

MANITOBA CLEAN ENVIRONMENT COMMISSION

MANITOBA-MINNESOTA TRANSMISSION PROJECT

VOLUME 13

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Transcript of Proceedings
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MONDAY, MAY 29, 2017

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INDEX OF PROCEEDINGS

Consumers' Association of Canada
Standards and Adaptive Management presentation:

Patricia Fitzpatrick 2825

Questions by Ms. Mayor 2880

Questions by CEC panel 2923

Manitoba Wildlands: Sustainability and
Environmental Assessment presentation:

Alyson McHugh 2926

Questions by Mr. Bedford 2975

Questions by Ms. Pastora Sala 2993

Impacts on member First Nations:

Grand Chief Jerry Daniels 3025

June Thomas

David Daniels

Gord Bluesky

William Abraham

Ernie Daniels

Jared Whelan

Questions by Mr. Toyne 3083

Questions by CEC panel 3089

INDEX OF EXHIBITS

CAC-07 Outline of presentation	3092
CAC-08 Dr. Fitzpatrick's paper	3092
CAC-09 Errata to Dr. Fitzpatrick's paper	3092
CAC-10 Presentation by Dr. Fitzpatrick	3092
CAC-11 Great Binding Law	3092
MWL-04 Ms. McHugh's paper	3093
MLW-05 Ms. McHugh's presentation	3093
SCO-05 Slide presentation by SCO	3093
SCO-06 Map by SCO	3093

INDEX OF UNDERTAKINGS

NO UNDERTAKINGS

1 MONDAY, MAY 29, 2017

2 UPON COMMENCING AT 9:30 A.M.

3

4 THE CHAIRMAN: Welcome back everyone,
5 and we're ready to resume our hearings into the
6 Manitoba-Minnesota Transmission Project. I hope
7 you all had a good Sunday for those of you who
8 were with us in La Broquerie on Saturday. And
9 with that we'll just go right into it. And so
10 we'll start with the Consumers' Association of
11 Canada and their presentation.

12 MS. PASTORA SALA: Good morning,
13 Mr. Chair and members of the panel. Before we
14 begin, Ms. Johnson, if you would like to swear in
15 Dr. Fitzpatrick and then I can take it from there.

16 (Patricia Fitzpatrick Sworn)

17 THE CHAIRMAN: I'm sorry, I also
18 should have said that Ms. Pastora Sala will begin
19 and then turn it over to Ms. Fitzpatrick. We'll
20 start that way.

21 MS. PASTORA SALA: Thank you,
22 Mr. Chair and thank you Ms. Johnson. CAC Manitoba
23 would like to thank the CEC for the opportunity to
24 bring Dr. Fitzpatrick's evidence forward relating
25 to monitoring, follow-up, adaptive management and

1 non-state market driven initiatives such as ISO
2 14001.

3 I believe before we begin
4 Dr. Fitzpatrick has some introductory remarks, and
5 then I will move forward to an overview of her
6 qualifications.

7 DR. FITZPATRICK: Thank you,
8 Ms. Pastora Sala.

9 I would like to begin by acknowledging
10 the land in which we gather today is the
11 traditional territory of the Anishinaabeg, the
12 Cree, the Oji-Cree, Dakota, and Dene people, and
13 on the homeland of the Metis Nation.

14 Good morning, Mr. Chair, members of
15 the Clean Environment Commission, commissioners,
16 Manitoba Hydro, and participants, and any guests
17 we may have in the audience. Thank you.

18 MS. PASTORA SALA: Thank you,
19 Dr. Fitzpatrick.

20 Before you begin your presentation, I
21 would like to provide an overview of your
22 qualifications. For the convenience of the CEC
23 panel and participants, we have provided an
24 excerpt of Dr. Fitzpatrick's CV. It might be
25 easier if you follow along with this CV as opposed

1 to the longer CV that we provided.

2 So Dr. Fitzpatrick, your expertise as
3 it relates to this hearing is in monitoring and
4 follow-up, adaptive management, independent
5 oversight and non-state market driven initiatives;
6 correct?

7 DR. FITZPATRICK: That's correct.

8 MS. PASTORA SALA: And if I were to
9 describe in English, or non-academic words, what
10 non-state market driven initiatives are, I could
11 say that they are voluntary activities undertaken
12 by corporations or other organizations to meet
13 specific environmental or societal goals. Would
14 that be correct?

15 DR. FITZPATRICK: That is correct.

16 MS. PASTORA SALA: With respect to
17 your education, Dr. Fitzpatrick, in 1999, you
18 first fell in love with Winnipeg when you
19 completed your Masters of Natural Resources
20 Management at the University of Manitoba, and your
21 Masters thesis looked at the role of critical
22 education in environmental assessment using the
23 Stable Gas project as a case study; correct?

24 DR. FITZPATRICK: That is mostly
25 correct. I started in 1999 and completed in 2001.

1 MS. PASTORA SALA: And in 2005, you
2 obtained your Doctor of Philosophy with a
3 specialization in geography from the University of
4 Waterloo?

5 DR. FITZPATRICK: That's correct.

6 MS. PASTORA SALA: And your thesis was
7 on the role of organizational learning and impact
8 assessment, and you drew on two case studies.
9 First, the Environmental Assessment of Wuskwatim
10 Generation Station in Manitoba and the Snap Lake
11 Diamond Mine in the Northwest Territories.

12 DR. FITZPATRICK: That's correct.

13 MS. PASTORA SALA: And now moving to
14 some highlights of your professional work
15 experience. You began working in environmental
16 assessments in 1997, as an environmental scientist
17 and later as a junior land specialist for what is
18 now called Indigenous and Northern Affairs?

19 DR. FITZPATRICK: That's correct.

20 MS. PASTORA SALA: And from 1998 to
21 1999, you were a project secretariat for INAC and
22 prepared a comprehensive study of the Diavik
23 Diamond Mines?

24 DR. FITZPATRICK: I was part of the
25 team that prepared the comprehensive study, that's

1 correct.

2 MS. PASTORA SALA: And since 2006, you
3 have been teaching at the University of Winnipeg
4 in the Department of Geography?

5 DR. FITZPATRICK: That's correct.

6 MS. PASTORA SALA: And you began as an
7 associate professor in that department in 2011,
8 and continue to hold that position?

9 DR. FITZPATRICK: That's correct.

10 MS. PASTORA SALA: Since 2011, you are
11 also an instructor in the Masters of Development
12 Practice program with an indigenous focus at the
13 University of Winnipeg?

14 DR. FITZPATRICK: That's correct.

15 MS. PASTORA SALA: And at the
16 University of Winnipeg, you have taught and
17 currently are teaching courses relating to
18 monitoring and follow-up, adaptive management,
19 independent oversight, and non-state market driven
20 initiatives.

21 DR. FITZPATRICK: That's correct.

22 MS. PASTORA SALA: From 2010 to 2014,
23 you received a SSHRC funded research grant related
24 to the relationship between environmental
25 legislation and corporate voluntary policies in

1 Canada and Brazil?

2 DR. FITZPATRICK: I'm sorry, I missed
3 the very last part of your sentence.

4 MS. PASTORA SALA: You received a
5 SSHRC funded research grant relating to the
6 relationship between environmental legislation and
7 corporate voluntary policies in Canada and Brazil
8 from 2010 to 2014?

9 DR. FITZPATRICK: That's correct.

10 MS. PASTORA SALA: Now, moving to your
11 publications. In terms of your publications, you
12 have done 23 peer-reviewed publications, six
13 chapters in edited books, 25 posters, reports,
14 contributions, guest statements, 24 conference
15 presentations and 20 other presentations?

16 DR. FITZPATRICK: That's correct.

17 MS. PASTORA SALA: And specifically
18 relating to monitoring and follow-up and adaptive
19 management, you have published a paper in the
20 Canadian Policy Administration Journal in 2018
21 entitled "Towards Community Based Monitoring in
22 The Hog Industry in Manitoba," a Paper submitted
23 to the Manitoba Clean Environment Commission?

24 DR. FITZPATRICK: In 2008, I believe,
25 but, yes, that's correct, subject to the change in

1 date.

2 MS. PASTORA SALA: 2008?

3 DR. FITZPATRICK: Yes.

4 MS. PASTORA SALA: Yeah. And you have

5 also submitted an article for publication in an

6 upcoming book, and that article is called "Good

7 Development Should Not End With Environmental

8 Assessment, Adaptive Management and Learning as

9 Guiding Principles for Northern Development."

10 Correct?

11 DR. FITZPATRICK: That's correct.

12 MS. PASTORA SALA: And related to

13 non-state market driven initiatives, you have

14 eight peer-reviewed publications; correct?

15 DR. FITZPATRICK: That's correct.

16 MS. PASTORA SALA: And for the benefit

17 of Mr. Chair and members of the panel, the

18 publications relating to non-state market driven

19 initiatives are outlined at the bottom of the

20 first page, as well as the second page of the

21 document we provided.

22 DR. FITZPATRICK: Abridged CV?

23 MS. PASTORA SALA: Yes, of the

24 abridged CV. You have presented on the topics of

25 monitoring, follow-up and adaptive management at

1 several conferences at the local, national and
2 international level, including in Nagoya, Japan,
3 Montreal and in Riding Mountain National Park?

4 DR. FITZPATRICK: That's correct.

5 MS. PASTORA SALA: And in terms of
6 providing your expertise to administrative
7 tribunals, this is the fifth report you have
8 prepared specifically relating to adaptive
9 management, monitoring and follow-up?

10 DR. FITZPATRICK: That's correct.

11 MS. PASTORA SALA: Specifically you
12 were involved in the hearings relating to hog
13 industry, Bipole III, Keeyask at the CEC, and
14 Enbridge line 3 at the National Energy Board.

15 DR. FITZPATRICK: That's correct.

16 MS. PASTORA SALA: You gave oral
17 testimony and were accepted as an expert witness
18 for Bipole III and Keeyask Generation Station?

19 DR. FITZPATRICK: That's correct.

20 MS. PASTORA SALA: You have made other
21 important contributions relating to evidence that
22 you are presenting at this report, including a
23 public submission to the Federal panel reviewing
24 environmental assessment?

25 DR. FITZPATRICK: That's correct.

1 MS. PASTORA SALA: And based on your
2 presentation before the expert panel, you were
3 asked by this independent panel to prepare an
4 additional submission on independent oversight;
5 correct?

6 DR. FITZPATRICK: That is correct.

7 MS. PASTORA SALA: And this work also
8 informed your public contribution to the expert
9 panel contemplating the modernization of the
10 National Energy Board?

11 DR. FITZPATRICK: That's correct.

12 MS. PASTORA SALA: And you were also
13 asked in November of 2016 to sit on an advisory
14 panel of a few selected Canadian experts that was
15 struck to review draft sections of the expert
16 panel report on Federal environmental assessment?

17 DR. FITZPATRICK: That's correct.

18 MS. PASTORA SALA: In addition, since
19 March 2017, you have served on an external review
20 committee for the Energy and Mine Ministers of
21 Canada exploring public confidence in the energy
22 and mine sectors?

23 DR. FITZPATRICK: That's correct.

24 MS. PASTORA SALA: I believe that's
25 all in terms of your qualifications for now,

1 Dr. Fitzpatrick. And don't worry, you haven't
2 turned completely red. I'll let you take it away
3 from here.

4 DR. FITZPATRICK: Thank you very much.
5 Again, good morning.

6 On the screen, Ms. Pastora Sala has
7 already discussed what I was retained to talk
8 about and what the subject of my report was about.
9 The other thing I'd like to point out to you is,
10 academics often have a here's what I'm going to
11 talk about agenda. Rather than do that, I have a
12 running bar at the bottom of the slide. Purple
13 indicates the topic we're on, so the audience can
14 know how much longer is she going to stand up
15 there and speak. My students appreciate that,
16 often.

17 Environmental assessment is a
18 proactive planning process designed to identify
19 and mitigate where possible the negative impacts
20 of a proposed development, before, prior to
21 construction or before -- this was the word that
22 my students always answer for me -- irrevocable
23 decisions are undertaken. Beanlands and Dunker in
24 1983 coined environmental assessment as minimum
25 regret planning. But I found another useful way

1 to understand what environmental assessment is,
2 through the panel reviewing the Federal
3 Environmental Assessment process. And here Ray
4 and Green, in their submission, said that EA is
5 essentially a hypothesis framework with approval
6 resting on the assumption that a project will
7 incur no significant environmental effects once
8 mitigation has been applied.

9 And we'll return to that later on in
10 my presentation. But in essence we are making
11 predictions that the development can proceed with
12 the least amount of negative harm, and ideally the
13 most benefit.

14 This slide is based on table 2 of my
15 report found on page 11. The bullets were the
16 original list prepared by Sinclair and Doelle.
17 However, I have added a number of extra components
18 which I will go through.

19 Best practice environmental assessment
20 is something that is constantly changing. And the
21 past year, we have taken large steps ahead of how
22 we understand environmental assessment should be
23 and what it could be. And so even though the
24 publication from Sinclair and Doelle came out in
25 2015, it is now out of date.

1 Best practice environmental assessment
2 then rests on two different aspects. First of
3 all, it rests on legislative requirements. So
4 things enshrined, for example, in the Environment
5 Act here in Manitoba. Currently we are under the
6 auspices of the Canadian Environment Assessment
7 Act 2012. But beyond what's in the legislation,
8 best practice environmental assessment also is
9 based on what people learn from their experiences
10 in specific locations, and what they come to
11 expect over time.

