have already said that the agricultural view
13 is compromised by the existing lines.

14 Is it your position that all Fortis
15 ratepayers, including low-income ratepayers, across
16 Fortis's service territory, who can't afford an
17 apartment let alone a detached home or a farm acreage,
18 or a home with a lake view, should pay higher rates
19 and possibly endure system reliability problems in
20 order to avoid marring your views of Skaha Lake or
21 possibly reducing your property values?

22 MR. ADVOCAT: A: No, is the short answer. Our
23 committee and town meetings have shown that a
24 representative of the actual community is willing to
25 pay a surcharge on their monthly electrical bills in
26 order to offset the cost differences in moving the

1 existing corridor to the uplands route by utilizing
2 FortisBC's option 2B. We also believe that the
3 residents of Kelowna should bear the costs of this.
4 This project is primarily meant to reinforce and
5 stabilize the reliability of electricity to that city.

6 MS. KHAN: Q: But within the Kelowna region, there are
7 low-income ratepayers, and so I think you have
8 answered my question already, I think, to an extent.

9 Well, you've mentioned the customer
10 contribution issue. So can you elaborate on that?
11 What you -- what discussions you've had with SOFAR
12 members so far? Whether -- can you tell me about what
13 type of contribution SOFAR members might be willing to
14 make?

15 MR. ADVOCAT: A: Up to \$25 a month on their monthly
16 utility bill.

17 MS. KHAN: Q: \$25 a month on their utility bill, and
18 that -- would that just be for SOFAR members who are
19 right-of-way holders?

20 MR. ADVOCAT: A: That would be for the entire
21 community surrounding the right-of-way.

22 MR. CAIRNS: Mr. Chairman --

23 THE CHAIRPERSON: Sorry.

24 MR. CAIRNS: I rise not necessarily to object yet, but as
25 long as my friend is aware that I will object if she
26 ventures into what I would call a form of negotiation

1 with people who are on the witness stand.

2 MS. KHAN: I can accept that. I'm not planning to
3 negotiate anything here.

4 MR. DANNINGER: A: Can I also comment on that question
5 from my perspective? Or is the previous question
6 already fully answered?

7 MS. KHAN: Q: No, go ahead.

8 MR. DANNINGER: A: I mean, we all know that the
9 dramatic increase in power needed in the valley is a
10 result of the huge developments going on and
11 particularly in the Kelowna area but also south and
12 those developers' developments which come on line in
13 Westbank, in -- you know, I heard numbers of 25 to --
14 2500 to 3,000 units on the south side of the Kelowna
15 bridge.

16 **Proceeding Time 3:17 p.m. T67**

17 In Peachland a friend of mine faces a
18 development next to her place of 1200 units. Those
19 projects are the ones which really drive the power
20 demand up in the valley, and to me it seems very
21 unfair that the people who are already burdened and
22 have been burdened over the past decades with this
23 power line should shoulder all these additional
24 negative impacts to support those big-scale projects.

25 MS. KAHN: Q: Right, I understand where you're going
26 with this.

1 MR. DANNINGER: A: And, you know, we're in the same,
2 I'm in the same position as your clients, the older
3 folks with limited retirement income. We already
4 shoulder an unproportionally high percentage of the
5 cost to get power to those high-demand areas.

6 MS. KAHN: Q: Right, but also, I mean, before -- for
7 example, you're building a house on your property and
8 so power is needed to supply that house. And I think
9 that before your properties had -- before there were
10 people using electricity on your property, there were
11 other owners who had to subsidize and pay for
12 electricity to be supplied to your properties.

13 But my question is really about -- I want
14 to just get back to the issue of customer
15 contributions, and I'm not trying to negotiate
16 anything here. I'm just trying to get a sense of what
17 you've discussed within SOFAR so far.

18 MR. DANNINGER: A: At the community meeting, the
19 attendance and at that point there were 40 attendants,
20 were asked whether they would be willing to pay a
21 surcharge on their monthly bill. And unanimously all
22 40 members, all people present at that meeting said
23 yes.

24 Now, you know, as it was discussed here
25 yesterday, who knows how the answer will be when push
26 comes to shove? But that's hard to say. But there

1 was a great willingness of those attendees to shoulder
2 some of the costs.

3 MS. KAHN: Q: So, and I heard earlier that your
4 counsel, I believe, at the -- or perhaps you mentioned
5 during your opening that SOFAR has about 350 members?
6 So out of those 350 members so far about 40 are
7 willing to provide some kind of rate rider, monthly
8 rate rider in the form of making it --

9 MR. ADVOCAT: A: Well, those were the ones that
10 attended the meeting. Of course there's lots of
11 reasons why people don't attend meetings.

12 MS. KAHN: Q: Right.

13 MR. ADVOCAT: A: And we can't speak for them why they
14 didn't attend, but they could have been maybe
15 attending a birthday or being on vacation to being in
16 the hospital. We don't know.

17 MS. KAHN: Q: So it is possible that there could be
18 other SOFAR members who are willing to provide -- to
19 pay some form of a rate rider in order to cover the
20 costs of moving the route upland.

21 MR. ADVOCAT: A: I'd say yes.

22 MS. KAHN: Q: What about up-front contributions? Do
23 you think there's any, any SOFAR members who might be
24 willing to provide an up-front contribution?

25 MR. ADVOCAT: A: I couldn't answer for them. All I
26 can state is that I know the perceptions of Heritage

1 Hills is that it's an upscale neighbourhood. But I
2 can tell you that I'd say in my opinion again, I'm not
3 saying this that it's fact, but it is my impression
4 that most of the people that are there are pensioners.
5 They're on limited incomes. They have nice homes but
6 that's pretty well what they have. They would be
7 subject as well as anybody else, and I'm sure there's
8 others out there that would be willing, yes.

9 I personally, and again I'm no expert but
10 10 percent of the community show up for a meeting, I
11 think that's a fairly decent representation.

12 **Proceeding Time 3:22 p.m. T68**

13 MS. KHAN: Q: Okay, thank you. I believe that a member
14 of SOFAR -- I can't recall exactly, yesterday, here
15 during the proceedings, said -- mentioned a property
16 that was for sale in one of the affected areas. I
17 believe it was Heritage Hills, although I could be
18 wrong. That a property in the area was listed at --
19 in the \$900,000 range, and that the owners were having
20 difficulty selling the property because the
21 prospective buyers were concerned about the
22 consequences of this FortisBC project.

23 Do you have any -- first of all, do you
24 recall that discussion and what the address was, and
25 secondly, do you know how much the sellers in that
26 case purchased their property for?

1 MR. ADVOCAT: A: Personally, not on that particular
2 property. I do know of another property that -- it's
3 a vacant lot on Heritage Hill that was owned by Dave
4 Calgol and his wife, and they have put that property
5 up for sale. In fact, there's a letter on record as
6 evidence where they have placed that property up for
7 sale due to the fact of this upgrade. And that's just
8 -- that's one that I know of.

9 If I recall the address that was spoken to
10 yesterday, I believe it was 308 Heritage Hills, but
11 then again, I'm just taking a guess.

12 MS. KHAN: Q: And so, as you've just mentioned, I mean,
13 selling your properties in response to the FortisBC
14 project is an option for owners in these affected
15 areas.

16 MR. DANNINGER: A: Well, it might have been an option
17 at an early stage. At this point in time, I was
18 informed by real estate agents that they are obligated
19 to disclose what's coming down the pipe, so --

20 MS. KHAN: Q: Right.

21 MR. DANNINGER: A: But initially, and I know of two
22 homes in the Maclean Creek area who were put up for
23 sale because this was coming, and the -- yeah.

24 MR. ADVOCAT: A: My house is almost finished, and I'm
25 looking forward to moving into it. But quite frankly
26 if this power line goes up, my concerns are not just

1 aesthetics. They're EMF as well. Not only is that
2 line going to put -- or I should say the upgrade is
3 going to put the lines closer as they lay down low,
4 they're going to bring them up horizontally closer to
5 my property by approximately 150 feet. If it goes
6 ahead, the option is there, my wife and I have
7 discussed it, We've spent almost two and a half years
8 buying the property, finding a builder, building the
9 house, and yes, we may end up putting it up for sale.
10 Whether we are or not, I really don't know at this
11 point in time, but we're definitely considering it.

12 MS. KHAN: Q: It's a possibility.

13 MR. ADVOCAT: A: It's a shame. It's a shame, but
14 that's -- especially -- especially when there's a
15 viable alternate route as FortisBC has stated it.
16 There is a viable alternate route. If there wasn't,
17 well, that would be a different story, maybe. I can
18 understand it in the Lower Mainland, where they're
19 running out of room, and we are running out of room
20 here, but there are viable alternatives here.

21 MS. KHAN: Q: Do you know -- you've mentioned, and
22 other people have as well during this proceeding, that
23 Heritage Hills is an upscale neighbourhood. Do you
24 know what the average -- what the range of property
25 values is for right-of-way properties within Heritage
26 Hills? And also other affected residential areas like

1 Maclean Creek and the Lakeshore Heights.

2 MR. ADVOCAT: A: I have no idea. I don't -- I can
3 only speak for myself, that the property that we
4 purchased at the time was comparable to any other
5 property with a comparable view. Which we looked at,
6 actually, north of Penticton in Naramata. That's
7 basically the only information that I can provide.

8 MS. KHAN: Q: But you don't know what the range of
9 values is.

10 MR. ADVOCAT: A: I'd be hazarding a guess. I would --
11 if I may -- I will hazard a guess. I'd say
12 approximately on the average 550,000 to 650,000.

13 MS. KHAN: Q: Any properties worth more than that?
14 That you're aware of?

15 MR. ADVOCAT: A: Now, are we talking just on the
16 right-of-way or in these areas?

17 MS. KHAN: Q: On the right-of-way.

18 MR. ADVOCAT: A: I couldn't speak to that, no. I'm
19 speaking to the entire community.

20 MS. KHAN: Q: Could you provide a list of the right-of-
21 way properties that are currently for sale? In those
22 affected areas, including the listing prices?

23 MR. ADVOCAT: A: Oh, I guess it's possible. The signs
24 are clearly visible on the street. It's just a matter
25 of noting down who the real estate agents are, I
26 suppose.

1 MS. KHAN: Q: Okay, thank you. That would be very
2 helpful. We can just take that as an Information
3 Request.

4 **Information Request**

5 **Proceeding Time 3:26 p.m. T69**

6 MS. KAHN: Q: Now, could you also provide, since you do
7 have so many -- 350 members of SOFAR, could you also
8 provide a list of the properties in the affected
9 areas, the right of way properties only that have sold
10 over the last year, including the listing price and
11 the sale amounts? It would help us to get a sense of
12 the values on the properties in these regions, because
13 right now we don't have a good sense of what those
14 values are.

15 MR. ADVOCAT: A: Well, I guess anything is possible,
16 but I am a working individual just like you. I had to
17 take vacation time off to be here today. I have a
18 house that I'm trying to build and deal with this all
19 at the same time. I guess I could find the time to do
20 it, but it wouldn't be done anytime soon.

21 MS. KAHN: Q: Thank you. I'm not -- I mean, I can't
22 imagine that there are actually that many right of way
23 properties that have sold within the last year, so --

24 MR. CAIRNS: Mr. Chairman, if I may, unless the
25 Commission orders my clients to do that, I would
26 object to sending them on an expedition of

1 questionable value at this point.

2 THE CHAIRPERSON: Just give me a moment, will you?

3 We may have a bit of a compromise here.

4 I'm wondering, Ms. Kahn, whether -- the suggestion has
5 been made by one of my colleagues that if you obtained
6 an MLS book, which I understand or am given to
7 understand contains a listing of properties that have
8 sold within -- I think the timeframe you are talking
9 about was about the last year. So if these folks
10 could get their hands on a current book that contains
11 that information, does that give you a start on what
12 you're looking for?

13 MS. KAHN: Yes, that would satisfactory.

14 MR. ADVOCAT: A: First of all, my friend here is right
15 in the middle of the growing season on his cherry
16 crop, and as he states, he's already taking out time.
17 He needs to be in the field. He doesn't have time for
18 this. You know, we've -- the amount of time and
19 expense -- we're not getting paid to do this.

20 THE CHAIRPERSON: Excuse me, Mr. Advocat, I was hopeful
21 that it might be as simple, and maybe that's not the
22 right word, as making a call to one of the realtors
23 and saying, "Can you provide us with one of those
24 books?" And I don't think we'd impose anything any
25 more onerous than that on you, but if you could
26 attempt to undertake or if that could somehow be

1 brought forward, I think that --

2 MR. ADVOCAT: A: We can attempt that, but I think it's

3 going to be more complicated than that.