12 So our expectations are constantly
13 changing. Again, some of the key things that were
14 not captured by Sinclair and Doelle in 2015, but
15 have come to enter the front of people's
16 attention, specifically through the Federal review
17 of the environmental assessment process, is that
18 best practice EA must include adaptive management
19 in a comprehensive monitoring and follow-up
20 program. Best practice environmental assessment
21 has to have respect for Indigenous legal
22 traditions. And the framework must begin to
23 contemplate and should contemplate the role of the
24 United Nations declaration on the Rights of
25 Indigenous People and how to implement it. Best

1 practice environmental assessment should also take
2 into account sustainability assessment. There are
3 a number of other elements which inform best
4 practice EA, my added list is abridged. Mostly
5 because I wanted to make sure the audience could
6 read what was on the screen. But for example, we
7 have good literature, and the Federal panel
8 reviewing, or the independent panel reviewing the
9 Federal environmental assessment process have a
10 lot to say about regional effects assessment,
11 cumulative effects assessment, who should
12 undertake the environmental assessment process.
13 So it's a very good document, in my opinion,
14 contemplating what Canadians expect from their
15 environmental assessment process.

16 Now, that being said, some of what
17 we're doing here today rests on a legislative
18 framework. And the reason why best practices
19 cannot just rely on what's in the legislation is
20 because it takes a much longer time period for
21 governments to update the laws and regulations.
22 So we have a body of learned experience that also
23 informs what participants, members of the policy
24 community expect from an environmental assessment
25 process.

1 Certainly in Manitoba, our Environment
2 Act has not been updated since the late 1980s, and
3 we have learned a lot since then, provincially,
4 nationally and internationally.

5 MS. PASTORA SALA: Dr. Fitzpatrick,
6 can you remind us what policy communities are?

7 DR. FITZPATRICK: Yes. I use the
8 phrase policy communities in part because I find
9 that some of the alternative terms are not
10 necessarily the best way to describe those who
11 have interest in a project. So you can think of
12 policy communities as a synonym for how we
13 describe policy actors or stakeholders. But in my
14 experience over the last 20 years, I have heard
15 concerns about those two phrases. So, for
16 example, the term stakeholder literally refers to
17 a mining concept of who holds the stake that
18 someone is going to make their mining claim with.
19 And certainly that does not meet the needs of all
20 of the participants.

21 Policy actors also offend some people
22 because as a concept, it implies that you are
23 pretending on a stage, you are being an actor and
24 citing lines that you don't necessarily believe
25 in. So what policy communities refers to, and

1 this is a definition and a concept put forward by
2 an author named Pal, is that a policy community
3 involves all of those who have interest in a
4 particular sector or a particular issue that
5 informs that sector. So that's why I use the
6 phrase policy communities.

7 As I say to my students, it's an
8 awkward concept, but I haven't found a better one.
9 If they can find a better one, that would be
10 great, but we're still waiting for people to catch
11 up.

12 MS. PASTORA SALA: Thank you.

13 DR. FITZPATRICK: As I was saying in
14 the previous slide, our understanding of what best
15 practice environmental assessment changes over
16 time, and the last year has been quite a busy time
17 for those of us in the environmental assessment
18 policy community. The panel, or the independent
19 experts who were reviewing the Federal
20 environmental assessment process in their report
21 identified four areas or four principles that
22 informed their re-visioning of the Federal
23 environmental assessment process. These are not
24 new concepts, but I like the way that they were
25 grouped and explained in that report.

1 So first of all, they talked about how
2 they were informed by the notion of transparency.
3 Members of the policy community need to see and
4 understand how the process is applied, how the
5 assessment is being undertaken, and how decisions
6 are being made.

7 With respect to inclusivity, the
8 process must take into account all of the concerns
9 of all of the parties who consider themselves
10 affected.

11 The next concept that they use is
12 informed. Their definition adds a little bit more
13 description, so I've called it informed
14 deliberation. And this basically notes that
15 environmental assessment must be based on
16 evidence. Evidence can come from a number of
17 different worldviews, but it should be informed,
18 and you have to take that evidence into account in
19 the decision-making process.

20 And finally, meaningful participation.
21 The public must have a real opportunity to be
22 heard and a chance to influence the decision.

23 Transparency guides my thinking. All
24 four of these principles guide my thinking in the
25 report that I prepared, but transparency is

1 particularly important. And what emerged for me
2 was that in all of the literature happening around
3 environmental assessment and public confidence,
4 people assume you know what you're talking about
5 when you use the word transparency. And so it's
6 important to establish a definition of what one
7 means when they use this phrase. For that I have
8 adopted the definition used by Mitchell, which
9 talks about how transparency involves the openness
10 of a process to the public. There need to be
11 clear procedures, structured decision-making, and
12 clear decision-making criteria. And transparency
13 should inform not only the environmental
14 assessment process, but also monitoring and
15 follow-up.

16 So this diagram, and you'll have to
17 excuse me, I am not a visual thinker even though I
18 have read that 97 per cent of the world is, so my
19 diagrams may seem chunky at best. But what this
20 diagram is designed to illustrate is that
21 environmental assessment and follow-up and
22 monitoring are two sides of the same coin. They
23 go hand in hand together.

24 So if you will recall minutes ago, I
25 hope it was minutes ago, I noted that

1 environmental assessment is a hypothesis
2 framework. Monitoring and follow-up is the means
3 to test the hypothesis that are laid out through
4 this EA process. And in doing so, monitoring and
5 follow-up will enable learning.

6 Monitoring and follow-up, or
7 post-approval environmental assessment involves a
8 number of different aspects or components. And
9 the legislation, again, broadly calls them
10 follow-up and monitoring or monitoring and
11 follow-up.

12 But in general, this diagram appears
13 in my report and it outlines a typology or
14 different types of monitoring and follow-up
15 programs that one would expect to see proposed in
16 an environmental assessment designed to meet best
17 practice.

18 So you have a monitoring based on
19 compliance. Are the proponents meeting their
20 regulatory obligations, what's set out in the
21 legislation, what's set out in the leases and
22 licences?

23 Next you have monitoring for valued
24 components. So as part of the process, the
25 proponents, the Clean Environment Commission, the

1 participants will identify areas that should have
2 consideration, that should involve more structured
3 learning. And so monitoring related to this
4 component identifies the nature and the causes of
5 change around those specific VCs.

6 The next form of follow-up and
7 monitoring is auditing. And here you will
8 generally have a proponent, in concert with a
9 government, compare the observations from
10 compliance and monitoring with standards and
11 expectations measured against the criteria they
12 set out in the environmental assessment process.

13 The last area is ex-post evaluation or
14 what's also known as post hoc evaluation. And
15 here this is a more structured process, usually
16 taken out, or undertaken by a third party after
17 construction, during operation, to review did we
18 get it right? So a post hoc evaluation looks at
19 what was predicted in the environmental
20 assessment, compares it to what emerged through
21 the compliance, monitoring and auditing phase, and
22 identifies where the predictions were correct, and
23 where further work was needed because the
24 predictions were not accurate, or did not
25 adequately capture key issues.

1 So, again, apologies for this diagram.

2 I heard from visual thinkers it doesn't
3 necessarily make visual sense, I'll work on that.

4 But here you have at the bottom of the
5 screen, the principles of transparency,
6 inclusivity, informed deliberation, and meaningful
7 participation. That's the foundation. That leads
8 into the design of follow-up and monitoring plans
9 and programs, the typology which I just described.
10 And then at the top it is informed by best
11 practice. And best practice for follow-up and
12 monitoring is adaptive management.

13 In my report I provided some
14 information from the peer-reviewed literature
15 about how one goes about evaluating follow-up and
16 monitoring programs. And so back in 2004, Baker
17 provided a list of issues and questions that
18 should be involved when looking at follow-up and
19 monitoring. So what elements should be
20 considered? And these include making sure that
21 all the issues are adequately canvassed, or the
22 VCs, the methodology espoused can adequately
23 capture the concerns, the communication strategy,
24 these are all questions that should be included.

25 Jalava et al built on this. What they

1 did is they evaluated monitoring and follow-up
2 programs as being implemented, so they use case
3 studies and said, yes, use Baker to look ahead and
4 critique the plans, but then here is the framework
5 for understanding how it's happening on the
6 ground. And it's actually, I found that very
7 useful. Certainly in this case we cannot look at
8 how monitoring and follow-up is happening on the
9 ground for the MMTP. That would happen after
10 construction. However, we can think about what is
11 involved in the implementation of the follow-up
12 and monitoring plans. We can look at what are the
13 anticipated outcomes of those plans and what are
14 the benefits, and I suppose liabilities.

15 So adaptive management is seen as best
16 practice in the design and implementation of
17 follow-up and monitoring plans. And on the screen
18 and in the powerpoints in front of you, I have
19 included a definition of adaptive management from
20 Nyberg and Taylor 1995.

21 Importantly, adaptive management is
22 supposed to be systematic. It's a formal process
23 for continually improving management strategies
24 and practices by ensuring learning from the
25 outcomes of those operational programs. And

1 importantly, that learning can't just be at a
2 desk, that learning should in turn inform
3 subsequent management decisions in the
4 implementation of follow-up and monitoring plans.

5 A key concept in follow-up and
6 monitoring is uncertainty. And I know
7 Ms. Pastora Sala has already told you the more
8 colloquial definition of uncertainty, which is
9 attributable to Donald Rumsfeld.

10 "There are known knowns. There are
11 things that we know that we know.
12 There are unknown knowns. There are
13 things that we know that we don't
14 know. And there are unknown unknowns.
15 There are things that we know that we
16 don't know."

17 The fourth category in the academic
18 definition is indeterminacy, and that reflects the
19 fact that sometimes there are things we just can't
20 even fathom. The causal chains, the networks are
21 open, and at this point we can't even begin to
22 understand.

23 So walking here this morning, it was
24 my task to try and think of a practical example of
25 uncertainty. And that's actually quite a

1 challenging thing to do. Because if I can talk
2 about the unknown unknowns, then in fact perhaps I
3 do know about them. So here is an example of how
4 uncertainty informs my career and my life.

5 As an academic, I have students who do
6 undergraduate thesis projects. They are intensive
7 work, they are usually eight months to one year in
8 length, and they do their own research. So when a
9 student comes to me with interest in doing a
10 research project, certainly I have a lot of known
11 knowns. First of all, I know that they have
12 passion about the area. I know that it's
13 something they are interested in. And usually I
14 know the student, so I know if they have the
15 necessary skills to do that project.

16 There are a number of known unknowns.
17 So a year in a life of a student is a very long
18 period of time, perhaps not for the rest of us as
19 we age, but for them it's a very long time. So
20 the unknown knowns, or the known unknowns, pardon
21 me, part is that they are going to have
22 assignments that are due. And as senior students,
23 those are going to be big assignments, there's
24 going to be a lot of reading. And so you need to
25 take those assignments and those things into

1 account as you help guide and design a student
2 research project.

3 There are also unknown unknowns. Life
4 happens over the year. So a student may take ill,
5 they may have family issues, I may take ill.
6 There are a number of other unknown unknowns. And
7 all of that has to be taken into account when I
8 help guide a student to do a one year research
9 project.

10 And I think that I have been told I
11 live adaptive management. Not I think I have been
12 told, I have been told I am a big geek and I live
13 adaptive management. And so when a student comes
14 to me asking about doing a research project, in
15 essence, I will come up with plan A for them. If
16 everything works out the way it's supposed to,
17 here is when this will be due, and this and this
18 and this. Inevitably, any student who comes to
19 me, I'll have up to a plan J. And as life unfolds
20 and I start going through, plan A is not going to
21 work because of this factor and this factor, plan
22 B is not going to work, I have been known to go to
23 plan S. I don't share all of the plans with them
24 at once, but they have laughed and told me, walked
25 into my office and said, okay, it's time for plan

1 D and please tell me you have a plan L. And so
2 that's what adaptive management is. That's living
3 it from a systematic perspective and having many
4 different options.

5 And that's different from managing
6 adaptively. If you are managing adaptively, you
7 haven't sat down ahead of time and come up with
8 different options and different scenarios, you
9 wait for something to emerge before you think,
10 okay, that didn't work, what should we try next?
11 So adaptive management, you sit and think before
12 you do, and come up with several different
13 management scenarios.

14 MS. PASTORA SALA: So the expression,
15 Dr. Fitzpatrick, "learning from your mistakes,"
16 would that be managing adaptively?

17 DR. FITZPATRICK: I would categorize
18 learning from your mistakes as managing
19 adaptively, often because you don't know about the
20 mistake before you make it. Whereas if you set
21 out a strategy and a framework ahead of time with
22 different options, you can learn from your
23 mistakes, yes, but you have already thought about
24 what those potential mistakes will be.

25 A key concept of adaptive management

1 is the notion of experimentation, and there are
2 two types of experimentation in adaptive
3 management. One is passive and the other is
4 active. And when I testified for the Keeyask
5 hearing, I used an example about coffee, which I'm
6 going to use again. So I love coffee, however, I
7 do not make good coffee. My coffee is horrible.
8 So my management objective in this scenario would
9 be to find a cup of coffee that I can make, that I
10 will like. So that's my management objective.

11 There are a number of different
12 management alternatives that I could apply, and in
13 a passive adaptive management approach, I would
14 apply one at a time. So the first management
15 alternative would be, well, at home I have Tim
16 Hortons coffee, so let's try Starbucks coffee; try
17 Starbucks coffee for a month, evaluate, find out
18 if I like that, make adjustments, perhaps go to
19 Timothy's coffee, as an example. So one
20 management alternative at a time.

21 In active experimentation, I'm
22 applying many different management alternatives at
23 the same time. So I still have the objective of
24 finding a cup of coffee that I can brew at home,
25 that I like, but perhaps what I'll do is I will

1 try my Tim Hortons coffee with water at
2 80 degrees, management alternative number 1.
3 Management alternative 2 would be Tim Hortons
4 coffee with the water brewed to a hundred degrees
5 Fahrenheit -- so sorry, I'm still on Fahrenheit.
6 Management alternative 3 would be Starbucks coffee
7 at 80 degrees. And management alternative 4 would
8 be Starbucks coffee at a hundred degrees. And I'm
9 going to stop with four management alternatives,
10 because in that scenario we have me drinking four
11 cups of coffee before I leave the house everyday,
12 and that's probably not very healthy.

13 But in this scenario, I would drink
14 each of the four cups before I left, and
15 determine, monitor, try it for a couple of days,
16 make sure that my taste buds haven't changed, and
17 then adapt. So that's the difference between
18 passive and active experimentation.

19 Before I go to the next slide
20 actually, it's important to say that in monitoring
21 and follow-up, you don't want to have
22 experimentation for everything. And one of the
23 side bars in my reports talks about what are some
24 of the cases where you would want to have, or how
25 do you evaluate if you should have experimentation

1 and if it should be passive or active? And so
2 that list includes the benefits. So if you can
3 get more information, more bang from your buck,
4 then you should lean towards more experimentation.
5 So areas where there's the most uncertainty are
6 pristine and important for applying
7 experimentation.

8 But you also have to weigh the
9 benefits with the costs. So any time you do an
10 experiment, there will be financial costs, there
11 may potentially be costs to the environment. And
12 so you have to take that into account, as well as
13 what the implication is for future experiments.
14 So if you do all of your experimentation at the
15 beginning, you might not have capacity, financial
16 resources, human resources, to do experimentation
17 later on. So designing and deciding what and
18 where you will do experimentation requires
19 planning.

20 This figure on the screen looks
21 different in my report. The one from the report
22 comes from Tasmania, and I notice that the
23 proponent used it in their presentation. So I
24 tried to make a bigger copy for people to see.
25 And the visual learners told me that the arrows

1 are all wrong. The arrows are wrong because I
2 spent 45 minutes trying to fix the arrows, but I'm
3 not artistic.

4 So adaptive management generally
5 follows the plan do, evaluate and learn and adjust
6 cycle. That exists in environmental management
7 plans. This is the same cycle that is ISO, ISO
8 14001 is based on. So right now we are in the
9 planning phase. We move into the do phase should
10 the project be approved.

11 And then we do the monitoring plans,
12 and during select periods, we need to evaluate how
13 effective the monitoring strategies were and make
14 adjustments to the do. So we're continuously
15 changing, and I don't want to use the word adapt,
16 but addressing the outcomes of the learning quite
17 actively.

18 The general characteristics of
19 adaptive management are on the screen and they are
20 in my report as well. Basically in adaptive
21 management you want to have a comprehensive
22 definition of adaptive management, and
23 uncertainty, and then you need to apply it. You
24 need to be deliberate in design and
25 implementation. You want to promote learning that

1 influences actions. You want to ensure there's
2 transparency in the decision-making during the
3 monitoring and follow-up phase. And you want to
4 make sure that you have the capacity, the
5 financial capacity, the human resource capacity to
6 make that happen.

7 So these characteristics were
8 presented in the Bipole III project. We developed
9 them, Dr. Diduck and I, into questions, and then
10 we refined those probative questions into number
11 20, 20 probative questions for the Keeyask project
12 which we applied in that report.

13 In the report that you have in front
14 of you, I apply the probative questions to the
15 information available and provided by the
16 proponent today. However, I just want to say that
17 the general characteristics will be coming again,
18 because I didn't want to just read through my
19 report.

20 So what I considered in preparing my
21 report was the literature. So the best practices
22 related to follow-up, monitoring, adaptive
23 management, non-state, market driven initiatives
24 like ISO 14001. I reviewed the case material for
25 the Manitoba-Minnesota Transmission Line, up until

1 the long weekend. So anything past that did not
2 get into my report, as I handed it in last
3 Tuesday, the 23rd.

4 I was involved in some in-person
5 discussions which are listed at the bottom of the
6 powerpoint. So I had a meeting with technical
7 personnel at Manitoba Hydro. I participated in a
8 workshop with members of the policy community. I
9 provided advice to a focus group. The workshop
10 and focus group were put on by the Consumers'
11 Association of Canada, Manitoba branch. And I
12 also reviewed the material from the Bipole III
13 project and the Keeyask project. So in my report
14 there's a whole table of the literature that
15 informed my analysis.

16 This diagram -- oh, it's actually
17 bigger than I thought it would be -- is figure
18 22.1 of the Environmental Impact Statement,
19 replicated here on the screen. I found this
20 diagram a little confusing when I started to
21 really read it, because I found that some of the
22 bullets involved plans and policies. Others
23 focused on processes and people. And so what I've
24 included in my report is this table, which I do
25 know is very, very small text. And what this

1 table lists, to the best of my knowledge, the
2 different follow-up and monitoring plans that are
3 available. So what's in bold I reviewed and
4 what's not in bold is forthcoming.

5 One error, or thing that I found out
6 quickly reviewing the transcripts from May 23rd,
7 is that the communications plan under purple
8 actually is a communications plan for blasting.
9 So this figure on my powerpoint is slightly
10 different. I have moved communication plans with
11 blasting up into the blue, and I have left a
12 communication plan in purple with a question mark.
13 I am not sure that's forthcoming.

14 This slide has bigger text. So,
15 again, we have a list of documentation that is now
16 available and has become available over the course
17 of these hearings, and another set of material
18 that will be forthcoming should the project be
19 approved.

20 MS. PASTORA SALA: Dr. Fitzpatrick,
21 just so it's clear, the table that was on slide
22 19, the bold documents, you indicated were
23 documents that you reviewed. These would also be
24 the same documents under documents available at
25 slide 20; correct?

1 DR. FITZPATRICK: That's correct. And
2 the only difference is the font size and the
3 organization. So the bold on this table, you look
4 to the powerpoint, you can read them better. So
5 what's bold is in the available in draft format,
6 and the unbolded is what's to be filed. And I
7 should add as a caveat that as I was trying to get
8 through the 300 pages of transcript from May 23rd,
9 I understand that some of the names have changed,
10 and so this takes into account some of the changes
11 but not all that were discussed and described by
12 Mr. Matthewson on the 23rd.

13 So as I said just moments ago, rather
14 than go through the detailed probative questions
15 for this presentation, I thought I would look at
16 the general characteristics and group the evidence
17 that way. So what I have done is I have included
18 specific page numbers on my powerpoint as to where
19 this is addressed in my report.

20 So the first probative question
21 involved ensuring there is a comprehensive
22 definition of adaptive management and recognition
23 of uncertainty. A strength of the material filed
24 by Manitoba Hydro is that uncertainty is
25 acknowledged in places throughout the impact

1 statement. However, I could not find a place
2 where uncertainty was explicitly defined or framed
3 the way that the literature would have it framed,
4 or Donald Rumsfeld's definition. And certainly
5 while I understand that that informed different
6 elements of the impact statements, including the
7 selection of VCs and the selection of VCs for
8 monitoring, that was not clearly documented in the
9 written material. And so it's difficult to know.
10 Uncertainty frames is an important component for
11 knowing which VCs need to be monitored, and
12 without explicit understanding of the
13 uncertainties related to the VCs, it's difficult
14 to evaluate if that's a comprehensive list of VCs
15 that should be monitored.

16 MS. PASTORA SALA: Can you give us an
17 example of what you mean, Dr. Fitzpatrick?

18 DR. FITZPATRICK: Over the course of
19 testimony, there was a very passionate example
20 about what I believe is the eastern salamander.
21 And so we heard about the state of knowledge about
22 that VC and the unknowns about that VC. But that
23 is a prime case of something that might be
24 involved in a follow-up and monitoring plan. So
25 where there are more uncertainties, there are more

1 questions, and passion and interest about the
2 salamander, you would tend to include that in the
3 follow-up and monitoring programs, and potentially
4 have a form of experimentation associated with the
5 eastern salamander. And perhaps it spoke to me
6 because it was a really nerdy discussion, or also
7 because I have come across salamanders in impact
8 statements for quarries in Ontario. And Sarah
9 Harmer made an entire music album about a
10 different salamander that she had concerns about.
11 But without explicitly understanding the level of
12 uncertainty, or the types of uncertainty
13 associated with the VCs, it's difficult to
14 evaluate if those ones that are included in
15 monitoring are the comprehensive list. There may
16 be others that the commissioners want to have
17 added based on the evidence that you hear through
18 these hearings.

19 A very strong strength of the material
20 presented is the description and application of
21 adaptive management in the monitoring and
22 follow-up reports. This is a marked improvement
23 over the Bipole III project, and the articulation
24 of what adaptive management is, the application in
25 the monitoring and follow-up programs from a

1 systematic perspective. So I'm not talking about
2 the nuances and the methodology for any VC, I'm
3 talking about the bones or the framework of the
4 report is very well done. In each monitoring
5 table there is recognition of passive or active
6 experimentation. Later on I will probably -- I'll
7 talk about it later -- there is experimentation
8 that is proposed, and importantly in version 3 of
9 the draft monitoring program, or plans, which came
10 out in April, there are decision thresholds and
11 action that's included. And so this is a very
12 good, very strong component of the monitoring and
13 follow-up plans.

14 The second characteristic is a process
15 that promotes learning. An innovative feature of
16 the impact statement is the inclusion in each
17 chapter of lessons learned. I think that that was
18 a very thoughtful addition and something I have
19 not seen or encountered before. I think my report
20 talks about the efforts by the project team to
21 truly learn from their experiences, and I cite
22 information from the hearings as well as some
23 examples in the impact statement and the
24 information requests, that demonstrate that the
25 project team is working at learning.

1 Importantly, there are changes to the
2 material, as we move forward in this process, and
3 there were significant changes to the draft
4 monitoring plan between version 1, which was
5 submitted in 2015, version 2 September 2016, and
6 version 3 April 2017. As well, there are clear
7 efforts by the proponent to fund research that
8 would inform their work in this area, as laid out
9 in a response to CAC Manitoba information request.

10 One area that is lacking is a
11 corporate organizational learning policy. So the
12 members of the project team have demonstrated
13 their interest and efforts to have a learning
14 agenda, but it's difficult to know how the
15 organizational culture related to learning and how
16 those in the upper management and the Board of
17 Directors, if they will continue to support those
18 learning exercises. And so an organizational
19 learning policy would be a formal document to
20 support the work by the project team.

21 In addition, that organizational
22 learning policy would have thoughts about
23 organizational memory. So you heard evidence from
24 Mr. Matthewson about how members of the
25 organization are experienced individuals with long

1 track records at Manitoba Hydro. And people are a
2 critical component of organizational memory.
3 However, in addition, you need some sort of system
4 to record the lessons learned by those people,
5 because what happens when those people retire?
6 What happens to their information and their
7 knowledge? What happens if they take ill?
8 Organizational memory is something that I am very
9 passionate about, and it's in part because of
10 personal experience.

11 My father worked for Agriculture
12 Canada for 30 years less a day, and unfortunately
13 20 years ago -- so it's okay -- he was killed at
14 work. Now, my father had as his territory as an
15 inspector for Agriculture Canada all of the farms
16 from St. Catharines to Owen Sound, which is a huge
17 territory. And he had been doing his job for 30
18 years. So when he was killed at work, all of his
19 memory, all of his understanding of the
20 agricultural systems in that region was lost. And
21 the people at his work had to scramble and, in
22 fact, hire three inspectors to cover his
23 territory, because they did not have his
24 organizational memory. And so people are
25 critical, but you need a way to get the memory

1 from the individual to the broader organization.

2 With respect to capacity, I struggled
3 with this a lot in my report, because some of the
4 figures did not necessarily match up to some of
5 the information in the impact statement. And so
6 we're seeing an emerging picture of Manitoba Hydro
7 personnel who will be involved in the follow-up
8 and monitoring programs. And the testimony at the
9 hearings has been particularly valuable for
10 understanding who will be on the ground. And in
11 my report I reference comments by Mr. Penner, but
12 I would also say that on May 23rd, Mr. Matthewson
13 also had some additional comments, but a critical
14 gap in understanding who and how First Nations and
15 the Metis Nation will be involved in the
16 monitoring program.

17 This is something that is not clearly
18 defined yet. It's involving interaction on an
19 ongoing basis, but we don't have a picture of how
20 First Nations and the Metis Nation will be
21 involved in the final design and the
22 implementation of the monitoring and follow-up
23 programs. So we have heard there may be an
24 Indigenous monitoring committee, should there be
25 interest, but we don't know what the mandate of

1 that committee will be, how much control they will
2 have, how much decision-making power they may
3 have. And this is something that is very
4 important for the commissioners.

5 It's important because, as we have
6 heard in testimony and through the IRs, the price
7 associated with this project is increasing, but
8 the budget line that came out in the IRs takes
9 into account the follow-up and monitoring program
10 as submitted.

11 There will be a firm budget for
12 anything that involves compliance. So if it
13 becomes part of the regulatory rules, the
14 regulatory system, if it's written into the
15 licence, there will be a budget envelope
16 associated with that.