4 MR. DANNINGER: A: If it's really that easy, would it

5 be to ask too much for Mrs. Kahn to call a realtor and

6 get the information?

7 THE CHAIRPERSON: Well, I think that may be -- would that

8 cause you a problem, Ms. Kahn, in terms of getting it

9 on the record?

10 MS. KAHN: It could, yes.

11 THE CHAIRPERSON: It could.

12 MS. KAHN: Well, I guess that would be a question, I'm

13 not sure whether, if it would be acceptable to you

14 then for me to file it. But since this is the panel

15 giving evidence, I leave it to you to make that

16 decision.

17 THE CHAIRPERSON: Mr. Cairns.

18 MR. CAIRNS: Mr. Chairman, just to clarify, did I

19 understand the proposal to be that Mr. Advocaat, say,

20 would make an inquiry to see whether he could get it?

21 If he could, great. If he couldn't, that we just let

22 it be at that?

23 THE CHAIRPERSON: Correct. It doesn't necessarily have

24 to be Mr. Advocaat or Mr. Danninger. It could be

25 generically SOFAR --

26 MR. CAIRNS: Sure, somebody.

1 THE CHAIRPERSON: -- make that effort. And as I say, we
2 don't want to impose anything more onerous than that
3 on them.

4 MR. CAIRNS: I will make the effort, yes.

5 MR. KAHN: Thank you.

6 COMMISSIONER NICHOLLS: I don't know if realtors will let
7 you have those pages out of the back of a book to pass
8 around, so that's another reason why this might not
9 work. But if you can just ask.

10 THE CHAIRPERSON: If you can come up with the information
11 readily, please file it, and if not, let us know.

12 MR. CAIRNS: Yes, sir.

13 THE CHAIRPERSON: Thank you.

14 **Information Request**

15 **Proceeding Time 3:32 p.m. T70**

16 MS. KHAN: Q: Thank you. Panel, many of the property
17 owners represented by SOFAR have purchased properties
18 within the existing right-of-way and the 161 kV line.
19 Electric magnetic fields, the levels of EMF are
20 predicted to decrease with the new lines. That's my
21 understanding of the evidence presented so far.

22 If the property owners represented by SOFAR
23 are concerned about EMF levels and the potential
24 health consequences of them, why have they chosen to
25 buy properties with the lines already on them? That I
26 understand many SOFAR members consider to already emit

1 harmful and unsafe EMF levels.

2 MR. ADVOCAT: A: Well, as I stated in my opening
3 statement, there was ignorance. Basically. That was
4 -- I had no idea, when I purchased the property. I
5 was ignorant of these particular facts. I had no
6 idea. Didn't even know what EMF was. Never heard of
7 it before.

8 MS. KHAN: Q: But now, with this project, EMF levels
9 are predicted to decrease.

10 MR. ADVOCAT: A: Well, that's what they say on paper,
11 yes. But as Dr. Blank stated in his rhetorical
12 question, that may be entirely different once they put
13 the line up.

14 MS. KHAN: Q: My understanding from the evidence
15 presented so far, though, is that while that, I
16 suppose, is a remote possibility, the chances are much
17 more likely that the levels will, in fact, decrease
18 from the present EMF levels. And so in that case --

19 MR. DANNINGER: A: That's what's written on paper, yes.
20 To be honest, me personally, I don't believe much any
21 more that's written on paper. There are things
22 written on paper and filed by Fortis which to me
23 clearly contradict reality. And so, unless there is
24 some way to verify these claims over the long term, in
25 terms of publicly accessible field strengths,
26 monitoring stations, and/or something alike, my

1 concern is not put to rest regarding this. I could --
2 I don't know what it means. I'm not a technical
3 person. I can just tell you a very brief incidence.

4 I recently -- a friend of mine, an
5 electrician, has been out to my place and he -- the
6 electricians, they use this little voltage detectors,
7 where they detect whether an electrical wire is hot or
8 not. That means whether there is an electrical charge
9 on it or not. And I don't know why he did it. We
10 walked near the power line, and he took this little
11 measuring device out and turned it on, and held it in
12 the air. We were about 40 metres away from the actual
13 line, and this thing started to go off like crazy.

14 Now, I know from using it myself, and we
15 tried that later, to get it to turn on close to an
16 electrical circuit, to a hot circuit, you basically
17 have to touch the wire at 110 volts, loaded with --
18 charged with 110 volts. So, you know, why would this
19 thing go off 40 or 45 metres away from the power line
20 if there is no significant change in the environment
21 from those lines. Now, as I said, I'm not a
22 biophysicist. I haven't any clue what this thing
23 reacts to. But it just tells me that these lines,
24 they certainly have -- they induce a change in the
25 environment. And before I know exactly, and I have
26 reliable credible sources would tell me what's going

1 on, it is a cause of concern.

2 **Proceeding Time 3:36 p.m. T71**

3 MS. KAHN: Okay, thank you, those are my questions.

4 THE CHAIRPERSON: Thank you, Ms. Kahn.

5 I wonder if we could just maybe take about
6 a 10-minute break here before we go on with the next
7 panel. Do you have something beforehand? Thank you.

8 **(PROCEEDINGS ADJOURNED AT 3:37 P.M.)**

9 **(PROCEEDINGS RESUMED AT 3:49 P.M.)**

10 THE CHAIRPERSON: Thank you.

11 MR. FULTON: Mr. Chairman, just to indicate to the Panel,
12 the maps have arrived. The Panel may have some
13 questions in terms of the map reads themselves before
14 they go off with the maps to do the view.

15 So what I'm going to suggest that we do is
16 once we finish with Mr. Macintosh's cross-examination
17 and finish with his cross-examination, we take a
18 break, you view the maps, and you can come back and
19 ask this panel some questions about the maps so that
20 you understand where it is that you may be going on
21 your view and they will be able to give you that
22 guidance. And then you can take a view when you
23 decide to take it.

24 THE CHAIRPERSON: Thank you. Sir.

25 MR. MACINTOSH: Thank you.

26 THE CHAIRPERSON: Just before you get underway, can you

1 just give me some sense, are we looking at 15 minutes
2 or two hours or -- I'm just trying to get some order
3 around what we've got left in front of us here.

4 MR. MACINTOSH: Mr. Chair, my guess is between 15 minutes
5 and half an hour.

6 THE CHAIRPERSON: Oh, fair enough. Thank you.

7 MR. MACINTOSH: Should I proceed then?

8 THE CHAIRPERSON: Yes indeed. Sorry.

9 **CROSS-EXAMINATION BY MR. MACINTOSH:**

10 MR. MACINTOSH: Q: Panel, perhaps the one exhibit, maybe
11 there'll be more, but the one exhibit that I know that
12 I may ask you a question or two on is Exhibit C, I
13 think that it is C1-12, which would be the main SOFAR
14 filing. Do you have that with you?

15 MR. ADVOCAT: A: Yes.

16 MR. MACINTOSH: Q: All right, and is that the one which
17 contains some photographs among other things?

18 MR. ADVOCAT: A: Yes, I believe it does.

19 MR. MACINTOSH: Q: Very well, so I'll turn to that down
20 the road a little bit.

21 Now, Mr. Advocat -- and let me say at the
22 outset, Mr. Danninger, if I direct a question to Mr.
23 Advocat it's because I gathered from his earlier
24 evidence that he would be the person. But obviously
25 if you want to add something, do so.

26 MR. ADVOCAT: A: I'm sorry, I didn't get the question.

1 MR. MACINTOSH: Q: Not at all. I may direct a question
2 to the person I think is the right person --

3 MR. ADVOCAT: A: Sure.

4 MR. MACINTOSH: Q: -- from the earlier evidence, but
5 each should speak up in supplement as you care to.

6 So, Mr. Advocat, as I heard your evidence
7 earlier, you -- and by "you" I will embrace SOFAR,
8 I'll include SOFAR; you do accept the need for the
9 project at this time overall, correct?

10 MR. ADVOCAT: A: Yes.

11 MR. MACINTOSH: Q: And I heard what you said, Mr.
12 Danninger, about EMF, but at least you expect that
13 there is likely to be less EMF on the new line.

14 MR. DANNINGER: A: If but for those dates in the
15 document and in the application is true, yes, I expect
16 it would be less. But I would feel much more
17 comfortable if I would have a means of periodically
18 check up on these facts.

19 MR. MACINTOSH: Q: Yes, and since the line isn't built,
20 of course, all we can do is theorize on EMF for the
21 time being.

22 MR. DANNINGER: A: Yeah.

23 MR. MACINTOSH: Q: But from looking at the filed
24 evidence of Fortis on EMF, you don't have anything to
25 contradict that. In other words --

26 MR. DANNINGER: A: That's true.

1 MR. MACINTOSH: Q: All right, all right. So if the new
2 line offers less EMF, then the EMF will be lower than
3 it was when everybody in SOFAR bought their houses.

4 **Proceeding Time 3:53 p.m. T72**

5 MR. ADVOCAT: A: It's still in theory, though,
6 correct?

7 MR. MACINTOSH: Q: Of course it's in theory, because it
8 hasn't been built yet. But if it's correct --

9 MR. DANNINGER: A: I think that fact is established by
10 now.

11 MR. MACINTOSH: Q: I'm sorry?

12 MR. DANNINGER: A: I think this fact is established by
13 now.

14 MR. MACINTOSH: Q: Fair enough. And so, it would
15 follow that with the new line the EMF will be lower
16 than it was when you, Mr. Advocat, bought your house.

17 MR. ADVOCAT: A: In theory, yes.

18 MR. MACINTOSH: Q: All right. You keep saying "in
19 theory", but can I just get a "yes" out of that?

20 MR. ADVOCAT: A: I am suspect. I am suspect. I'm
21 sorry, I don't know how else to answer that question.
22 I am truthfully suspect.

23 MR. MACINTOSH: Q: All right. Well, let me pause there
24 then, sir. Have you reviewed the evidence that has
25 been filed --

26 MR. ADVOCAT: A: Yes.

1 MR. MACINTOSH: Q: -- with respect to what the likely
2 EMF will be on the new line?

3 MR. ADVOCAT: A: Yes, as it is stated on paper, yes.

4 MR. MACINTOSH: Q: Yes. And you don't have any
5 counter-evidence on that point, do you?

6 MR. ADVOCAT: A: No, we don't.

7 MR. MACINTOSH: Q: All right. All right. So I
8 understand you've got reservations.

9 MR. ADVOCAT: A: Yes.

10 MR. MACINTOSH: Q: I understand that. But if it turns
11 out, as expected, that the line has less EMF, it
12 follows, of course, that the new line will have less
13 EMF than when you bought your house.

14 MR. ADVOCAT: A: In theory, yes.

15 MR. MACINTOSH: Q: All right. That's as far as we'll
16 go on that.

17 And Mr. Danninger, your orchard, sir, it
18 had the existing line on it, did it, when you bought?

19 MR. DANNINGER: A: Naturally. I think -- are you
20 asking a rhetorical question? I mean, that's what was
21 stated before.

22 MR. MACINTOSH: Q: Well, I, no --

23 MR. DANNINGER: A: The line was built in 1965, and the
24 -- or, in '64, and the easement was signed, the right-
25 of-way was signed in '65 and since then the line was
26 built. And I bought the land in '92, so obviously it

1 had the line on it.

2 MR. MACINTOSH: Q: Fair enough. Fair enough. Mr.

3 Wiltse was in the stand yesterday, and his family had

4 had the land for a long time, and I didn't know if

5 maybe that was the case --

6 MR. DANNINGER: A: Okay. No.

7 MR. MACINTOSH: Q: -- in your family. But in any

8 event, sir, then when you bought the property, the

9 line was there, right?

10 MR. DANNINGER: A: That's what I already stated, yes.

11 MR. MACINTOSH: Q: And Mr. Advocaat, the same for you,

12 then, sir.

13 MR. ADVOCAT: A: Just to clarify that the power

14 corridor is not on my property.

15 MR. MACINTOSH: Q: All right.

16 MR. ADVOCAT: A: However, that power corridor was

17 there with the existing structures when I bought the

18 property and I accept those existing structures, yes.

19 MR. MACINTOSH: Q: All right. And just to pause there

20 for a moment, your property isn't on the corridor, as

21 you pointed out. And the corridor, if it stays where

22 it is, obviously your property won't be on the

23 corridor when the new line goes in, if it goes in

24 there, obviously.