17 Since there are so many unknowns about
18 the First Nations and Metis Nation engagement
19 process, if the Clean Environment Commission
20 behoves itself, finds it important, if you could
21 move that role, or the framework for that role
22 into the compliance scheme, there will be more
23 certainty -- or certainty that that budget
24 envelope cannot be taken away by the Board of
25 Directors, or by the Premier, or by anything else.

1 The next component is deliberative
2 design, and certainly there are different time
3 frames for VCs. And as I mentioned earlier, there
4 is purposeful examination. And so there is clear
5 indication that there is deliberative design
6 associated with the development of the follow-up
7 and monitoring plans.

8 But what needs improvement is the
9 integration of information which has been
10 presented in the land use studies. And that may
11 alter the time frames for specific VCs. And it
12 may necessitate the inclusion of more VCs in the
13 follow-up and monitoring plan. So hearing from
14 the First Nations and the Metis Nation, you may
15 find that you recommend more VCs be included in
16 monitoring and follow-up, or the time frames be
17 extended.

18 MS. PASTORA SALA: Dr. Fitzpatrick, we
19 actually need to take a little pause, your battery
20 pack is just about to stop working. Thank you.

21 Mr. Chair, would you prefer that we
22 continue or wait for the computer to reboot?

23 THE CHAIRMAN: Why don't we give him a
24 couple more minutes and then we will decide. He's
25 usually pretty good at these things.

1 Thank you, Carter, we knew you could
2 do it.

3 DR. FITZPATRICK: Thank you. I teach
4 courses in a studio for Video on Demand, and so
5 I'm always in trouble because I don't have
6 pockets, so I ended up putting it on my back.

7 All right. The last bullet on this
8 slide is that there's an important role for
9 government departments to play in the monitoring
10 and follow-up process. And I'm not sure that we
11 have heard through the course of the hearings all
12 the information that would be required with
13 respect to that whole -- transparency is the next
14 element, and there are many strengths associated
15 with the transparency of the follow-up and
16 monitoring programs as designed by Manitoba Hydro.
17 So in my report I talk about the commitment to
18 maintain a project website. I talk about
19 publishing annual monitoring reports, and there is
20 a commitment to do that as well.

21 I would note that I looked back at
22 both of these aspects because they were
23 requirements written into the licence for Bipole
24 III and for Keeyask. I think that writing these
25 requirements into the licence for this project

1 will be very beneficial. Because again, if it's
2 written in the licence, it moves into the
3 compliance form of the regulatory process, and
4 it's much more challenging to cut that budget
5 envelope. But the proponent has made commitments
6 to, again, have a project website and have annual
7 reports.

8 And another important element of
9 transparency, which is in draft 3 of the
10 monitoring plan, of the draft monitoring plans,
11 version 3 is the information about decision
12 triggers. And so that adds a transparency about
13 the decision-making process.

14 With respect to transparency, there
15 are aspects that require improvement. Previous
16 Commissions have found that Manitoba Hydro is a
17 very siloed organization. And the interactions
18 between divisions seems opaque to me. I'm
19 particularly concerned that members of the
20 indigenous relations division were not involved in
21 the selection of VCs, as came out on the record
22 early during these hearings. When, on the 18th of
23 May and the 23rd of May, we were hearing about the
24 implementation teams, both at the management level
25 and on the ground implementation teams, the

1 personnel listed were not, did not appear to be
2 from indigenous relations. And so I think that it
3 would be important to have members of the
4 indigenous relations department involved in these
5 critical components of the monitoring program.

6 There is a mechanism for the public to
7 call in, to send e-mails, to talk about their
8 concerns. And in fact, in the transcript from the
9 23rd, we heard about how tracking that is part of
10 the licence for the -- part of the transmission
11 line south of the border. But a way to add to the
12 transparency would be to include an issues
13 tracking table for public concerns, along the
14 lines of what often emerges for environmental
15 assessment. Here is what we heard, here is how we
16 addressed it, here is how we couldn't address it,
17 here is the follow-up. So having a tracking table
18 for public concerns and putting that as part of
19 the annual monitoring reports would strengthen the
20 transparency.

21 MS. PASTORA SALA: Dr. Fitzpatrick,
22 has this type of tracking table been recommended
23 by any other administrative tribunal before?

24 DR. FITZPATRICK: I'm not sure it's
25 been recommended specifically for the follow-up

1 and monitoring phase, although I would have to
2 check the licence conditions for some of the more
3 recent pipeline projects to confirm.

4 And there is an opportunity to
5 strengthen transparency in the post environmental
6 assessment decisions. Certainly there's been a
7 lot of information on the record through these
8 hearings, and in leading up to these hearings.

9 And so it's important to flip the coin and look at
10 the other side and understand what sort of
11 transparency is available should the project get
12 its approval and licence. How will we keep
13 attention and interest of the public -- how will
14 we make sure that this project still can be
15 accessed by the public, still gets the public's
16 attention?

17 During the workshop that was hosted by
18 the Consumers' Association of Canada, Manitoba
19 branch, I heard different members of the policy
20 community talk about how there's a potential role
21 for independent oversight. And in my report, I
22 refer you back to the submission by Dr. Diduck,
23 myself, and now Dr. Robson, he's a doctor now,
24 where we spent considerable amount of time talking
25 about what independent oversight was.

1 What I was hearing is reflected in
2 this quotation. So this quotation comes from a
3 member of Indigenous and Northern Affairs Canada.
4 He was testifying at the Mackenzie Gas Project
5 hearing, and he was explaining that the position
6 of Indigenous and Northern Affairs Canada was that
7 independent oversight was not needed. However, he
8 then explained why the public thought it should be
9 considered. And what he talked about was the
10 importance of ensuring that development proceeds
11 in a responsible fashion, that it provides the
12 benefits, and that it results in minimal harm. He
13 talked about how there was scepticism that
14 decisions post environmental assessment can be
15 entrusted to government and industry. And that's
16 important. It's not just Manitoba Hydro, the
17 decisions are Manitoba Hydro and different levels
18 of government, particularly Conservation and the
19 National Energy Board. So there's scepticism that
20 these decisions can be entrusted to government and
21 industry alone to ensure it happens.

22 He talked about the transparency of
23 the process and ensuring that information is
24 readily available, so that people can confirm for
25 themselves that things are going well. He said

1 that's a big part of why the public has interest
2 in independent oversight.

3 Again, he then reaffirmed the position
4 that it was not the position of Indigenous and
5 Northern Affairs that independent oversight be
6 used for the Mackenzie Gas Project. But I like
7 the quote.

8 On the slide, and for the convenience
9 of the Commission, are the components of effective
10 independent oversight. This information is
11 available in the Bipole III report, as opposed to
12 the supporting material that lead to the
13 identification of these components.

14 Look, we're getting close to the end.
15 The purple has moved.

16 So additional things. Again, the
17 Clean Environment Commission has a critical role
18 to play. Your recommendations are very important
19 for ensuring this project proceeds, for ensuring
20 that things you believe are important and you
21 determine to be important will be moved hopefully
22 into the regulatory stage, written into the
23 licences. And so my report talks about
24 specifically how the recommendations that the
25 Commission included for Bipole III, and for

1 Keeyask, it would be -- I recommend that they be
2 included for this project as well.

3 One thing that I looked at in
4 preparation for this hearing, and for this report,
5 was how is it going? So I looked at the annual
6 monitoring plans that are available for the Bipole
7 III project and for the Keeyask project. And I
8 found that there is significant variability, which
9 is discussed in my report, between projects about
10 level of detail and types of information included
11 in the annual monitoring plans. And so I have
12 made a recommendation about a standardized format
13 that can be used. It's derived from some of the
14 annual monitoring reports for the Keeyask project,
15 and it sort of reflects some of the
16 characteristics that Manitoba Hydro has adopted in
17 this impact statement. So I suggest that it
18 include an executive summary that outlines what is
19 being considered, the methods that -- what is
20 being monitored, the methods of monitoring,
21 reflection on whether or not that monitoring meets
22 the predictions or does not meet the predictions.
23 Information as to how the monitoring results from
24 each year may inform changes to the design of
25 monitoring that VC moving forward, and so that's

1 outlined in my report as well.

2 All right. So second to the end. I
3 was retained to talk about ISO 14001 certification
4 as well. And that is chapter 5, I believe, of my
5 report. I spent a lot of time studying voluntary
6 non-state market driven initiatives because I
7 think that they are an innovation in our
8 environmental management role. So what they are,
9 in brief, is they're tools to implement
10 environmental policy outside of government
11 regulation and the normal government tool box that
12 we have.

13 There are many different types of
14 voluntary non-state market driven initiatives.
15 They all have different time frames. They have a
16 different purpose and objective. They have
17 different systems of verification. They have
18 consequences in some instances for non-adherence.
19 In other instances there are no consequences for
20 non-adherence.

21 So you will encounter these type of
22 schemes or systems in your everyday life. And
23 they may, in fact, influence your life as a
24 consumer. So maybe you choose to only purchase
25 coffee that has a fair trade certified label on

1 it, or maybe when people in your office are making
2 decisions about paper, they are making sure that
3 those paper are purchased through a certification
4 system by the Forest Council.

5 I am part of the International
6 Association of Impact Assessment, and there we
7 have a code of ethics that any member has to
8 adhere to. Now, that being said, I have never
9 heard of any consequences should I not adhere to
10 it -- although I do adhere to it, don't worry.
11 And there's no verification system for that.

12 So as the world is changing, and over
13 the last 30 years we have seen more and more
14 non-state market driven voluntary initiatives, and
15 the onus really has to be on the consumer to find
16 out what's involved with the initiative. And that
17 in turn can lead you to decide if that's something
18 that you want to support.

19 ISO 14001 is perhaps the most
20 long-standing voluntary non-state market driven
21 initiative in place. So it focuses on, as you
22 have heard, the development of environmental
23 management plans. It includes a number of
24 different requirements for those to seek
25 certification, or want to continue with their

1 certification process. But in essence, it's the
2 planning process and it focuses on making sure
3 that your environmental management plans are in
4 place. It requires compliance with government
5 legislation and regulation, and it requires
6 companies to demonstrate that they have continual
7 improvement. So every year or every two years,
8 when they are audited, they have to set targets,
9 the companies themselves set targets that
10 demonstrate that they are improving their
11 performance.

12 The standard does not set out any
13 absolute requirements for environmental
14 performance. And there is not a clear definition
15 of what continual improvement is. So the targets
16 are set by industry, who is seeking certification.
17 They get audited to evaluate the degree to which
18 they are meeting their environmental management
19 plan and their targets.

20 However, there's no information about
21 where you start from. So a company who has had a
22 terrible oil spill in the Gulf of Mexico that year
23 could seek certification under ISO 14001. And so
24 long as they perform incrementally better from
25 that year moving forward, and every year moving

1 forward, they will maintain their certification.

2 So no absolute standards for performance.

3 As we heard about in the hearings, the
4 certification happens at the high level, and it's
5 not clear how any individual commitment for this
6 project will inform the broader corporate policy.
7 So certainly the company has an obligation to meet
8 its legislative and regulatory requirements. And
9 certainly they may include particular commitments
10 associated with the MMTP, but we don't know how
11 that will inform the broader organizational
12 management scheme.

13 There's a lack of transparency with
14 this system, so the audits themselves are
15 generally not publicly available. And this in
16 fact was the first time that the Consumers'
17 Association of Canada, Manitoba branch, had access
18 to an auditing plan, or the dashboard for select
19 portions of the auditing plan and select elements
20 of the dashboard for review. And I want to thank
21 Manitoba Hydro for making those publicly
22 available.

23 That being said, there's no commitment
24 to make annual audits publicly available. The
25 position still is that that information is under

1 the ownership and auspices of the auditing firm.
2 And so we have one snapshot in time. And the
3 picture is going to change quite quickly because
4 Manitoba Hydro is going through a process to
5 update its management system to comply with the
6 most recent version of the ISO 14001 certification
7 system.

8 So there is a lack of information
9 available to understand actual environmental
10 performance. And ISO 14001, I think that the
11 proponent, Manitoba Hydro, has many reasons why
12 they would want to be ISO 14001 certified. And I
13 do not want to take away from that certification
14 itself. However, it does not meet the needs of --
15 it does not fulfill the same function or purpose
16 as a post hoc evaluation that I am recommending
17 for this project. ISO 14001, broad, corporate,
18 management system, Manitoba-Minnesota Transmission
19 Line, one project, which will feed in, but we're
20 not sure how, and we won't have access to the
21 environmental audits.

22 So in conclusion, and actually this is
23 more clearly laid out in the executive summary,
24 the material I reviewed for this project,
25 particularly drawing in the information from the

1 hearings, in addition to the impact statement
2 themselves, shows a marked improvement over Bipole
3 III. There's a clear effort to implement and
4 think about adaptive management, and a clear
5 commitment to learning from the project team.
6 There is a need to improve transparency, and there
7 is a particular void or lack of information about
8 what the monitoring programs and follow-up
9 programs will look like as they are implemented,
10 specifically related to the First Nations and
11 Metis Nation role.

12 As commissioners, it's important for
13 you to carefully consider the VCs in the
14 monitoring program based on the evidence in front
15 of you. And you may find there is a need to have
16 monitoring for additional VCs. Best practice
17 would have you think about areas or VCs that have
18 higher degrees of uncertainty, VCs that are
19 identified by the First Nations and Metis Nation
20 engagement process, and their land use plans, and
21 their testimony, and VCs that involve cumulative
22 effects.

23 The recommendations that you put
24 forward could reinforce commitments made by the
25 proponent. And I think that's really important to

1 reinforce what Manitoba Hydro and the project team
2 has put forward, and move that into the compliance
3 bracket to ensure that there is funding.