25 MR. ADVOCAT: A: Correct.

26 MR. MACINTOSH: Q: And you're aware that the structures

1 would be in the same locations if what Fortis is
2 asking for is approved.

3 MR. ADVOCAT: A: That's my understanding, correct.

4 MR. MACINTOSH: Q: All right. And so, you had said in
5 your opening statement at page 2, you said:

6 "The Commission has received evidence
7 verifying that the presence of overhead
8 transmission lines impact negatively on
9 property values."

10 Which translates into a reduction in property values.
11 So you paid less for your property, because of the
12 line being there. Is that right?

13 MR. ADVOCAT: A: No, I didn't say that.

14 MR. MACINTOSH: Q: I see.

15 MR. ADVOCAT: A: We made a lower offer. We did not
16 explain why we were making that lower offer. We made
17 a lower offer. It was a bluff and it was accepted.

18 MR. MACINTOSH: Q: It was a bluff, did you say?

19 MR. ADVOCAT: A: Well, yes.

20 MR. MACINTOSH: Q: All right. What Fortis was
21 admitting yesterday for the Commission, I mean, as I
22 think it obviously should on the evidence, is that the
23 existence of a power line, all else equal, tends to
24 result in a lower property value. And I thought
25 that's what you were saying in your written
26 submission.

1 MR. ADVOCAT: A: Yes.

2 MR. MACINTOSH: Q: All right. So, because what you
3 said in your written submission is the Commission has
4 received evidence verifying that the presence of an
5 overhead transmission line impacts negatively on
6 property values.

7 **Proceeding Time 3:57 p.m. T73**

8 MR. ADVOCAT: A: Yes.

9 MR. MACINTOSH: Q: All right. And so when you bought
10 your property you paid less for it because of the
11 transmission line.

12 MR. ADVOCAT: A: It was one of the reasons, yes.

13 MR. MACINTOSH: Q: All right. And would you accept
14 that proposition too, Mr. Danninger, that you probably
15 paid less for your property because there was a
16 transmission line there?

17 MR. DANNINGER: A: No, in my case I would not think
18 that's the case.

19 MR. MACINTOSH: Q: All right.

20 MR. DANNINGER: A: I got -- and I explain you why if
21 you want to know.

22 MR. MACINTOSH: Q: Sure.

23 MR. DANNINGER: A: If you don't, that's fine too.

24 MR. MACINTOSH: Q: No, I'm tempted.

25 MR. DANNINGER: A: The farmer who farmed the lands for
26 the previous 10 years before or 12 years before I got

1 in, he went bankrupt and there was a repossession, and
2 I just had enough funds to purchase the property at
3 that price. But it probably was below, slightly below
4 market price anyway because of that. And me, having
5 -- or coming, having been -- having grown up in
6 Germany, it was a very good price for such a large
7 piece of land, and I probably wouldn't have known that
8 it was too expensive or not. I was just touched by
9 the property and that's why I purchased it and stayed
10 there.

11 MR. MACINTOSH: Q: All right, thank you.

12 Mr. Advocaat, from your property, how many
13 structures do you see?

14 MR. ADVOCAT: A: Two, plus the lines, of course.

15 MR. MACINTOSH: Q: And again I want to stay with a
16 basic point, but I won't repeat it too many more
17 times, but obviously structures were in those two
18 sites when you chose to buy.

19 MR. ADVOCAT: A: Yes.

20 MR. MACINTOSH: Q: All right, and in your exhibit that
21 I asked you to have in front of you, that C1-12,
22 you've put in photographs.

23 MR. ADVOCAT: A: Yes.

24 MR. MACINTOSH: Q: And as I understand it, you've put
25 in photographs of the two structures that you see from
26 your house, with you transposing onto it what you

1 think the new towers will look like?

2 MR. ADVOCAT: A: Yes, that was based on a description
3 given to me by Mr. Barnett.

4 MR. MACINTOSH: Q: Fine. And so Mr. Barnett gave you a
5 description, and did you put those on the photographs?

6 MR. ADVOCAT: A: Yes, I did.

7 MR. MACINTOSH: Q: And can you turn those up for me,
8 please? They are part of Exhibit C1-12.

9 MR. ADVOCAT: A: It looks like they may very well be
10 segmented somehow.

11 MR. MACINTOSH: Q: Let me do this. This may be of
12 assistance. Did you receive -- did Mr. Cairns show
13 you the photographs which I provided to him and to Mr.
14 Fulton yesterday morning before the hearing began,
15 with respect to these photographs and how they've been
16 corrected by Fortis?

17 MR. ADVOCAT: A: No.

18 MR. MACINTOSH: Q: All right, well, let me -- I'll show
19 you fresh copies of them then. Now, I've shown you
20 here, sir, a group of five, of six photographs that
21 I've just handed out, and the second one in is marked
22 Exhibit C1-12.

23 MR. ADVOCAT: A: Yes.

24 MR. MACINTOSH: Q: And that was one of the photographs
25 that you filed.

26 MR. ADVOCAT: A: Yes.

1 MR. MACINTOSH: Q: And I had the company render that
2 photograph with its computer technology for doing so,
3 and gave it, as I say, to Mr. Cairns yesterday morning
4 in case he had questions of the panel who had those
5 photograph done. And the top photograph in the bundle
6 I've given you purports to -- intends to correct the
7 true picture, if you will, of what that pole will look
8 like.

9 And so do you have on the top the new pole
10 with one photograph, and underneath that is your
11 version of that?

12 MR. ADVOCAT: A: That's correct, based on Mr.
13 Barnett's description, yes.

14 MR. MACINTOSH: Q: No, I understand. You've pointed
15 that out. Mr. Barnett gave you a description from
16 B.C. Hydro, correct?

17 MR. ADVOCAT: A: No, from FortisBC.

18 MR. MACINTOSH: Q: Yes, but Mr. Barnett testified here
19 yesterday, and he's from B.C. Hydro, and that's the
20 same person you're talking about.

21 MR. ADVOCAT: A: Yes.

22 MR. MACINTOSH: Q: All right. And he gave you data,
23 and from that you constructed this picture.

24 MR. ADVOCAT: A: That's right.

25 MR. MACINTOSH: Q: All right. And the top photograph,
26 which I distributed to your counsel yesterday morning,

1 is the one which Mr. Barnett has created through his
2 facilities, to correct what the visual impact would
3 likely be with respect to that pole. And are you -- I
4 would presume that you wouldn't have any knowledge to
5 dispute what I call the corrected photograph.

6 **Proceeding Time 4:03 p.m. T74**

7 MR. ADVOCAT: A: Based on Mr. Barnett's description, I
8 believe it's inaccurate. And that's based on his
9 description.

10 MR. MACINTOSH: Q: All right. Well, we can recall Mr.
11 Barnett if need be. That's why I distributed this
12 before Mr. Barnett was on the stand yesterday. And
13 this is his version of the corrected photograph.
14 Underneath is the one that you prepared. That's the
15 position of Fortis.

16 Now, in this pile of photographs, if you go
17 down two more, there's another large-looking pole
18 which you, as I understand it, as part of C1-12,
19 prepared as the appearance of the pole -- one of the
20 two structures. And I'm sure you're going to say,
21 based on information Mr. Barnett gave you.

22 MR. ADVOCAT: A: Yes.

23 MR. MACINTOSH: Q: All right, so you --

24 MR. ADVOCAT: A: The height of the mountains as he
25 described, yes.

26 MR. MACINTOSH: Q: All right, so you prepared that.

1 MR. ADVOCAT: A: Yes.

2 MR. MACINTOSH: Q: All right. And again, what I was
3 advised by Mr. Barnett was that the correct photograph
4 would be the one I handed to your counsel yesterday
5 morning, which would be just on top of that. And so
6 if you go one more, you'll see the same view and
7 you'll see what I am suggesting is a corrected
8 photograph. Do you see that?

9 MR. ADVOCAT: A: Yes. Corrected in whose view?

10 MR. MACINTOSH: Q: Corrected in Mr. Barnett's view.

11 MR. ADVOCAT: A: Ah.

12 MR. MACINTOSH: Q: Because he had this prepared by his
13 staff, who do this professionally, with all the data
14 with respect to these poles.

15 MR. ADVOCAT: A: I see.

16 MR. DANNINGER: A: May I?

17 MR. MACINTOSH: Q: Yes.

18 MR. DANNINGER: A: May I just make a comment? These
19 photographs are identical, right? Except the power
20 pole. And the power -- the installation, the
21 transmission installation. Otherwise they are
22 perfectly identical, right? Except colour
23 differences. But the perspective is the same.

24 MR. MACINTOSH: Q: The perspective is the same.

25 MR. DANNINGER: A: Is the same. So --

26 MR. MACINTOSH: Q: Excuse me, sir, sorry to interrupt.

1 The proportions are the same.

2 MR. DANNINGER: A: Are the same. Yeah.

3 MR. MACINTOSH: Q: Right.

4 MR. DANNINGER: A: The power -- the old -- the existing

5 transmission line on Mr. Advocaat's copy of the photo,

6 with the hand-drawn pole in it, you see the height of

7 the old -- of the existing structure?

8 MR. MACINTOSH: Q: Yes.

9 MR. DANNINGER: A: Because he didn't erase that. And

10 if I measure the height of this structure, just with a

11 pencil here, to get a fix of lengths, and I put that

12 at twice that length on the new photograph, the new

13 pole is too short.

14 MR. MACINTOSH: Q: I understand, sir. And as I say,

15 the reason I distributed this before any witness took

16 the stand yesterday was so that there could be

17 questioning on it, if there was any question with

18 respect to the corrected photographs.

19 MR. ADVOCAT: A: This is the first I've seen of this.

20 MR. MACINTOSH: Q: Well, sir, I gave it to your counsel

21 yesterday morning when I received it. And so what we

22 can do, I can easily have Mr. Barnett recalled to show

23 these photographs as need be. Now --

24 MR. ADVOCAT: A: These?

25 MR. MACINTOSH: Q: -- now, in the -- if that is

26 regarded as necessary, and I can discuss that with Mr.

1 Cairns after.

2 Now, in the last photograph in the bundle,
3 which is the -- which also has C1-12 written on it,
4 that was a photograph which you filed, I believe? Is
5 that right, sir?

6 MR. DANNINGER: A: Just a second.

7 MR. ADVOCAT: A: I believe --

8 MR. DANNINGER: A: I didn't file it. The -- that was a
9 picture I took for the presentation before the RDOS
10 Board of Directors.

11 MR. MACINTOSH: Q: All right. And that's an existing
12 pole there?

13 MR. DANNINGER: A: That's the existing pole in front of
14 this house where the power line gets the closest to a
15 building in Heritage Hills.

16 **Proceeding Time 4:07 p.m. T75**

17 MR. MACINTOSH: Q: And presumably that lot where that
18 house is was purchased after that pole was in place.
19 Do you know that to be the case?

20 MR. DANNINGER: A: The house was built after -- I
21 think, because it's all new construction up there. I
22 think the house was built after the --

23 MR. MACINTOSH: Q: Right. And so the person bought
24 that house, and bought that lot --

25 MR. DANNINGER: A: They built the lot -- they built the
26 house on the lot.

1 MR. MACINTOSH: Q: -- and built the house on it after
2 the pole was already in place. All right?

3 MR. DANNINGER: A: Yes.

4 MR. ADVOCAT: A: May I add that nobody has -- nobody
5 within the Heritage Hills area has any argument with
6 what's existing there now. They accept them.

7 MR. MACINTOSH: Q: Very well. And I want to show you
8 other photographs which were also given to your
9 counsel yesterday morning, Mr. Advocat, which were
10 taken by Mr. Barnett last Friday, and just have you
11 identify for the Commission --

12 MR. FULTON: Before we move to these new photos, we
13 should mark the first set Exhibit B-22, Mr. Chairman.

14 MR. MACINTOSH: Thank you.

15 THE CHAIRPERSON: Thank you.

16 **(COPIES OF SIX COLOURED PHOTOS, MARKED EXHIBIT B-22)**

17 MR. MACINTOSH: And the way I would like to leave it, if
18 I can, Mr. Chair, is that if Mr. Cairns wishes to take
19 issue with what I call corrected photographs, Mr.
20 Barnett can be recalled, but I'll just leave that as
21 outstanding for now. In Exhibit B-22.

22 MR. MACINTOSH: Q: And the new photographs, sir, are
23 ones, as I say, which I gave to your counsel yesterday
24 morning, which Mr. Barnett took last Friday. And do
25 you have four coloured photographs there?

26 MR. ADVOCAT: A: Yes.

1 MR. MACINTOSH: Q: And can you confirm for us that each
2 of those four photographs contains a view of a portion
3 of Heritage Hills?
4 MR. ADVOCAT: A: Yes.
5 MR. MACINTOSH: Q: So in all the photographs, all the
6 houses which are shown are Heritage Hills properties?
7 MR. ADVOCAT: A: I believe so.
8 MR. MACINTOSH: Q: All right. And in the first
9 photograph, for example, roughly in the middle of the
10 page, we see a structure, and that's the existing line
11 on the existing right-of-way.
12 MR. ADVOCAT: A: I can assume that it is. I have
13 never seen Heritage Hills from this perspective, but
14 --
15 MR. DANNINGER: A: Yes, it is.
16 MR. MACINTOSH: Q: All right, thank you, Mr. Danninger.
17 And similarly if we look at the next picture, Mr.
18 Advocat, the poles which are shown in the -- somewhat
19 in the foreground to the lower right, those are
20 photographs of the existing right-of-way and the
21 existing poles?
22 MR. DANNINGER: A: I'm not familiar with this
23 perspective, but --
24 MR. ADVOCAT: A: Likewise.
25 MR. DANNINGER: A: -- unless the photograph has been,
26 you know, modified, it shows -- the power line.

1 MR. MACINTOSH: Q: No, these are just --

2 MR. ADVOCAT: A: Again, this is a perspective that

3 I've never seen Heritage Hills from. I'm not saying

4 that it isn't, I'm just saying that I can't --

5 MR. MACINTOSH: Q: All right. I'm advised these are

6 just normal photographs as opposed to the

7 superimposition of the new poles in the earlier

8 exhibit. But you would accept that those are

9 photographs of Heritage Hills with the existing power

10 line, the existing right-of-way?

11 MR. DANNINGER: A: Assuming that it is, yes.

12 MR. MACINTOSH: Q: All right. And then the third

13 photograph in this package, does that include the

14 place where you're building your house?

15 MR. ADVOCAT: A: Does this photograph include my build

16 site?

17 MR. MACINTOSH: Q: Yes.

18 MR. ADVOCAT: A: Yes, it does.

19 MR. MACINTOSH: Q: All right. And so, when we look at

20 this third photograph, is your building site toward

21 the right-hand side of it?

22 MR. ADVOCAT: A: That's correct.

23 MR. MACINTOSH: Q: And we see a house, a right-most

24 house, if I can put it that way, a house toward the

25 right-hand side, is yours further to the right than

26 that? Or is it in the foreground from that?

1 MR. ADVOCAT: A: It is the furthest to the right.

2 MR. MACINTOSH: Q: All right. So your property would
3 be just a little bit to the right of the last house in
4 the photograph.

5 **Proceeding Time 11:34 a.m. T38**

6 MR. ADVOCAT: A: No, the last house in the photograph
7 is my house.

8 MR. MACINTOSH: Q: Oh, I see. And so is your house
9 built to that -- obviously then your house is built to
10 that extent. You've got a roof on it, for example?

11 MR. ADVOCAT: A: Yes, I'm ready to move into it,
12 hopefully.

13 MR. MACINTOSH: Q: I see. So the last, the house to
14 the right is your house.

15 MR. ADVOCAT: A: All right.

16 MR. MACINTOSH: Q: And obviously you would accept that
17 the structures shown for power line are the existing
18 power line on the existing right of way.

19 MR. ADVOCAT: A: Yes.

20 MR. MACINTOSH: Q: And the final photograph is just
21 more of the same, but this is also Heritage Hills.
22 And does that contain your -- include your house but
23 from a greater distance?

24 MR. ADVOCAT: A: Yes, again it's the one furthest to
25 the right, just above the orchards.

26 MR. MACINTOSH: Q: Very well. And roughly toward the

1 right, at the mid-level of the picture.

2 MR. ADVOCAT: A: I stand corrected. There is one
3 other house that's further to the right, but it's at a
4 higher elevation.

5 MR. MACINTOSH: Q: Very well. And again we see a right
6 of way and wires and you would accept that's the
7 existing right of way.

8 MR. ADVOCAT: A: Yes.

9 MR. MACINTOSH: Q: All right, thank you.
10 Could I have that group of four pictures
11 marked as an exhibit please, Mr. Chair?

12 THE HEARING OFFICER: Marked Exhibit B-23.

13 THE CHAIRPERSON: B-23, thank you.

14 **(COPIES OF FOUR COLOURED PHOTOS, MARKED EXHIBIT B-23)**

15 MR. MACINTOSH: Q: Now, Mr. Advocat and Mr. Danninger,
16 your goal on behalf of SOFAR is to get the line
17 relocated so it's not near Heritage Hills and not near
18 your property, Mr. Danninger, is that correct?

19 MR. DANNINGER: A: And not near the Evergreen area and
20 just away from the valley bottom where the most
21 precious land in this area can be found, yes, that's
22 correct.

23 MR. MACINTOSH: Q: All right. The most precious land.

24 MR. DANNINGER: A: Yes.

25 MR. MACINTOSH: Q: All right. And is it correct that
26 there are -- do you know where Golden Hills is?

1 MR. DANNINGER: A: Yes, it's right above me.

2 MR. MACINTOSH: Q: And it's above Heritage Hills and
3 above you.

4 MR. DANNINGER: A: Elevation-wise, Golden Hills is
5 almost at the -- it depends. Golden Hills is 140 acre
6 if I'm correct. I don't remember the exact -- it's
7 over 100 acres as far as I remember. There are 18
8 building sites on there and they are spread out all
9 over the whole area. The highest house in Golden
10 Hills is slightly higher than the highest house in
11 Heritage Hills, but most of the houses in Golden Hills
12 are about the same elevation as the upper tier of
13 houses in Heritage Hills. The lowest houses in
14 Heritage Hills are below the lowest house in Golden
15 Hills.

16 MR. MACINTOSH: Q: All right, so without getting into
17 specifics of elevation, but Golden Hills is roughly at
18 the same elevation and higher than Heritage Hills, is
19 that roughly correct?

20 MR. DANNINGER: A: I think there are two houses which
21 could be considered higher, but I'm not certain about
22 it. They might be the same elevation as the highest
23 houses in Heritage Hills.

24 MR. MACINTOSH: Q: All right, and you're aware that
25 Golden Hills has filed a letter here requesting that
26 the line be on the lower route and that it not go onto

1 the upland route.

2 MR. DANNINGER: A: That's correct.

3 MR. MACINTOSH: Q: You're aware of that?

4 MR. DANNINGER: A: That's correct because Golden Hills
5 residents voice concern regarding their water supply,
6 which is also my water supply for the first half of
7 the growing season. They use it to fill a pond which
8 they use for fire protection. I use it for irrigation
9 in the orchard.

10 MR. MACINTOSH: Q: And you're aware, though, that
11 Golden Hills has taken the position with the
12 Commission that it would prefer that the line be down
13 below, and so far --

14 MR. DANNINGER: A: Yes, of course, because it's so far
15 below that their view is not impacted.

16 MR. MACINTOSH: Q: Exactly.

17 MR. DANNINGER: A: And they are far away from the line.
18 So they figure that --

19 MR. MACINTOSH: Q: See, they would like it down where
20 it is now, because they figure for them it's better
21 than if it goes upland, correct?

22 MR. DANNINGER: A: Yeah.

23 MR. MACINTOSH: Q: And you figure it's better to have
24 the line upland because it's better for you than if
25 it's where it is now and where it was when you bought
26 your property, correct?

1 MR. DANNINGER: A: That is correct, except that the
2 reasons are very different, and I think the reasons
3 Golden Hills put forward are under close scrutiny, not
4 -- would not stand up as well as the reasons.

5 MR. MACINTOSH: Q: You think your case is a better case
6 to --

7 MR. DANNINGER: A: No, they claim the hydrology of the
8 slope would be changed, and according to all I know
9 from mountain hydrology, from my forestry background,
10 I have -- the water -- I appreciate to have that water
11 too. But I can't see any way that unless road
12 construction is done in a completely responsible way,
13 that it would change the hydrology of the area where
14 the line -- for where the upper route is planned or
15 proposed, that that would change so much that it would
16 have any effects on the water supply.

17 **Proceeding Time 4:17 p.m. T77**

18 MR. MACINTOSH: Q: Mr. Danninger, you've expressed a
19 view that you think Golden Hills is mistaken in its
20 requesting to have the line left where it is, and that
21 your position is better for having the line down where
22 it -- having it moved upland. That's correct, to
23 begin, isn't it?

24 MR. DANNINGER: A: No, you can't be mistaken on a
25 personal opinion, I think.

26 MR. MACINTOSH: Q: No.

1 MR. DANNINGER: A: That's --

2 MR. MACINTOSH: Q: No. And you mentioned earlier, the
3 Golden Hills people, one of the reasons they want the
4 line down below is they think it has less visual
5 impact on them, correct? Than moving it upland,
6 correct?

7 MR. DANNINGER: A: No, either way, it's not correct.
8 Either way it has no visual impact on them.

9 MR. MACINTOSH: Q: And so would you recognize that in
10 1965, when the line was built where Heritage Hills is,
11 that there was no one in Heritage Hills, right?

12 MR. DANNINGER: A: That's right.

13 MR. MACINTOSH: Q: And you're aware that this line is
14 supposed to be built out for a 50-year life?

15 MR. ADVOCAT: A: I have no idea.

16 MR. MACINTOSH: Q: You have no idea.

17 MR. DANNINGER: A: Pardon, what was the question?

18 MR. MACINTOSH: Q: That this line, when it gets
19 installed, wherever it gets installed, is designed for
20 a 50-year life.

21 MR. DANNINGER: A: Oh, it will be probably more than 50
22 years.

23 MR. MACINTOSH: Q: Right.

24 MR. ADVOCAT: A: Are you talking about the existing
25 line? Or are you --

26 MR. MACINTOSH: Q: I'm talking, sir, about this

1 project, wherever it is located.

2 MR. ADVOCAT: A: Yes.

3 MR. MACINTOSH: Q: It is being built into a 50-year
4 planning for long-term use.

5 MR. ADVOCAT: A: I believed it was 20 years.

6 MR. MACINTOSH: Q: And -- all right. I have evidence
7 we could consult on that. And we needn't fence on
8 that. The point is, sir, that the line is going to be
9 built out for, let's say, at least 20 years' usage,
10 correct?

11 MR. ADVOCAT: A: Yes.

12 MR. MACINTOSH: Q: And you heard the evidence from the
13 land developer who gave evidence with Mr. Wiltse
14 yesterday about growth in the Okanagan, correct?

15 MR. ADVOCAT: A: Yes.

16 MR. MACINTOSH: Q: And you recognize that the Okanagan
17 is going to continue to grow for the next two, three,
18 four, five decades, in all likelihood. Correct?

19 MR. ADVOCAT: A: Yes.

20 MR. MACINTOSH: Q: And you realize that whoever lives
21 near a line prefers not to have the line nearest them,
22 correct?

23 MR. DANNINGER: A: That's right. That it's -- that's
24 why it's a good idea to move it somewhere where nobody
25 will live in the next five decades.

26 MR. MACINTOSH: Q: No, but sir, that's not the case,

1 then, is it? Because someone is going to be up there,
2 aren't they? Someone is going to --

3 MR. DANNINGER: A: The line --

4 MR. MACINTOSH: Q: -- Golden Hills is going to expand
5 as well.

6 MR. DANNINGER: A: No, it's not, because they are
7 bordering Crown land.

8 MR. MACINTOSH: Q: Golden Hills is not going to expand?

9 MR. DANNINGER: A: No.

10 MR. MACINTOSH: Q: And how many units are there now?

11 MR. DANNINGER: A: Unless they change their strata plan
12 and get permission to do, though, and build more
13 houses on their lots. But the upper route, if the
14 line would be put on the high-elevation route, there
15 would be a distance -- and I don't have the map, but
16 even with the map in my hand -- but it would be a
17 straight line of at least six, seven, eight hundred
18 metres between the upland corridor and the Golden
19 Hills property line. So the Golden -- no matter what
20 happens, the Golden Hill people will not be affected
21 by the upland route in terms of visual or any
22 proximity, EMF, whatever.

23 MR. MACINTOSH: Q: Do you --

24 MR. DANNINGER: A: Their only concern -- they revealed
25 to me in private conversations, is the water issue,
26 that the hydrology is not changed, and residual

1 access. They don't -- so that they don't get dirt
2 bikes and other motorized recreational vehicles in
3 their back yard. That's their concern.