4 So as a consequence, my report focuses
5 on six recommendations, all of which I have talked
6 about today. So I don't think I need to go into
7 any specific detail about what those
8 recommendations are.

9 I want to thank you for taking the
10 time to listen to me today, and I look forward to
11 the questions.

12 MS. PASTORA SALA: Thank you,
13 Dr. Fitzpatrick. Subject to questions, Mr. Chair,
14 we are done our presentation, and I would note
15 that it's 11:00 so it might be a good time for a
16 morning break.

17 THE CHAIRMAN: Yes. Thank you,
18 Dr. Fitzpatrick, from the panel as well for a very
19 informative presentation, and for all of your
20 advice directly to us, which you mentioned a
21 number of times. So thank you.

22 And yes, your timing is perfect, it's
23 exactly 11:00 o'clock, so we'll take a 15 minute
24 break and be back for questioning at 11:15. Thank
25 you.

1 (Proceedings recessed at 11:00 a.m.
2 and reconvened at 11:15 a.m.)

3 THE CHAIRMAN: All right. Welcome
4 back, everyone, and thanks again for your
5 presentation, Dr. Fitzpatrick. Are there
6 questions from Manitoba Hydro?

7 MS. MAYOR: Yes, there are, thank you.

8 Dr. Fitzpatrick, you indicated that
9 you have in the past reviewed Manitoba Hydro's
10 follow-up and monitoring programs for both Bipole
11 III and for Keeyask. And you testified at both
12 hearings; correct?

13 DR. FITZPATRICK: That is correct.

14 MS. MAYOR: And as you set out in your
15 current report, Manitoba Hydro's follow-up and
16 monitoring programs and processes have improved
17 significantly in each successive project?

18 DR. FITZPATRICK: What I said in my
19 report is that this was a marked improvement over
20 Bipole III.

21 MS. MAYOR: And in terms of the
22 description and application of adaptive
23 management, you indicated that that was a very
24 strong strength of Manitoba Hydro?

25 DR. FITZPATRICK: That is correct.

1 MS. MAYOR: And you indicated in your
2 report that overall this description and
3 application of adaptive management is a clear
4 improvement on that provided from the Bipole III
5 project and later the Keeyask project; correct?

6 DR. FITZPATRICK: That is correct.

7 MS. MAYOR: On both the Bipole III
8 project and the MMTP project, in addition to
9 reviewing portions of the Environmental Impact
10 Statement, and the answers provided on information
11 requests, you also requested to meet with Manitoba
12 Hydro representatives to gather additional
13 information?

14 DR. FITZPATRICK: During the Bipole
15 III project, we met with Manitoba Hydro to gather
16 additional information.

17 MS. MAYOR: And you did so again for
18 the MMTP project?

19 DR. FITZPATRICK: That is correct.

20 MS. MAYOR: And Manitoba Hydro was
21 quite willing to meet with you?

22 DR. FITZPATRICK: Yes, they were quite
23 willing to meet with me.

24 MS. MAYOR: And you would agree that
25 they were cooperative and knowledgeable and

1 forthcoming during that meeting?

2 DR. FITZPATRICK: I would agree.

3 MS. MAYOR: You would also agree that
4 you obtained further details about Manitoba
5 Hydro's Environmental Protection Program that gave
6 you more comfort about its program and its plans
7 going forward?

8 DR. FITZPATRICK: I obtained more
9 information, so that meeting happened in March of
10 2017, and then there was a new draft of the
11 monitor -- new version of the draft monitoring
12 program which was released in April, yes.

13 MS. MAYOR: And so both the meeting
14 and the revised draft Environmental Protection
15 Program gave you more comfort about Manitoba
16 Hydro's programs and its plans?

17 DR. FITZPATRICK: It certainly
18 provided more information about how important
19 elements of adaptive management would be applied.
20 That is correct.

21 MS. MAYOR: Now, Manitoba Hydro also
22 provided a lessons learned section in each chapter
23 of the Environmental Impact Statement?

24 DR. FITZPATRICK: That is correct.
25 And I spoke about that during my presentation

1 saying that was something unique and something
2 that I have never seen in other Environmental
3 Impact Statements before.

4 MS. MAYOR: Manitoba Hydro also
5 provided a description, both in the Environmental
6 Impact Statement and at the hearing, and provided
7 examples of how those lessons learned changed the
8 manner in which both the environmental assessment
9 for MMTP was carried out, and how its follow-up
10 and monitoring programs would be carried out?

11 DR. FITZPATRICK: That is correct.
12 Although some of the lessons learned in the
13 chapter related to monitoring and follow-up did
14 not necessarily translate into the subsequent
15 written submissions and written materials. So
16 more information was required through the
17 information requests and testimony to understand
18 the fuller picture of the learning of the
19 proponent with respect to monitoring and
20 follow-up.

21 MS. MAYOR: So through both the
22 Environmental Effects Statement, also through the
23 IR process, and also through the testimony at the
24 hearing, Manitoba Hydro has demonstrated its
25 experiences and its lessons learned in each

1 successive project that it's had?

2 DR. FITZPATRICK: That is correct. In
3 my experience, this is -- there have been more
4 than 10 environmental assessment processes that I
5 have been involved in over the course of my
6 career, and I would say that following the
7 hearings of the MMTP was critically important for
8 getting a better understanding of what the
9 proponent had planned afterwards. This is more so
10 the case here than in previous hearings that I've
11 either studied or participated in.

12 MS. MAYOR: Now, assuming that
13 adaptive management principles are followed, and
14 assuming that lessons learned are utilized to
15 enhance each successive Environmental Protection
16 Program, would you agree with me that the more
17 Environmental Protection Programs that individuals
18 are involved in over the course of different
19 projects and over the course of the years, the
20 better both the design and the implementation of
21 the Environmental Protection Program will likely
22 be?

23 DR. FITZPATRICK: I agree that
24 learning is a critical outcome of any
25 environmental assessment process. And some of my

1 earlier research demonstrates how learning makes
2 for a better project with respect to design and
3 implementation.

4 A key corollary component is ensuring
5 that the commitments and the learning are well
6 documented in the material and make their way into
7 the leases and licensing conditions, well, in this
8 case the licensing conditions, so to ensure that
9 those commitments are flipped into regulatory
10 compliance.

11 MS. MAYOR: Now, you have had an
12 opportunity to meet with Manitoba Hydro, with
13 members of Manitoba Hydro's environmental
14 protection team and you have had an opportunity to
15 see them testify. You would agree with me that
16 they're a broad team made up of both internal
17 staff, such as Mr. Matthewson, and several
18 external subject matter experts, such as the
19 biologists and doctors and archeologists who
20 presented at the hearing. Combined they have
21 considerable experience in developing and
22 implementing environmental protection programs and
23 monitoring plans?

24 DR. FITZPATRICK: I would agree that
25 the team has considerable experience in the design

1 and implementation of environmental monitoring and
2 protection programs. Much of the experience and
3 what the testimony focused on were the credentials
4 of the team. And so I have identified that a key
5 division which could have a greater role in the
6 design and implementation of follow-up and
7 monitoring programs is the Indigenous Relations
8 division.

9 MS. MAYOR: And you are aware that the
10 Indigenous Relations division has been
11 significantly involved in the Environmental Impact
12 Statement, and in the information request
13 provision, and in providing support at the
14 hearing?

15 DR. FITZPATRICK: I'm aware that they
16 fulfill the three functions that you specify in
17 your question. During the hearings we heard that
18 they were not involved in the selection of VCs,
19 early on during the hearings. And then during the
20 testimony about the follow-up and monitoring
21 program starting on May 18th, it was unclear to me
22 their role in the implementation team and the
23 management team itself.

24 MS. MAYOR: And at no time did you ask
25 to meet with the folks from the Indigenous

1 Relations Department to clarify your confusion?

2 DR. FITZPATRICK: I did not ask to
3 meet with the Indigenous Relations department.
4 This was an issue which I didn't expect to have so
5 many questions about. Some of my questions arose
6 during the course of the hearings themselves.

7 MS. MAYOR: Now, in terms of the broad
8 environmental protection team, you indicated as
9 well that there is considerable experience. You
10 also indicated in reference to one of your slides
11 that learning can't just take place at a desk.
12 With all that, you would agree with me that those
13 who have published peer-reviewed articles are
14 certainly not the only ones who can be in charge
15 of developing and implementing an EPP?

16 DR. FITZPATRICK: I would agree. In
17 fact, when I lecture to my students, I'm very
18 clear that expertise is not something that can
19 only be achieved through academia. I have met
20 with and had teachings from land users, which
21 listening to them for an hour has taught me more
22 than reading from a desk for months on end. So
23 expertise comes from a variety of different
24 mechanisms and means.

25 MS. MAYOR: Now, in terms of the

1 valued components, you indicated that because you
2 are not, and I'm paraphrasing, that you are not a
3 subject matter expert in each particular valued
4 component and that you have not had access to the
5 government scientists or those retained by other
6 hearing participants in specialty areas, that you
7 can say, and I'm quoting here, that you can say:

8 "...little about monitoring of
9 specific VCs."

10 Do you recall that testimony, or that
11 page in your report?

12 DR. FITZPATRICK: I recall that page
13 in the report and I think that that is a very
14 important point. So I'm looking at the framework
15 for monitoring. I am not a biologist, I am not an
16 expert on salamanders, or cumulative effects
17 assessments, or sustainability assessment. So
18 what I am an expert in is looking at the framework
19 for monitoring. The specificities of the design
20 for monitoring a specific VC needs to be critiqued
21 by those who have expertise in that particular
22 area. Some of those people include -- some of
23 those qualifications, pardon me, include
24 government scientists, other academics, land
25 users, elders and knowledge keepers, and the list

1 can go on. But they would have more expertise
2 with respect to critiquing specific methods and
3 methodology for a particular VC, as well as the
4 time frame.

5 MS. MAYOR: So you would agree with
6 Manitoba Hydro's approach in retaining a team of
7 specialists to assist it in choosing the
8 appropriate VCs, and in selecting the monitoring
9 programs for each of the VCs?

10 DR. FITZPATRICK: I would agree that
11 having the expertise at the table to select the
12 VCs and the monitoring approach is critically
13 important. I believe my report identifies that
14 some of the information that I have reviewed
15 identified questions for me, as a non-expert in
16 areas, as to the time frame of particular VCs and
17 whether or not the VCs themselves adequately
18 captured the desired, what the phrase is,
19 management objective. However, they were flags
20 for me as a layperson, not as an expert. And I
21 particularly highlighted some areas from the land
22 use plans that I reviewed, and it wasn't a
23 comprehensive list, but it would lead me to think
24 that perhaps some of the VC time frames should be
25 extended.

1 For example, I believe it was the
2 Peguis First Nation land use study talked about
3 questions around traditional medicines and the
4 interconnection with herbicides and pesticides,
5 which would require more than a two year time
6 frame, because their application in the clearing
7 process goes beyond construction into operation.

8 MS. MAYOR: And you're aware that the
9 government scientists did in fact review the VC
10 selection and monitoring programs that were
11 developed to date through the TAC process, and
12 they provided feedback that Manitoba Hydro
13 incorporated?

14 DR. FITZPATRICK: I am aware that
15 government scientists provided feedback through
16 the TAC process. In other hearings that I have
17 been involved with government scientists take a
18 more active role, and so the public, members of
19 the public themselves can interact with these
20 public servants to get a better understanding of
21 how their expertise informs their recommendations
22 And so I reviewed the TAC information requests.
23 But as someone who participates in environmental
24 assessment hearings, it would always be a good
25 thing, from the perspective of transparency, for

1 those scientists to come and share their vast
2 knowledge and expertise through a hearings
3 environment.

4 MS. MAYOR: In terms of developing a
5 monitoring strategy, from your description in the
6 diagrams that you have used, you first need to
7 plan?

8 DR. FITZPATRICK: That is correct.

9 MS. MAYOR: And after planning, you
10 then do, evaluate and learn, as you have
11 described?

12 DR. FITZPATRICK: That is correct, as
13 well as make adjustments that arise from your
14 learning.

15 MS. MAYOR: And at the planning stage,
16 it's important to seek input from those most
17 directly affected?

18 DR. FITZPATRICK: It's important to
19 seek input from members of the policy community.
20 And the policy community, as you will recall, are
21 individuals, organizations, members of different
22 sectors who believe that they have expertise to
23 share, or interest in the design and
24 implementation of the project.

25 MS. MAYOR: And you would agree that

1 those policy communities want meaningful
2 participation at the planning stage?

3 DR. FITZPATRICK: I would agree that
4 meaningful participation at the planning stage is
5 very important, as is meaningful participation at
6 the implementation and the learning, evaluating
7 and adjusting phase.

8 MS. MAYOR: Starting with the planning
9 stage, in terms of planning monitoring, you would
10 agree that Indigenous communities should
11 participate in deciding how best to work with
12 Manitoba Hydro on monitoring?

13 DR. FITZPATRICK: I would agree that
14 it is the role of Indigenous communities, First
15 Nations, the Metis Nation, to set the terms for
16 how they wish to be engaged on an equal standing.

17 MS. MAYOR: And one of the ways that
18 has simply been proposed at this stage for
19 Manitoba Hydro to work with those various
20 communities is the proposed Indigenous community
21 monitoring group?

22 DR. FITZPATRICK: Yes, I'm familiar
23 with what has been put on the record with respect
24 to the Indigenous monitoring committee.