4 MR. MACINTOSH: Q: Do you accept, Mr. Danninger or Mr.
5 Advocaat, that the Commission has to endeavour to
6 balance competing interests?

7 MR. DANNINGER: A: It should, yes.

8 MR. ADVOCAT: A: Yes. Yes. But there is no balance
9 here.

10 MR. MACINTOSH: Q: I beg your pardon?

11 MR. ADVOCAT: A: In my view there is no balance here.

12 MR. MACINTOSH: Q: There's no balancing here?

13 MR. ADVOCAT: A: Yes. Yes.

14 MR. MACINTOSH: Q: I'm not following.

15 MR. ADVOCAT: A: There's over 350 human lives that
16 live in the communities that are going to be affected
17 by this, and they seem to be the least considered so
18 far in this application. So my view of the balance
19 that FortisBC is putting forward is unbalanced.

20 **Proceeding Time 4:21 p.m. T78**

21 MR. MACINTOSH: Q: I see. And you are aware of the
22 stated position on this application of the Penticton
23 Indian Band.

24 MR. DANNINGER: A: To have a timber claim up there and
25 --

26 MR. MACINTOSH: Q: They have a timber claim, sir, but

1 my question first is, are you aware of the position
2 stated by the Penticton Indian Band with respect to
3 which route should be used? Are you aware of that,
4 first of all?

5 MR. DANNINGER: A: It was mentioned yesterday and the
6 reason which was mentioned for it --

7 MR. MACINTOSH: Q: Excuse me, Mr. Danninger. Are you
8 aware of the position of the Penticton Indian Band
9 with respect to which route it would prefer?

10 MR. DANNINGER: A: Yes.

11 MR. ADVOCAT: A: Yes.

12 MR. MACINTOSH: Q: All right, and which is that?

13 MR. DANNINGER: A: The existing route.

14 MR. MACINTOSH: Q: All right. Are you aware of the
15 position of the Provincial Integrated Land Management
16 Bureau on which route it would prefer that the
17 Commission approve?

18 MR. ADVOCAT: A: I believe it is the existing route.

19 MR. MACINTOSH: Q: That it would prefer the existing
20 route.

21 MR. ADVOCAT: A: Yes.

22 MR. MACINTOSH: Q: If the two lines, that is down below
23 and up above, went -- were costed on the basis of
24 being put in service at the same time as one another,
25 are you aware that the upland line would cost upwards
26 of 10-20 million dollars more than the line down

1 below, through Heritage Hills and other areas?

2 MR. ADVOCAT: A: On the contrary, the application

3 shows that there's a \$600,000 difference between

4 Option 1A and Option 2B.

5 MR. MACINTOSH: Q: Yes, sir, but are you aware that if

6 you used like and like comparison of putting in the

7 line down below and the line up above, building on the

8 same timeframe, on the same timeframes because you've

9 got to compare postponed service, that there's a 10 to

10 20 million dollar spread?

11 MR. ADVOCAT: A: No, I don't agree with that.

12 MR. MACINTOSH: Q: All right. If --

13 MR. DANNINGER: A: That's what your numbers show.

14 That's what the numbers presented showed.

15 MR. ADVOCAT: A: Well, that's what your numbers show

16 but I don't agree with that.

17 MR. DANNINGER: A: So they are aware of --

18 MR. MACINTOSH: Q: All right. If there is a greater

19 cost of having the line installed upland, or if there

20 is a delay in in-service by having to go upland, who

21 should bear that cost?

22 MR. ADVOCAT: A: FortisBC.

23 MR. MACINTOSH: Q: In other words, the customers of

24 FortisBC as a whole.

25 MR. ADVOCAT: A: No, really they shouldn't. Sir, I --

26 MR. MACINTOSH: Q: Excuse me, just so I --

1 MR. ADVOCAT: A: No, if I may, if I may.
2 MR. MACINTOSH: Q: No, Mr. Advocat.
3 MR. ADVOCAT: A: If you can indulge me.
4 MR. MACINTOSH: Q: Just -- excuse me, just so I
5 understand your answer, sir, is it your evidence that
6 the cost of going upland should be borne by Fortis's
7 shareholders as opposed to Fortis's customers as a
8 whole?
9 MR. ADVOCAT: A: Yes, absolutely.
10 MR. MACINTOSH: Q: And so if the Commission was
11 determining that the cost of going upland was to be
12 borne by Fortis's customers, --
13 MR. ADVOCAT: A: Sorry?
14 MR. MACINTOSH: Q: If the Commission was to determine
15 that the line was to go and it was to go upland and it
16 was to be borne by Fortis's customers as a whole, are
17 you prepared to accept that impact on rates and have
18 that borne by all of Fortis's customers and not borne
19 by Heritage Hills people?
20 MR. ADVOCAT: A: No.
21 MR. MACINTOSH: Q: Now, you've seen evidence with
22 respect to the various cross-sections for the various
23 proposals for the different structures.
24 MR. ADVOCAT: A: Yes.
25 MR. MACINTOSH: Q: The different poles. Am I correct
26 that the one that you preferred was the cross-section

1 D, which has the two different support structures in
2 it for the two different 230 kV lines?

3 MR. ADVOCAT: A: I'm sorry, I don't understand. The
4 only structure that is acceptable to me is the one
5 that's presently on the existing right of way today.

6 **Proceeding Time 4:25 p.m. T79**

7 MR. MACINTOSH: Q: And when the BCUC asked so far, in
8 the event that the two 230 kV lines are approved, so
9 there were two 230 kV lines and they were approved for
10 construction along the existing right of way. All
11 right? That was a question put to SOFAR and SOFAR
12 gave an answer. Do you recall? Were you involved in
13 that process?

14 MR. DANNINGER: A: Yes, partly but we have to revisit
15 this exhibit and see what the answer is.

16 MR. ADVOCAT: A: Would the structures --

17 MR. DANNINGER: A: Please inform us about the question.

18 MR. MACINTOSH: Q: Yes, the Commission asked you which
19 of the structures that SOFAR would prefer if two 230
20 kV lines were to be installed on the lower route, and
21 in particular it's IR 1.5.

22 MR. DANNINGER: A: Yes, to my knowledge at this point,
23 the SOFAR members have not formed a uniform opinion on
24 this point. This is simply because for those people
25 whose views are impacted severely by higher posts,
26 they prefer the option where the poles are lower, and

1 those people who have, like myself for example, who
2 have right now two, four, six -- probably in the range
3 of eight or nine poles on the property with the
4 existing line, if that's doubled, it would end up to
5 look like a forest of power poles spread out over a
6 slope, and that's equally unacceptable. So we can't
7 speak on behalf of all SOFAR members in this regard at
8 this point.

9 MR. MACINTOSH: Q: And so different people would prefer
10 different pole structures within SOFAR.

11 MR. DANNINGER: A: Yes, because SOFAR is comprised of
12 people from the McLean, Shuttleworth Creek, Lowlands,
13 all the way to Evergreen, Penticton and it's quite
14 understandable that they might prefer for their
15 properties different pole configurations.

16 MR. MACINTOSH: Q: Yes, and so different people want
17 different things if there are two 230 kV lines on the
18 lower route.

19 MR. DANNINGER: A: Probably, yes.

20 MR. MACINTOSH: Q: To your knowledge -- go ahead.

21 MR. DANNINGER: A: That does not mean that SOFAR
22 members could not come to a uniform opinion on that by
23 compromising their views.

24 MR. MACINTOSH: Q: Right. But so far that hasn't
25 occurred.

26 MR. DANNINGER: A: So far we did not have a discussion

1 on that. We would have to get another community
2 meeting and discuss this.

3 MR. MACINTOSH: Q: All right. Thank you very much.
4 Those are my questions.

5 THE CHAIRPERSON: Thank you, sir. Mr. Fulton.

6 MR. CAIRNS: Mr. Chairman, my understanding that Mr.
7 Macintosh introduced these photographs and I think he
8 said something along the lines of if I wanted to
9 recall Mr. Barnett.

10 THE CHAIRPERSON: Correct.

11 MR. CAIRNS: My recollection of what my friend said
12 yesterday was he produced these photographs to me
13 indicating that he would be producing these through
14 one of his witnesses. Since he didn't produce it
15 through Mr. Barnett they were of no concern to me. So
16 I don't know if he forgot or what, but he's now trying
17 to introduce Mr. Barnett's photographs through my
18 panel. So I think it is -- if the Commission is going
19 to accept these exhibits, it would be useful to have
20 Mr. Barnett talk a little bit about perspective.

21 Proceeding Time 4:30 p.m. T80

22 I don't mind recalling him. These things
23 happen. But it would be useful, I think, to have a
24 bit of a discussion about that or, alternatively, the
25 Commission not accept the exhibits as part of the
26 evidentiary record.

1 MR. MACINTOSH: Mr. Chair, I gave these photographs to
2 Mr. Cairns yesterday morning so that if he had
3 questions on them, he could cross-examine the panel.
4 There was apparently a misunderstanding between him
5 and me on that, but in any event, Mr. Barnett can be
6 called if he finds that helpful.

7 THE CHAIRPERSON: How available is Mr. Barnett?

8 MR. MACINTOSH: He is here.

9 THE CHAIRPERSON: Thank you.

10 MR. CAIRNS: So I guess that leaves us with completing
11 this --

12 MR. FULTON: Well, before -- I should wait on your
13 ruling, Mr. Chair, but we need to finish this panel as
14 well before we get to Mr. Barnett.

15 THE CHAIRPERSON: Before we get into that. Thank you.
16 Do you have any questions?

17 MR. FULTON: I do not.

18 THE CHAIRPERSON: Excuse me.

19 MR. FULTON: Mr. Chairman, before you begin your
20 questions, though, I'll remind you that there are the
21 maps there that you may wish to look at before you ask
22 this panel any questions, to get an explanation of the
23 view you may be taking.

24 THE CHAIRPERSON: Okay. We can do that. Should we take
25 a break, so that we can sort that out? And then we'll
26 have a look, you have a look, and the panel will still

1 be there for us to put the map and other questions to
2 them.

3 MR. FULTON: Yes.

4 THE CHAIRPERSON: Yes. Fair enough. We'll take five.
5 Thank you.

6 **(PROCEEDINGS ADJOURNED AT 4:32 P.M.)**

7 **(PROCEEDINGS RESUMED AT 4:36 P.M.)**

8 THE CHAIRPERSON: Thank you.

9 We have the map before us, and I think the
10 first thing we'll do is get it marked as an exhibit,
11 Exhibit A -- whatever we're at.

12 MR. FULTON: Mr. Chairman, given that I've requested the
13 map, or it was offered up to me, it should be a
14 Commission counsel exhibit. So if we mark it A2-1.

15 THE CHAIRPERSON: A2-1. Thank you.

16 **(TOPOGRAPHICAL MAP FOR VIEWING AREA, MARKED EXHIBIT**
17 **A2-1)**

18 THE CHAIRPERSON: This may be a collective effort, but
19 just so that we get our orientation correct, we're
20 looking at the northwest quadrant of the map where the
21 lots are indicated, and we do see Heritage Boulevard
22 in there, and we do have a couple of questions, just
23 confirming that the -- well, Sunnybrook, and I'm not
24 too sure how much of what's below Heritage Boulevard
25 is included. Or is that all considered Sunnybrook,
26 down towards the lake from there?

1 MR. ADVOCAT: A: That's a good question. I don't
2 know.

3 MR. DANNINGER: A: I'd say the oldest -- I would have
4 to look at the map. As far as I know, it's the
5 northern part of the houses in that area is referred
6 to as Heritage -- not Heritage Hills -- Lakeshore
7 Highlands.

8 MR. ADVOCAT: A: Lakeshore Highlands.

9 MR. DANNINGER: A: Lakeshore Highlands. And that's --
10 those houses have been built, I think, in the 60s or
11 70s. And the actual Heritage Hills subdivision is to
12 the east, higher up the hill, and to the north along
13 Heritage Boulevard.

14 THE CHAIRPERSON: So Heritage Hills, then, does it
15 include Christie Mountain Lane?

16 MR. ADVOCAT: A: Yes.

17 MR. DANNINGER: A: That's new.

18 THE CHAIRPERSON: Big Horn Trail?

19 MR. ADVOCAT: A: Yes.

20 MR. DANNINGER: A: That's new.

21 THE CHAIRPERSON: One Quail Place?

22 MR. ADVOCAT: A: Yes.

23 THE CHAIRPERSON: Apple Road?

24 MR. DANNINGER: A: Yes.

25 THE CHAIRPERSON: And then I think we come to the end of
26 the development at that point.

1 **Proceeding Time 4:39 p.m. T81**

2 MR. ADVOCAT: A: That's the higher elevation of the

3 development. If you carry on along Heritage

4 Boulevard, that takes you to the most southerly point

5 of the development.

6 THE CHAIRPERSON: Right. And then Golden is --

7 MR. DANNINGER: A: Golden Hills is just to the south of

8 the -- if you look at the --

9 THE CHAIRPERSON: The south? Is that --

10 COMMISSIONER NICHOLLS: Is that here?

11 MR. DANNINGER: A: No, it's down here to the south.

12 South --

13 THE CHAIRPERSON: It's even further than this map, I see.

14 I see, okay.

15 MR. ADVOCAT: A: So they will be here.

16 THE CHAIRPERSON: This is Heritage up here.

17 MR. DANNINGER: A: This is Golden Hills here, this lot.

18 THE CHAIRPERSON: I see, okay. Okay, fair enough.

19 MR. FULTON: Perhaps, Mr. Chairman, for the record, we

20 could find out where Golden Hills is in reference to

21 the map, whether it's street designation --

22 THE CHAIRPERSON: With reference to Heritage Hills,

23 Golden Hills, as I make this out, is to the southeast.

24 Southeast quadrant.

25 MR. DANNINGER: A: Yes.

26 THE CHAIRPERSON: Is that correct?

1 MR. ADVOCAT: A: I believe you access it from Matheson
2 Road.

3 THE CHAIRPERSON: Yes, and we see that here. Thank you,
4 yes, right up in here. Yes.

5 MR. DANNINGER: A: The Golden Hills -- Golden Hills
6 protects its privacy very much, and you will see a
7 sign when you get close to the gate that they will
8 fine any trespassers minimum \$200.

9 THE CHAIRPERSON: Well, we'll at least be able to get
10 some idea of --

11 MR. DANNINGER: A: You may want to be careful.

12 THE CHAIRPERSON: Well, we may also try and get a GPS to
13 get us in and out of there.

14 Mr. Bemister -- well, no, we'd better take
15 that. You'll get it back. Thank you. Sorry. Now --
16 yes.

17 COMMISSIONER NICHOLLS: I'll ask you a question or two
18 first about the structure options for the poles.

19 In the event that we did decide to keep the
20 new lines on the existing right of way, Fortis has
21 suggested Option A-1 -- 1A rather, which they say they
22 chose even though it costs more, because of
23 environmental, aesthetic and EMF benefits. Now,
24 because it costs more it's important for us to know if
25 that matters to the people affected, and if some pole
26 structures do different things, as in Mr. Danninger's

1 case, maybe Option D with higher EMF but better
2 aesthetics because of his view, could be his choice.

3 I just want to know what your priority is
4 on these things, environment, aesthetics, EMF, if we
5 have to choose different pole structures and offset --
6 balance them against costs.

7 MR. DANNINGER: A: Are you specifically asking me?

8 COMMISSIONER NICHOLLS: You first, yes.

9 MR. DANNINGER: A: This is a really tough question and
10 it kind of feels like whether you ask should we punish
11 you by chopping off your arm or your leg? And you
12 know, if you like to walk it's equally bad. I think
13 in the end I would prefer the double circuit monopole
14 to anything else, simply to reduce the number of poles
15 on the property, which is getting very high. But it's
16 definitely only the lesser of the two great evils.

17 COMMISSIONER NICHOLLS: I understand that, but it's
18 important for us to know so we're not guessing what
19 you would like.

20 Mr. Advocaat?

21 **Proceeding Time 4:43 p.m. T82**

22 MR. ADVOCAT: A: In my position, where my home is
23 probably a further distance away from -- obviously the
24 right-of-way, that I believe it was a structure
25 related to the high capacity single 230 kilovolt line.
26 Which structure that was, it was -- if I recall, it

1 was similar to the ones that are in place today.
2 Possibly two metres higher. So which structure that
3 would be? I can't recall the designation.
4 COMMISSIONER NICHOLLS: I actually wasn't asking you
5 about that one, because then we get into different
6 trade-offs from Fortis's perspective, I believe.
7 Reliability, and things like that.
8 MR. ADVOCAT: A: Oh, I see.
9 COMMISSIONER NICHOLLS: So I'm just wondering, of the
10 cross-sections, the two double circuit ones which are
11 C --
12 MR. ADVOCAT: A: Then it would be the monopole.
13 COMMISSIONER NICHOLLS: It would be?
14 MR. ADVOCAT: A: Yes.
15 COMMISSIONER NICHOLLS: Over the -- okay, thank you.
16 THE CHAIRPERSON: I'm sorry, I didn't follow the answer.
17 COMMISSIONER NICHOLLS: It would be the monopole.
18 THE CHAIRPERSON: Okay.
19 COMMISSIONER HARLE: Oh, the monopole.
20 THE CHAIRPERSON: It would be.
21 COMMISSIONER NICHOLLS: 1A.
22 MR. ADVOCAT: A: 1A, yes.
23 THE CHAIRPERSON: Okay, thank you.
24 MR. DANNINGER: A: Yes.
25 MR. ADVOCAT: A: I'm sorry, when I based my first
26 answer, I completely forgot about the reliability

1 issues that were provided by FortisBC concerning the
2 single circuit high-capacity 230 kilovolt line.
3 Ideally, in my view, that would be the most
4 preferable.

5 COMMISSIONER NICHOLLS: But uplands, number one, clearly,
6 and --

7 MR. ADVOCAT: A: Well, uplands, obviously. Yes.

8 COMMISSIONER NICHOLLS: And then the high-capacity
9 second, and then the monopole.

10 MR. ADVOCAT: A: Yes.

11 COMMISSIONER NICHOLLS: Thank you.

12 THE CHAIRPERSON: All right. You done?

13 Gentlemen, this is a question that I'd be
14 interested to hear from each of you. If I understood
15 correctly, you're -- you would take the position that
16 the existing line does result in a negative impact on
17 property values. Let's just start there. Is that
18 correct, Mr. Advocat?

19 MR. ADVOCAT: A: I would say yes. There's been
20 comments from the individuals that do live in the area
21 that recognize that the existing poles in the area do
22 take away from property values.

23 THE CHAIRPERSON: But whatever the reason, be it visual
24 or health-related, or --

25 MR. ADVOCAT: A: Yes.

26 THE CHAIRPERSON: And Mr. Danninger, would you concur

1 with that?

2 MR. DANNINGER: A: I would agree with your statement,
3 yes.

4 THE CHAIRPERSON: And you're proposing the alternative
5 route which, again if I understand it, would result in
6 the existing line disappearing, and the right-of-way
7 being released from your property. Would that not
8 result in a corresponding, or balanced, if you wish,
9 increase in your property value?

10 MR. ADVOCAT: A: Yes.

11 MR. DANNINGER: A: I would say so.

12 THE CHAIRPERSON: So that there is a bit of a benefit
13 available to you of going upland, in a financial
14 sense?

15 MR. DANNINGER: A: Yes, I would say there would be,
16 yes. If the easement would be released, yes. I would
17 agree.

18 THE CHAIRPERSON: And just to explore that a little bit
19 further in the context of the question you addressed a
20 few minutes ago, and that's the "who pays". And I
21 wasn't quite clear on the extent of support that you
22 have within your group for, first of all, the monthly
23 bill. And I think you said you had something like 40
24 members who had indicated they would. Have you taken
25 any further surveys, or do you intend to --

26 MR. DANNINGER: A: No.

1 THE CHAIRPERSON: -- to take that proposition forward,
2 should there be an opportunity.

3 MR. ADVOCAT: A: We had the town meeting. The town
4 meeting is to do with the most efficient way we could,
5 with the time that we had. And no, we didn't take it
6 any further than that, no. We had two town meetings,
7 in fact. And the issue was brought up at both of
8 those, and the results were the same. They were
9 unanimous.

10 **Proceeding Time 4:47 p.m. T83**

11 THE CHAIRPERSON: Thank you. And I think you told Mr.
12 Macintosh that your view was that it should be the
13 Fortis shareholders who should bear the cost of this.
14 Is that my --

15 MR. ADVOCAT: A: Well, as I stated in my opening
16 statement, I firmly believe that if FortisBC had done
17 their due diligence on all possible alternatives,
18 there would be no delay. The delay would not exist.
19 You'd have to be blind not to take a look at -- a
20 simple lay person walking through the neighbourhood
21 can see, immediately, that putting up a 100-foot
22 monopole compared to what is there now is going to
23 anger their customers. And based on that, personally,
24 I would think again that I would say, "Well, gee,
25 don't you think we should take a look at some
26 alternative routes here that might be more viable

1 before we decide on maybe selecting ..." In fact, as
2 far as I understand it, FortisBC could have put their
3 -- the alternative route up, or one of the alternate
4 routes, as their preferred route, based on the impact
5 of the public. But they did not. So, who is
6 responsible for the delay?

7 THE CHAIRPERSON: Well, where I was going with this was,
8 if I suggested to you that the Commission might be
9 under some constraints in terms of being able to
10 penalize the Fortis shareholders, I guess my question
11 to you then would be, what would be your best option
12 in terms of how the additional cost should be -- in
13 the range that Mr. Macintosh was suggesting? I don't
14 know whether it's going to be ten or twenty or
15 whatever. It's going to be some significant number.
16 I think you said, "No," you didn't think the entire
17 community of FortisBC ratepayers should pay. So I'm
18 left just wondering --

19 MR. ADVOCAT: A: I have a bit of difficulty with that
20 question. The intent that I'm trying to put across is
21 that those that benefit from it should pay. Be it the
22 population of Kelowna, which stands to benefit from
23 the reliability issues. And those in Heritage Hills,
24 as well as the other outlying communities that would
25 also benefit, such as the MacLean Creek lowlands, for
26 instances.

1 MR. DANNINGER: A: And so the option that the property
2 owners -- if the easement, if the right-of-way is
3 given up by Fortis, that this would mean an increase
4 in their property values, and they might be willing to
5 pay some of the additional cost for the upland route
6 as well because of that. But we have not -- we were
7 not able to research that in any more detail.

8 I as a property owner would probably be
9 willing to -- if I wanted, for example, if I wanted to
10 develop building lots or whatever on my property, then
11 I would certainly be interested in getting that land,
12 and it is very well possible that I would be willing
13 to pay for that.

14 THE CHAIRPERSON: In a similar sense to what Mr. Wiltse
15 was discussing yesterday.

16 MR. DANNINGER: A: Yeah. Yeah. Yeah. But, I mean, on
17 the other hand, I see that many property owners in the
18 rural community, which is the Maclean Creek Road, the
19 Shuttleworth/Maclean Creek lowlands east of Okanagan
20 Falls, I mean, a lot of these people, they don't have
21 significant amounts of financial resources available
22 to them.

23 **Proceeding Time 4:51 p.m. T84**

24 They would have to go to the bank, take a
25 mortgage to pay any significant amount like that. And
26 I don't know whether they would be willing to do that.

1 Some of those folks are older, and whether there would
2 be enough money made available to contribute in any
3 significant way to moving the lines is really
4 questionable, I don't know.

5 THE CHAIRPERSON: Thank you. If it came down to a
6 question of view versus health, a line higher up with
7 lower EMF, or a line lower down with presumably
8 greater EMF but that enhanced view, where do you put
9 the weight on making that decision were it to be
10 either of your properties?

11 MR. ADVOCAT: A: It would have to be the higher. EMF
12 is more important.

13 THE CHAIRPERSON: EMF is more important?

14 MR. ADVOCAT: A: Yes, health is important.

15 THE CHAIRPERSON: So that's where you'd put a significant
16 portion of the weight?

17 MR. ADVOCAT: A: Absolutely.

18 THE CHAIRPERSON: Mr. Danninger?

19 MR. DANNINGER: A: Same.

20 THE CHAIRPERSON: Sorry, was that a yes?

21 MR. DANNINGER: A: The same. Yes.

22 THE CHAIRPERSON: The same. Thank you, thank you.

23 Mr. Cairns, any re-direct? Or do we now
24 pursue the photos?

25 MR. CAIRNS: No to re-direct, Mr. Chairman.

26 THE CHAIRPERSON: Thank you. But you do wish to have the

1 or --

2 MR. MACINTOSH: Thank you, Mr. Chair.

3 **EXAMINATION IN CHIEF BY MR. MACINTOSH:**

4 MR. MACINTOSH: Q: You've got in front of you, Mr.

5 Barnett, Exhibit B-22, which contains the six pages,
6 and the top four are the most central. That is, at
7 the top is the photograph which you had prepared, and
8 the second one is from Exhibit C1-12 that was produced
9 by SOFAR.