25 MS. MAYOR: And you would agree that

1 those communities should be involved in developing
2 the terms of reference?

3 DR. FITZPATRICK: I would agree that
4 those communities, First Nations and the Metis
5 Nation should be involved, in equal footing,
6 setting out the agenda to create a collaborative
7 process.

8 MS. MAYOR: Your recommendation
9 requires Manitoba Hydro and the Indigenous
10 communities to move forward with this community
11 monitoring committee, whether or not the
12 communities wish to proceed in that fashion or
13 not. Wouldn't you agree that instead the
14 communities should be involved in determining how
15 best they want to participate, and it may or may
16 not include an Indigenous community monitoring
17 group?

18 DR. FITZPATRICK: I spent a lot of
19 time thinking about recommendation 6, to which you
20 are referencing. And what I struggled with was
21 trying to ensure that moving forward, the First
22 Nations and Metis Nation had an opportunity to
23 contribute to monitoring and follow-up on an equal
24 participatory collaborative process. And so I did
25 identify the Indigenous community monitoring

1 committee as a potential framework for doing so.
2 However, the second sentence is recognition of
3 some of the elements that Ms. Mayor just talked
4 about. And it's a tightrope, trying to phrase
5 this recommendation, because the roles and the
6 responsibilities for each of the parties will need
7 to be identified in conversation, based on
8 recognition that each parties bring forward
9 different worldviews, and there, of course, is
10 more than one Indigenous worldview, which need to
11 be equally respected in the design and
12 implementation of the subsequent monitoring plans.
13 And so while my recommendation 6 focuses on
14 enshrining a commitment to an Indigenous community
15 monitoring committee, I tried to be clear that
16 what that would involve must be determined by the
17 parties equally.

18 MS. MAYOR: Now, there's been some
19 concern expressed by some of the other
20 participants that Manitoba Hydro has not yet
21 finalized all of its monitoring and management
22 plans. Would you agree that, looking back, there
23 have been more draft plans than ever before
24 provided by Manitoba Hydro?

25 DR. FITZPATRICK: I'm trying to do the

1 numbers in my head. There were a number of draft
2 monitoring plans presented as part of the hearings
3 into the Keeyask project. And so in terms of
4 total numbers, I actually think that more draft
5 plans were submitted for that project than this
6 project. However, for this project there were
7 certainly more draft plans available than were
8 submitted for the Bipole III project.

9 MS. MAYOR: And because the Keeyask
10 Generating Station project involves a generation
11 station and converter station, there may be more
12 plans required because of the nature of the
13 project and its tremendous larger size, than a 200
14 kilometre transmission line? If you're not able
15 to say, that's fine.

16 DR. FITZPATRICK: I would have to
17 think about that answer with respect to scale.
18 Other things I would take into account in
19 formulating an answer to that question involve the
20 degree of the disturbed landscape. I would think
21 about the VCs that were identified. I would think
22 of a number of different components before I could
23 meaningfully answer your question.

24 MS. MAYOR: There has been some
25 criticism that certain plans have not yet been

1 finalized, and some have not yet been developed.
2 Having met with Manitoba Hydro, you understand
3 that the developing the various components to
4 these Environmental Protection Plans require
5 certain inputs and information before they can be
6 finalized, and in some cases even developed?

7 DR. FITZPATRICK: I would agree that
8 the timing and availability of plans is subject to
9 a number of different elements. The plans that I
10 reviewed were all draft in nature, as they should
11 be, because this hearing process is a key
12 mechanism through which the proponent and the
13 regulator can garner more information, as is the
14 subsequent environmental review by the National
15 Energy Board.

16 Some of the plans that have yet to be
17 developed, Manitoba Hydro has indicated will be
18 done by contractors. And so it would make sense
19 that those plans are not available as the project
20 has not been approved. So something to consider,
21 moving forward, is what kind of transparency
22 surrounds the development and implementation of
23 the outstanding plans should this project proceed.

24 MS. MAYOR: In terms of the
25 examination of Manitoba Hydro's environmental

1 performance, you have suggested a number of
2 different methods by which that can be reviewed;
3 correct?

4 DR. FITZPATRICK: Could I ask for
5 clarity, or context, additional context, please?

6 MS. MAYOR: Sorry, I was trying to
7 find the slide. Your slide had typology and
8 follow-up and monitoring, and you recommended a
9 number of different ways in which that could be
10 carried out, through compliance monitoring,
11 auditing and ex-post evaluation.

12 DR. FITZPATRICK: Yes. There are a
13 number of different types of monitoring that
14 should inform a project implementation should a
15 project be approved.

16 MS. MAYOR: And what you were doing by
17 utilizing those various mechanisms is to try and
18 look at Manitoba Hydro's environmental
19 performance, in particular, did it do what it said
20 it was going to do, and did the mitigation
21 measures do what they wanted to do?

22 DR. FITZPATRICK: The two examples you
23 just cited are things that are considered in
24 different types of monitoring plans or programs
25 set out by the typology. So my analysis looks at

1 the framework or the pieces in place to ensure
2 that when you can look backwards, there is enough
3 information available and enough capacity to make
4 sure that those two specific elements are
5 addressed, in addition to others.

6 MS. MAYOR: And you had a slide about
7 an individual who testified at a prior hearing.
8 And the individual, in particular, was concerned
9 about ensuring that information was readily
10 available so that people can confirm for
11 themselves that things were going well, and that
12 was a very big part of oversight from that
13 individual's perspective.

14 DR. FITZPATRICK: Yes. So the quote
15 you are referencing was a quotation taken from the
16 hearing for the proposed Mackenzie Gas project.
17 And as I said in my presentation, the context was
18 that he, as a representative of Indigenous and
19 Northern Affairs Canada, it was the departmental
20 position that independent oversight was not
21 required. However, the quotation was him listing
22 the reasons that he had heard and experienced in
23 his position as to why the public had a desire for
24 independent oversight.

25 MS. MAYOR: And one way in which both

1 the public and other policy communities can keep
2 an eye on what's going on and be provided with
3 information is through the annual monitoring
4 reports that Manitoba Hydro provides?

5 DR. FITZPATRICK: Yes. I think the
6 annual monitoring reports are very helpful. And
7 in fact, I have used those as examples of best
8 practice when I made my presentation and
9 discussion to the Federal -- or sorry, the
10 independent panel reviewing the Federal
11 environmental assessment process.

12 As I talk about in my report, I read
13 through the annual monitoring plans that were
14 available for Bipole III and for Keeyask. So each
15 project has two years of annual monitoring reports
16 available. I skimmed through the ones related to
17 the Keeyask project, and I reviewed in detail the
18 annual monitoring reports for Bipole III. And so
19 I have some recommendations, which I talked about
20 in my presentation, about how to make the annual
21 monitoring reports more useful and user friendly
22 with respect to the design and implementation of
23 monitoring plans and programs, and for
24 communicating the information and things that
25 Manitoba Hydro is doing.

1 MS. MAYOR: You agree with the posting
2 on the website and the ability of the public to
3 provide comments and ask questions?

4 DR. FITZPATRICK: Those are two
5 different areas. So can I deal with them
6 separately?

7 MS. MAYOR: You would agree that
8 posting the annual reports on the website is a
9 positive thing?

10 DR. FITZPATRICK: I would agree that
11 posting annual reports on the website is a
12 positive thing, and I think that it is a good
13 commitment that Manitoba Hydro has made to
14 continue posting annual reports -- post annual
15 reports for this project on the website.

16 MS. MAYOR: And also having a
17 mechanism for the public to comment, to ask
18 questions, both on the website, through e-mails,
19 through telephone lines, you would agree that
20 that's a positive in terms of the public being
21 able to get the information that they need and get
22 the answers that they need?

23 DR. FITZPATRICK: I would agree that
24 having a means for the public to get the
25 information they need is positive. I haven't

1 found the comment box on the website, however, I
2 have found the 1-800 number that I understand goes
3 to Mr. Joyal's phone. And I understand for the
4 MMTP, there is a specific e-mail address which
5 goes into his inbox, subject to check.

6 MS. MAYOR: Now, you've heard about
7 Manitoba Hydro's commitment to involve Indigenous
8 communities in environmental monitoring, though
9 that mechanism has not yet been finalized. You
10 would agree that that would be an independent
11 mechanism for environmental monitoring plans to be
12 enhanced?

13 DR. FITZPATRICK: I would agree that
14 that could be an independent mechanism for
15 independent review of monitoring programs to be
16 enhanced, should the parties agree that that would
17 be the scope of this monitoring committee. But as
18 you pointed out, that is subject to equal
19 deliberation at this time.

20 MS. MAYOR: And with Indigenous
21 monitoring of the project, that would be a
22 mechanism for independent oversight of the
23 programs and their implementation down the road?

24 DR. FITZPATRICK: I agree that that
25 could be a mechanism, subject to the terms of

1 reference, which would be mutually agreed upon by
2 the parties.

3 MS. MAYOR: Now, you've heard that
4 Manitoba Hydro is committed to hiring
5 environmental monitors, and that those monitors
6 may be hired externally and may be hired from the
7 Indigenous communities. If those monitors are, in
8 fact, external to Hydro, that would provide a
9 further way in which there could be independent
10 oversight of both the monitoring plans and the
11 actual progress on the monitoring, and the project
12 itself?

13 DR. FITZPATRICK: As I reference in my
14 report, the environmental monitors, and my
15 understanding based on the written material is
16 changing over time, so I would agree in principle
17 to what your question poses, subject to needing
18 more information about the terms of reference and
19 the specific credentials that would be posted by
20 Manitoba Hydro.

21 MS. MAYOR: Now, there had been a
22 number of recent sessions, or a couple of recent
23 sessions in the Town of La Broquerie, where
24 landowners that may be affected by the project
25 came and expressed an interest in the project.

1 You're aware that there is ongoing engagement and
2 meetings with those landowners and communities?

3 DR. FITZPATRICK: In a general way I'm
4 aware. Although, as I note in my report, I
5 stopped -- my report goes up until May 17th, and
6 then I have referenced in my presentation some
7 material from the transcripts from May 18th and
8 May 23rd, but I haven't kept up with the
9 transcripts last week.

10 MS. MAYOR: You're aware that Manitoba
11 Hydro has, in addition to those community
12 meetings, put in place landowner liaisons to allow
13 landowners to have one-on-one conversations about
14 the project, and any concerns they may have now,
15 during construction, and ongoing? You are aware
16 of that?

17 DR. FITZPATRICK: That official title
18 is one of the things which I was having trouble
19 tracing through the Impact Assessment and the
20 monitoring reports and the hearings transcripts.
21 So, in general, I understand that it had occurred.
22 What would be helpful, I think Manitoba Hydro has
23 done a good job of being responsive to the public
24 in updating information. In future it would be
25 very useful to the public and people involved in

1 the hearings to update some of the key figures as
2 we go along. For example, the figure 1 in the
3 chapter on monitoring, which talks about the
4 different monitoring plans, and figure 2, which
5 talks about the roles and responsibilities and who
6 would be involved. Because I think the testimony
7 of Mr. Matthewson, and before him Mr. Penner, has
8 added more clarity, but I still am struggling with
9 how all the pieces are fitting together.

10 MS. MAYOR: You would agree that
11 ongoing communication with landowners in a variety
12 of forums is another way that there is independent
13 oversight of project?

14 DR. FITZPATRICK: I would agree that
15 ongoing communication is an important component of
16 transparency. And I am unclear as to whether or
17 not there will be a communication plan for the
18 monitoring and follow-up phase, as I discussed
19 during my presentation.

20 MS. MAYOR: And that's because you
21 haven't heard all of the testimony. You weren't
22 able to be here for all of the testimony that was
23 provided?

24 DR. FITZPATRICK: Yes, that's because
25 my report was due the day that some of the very

1 important testimony was occurring.

2 MS. MAYOR: Now, you understand that
3 government departments have responsibility and
4 authority to ensure compliance with their
5 particular licence conditions and permit
6 conditions?

7 DR. FITZPATRICK: I understand that,
8 yes.

9 MS. MAYOR: And you understand that
10 there are several different governmental
11 departments that are involved in environmental
12 assessments, as of course there are a variety of
13 different valued components which fall under
14 different departments as with every government.

15 DR. FITZPATRICK: I understand.

16 MS. MAYOR: And on this particular
17 project, you understand that there will be regular
18 inspections throughout by conservation officers
19 and environmental officers?

20 DR. FITZPATRICK: I understand in
21 principle. I think it would be helpful to the
22 public to hear about that from the government
23 bureaucrats and inspectors as part of these
24 hearings.

25 MS. MAYOR: Provincially, you also

1 understand that the Manitoba Sustainable
2 Development Department has to approve each of
3 Manitoba Hydro's construction environmental
4 protection plans, after seeking input from the
5 various specialized departments?

6 DR. FITZPATRICK: I understand that --
7 could you repeat your question, please?

8 MS. MAYOR: Sure. You understand that
9 Manitoba Sustainable Development has to approve
10 each of Manitoba Hydro's construction,
11 environmental protection plans after, of course,
12 it seeks input from each of its own specialized
13 departments?

14 DR. FITZPATRICK: Yes, I understand
15 that Conservation -- or, sorry, the Department of
16 Sustainable Development has to approve each of the
17 plans after seeking input from the government
18 departments. I am unclear as to what role, if
19 any, is made for the public in approving that
20 plan. I am unclear as to how much time and how
21 much notification is given on the Department of
22 Sustainable Development website public registry
23 with respect to notification and potential
24 engagement. And so increasing transparency from a
25 government perspective, or from the mechanisms of

1 what the Provincial Government and the Federal
2 Government will do is an important component of
3 monitoring.