10 MR. BARNETT: A: Yes.

11 MR. MACINTOSH: Q: And then the third one is the
12 photograph which you had prepared, and then the next
13 one is the -- again from C1-12.

14 MR. BARNETT: A: Correct.

15 MR. MACINTOSH: Q: All right.

16 And, no, that's fine, Mr. Chair, he's
17 available for questioning.

18 THE CHAIRPERSON: Thank you. I take it that maybe Mr.
19 Cairns is the only one who might care to cross-
20 examine? It seems to be the case, so Mr. Cairns,
21 proceed.

22 **Proceeding Time 4:55 p.m. T85**

23 **CROSS-EXAMINATION BY MR. CAIRNS:**

24 MR. CAIRNS: Q: Mr. Barnett, my apologies. Lawyers do
25 occasionally get their wires crossed. But glad to
26 have you here today. I think Mr. Macintosh said you

1 took some of these photographs. In B-23, that's
2 certainly the case. Is that right?

3 MR. BARNETT: A: That's correct.

4 MR. CAIRNS: Q: All right. B-22, was that you, or not?

5 MR. BARNETT: A: No, these are actually photos taken
6 by, and provided by SOFAR. This is the ones with the
7 structures on them.

8 THE CHAIRPERSON: So these are reproductions of the
9 photos that are --

10 MR. BARNETT: A: What our visualization specialist did,
11 he was given the photos that would -- say, take an
12 example, the second photograph in the package. And he
13 would have scanned it, and then through his software
14 he would be able to remove the SOFAR markup.

15 MR. CAIRNS: Q: Right. So I don't recollect sending a
16 JPEG image. I'm not sure --

17 MR. CAIRNS: Q: Thanks. Thank you. All right.

18 MR. BARNETT: A: Don't ask me how he does it, but he
19 does it.

20 MR. CAIRNS: Q: Oh, well. Well, maybe I might have to
21 call somebody else. But my problem with these
22 photographs has been for some time now -- is that they
23 have a different impact. So, for example, if you flip
24 over to Exhibit C1-12 -- sorry, the second page of B-
25 22.

26 MR. BARNETT: A: Yes.

1 MR. CAIRNS: Q: Mr. Advocaat's hand-drawn poles in
2 there. So if I look at that, and I compare that to
3 the photograph on the front page --

4 MR. BARNETT: A: Correct.

5 MR. CAIRNS: Q: Which is where your technician has
6 imposed -- put a new pole, that to me, just looking at
7 the rocks and the various landmarks, is a different
8 angle. The one with your pole on it is a wider angle,
9 which, wouldn't you agree, tends to diminish the
10 impact that pole has when you look at it?

11 Just check the rocks on the left and the
12 little house and the road on the right, and you can
13 clearly see that Mr. Advocaat's depiction is closer in
14 and gives more of an impact.

15 MR. BARNETT: A: I agree that it is -- the
16 magnification of it, if that's the right word, is not
17 exactly the same.

18 MR. CAIRNS: Q: Right. But it -- even these small
19 changes can lead to quite a substantial different in
20 the impact that they have on the reader, wouldn't you
21 say?

22 MR. BARNETT: A: It could, yes.

23 MR. CAIRNS: Q: All right. Now, the other problem that
24 I had was, it also depends on the size of the
25 reproduction. For example, these are eight and a half
26 by eleven.

1 MR. BARNETT: A: Yes.

2 MR. CAIRNS: Q: And a number of the exhibits, I think,
3 are 11 by 17.

4 MR. BARNETT: A: Correct.

5 MR. CAIRNS: Q: And so the 11 by 17s also appear to be
6 from a farther away perspective.

7 MR. BARNETT: A: Some of the 11-17s, as I recall, were
8 actually stitched photographs.

9 MR. CAIRNS: Q: Right. So the impact once again is
10 diminished on the -- depending on the size -- well,
11 diminished or enhanced, depending on the size --

12 MR. BARNETT: A: Depending upon the viewer and the
13 view.

14 MR. CAIRNS: Q: All right. And the other problem that
15 I had with the photographs, in terms of just providing
16 a fair and accurate depiction of what actually might
17 be occurring out there, is that it depends on the
18 medium on which you view it. So, when I got, for
19 example, the Fortis -- the Fortis response to SOFAR IR
20 10.7, it came with a number of photographs.

21 MR. BARNETT: A: Okay.

22 **Proceeding Time 5:00 p.m. T86**

23 MR. CAIRNS: Q: See if this is a fair characterization.
24 Anyway, when I got A10.7, there were -- sorry, it's
25 10.8. A10.8 has a depiction of -- have we got that
26 available?

1 MR. BARNETT: A: That's a stitched photograph again.

2 MR. CAIRNS: Q: Right. So back to this problem of what
3 medium do you view it on? When I pulled that up on my
4 computer I went, "Whoa, this is huge. It's like
5 painting a mustache on the Mona Lisa." On the
6 computer screen that pole is right in your face, but
7 when you view it on a photograph it's not -- doesn't
8 have quite the same impact. So doesn't the medium
9 also have an effect on the impact that photographs can
10 have?

11 MR. BARNETT: A: Again, it depends too whether they've
12 been changed from a JPIC to a PDF, or whether you're
13 printing it on a fancy Xerox colour printer, or
14 whether you're doing it on a bubble jet.

15 MR. CAIRNS: Q: So I guess -- well, let's go to the
16 very last two photographs in B-22. Let's start with
17 the last one.

18 MR. BARNETT: A: I could explain these two.

19 MR. CAIRNS: Q: Okay, go right ahead. You know where I
20 --

21 MR. BARNETT: A: They are the SOFAR photographs, but
22 because the new poles will be taller than the existing
23 ones, we thought we wanted to show the complete
24 structure rather than taking up the picture and
25 stopping. So our visualization specialist imported
26 some sky.

1 MR. CAIRNS: Q: There we go.

2 MR. BARNETT: A: Okay. I'll be honest with you --

3 MR. CAIRNS: Q: So he imported some sky and he reduced

4 the size of the photograph and it doesn't --

5 MR. BARNETT: A: Well, he didn't reduce the size --

6 well, it is reduced and it's turned from landscape to

7 portrait.

8 MR. CAIRNS: Q: All right, so you would agree with me

9 then that it depends on the angle -- to obtain a fair

10 characterization of what's going on depends on the

11 photographic angle that's used, narrow, wide; it

12 depends on the size of the reproduction, 8 and a half

13 by 11, 11 by 17; and it also depends on the medium

14 through which it's viewed, either on a paper

15 reproduction or a computer screen. All those --

16 MR. BARNETT: A: They can vary, and again each one of

17 us who looks at those pictures get somewhat of a

18 different idea too.

19 MR. CAIRNS: Q: And would you also agree with me that a

20 very beneficial exercise is actually to go out on the

21 property and get a sense of what may or may not be

22 happening out there?

23 MR. BARNETT: A: We have done that and SOFAR did the

24 same thing. I guess you could take different pictures

25 at different angles and end up with different

26 perspectives.

1 MR. CAIRNS: Those are my questions, Mr. Chairman.

2 THE CHAIRPERSON: Thank you. Mr. Fulton, I understand we
3 may have another presentation, do we, potentially?

4 MR. FULTON: Yes, Mr. Chairman. With your leave, Judy
5 Brock, who was not here last night and who was at the
6 top of the list, has asked that she can speak today.
7 I understand that owing to flight delays she was not
8 able to arrive at last night's community input session
9 on time. So she would be, subject to the leave of the
10 Chair, making her presentation in the same manner that
11 the others did last night, a 10-minute cap on the
12 presentation.

13 THE CHAIRPERSON: Fair enough. I think the Panel would
14 be quite prepared to hear her, subject only to
15 considering any comments that anyone else might have.

16 MR. MACINTOSH: No, thank you, Mr. Chair. As I
17 understand it, the speaker will speak as if it was in
18 this session last evening, and we certainly take no
19 objection. Thank you.

20 THE CHAIRPERSON: Thank you.

21 MR. FULTON: Can Mr. Barnett be excused then, Mr.
22 Chairman?

23 THE CHAIRPERSON: Mr. Barnett, you're excused one more
24 time.

25 (WITNESS ASIDE)

26 MR. FULTON: And Ms. Brock, if you could come forward and

1 take the chair close to the microphone.

2 **Proceeding Time 5:04 p.m. T87**

3 MR. FULTON: Yes. Take the microphone that looks best to
4 you.

5 THE CHAIRPERSON: Ms. Brock, just before you get
6 underway, the session we had last night was less
7 formal in format than what you've been witnessing this
8 afternoon. The most important thing perhaps to you
9 might be that you won't be cross-examined on your
10 statement. Either myself or my colleagues may have a
11 question or two of you. You do have a time limit, and
12 it's ten minutes, as I hope you're aware. And it was
13 my habit last night, and would be again today, to put
14 a fairly tight collar on that time limit.

15 So we'd be happy to hear what you have to
16 say.

17 **SUBMISSION BY MS. BROCK:**

18 MS. BROCK: Well, I really appreciate the opportunity to
19 make this little presentation today. I'm not -- I
20 didn't even -- I went away soon after I heard, like,
21 within a day or two that we would have this
22 opportunity, so I'm not, you know, so very well
23 prepared. I'm not exactly sure if there's guidelines,
24 if I could comment on something I heard today or if I
25 have to stick to things that were in my mind before I
26 sat in here this afternoon, or what sort of guidelines

1 there would be that way.

2 THE CHAIRPERSON: No particular guidelines. We're here
3 to hear your view.

4 MS. BROCK: Oh, okay.

5 THE CHAIRPERSON: And I just reset my watch, so we'll
6 start --

7 MS. BROCK: Okay. Yes. Thank you very much. My name is
8 Judy Brock. I moved up to the Okanagan almost 40
9 years ago from the coast. We were farmers, and still
10 are -- smaller farmers now, because we're getting
11 older -- in the Okanagan.

12 Soon after we moved here, there was the
13 occasion where West Kootenay Power at that time was to
14 put a line across the valley floor close by Macintyre
15 Bluff. And ironically, that month, that that came
16 into the public knowledge, it was also the fold-out in
17 the middle of *Beautiful B.C.* magazine, was that view.
18 It's quite an iconic view in the world, I gather now
19 from what I hear from people.

20 West Kootenay Power talked with community,
21 listened very closely to concerns, and changed the
22 materials they used at some expense, I was told, to
23 make sure that that viewscape wouldn't be interfered
24 with. I guess there was -- it was more of a community
25 process, and it didn't get into any kind of a -- I
26 don't know what other term to use, but almost an

1 adversarial feeling that there is to this process that
2 we're involved in now. So that has been my previous
3 experience in being involved in something like this.

4 I heard mention today of Penticton Indian
5 Band, and I know within our community we have often
6 had opportunities to meet together and talk about
7 things, and as a resident of the east side, they've
8 even helped us with some concerns over development
9 along that area. So I also feel sad that we weren't
10 given the opportunity to sit as a community --
11 communities, to communities, I guess, and talk about
12 the concerns within the community along this route.

13 I went to the community meetings. There
14 was a bit of confusion there. When I first went, I
15 was told -- shown one set of what the poles would look
16 like, and they didn't look very bad. And then as I
17 was leaving, I mentioned this, you know, I mentioned,
18 "Gee, those aren't ..." and I was told then that I was
19 wrong, that they -- so there was some confusion even
20 at the meetings over how things would look. Anyway.

21 So that, and not having the opportunity to
22 meet as a community. I know you mentioned that other
23 group that put in -- is it the land -- the integrated
24 land management --

25 THE CHAIRPERSON: Oh, Integrated Land Management Board.
26 That's a provincial --

1 MR. BROCK: Yeah. And I'm wondering if that's not the
2 place where some of the environmental studies would
3 have been put forward. I know that when we bought our
4 land back 40 years ago, we right away were approached
5 by Canadian Wildlife Service and a couple of years
6 after that, because they were just new, the Nature
7 Trust of Canada. And it was because the valley bottom
8 represents such a richness of species.