4 MS. MAYOR: Now, for this project of
5 course there are two levels of government. So
6 there is also the Federal government that will be
7 involved in environmental checks with respect to
8 international power lines, that being the National
9 Energy Board; correct?

10 DR. FITZPATRICK: Correct.

11 MS. MAYOR: And you are aware that the
12 National Energy Board has broad inquiry provisions
13 that would include environmental issues?

14 DR. FITZPATRICK: Yes, I'm aware.

15 MS. MAYOR: So on this project there
16 will also be National Energy Board inspections,
17 Transport Canada inspections, and Department of
18 Fisheries and Oceans inspections?

19 DR. FITZPATRICK: Yes, and I
20 understand that there may be another opportunity
21 to hear about the Federal inspection regime as the
22 National Energy Board makes its determination as
23 to how it will review this project following the
24 hearings.

25 MS. MAYOR: And you would agree that

1 the review of the monitoring reports by Manitoba
2 Sustainable Development, the National Energy
3 Board, Environment Canada biologists, and other
4 experts involved in the project, can be expected
5 to provide effective review and feedback on the
6 results of monitoring?

7 DR. FITZPATRICK: I would agree that
8 they would provide some form of review and
9 feedback. But again, I have questions about the
10 transparency of that process and the ability of
11 the public and members of the policy communities
12 to meaningfully be involved in those reviews.

13 MS. MAYOR: Now, were you also aware
14 that there will be third party bio-security
15 monitoring on this project?

16 DR. FITZPATRICK: I am aware of the
17 bio-security plan, yes.

18 MS. MAYOR: Changing topics slightly,
19 there was much discussion during the hearing and
20 in your presentation today about ISO audits
21 conducted by third parties. Now, you're aware
22 that the ISO auditors can review components of the
23 Environmental Protection Program on MMTP as part
24 of their audit process?

25 DR. FITZPATRICK: It's my

1 understanding that the auditors are required to
2 review compliance with existing legislation, and
3 progress, continual progress. It's also my
4 understanding that the auditors can then review
5 any information that they deem necessary. So I am
6 aware that they have that opportunity. I'm not
7 clear on how often they afford themselves of that
8 opportunity.

9 MS. MAYOR: And they will be, if the
10 auditors are doing the review, which includes
11 components of the Environmental Protection
12 Program, that program will already have undergone
13 rigorous independent review through this hearing,
14 through the NEB process, and through ongoing
15 engagement processes; correct?

16 DR. FITZPATRICK: I'm wondering if
17 we're talking about the same thing. Specifically,
18 because the auditors for the ISO 14001
19 certification review the broader environmental
20 management approach, not the specific details of
21 this one project, which may in fact inform the
22 overall corporate environmental management process
23 in a way that Manitoba Hydro sets out.

24 MS. MAYOR: So it would surprise you
25 if I told you that, in fact, the auditors can and

1 do look at the specific components of the
2 Environmental Protection Program put forward by
3 Manitoba Hydro in its projects?

4 DR. FITZPATRICK: It would not
5 surprise me. I have had access to ISO certified
6 environmental management systems, mostly in the
7 mining sector, and I am familiar with that.
8 However, what's not clear to me is the systematic
9 planned approach to how the environmental
10 protection programs for this specific project feed
11 into the overall. And so there's a lack of
12 transparency. I realize it can be an option.

13 MS. MAYOR: And are you aware that
14 there are in fact three ISO audits planned already
15 for the next three years?

16 DR. FITZPATRICK: I'm not aware of
17 that specific detail, but I am not surprised that
18 there will be specific audits happening.

19 MS. MAYOR: And were you aware that
20 the tender, which is going out for auditors, has
21 asked for a public reporting component to provide
22 reporting on the ISO audits?

23 DR. FITZPATRICK: Where would I have
24 found that? That is --

25 MS. MAYOR: There was some testimony

1 earlier about Manitoba Hydro's approach.

2 DR. FITZPATRICK: It's my recollection
3 in the testimony that the discussion was that the
4 tenders were going out, and there may be some
5 discussion, but not the specificities as outlined
6 by your question.

7 MS. MAYOR: So you would certainly
8 approve of Manitoba Hydro, when it puts out its
9 tendering documents, to make a request for
10 potential auditors to provide them with a method
11 in which they could report back to the public?
12 You would agree with that?

13 DR. FITZPATRICK: I would support that
14 and I would appreciate additional testimony about
15 the specificities of that tender, and whether or
16 not that is a requirement of the tender or
17 something subject to negotiation?

18 MS. MAYOR: Now, were you also aware
19 that the new ISO 14001 requirements place greater
20 emphasis on the systems in place for stakeholder
21 engagement?

22 DR. FITZPATRICK: In general, yes.

23 MS. MAYOR: And that again would allow
24 for independent audit and review of those systems?

25 DR. FITZPATRICK: It could, again

1 subject to my previous testimony and subject to
2 also the documentation that Manitoba Hydro submits
3 in order to comply with the revised standards,
4 which as of now will not be publicly available.

5 MS. MAYOR: So in addition to all of
6 the independent oversight mechanisms that are
7 already in place for this project, you are also
8 recommending a third party audit. And you
9 understand that there is a significantly high cost
10 to such audits, both in terms of cost of the
11 auditors and hundreds of hours of staff time which
12 is taken up doing those audits?

13 DR. FITZPATRICK: In addition to the
14 aspects of monitoring that we have outlined, which
15 are confirmed, and the ones which are proposed or
16 tenuous, I am recommending a post hoc evaluation.
17 I'm aware of the costs involved in post hoc
18 evaluation. However, post hoc evaluation is
19 considered best practice. It is a very specific
20 audit that is designed to confirm if -- confirm or
21 verify the accuracy of the Impact Assessment
22 itself, and to determine if the predictions as
23 laid out in the Impact Statement are accurate and
24 the areas where they weren't accurate. So it's a
25 very specific component, and it is considered best

1 practice. It is also something that is required
2 for the Bipole III projects and the Keeyask
3 project, with different time frames, as determined
4 by the CEC itself. And unfortunately, because of
5 the timing of this hearing, we haven't had that
6 post hoc evaluation itself, so I could not review
7 it.

8 MS. MAYOR: And because those post hoc
9 evaluations haven't taken place on either Bipole
10 or Keeyask, there's no way of determining whether
11 any value is added by them?

12 DR. FITZPATRICK: There is no way of
13 determining if the post hoc evaluations for those
14 two projects have added value. However, the
15 literature shows that in other cases, in other
16 jurisdictions where post hoc evaluations have been
17 implemented, there has been value added.

18 MS. MAYOR: And you would agree that
19 where those types of evaluations have been
20 ordered, it has been on significantly larger
21 projects than this small transmission line
22 project, relative to Bipole III is my comparison?

23 DR. FITZPATRICK: I guess you caught
24 that I'm -- as a geographer, large means different
25 things in different scales.

1 MS. MAYOR: I'm sorry, I'm only
2 talking about relatively between Keeyask and
3 Bipole on the one hand and this transmission line
4 on the other hand.

5 DR. FITZPATRICK: So I think there are
6 a couple of differences between Bipole III and the
7 Manitoba-Minnesota Transmission Line. One
8 involves the length of the line within our actual
9 jurisdiction, because the line does connect to
10 another portion south of the border. So it is, in
11 its totality, over 600 kilometres in length I
12 believe.

13 Another component that I would
14 consider when understanding large or relative size
15 would be the type of environment. So the Bipole
16 III occurred in the north in an area that the
17 literature calls basin opening. But basically
18 lots of forested area, and then as it moves south
19 into heavily human modified. Whereas the
20 Manitoba-Minnesota Transmission Line corridors are
21 occurring in a portion of the province that has
22 already been subject to significant human
23 modification. And both basin opening and heavily
24 disturbed environments are aspects which would
25 potentially inform the scale of monitoring in a

1 more favourable way. So, basically if it's in a
2 basin opening or in a heavily modified area, you
3 might need more monitoring.

4 MS. MAYOR: Now, you discussed earlier
5 this morning that there may be a need for longer
6 term monitoring beyond the two years currently
7 outlined. You would agree that the length of time
8 necessary for monitoring is VC specific?

9 DR. FITZPATRICK: Yes. And I believe
10 that I said that in my presentation, that it's VC
11 specific, so it's something that the commissioners
12 will want to take into account as they are
13 reviewing the VCs and the time frame of those VCs.

14 MS. MAYOR: And when Mr. Matthewson
15 and Mr. Wiens both testified, they indicated that
16 a determination will be made after the two year
17 period whether further monitoring is required for
18 each VC. Would you have had an opportunity to
19 read that testimony?

20 DR. FITZPATRICK: That's part of the
21 testimony that I skimmed through. And so yes,
22 that -- and that review is part of the adaptive
23 management process. So what's important is the
24 transparency associated with that review.

25 MS. MAYOR: And you would agree that

1 their assessment after the two year period is
2 exactly what adaptive management is to be used
3 for, you plan, you do, you evaluate, and look at
4 what's happened, and then where necessary they
5 adjust. So if they need to continue monitoring,
6 they will do so. If they need to change the
7 method of monitoring, or the nature of the
8 mitigation measures, they can then do so?

9 DR. FITZPATRICK: I mostly agree with
10 your question, just that the evaluation and the
11 learning wouldn't just occur at the two year
12 phase, it should be continuously happening, but in
13 principle, subject to that change.

14 MS. MAYOR: Now, one of the goals in
15 providing commentary on this project is to try and
16 fill the gaps that you and your client see in the
17 current environmental legislation. Is that fair
18 to say?

19 MS. PASTORA SALA: Sorry, Ms. Mayor,
20 can I just clarify, when you indicated your
21 client, you are of course aware that
22 Dr. Fitzpatrick is --

23 MS. MAYOR: I'm sorry, I worded that
24 incorrectly. One of your goals and the goals of
25 the Consumers' Association of Canada in providing

1 commentary on this project is to try and fill gaps
2 that you both see in the current environmental
3 legislation. Is that fair?

4 DR. FITZPATRICK: First, I cannot
5 comment on the goals of the Consumers' Association
6 of Canada, Manitoba branch. I have not discussed
7 that with them. My evidence is independent. And
8 I look forward to what they will put forward as
9 part of their closing argument.

10 Second, I'm not sure I would
11 articulate in the same manner a part of my goals
12 with my independent evidence. My independent
13 evidence is focused on best practice. And as I
14 specified, best practice includes legislation, but
15 also experience and process changes. So I think
16 slightly different wording, and perhaps different
17 intent.

18 MS. MAYOR: Many of the items that you
19 have recommended, and I think you have described
20 it as to try and push the envelope in terms of
21 what is best practice. And you also describe to
22 us that environmental assessment approaches have
23 changed even since 2015. Fair to say?

24 DR. FITZPATRICK: You have three
25 components in your question. So best practice,

1 yes, to ensure that we are meeting best practice,
2 particularly the best practice that we have
3 already established in this jurisdiction, it's
4 important to ensure that we maintain that
5 practice.

6 Fair to say it's changed since 2015, I
7 would even argue that it's changed since May 15th,
8 when the draft, or sorry, when the independent
9 panel reviewing the potential modernization of the
10 National Energy Board released its report, has
11 come out.

12 And I can't remember the third
13 component of your question.

14 MS. MAYOR: Well, I guess my point is
15 that you are trying to, and certainly a lot of the
16 goal is to try and move environmental assessment
17 across Canada forward in a progressive manner.
18 You recognize, though, that Manitoba Hydro has to
19 balance the costs of environmental assessment and
20 extensive monitoring with the interests of its
21 ratepayers in keeping its rates low and keeping
22 its costs down. So you recognize that there needs
23 to be a balance on that?

24 DR. FITZPATRICK: I recognize that
25 there needs to be a balance for the proponent with

1 respect to its policies and practices related to
2 monitoring and follow-up. At its core, I am a
3 Manitoban, so I understand the issues surrounding
4 rate payment, and certainly I am very aware of
5 what's happening in front of the Public Utilities
6 Board right now. And as a consumer, I have
7 concerns about that.

8 My primary focus is on creating, or
9 ensuring there is a framework in follow-up and
10 monitoring to protect the environment, which I
11 broadly define as including the ecology and the
12 people within the environment. So my priority is
13 there.

14 With respect to best practice, I am
15 interested, and I took to heart the concept that I
16 want to ensure the design and the requirements of
17 the follow-up and monitoring program for the
18 Manitoba-Minnesota Transmission Line live up to
19 the best practice that has been established by
20 this proponent, in this province, with respect to
21 monitoring and follow-up. Some of the key
22 recommendations I made are those elements.

23 So having annual monitoring reports
24 publicly available is something that has been done
25 for Bipole III and for Keeyask. It is setting a

1 bar for other jurisdictions across Canada. And
2 it's important for us to maintain the course or
3 stay the course.

4 The post hoc evaluation is a
5 requirement for Bipole III and for Keeyask. It
6 has been identified as best practice
7 internationally, proposed since 1985 and
8 implemented in other jurisdictions. It would be
9 important to stay the course for this project as
10 well.

11 The project website is a third
12 recommendation that I make. And again, it's
13 recommendations of the Clean Environment
14 Commission for the Bipole III and the Keeyask
15 project that set the stage for monitoring and
16 follow-up transparency, submissions that I made at
17 the Federal level, stay the course, maintain our
18 best practice.