9 So I'm kind of again confused over why a
10 lower route wouldn't be as, you know, important to
11 disturb as a higher route. Because you know, over
12 those times, I've had opportunity to work with
13 scientists, some of which I know were in that position
14 as being consultants. But it just -- again, it
15 confuses me as a person who doesn't have much depth of
16 knowledge on that, and I know it does confuse the
17 community a bit too. Because there was things that
18 were put forward showing how important the lower
19 elevations are as far as species richness in the area.

20 **Proceeding Time 5:09 p.m. T88**

21 I'm definitely not an appraiser but I can't
22 help but think that the impact, the viewscape, is
23 going to be amazing. Since those many years ago when
24 that viewscape was considered way back then, this area
25 has become renowned as a wine tourism area. It's hard
26 to pick up anything, I just happened to pick this up

1 last night in the airport, that doesn't show that
2 iconic view. It's everywhere. If you had a minute to
3 go to the LDB hearing, I gather it's throughout the
4 province, that view is a mural about half the size of
5 this wall in our local one, and has been -- the logo
6 across the ones down at the coast I was told was
7 "Welcome to our back yard". Well, it is our back yard
8 for a lot of us here today.

9 The concerns about being, you know,
10 property values, that's -- I think most people's
11 property and assets are tied up in their homes. So
12 probably a lot of what I'm saying is redundant to what
13 other people have said. But that is their major
14 asset. So when there is an impact on it it's a major
15 concern and can lead to stresses that we won't know,
16 you know, where they could end or the people that
17 could be affected.

18 I guess the other issue that's very, you
19 know, I'm hearing a lot about it today. In my
20 opportunities I've had here to work with scientists
21 just learning about this area, I understand something
22 I didn't know so well, that science is a very fluid
23 thing. It changes from -- sometimes from day to day
24 on what we know, what we can really -- I guess I
25 always thought, "Oh, the scientist said it so that's
26 it and I want to believe it." But, you know, I've

1 learned that it changes. So I know that statistics
2 are rising in neurological disorders and cancers, in a
3 number of things, so I can certainly, certainly
4 understand people's concerns about health issues in
5 this matter too.

6 I guess the availability of an alternate
7 route which would address all these issues really,
8 really, you know, makes me think that I'd -- I don't
9 have a sense of a compelling reason why we wouldn't
10 choose that alternate route. I've heard from the
11 community that they would do whatever they could, over
12 time, to pay for having that route chosen. I've heard
13 all sorts of things I've never heard of before. I've
14 also heard that the Regional District, I missed their
15 presentation but I've heard that that is a rarity in
16 B.C. to have a regional district come out in favour of
17 one route or another. So I hope that the concern is
18 local to this area. This is -- probably this route
19 goes through some of the most narrow areas of this
20 Okanagan Valley. I don't know what effects topography
21 has on even health issues, when you think of things on
22 a high slope what's happening rather than in an open
23 area. I have no knowledge of that. But I just, you
24 know, for all those issues I just hope that it's not
25 -- the concern isn't a precedent being set as far as a
26 community's influence, as much as the fact that this

1 is our community, it's a narrow, narrow part of a
2 valley, and I think we all have, you know, many shared
3 concerned over not going with the alternate route.

4 That's basically all I have to say.

5 THE CHAIRPERSON: Thank you very much. Can we go back to
6 oral hearing mode now, Mr. Fulton?

7 MR. FULTON: Perhaps not quite, Mr. Chairman. Again,
8 subject to your leave, I've just been approached by
9 another intervenor named Valerie Kistner, who has
10 asked if she too could make a presentation. She had
11 not signed up originally for the community input
12 session as Ms. Brock had. So I'm in your hands in
13 that respect.

14 THE CHAIRPERSON: Are there any others? Apparently not.
15 That would be fine.

16 **Proceeding Time 5:14 p.m. T89**

17 THE CHAIRPERSON: Good afternoon. And just before you
18 begin, you were here when I did the introduction for
19 Ms. Brock? In terms of the time limit, and -- yes.
20 Thank you very much. Proceed.

21 **SUBMISSION BY MS. KISTNER:**

22 MS. KISTNER: Thank you, Mr. Chairman, for your
23 discretionary powers given to me.

24 I wanted to say, first of all, that I'm a
25 farmer in the Maclean lowlands area next to
26 Shuttleworth Creek. We purchased the property in

1 2000. And it was after looking for several years --
2 three years to four years, to find a suitable property
3 that was within our means. Both my husband and I were
4 raised on acreages and having worked towards this goal
5 throughout our lives together, over the past -- the
6 previous 15 years, we were finally able to find a
7 property that was within our means, that we could buy,
8 purchase.

9 Certainly a factor in our negotiations, and
10 in looking at the property, was the fact that it did
11 have electrical power lines bisecting the property.
12 But again, I will cite Mr. Advocaat's claim of
13 ignorance of the true level of fears expressed by the
14 public at large about what issues surround EMF. I
15 thought, really, that the arguments that I had heard
16 and were espoused in the news were really childhood
17 leukemia, and I'd heard many public relations gambits
18 by the electrical utilities company disputing the
19 findings that there was any relationship.

20 I wasn't aware of the serotonin and
21 melatonin issues, and I in fact suffer from major
22 depressive disorder that is treatment-resistant. I
23 have been off work for the last four years on
24 disability. I've been let go from my job because I am
25 unable to maintain employment. I also suffer from
26 sleep disorders. I take sleeping pills, three a

1 night, of pills that my friends, or people that I
2 know, take a half to one pill, and still cannot sleep
3 through the night. It leaves me exhausted most of the
4 time. And I am able to help around the farm on a
5 sporadic basis. And even that is -- it's not
6 something that I can predict or plan for.

7 I'd like to say that we could sell our
8 property and move elsewhere, but being that it has an
9 electrical line through it, as when we looked at the
10 property, we considered that factor. It makes it less
11 sellable. Not that necessarily the price would be any
12 less, perhaps, but it makes it less desirable in the
13 face of other properties being available on the
14 market. It's a strike against it.

15 So, we're committed to being where we are.
16 We have goats. We raise meat goats. And, as I said,
17 the power line bisects our property. And so, when we
18 have kids in the kidding season, which is between two
19 and four months of the year, I'm out there feeding,
20 nursing, nurturing, the babies, directly under those
21 power lines each and every day. I cannot get away
22 from them. There is a limit to how much property and
23 how far we can move from those lines.

24 The house was pre-existing. So, and I've
25 measured from our property -- our house, from the
26 property -- or the centre of the power line, and it's

1 40 metres. My understanding is, the line is supposed
2 to go to the east of that, while they parallel-
3 construct. That will put it closer to my house, and
4 to my -- the rest of my daily life.

5 Proceeding Time 5:18 p.m. T90

6 I have grave concerns for that. But again,
7 I'm unable to do anything about it, unless this Board
8 can intervene on our behalf.

9 I have children that play amongst those
10 power lines every day. I have a renter whose property
11 -- on the property, enabled us to buy this property by
12 subsidizing our mortgage. Their house falls within
13 that 40-meter -- again, an existing -- pre-existing
14 condition that I couldn't change when I purchased the
15 property. But I had to factor it into the overall
16 picture. I was fortunate that I was able to buy the
17 property, or maybe you can look at it as being
18 unfortunate, in that I am left with the legacy power
19 line.

20 But -- excuse me, I'm losing my train of
21 thought here. The property -- to say that there was
22 no development in the area of the property when it was
23 -- when the power line was proposed is erroneous.
24 Because my property has a water rights on it. First
25 water rights that date back to 1893. There were
26 people living on that land, and the land, as far as I

1 could ascertain, was expropriated for the development
2 of that power line.

3 No control in their hands either. And
4 really, I'm asking the Board to intervene on our
5 behalf.

6 When I look at what's going in in the
7 existing right-of-way, as a proposal, the wooden poles
8 have a life expectancy -- well, it's been, what, close
9 to 45 years now, and they're nearing their life
10 expectancy. And Fortis has said they're looking at a
11 50-year life -- they're looking at a 50-year
12 projection for their plan, although they're looking at
13 a 20-year load projection.

14 What that means to me is that, 20 years
15 from now, as the development progresses and changes,
16 that infrastructure will be there. And it will be the
17 first line that they look at for upgrading. And I
18 know that's not the scope of this hearing, but it
19 should be, because it will impact further every day of
20 my life for the rest of my life. It will impact my
21 property and my property values and my health. And
22 the health of all of the people that live on my
23 property, and in any of the adjoining properties along
24 the line.

25 And I know there's been a lot of discussion
26 about property values rising if the view is improved.

1 Well, you know, that's a two-edged sword. Yes, our
2 property values are rising. But if we don't sell, if
3 we can't sell, we're just left with higher property
4 taxes. And perhaps this Commission may have the scope
5 of power to ask that some of the Regional Districts or
6 cities commit some of those extra property taxes that
7 they will be assessed -- able to assess, to offsetting
8 some of the costs for this project upgrade to the
9 Highlands route. I know it's out of the scope of this
10 Board, and I know that -- but likewise, I know that
11 what we have proposed in terms of subsidizing this
12 effort as citizens being affected by this lowlands
13 route is out -- not within the typical scope of this
14 Board's hearings in the past, either.

15 We've got to all think outside of the box
16 and think of the whole issue. Long-term, not just
17 today, not just next year, not just ten years from
18 now. But where will these next upgrades come from as
19 this valley continues to grow? And I ask the
20 Commission's indulgence in seriously assessing and
21 considering the uplands route.

22 Thank you.

23 THE CHAIRPERSON: Thank you very much. We appreciate
24 your time.

25 MR. FULTON: Just for the record, Mr. Chairman, Mrs.
26 Kistner's number as an intervenor is C-19.

1 That, then, concludes the community input
2 session for today, and we can now move back to the
3 hearing.

4 Proceeding Time 5:23 p.m. T91

5 THE CHAIRPERSON: Thank you. I think we're very close to
6 the end or at least the finishing portion, or am I
7 missing something, Mr. Fulton?

8 MR. FULTON: We are, Mr. Chairman. Subject to the timing
9 of the filing of the outstanding undertakings, and
10 I'll make a suggestion to the Panel in that respect,
11 the evidentiary portion of this hearing is complete.

12 THE CHAIRPERSON: With the exception of the filing of the
13 undertakings.

14 MR. FULTON: Yes. And so I'm suggesting to the Panel
15 that Fortis file its undertakings which remain
16 outstanding by no later than July 3rd, which is the
17 date for Fortis filing its final written submissions,
18 and that the intervenors file their outstanding
19 written undertakings by no later than July the 10th,
20 which is a week before the intervenors need to file
21 their written final submissions, and it will also give
22 Fortis an opportunity in its reply to address those
23 undertakings as well.

24 THE CHAIRPERSON: I don't think we have any problems with
25 those dates unless there's some other observation.

26 MR. MACINTOSH: That's fine, thank you, sir.

1 MR. FULTON: Thank you, Mr. Chairman. Then subject to
2 the filing of the outstanding undertakings on the
3 dates that the Commission has agreed to, that is in
4 the case of Fortis by no later than July the 3rd, and
5 in the case of intervenors by no later than July the
6 10th, I move that the evidentiary record of these
7 proceedings be closed as of 5:28 today.

8 THE CHAIRPERSON: Fair enough, thank you.

9 I just want to confirm some dates for
10 submissions. You've mentioned the Fortis final
11 submission date of July 3rd, and as I recall and have
12 in front of me the intervenor submission date is July
13 17, with Fortis's reply submission on July 24.

14 MR. FULTON: Yes, those dates are set by Order G-35-08,
15 Mr. Chairman.

16 THE CHAIRPERSON: Right. I think that's just about
17 everything then, is it? Unless someone else has
18 anything further to add? Apparently not.

19 I would just like to close on behalf of
20 certainly the Panel and the Commission, by thanking
21 everybody for their participation on this on all
22 sides. It's a challenging and difficult time for
23 everybody. There's some important things that are
24 required and I think there was virtual unanimity of
25 the need for this project. There certainly is not
26 unanimity in terms of exactly how that should proceed.

1 It's going to be a challenge for us.

2 We particularly thank the intervenors who
3 have taken the time and trouble to bring forward their
4 position and assist us in understanding the issues
5 that we will have to contemplate in the course of the
6 next handful of weeks. So thank you all. To say
7 nothing of Commission Counsel and Staff and Mr.
8 Bemister's organization. It's run relatively
9 smoothly, we think, so thank you very much.

10 And this hearing is terminated.

11 **(PROCEEDINGS CONCLUDED AT 5:29 P.M.)**

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