19 MS. MAYOR: And that's regardless of
20 whether it's duplicitous or redundant in other
21 third party examinations that are taking place
22 already on the project?

23 DR. FITZPATRICK: I don't agree with
24 your premise, because I don't think that it's
25 duplicitous with other third party audits that are

1 occurring.

2 MS. MAYOR: Dr. Fitzpatrick, were you
3 aware that the Consumers' Association was invited
4 to participate in the MMTP process from the start
5 of public engagement, but chose not to participate
6 until the CEC hearing was called?

7 DR. FITZPATRICK: I have no
8 information on that topic.

9 MS. MAYOR: If there was an earlier
10 involvement, would that have assisted you to raise
11 your issues of clarification and the questions
12 that you have at an earlier point in time?

13 DR. FITZPATRICK: I'm an independent
14 expert and I was retained by the Consumers'
15 Association of Canada, Manitoba branch, in I
16 believe it was January of 2017, subject to check.
17 So no, that would not have been useful to me in my
18 role here today.

19 MS. MAYOR: As you weren't yet
20 retained?

21 DR. FITZPATRICK: Yeah.

22 MS. MAYOR: Now, you indicated in your
23 report that a workshop was offered by the
24 Consumers' Association for policy communities
25 working on the MMTP hearing?

1 DR. FITZPATRICK: Yes, I did.

2 MS. MAYOR: Was Manitoba Hydro invited
3 to participate or observe at that workshop?

4 DR. FITZPATRICK: I am not aware if
5 Manitoba Hydro was invited to -- well, I was there
6 so I know that Manitoba Hydro was not there. The
7 organization of that workshop was done by the
8 Consumers' Association of Canada, Manitoba Inc.
9 Although I will say that I invited them to use a
10 boardroom at the university, mostly so I could get
11 there quite easily. And my job was not on the
12 organization committee, my role in that was to
13 provide information.

14 MS. MAYOR: Is there a report filed
15 and available, or meeting notes, or results of
16 that workshop posted anywhere?

17 DR. FITZPATRICK: That is a question
18 you would have to ask of the Consumers'
19 Association of Canada, Manitoba Inc.

20 MS. MAYOR: Are you aware of any
21 reports, meeting notes or other results from
22 either that workshop or the focus group that was
23 offered being publicly available?

24 DR. FITZPATRICK: I read some draft
25 notes. I wouldn't say it was a monitoring report,

1 in addition to the notes that I took, as someone
2 who was presenting at those two events, but I am
3 not -- I can't say with confidence if a final
4 document is available.

5 MS. MAYOR: Thank you. I have no
6 other questions.

7 THE CHAIRMAN: Thank you for those
8 questions, Manitoba Hydro, and for your response,
9 Dr. Fitzpatrick.

10 Are there any questions from the
11 panel?

12 MR. GILLIES: This is Ian Gillies.

13 I think you said that you had reviewed
14 about 10 instances of impact assessment. And
15 given your focus on the inclusion of Indigenous
16 worldviews and knowledge, can you point out an
17 organization that seems to be leading in that area
18 of incorporating Indigenous worldview into IA?

19 DR. FITZPATRICK: That is the subject
20 of a three-hour lecture, or an entire course. I
21 think perhaps the most up-to-date approach, I
22 would refer you to the report prepared by the
23 independent panel reviewing Federal Environmental
24 Assessment. The submissions by the Assembly of
25 Manitoba Chiefs as part of that review process are

1 also rather informative.

2 MR. GILLIES: Thank you.

3 MR. NEPINAK: Good morning. We thank
4 you for the report. And as mentioned, we were in
5 La Broquerie last week, and going back to the
6 Environmental Assessment, Federal Environmental
7 Assessment, has there been any -- there's mention
8 of First Nations and Metis being in that process,
9 in a greater process than it is today. But is
10 there mention of ranchers and farmers, landowners
11 having a greater say in that report? I'm sorry, I
12 read parts of it but my computer is down and all I
13 got to read is this.

14 DR. FITZPATRICK: So there are a
15 couple of components to your question. So one is,
16 there is a great debate at the Federal level about
17 if there should be more say by those who are
18 directly affected. And CEAA 2012 has a spot for
19 directly affected, it specifies that should be who
20 is included. The Federal Independent Panel
21 reviewing environmental assessment said that you
22 should take a more broader approach and think from
23 a -- I'm paraphrasing here -- a policy communities
24 perspective, and go back to the interpretation of
25 who is involved and should be involved, to go back

1 to the original CEAA from 1995, revised in 2003.

2 In terms of recognition of different
3 members of the policy communities, there is some
4 discussion in the, I believe it's the Federal
5 Report on Environmental Assessment that talks
6 about municipalities. I certainly know that the
7 draft, or the report on -- the independent report
8 prepared for the independent panel reviewing the
9 modernization of the National Energy Board spends
10 more time talking about landowners and
11 municipalities as well. That report came out on
12 May 15th, and I don't have a hard copy with me,
13 but it has more information about that as well.

14 MR. NEPINAK: Thank you.

15 THE CHAIRMAN: All right. Thank you
16 panelists for those questions, and again for your
17 responses.

18 So does that conclude then the
19 presentation from CAC?

20 MS. PASTORA SALA: Yes, Thank you,
21 Mr. Chair.

22 THE CHAIRMAN: Thank you very much.
23 And thank you, Dr. Fitzpatrick.

24 Given that it's now 12:20 and we're
25 due to take a break at 12:30, and we have a

1 presentation to start, would it be acceptable to
2 Manitoba Wildlands that we wait until after the
3 break, which would now be at 1:20, to start your
4 presentation, rather than doing 10 minutes now?

5 MS. WHELAN ENNS: That's fine.

6 THE CHAIRMAN: So we'll break now at
7 12:20 and we'll start at 1:20. Thanks.

8 (Recessed at 12:20 p.m. to 1:20 p.m.)

9 THE CHAIRMAN: Welcome back to our
10 hearings, and we are now going to move on to
11 Alyson McHugh, with Manitoba Wildlands on
12 sustainability and environmental assessments.
13 So I think you have one step to do first,
14 Ms. Johnson.

15 (Alyson McHugh sworn)

16 THE CHAIRMAN: All right. The floor
17 is all yours.

18 MS. MCHUGH: Thank you.

19 Good afternoon.

20 Just want to thank the Clean
21 Environment Commission for having me. I just want
22 to give you a brief introduction about myself and
23 how I ended up here.

24 My name is Alyson McHugh. I'm a
25 registered professional biologist in British

1 Columbia; I'm an associate wildlife biologist in
2 the United States. I have a master of science in
3 sustainable forest management. I'm a permaculture
4 designer. I recently finished a two-year term as
5 a board of director on the Association of
6 Professional Biology in B.C. board.

7 I have a very broad ecosystem-based
8 background with a holistic inter-disciplinary
9 approach. I have relevant experience, many years
10 of relevant experience, to bring to this
11 Commission and I work primarily in Hydro
12 Power-dominated watersheds.

13 I have several years of conducting
14 environmental impact assessments. I engage on a
15 day-to-day basis in my research practice in
16 adaptive management and structure decision-making.
17 I conduct effectiveness monitoring. I focus a lot
18 on enhancement and co-benefits, and I also have
19 been here before; I was here as an expert witness
20 for the Keeyask hearings.

21 I'm primarily here because I'm
22 generally a concerned scientist, and I'm primarily
23 here for my daughter, who just turned one last
24 week, and I'm concerned for her future.

25 So the purpose of the presentation is

1 to provide the Clean Environment Commission
2 information to aid in decision-making in the
3 formation of your recommendations regarding MMTP.

4 I'm concerned with the natural -- the
5 rapid natural degradation. I was retained to
6 provide a -- to conduct a general ecological
7 review of the MMTP environmental impact statements
8 by Manitoba Wildlands. This presentation
9 highlights a small but significant set of issues
10 that we identified within the EIS, and is meant to
11 encourage forward future thinking in Manitoba
12 Hydro projects and development. It is also meant
13 to facilitate the implementation of regenerative
14 sustainability practices.

15 So, first, to do this, to conduct this
16 external objective review, it is important to step
17 back and think about the global ecological
18 conditions. So we wanted to examine the approach
19 adopted in the EIS to do this, and our main
20 overarching question, one main overarching
21 question, drove this review, and that question is:
22 Does MMTP reinforce a healthy, mutually beneficial
23 relationship between human activities and the
24 environment?

25 The review was quite limited, due to

1 budgetary and resource constraints. But we looked
2 at the environmental impact statement itself,
3 associated technical data reports, and information
4 requests and responses. So this presentation and
5 report submission to the Clean Environment
6 Commission details our examination of that
7 relationship.

8 So for that, to answer this question
9 about this relationship, it is first necessary to
10 examine the integrity of the natural systems
11 around us at multiple scales: Global, national,
12 and local.

13 Global ecosystem health and integrity
14 is declining; that's obvious in the newspapers and
15 headlines. And the current environmental
16 assessment standards of practice for projects and
17 mitigation utilize a conventional approach. The
18 approach is focused mainly on mitigation of
19 significant adverse biophysical effects.

20 This focus is actually accelerating
21 the decline of biodiversity, ecological integrity,
22 and ecosystem health. It is clear, as we look
23 around us, that the benefits from nature that we
24 receive are in sharp decline all around the world.
25 And this has direct implications for human health

1 and human well-being.

2 I'm not going to belabour this too
3 much, because I think we are all aware of what is
4 happening in the world. But I wanted to just
5 touch on a few specific points.

6 Freshwater species and ecosystems are
7 the most in decline; about two-thirds of all the
8 fresh water flowing into the oceans was obstructed
9 by 800,000 hydro power projects by the year 2000.
10 All of these hydro power projects require
11 transmission systems and converter stations like
12 MMTP.

13 Some areas of wetlands are up to
14 95 per cent lost, or severely impaired. Most of
15 the world's people live within 50 kilometres of a
16 water source that is impaired, impounded,
17 diverted, polluted, or running dry. And by 2030,
18 about half the population of the world is
19 predicted to be under severe water stress.

20 So it is important to think about the
21 context when reviewing this MMTP project. Will
22 communities in the MMTP region be a part of that
23 statistic? And it is already clear, and I just
24 want to recognize that Lake Winnipeg is already
25 under water stress today, in 2017.

1 Moving to forests; humans have
2 deforested more than two to three million square
3 kilometres of primary forest. The 2016 Living
4 Planet report estimated vertebrate decline, so
5 they looked at birds, fish, mammals, and reptile
6 populations, and found that they have been cut in
7 half. They are further predicted to decline by
8 67 per cent by 2020.

9 And here this graphic is from the
10 Living Planet report, and it depicts freshwater
11 species with an 81 per cent decline. And it
12 paints a picture that things are being degraded
13 rapidly all around the world.

14 So this graph, this figure, depicts
15 the nine different variables -- or, I'm sorry,
16 seven different variables for the planetary
17 boundaries. And going back to this graphic
18 before, we can look at that 81 per cent decline;
19 we can look across all of these different
20 categories of vertebrates and see that we are
21 degrading these populations.

22 This is depicted in the generic
23 diversity section, in red, and basically this
24 figure presents everything that is within -- in
25 the green area is sort of a safe operating space

1 for humanity. Everything in the yellow and the
2 red depicts where we are no longer in what is a
3 known safe operating space for humanity.

4 So, there is -- it is clear that land
5 change, diversity of species, nutrient inputs, and
6 nutrient cycling, we have already crossed our
7 boundaries for those areas.

8 There is also a lot of uncertainty.
9 There is a lot of uncertainty in some of the
10 areas, and we just don't know where we stand right
11 now. But it is clear that systems -- ecological
12 systems are in decline and are failing all around
13 the world. And this sort of explains where we
14 think we sit with these variables.

15 So, consequently, we are witness to
16 and part of a widespread and global ecological
17 degradation of many of the ways nature contributes
18 to our own personal health and well-being. As
19 nature's life support systems decline, people too
20 are increasingly victims of this deteriorating
21 state of nature. Substantial human health effects
22 are evident from these declines, and this is
23 predicted to become more important in the decades
24 to come.

25 We have been recognized, as humans, as

1 a primary driver for this decline. And a new
2 geological epoch has been named, and this is
3 called the Anthropocene. The main causes for this
4 decline are habitat loss, degradation, and
5 overexploitation of fish and wildlife populations.
6 And we are being recognized as a driving force
7 behind that. Never before have humans dominated
8 global trends.

9 So, as a professional biologist, I'm
10 forced to, as I document the degradation of the
11 world around us, I'm forced to ask myself some
12 pretty tough questions. Clearly the EA process
13 that I'm a part of on a day-to-day basis is
14 failing us.

15 Whose fault is it? Is it my fault, as
16 a professional biologist? When I first joined the
17 board of directors back in 2014 or 2015, a
18 husband-and-wife team of sociologists came from
19 Europe, and they were professors at the University
20 of Northern British Columbia, and they came and
21 spoke with us. And it was quite alarming, what
22 they had to say. But in Europe, at that time, it
23 wasn't happening in -- on this continent yet, but
24 in Europe, there were people -- young people,
25 children, teenagers -- that were starting to sue

1 governments and municipalities for the degradation
2 of their environment. And this husband-and-wife
3 team came to our board of directors meeting and
4 asked us what we thought about this, and they also
5 asked us if we thought it was our fault.

6 And as a biologist in B.C., we
7 participate in these processes of environmental
8 impact statements. And this talk was very
9 alarming to me, and it sort of opened my eyes that
10 yes, I am actually a part of this process as well.
11 And it forced me to really re-evaluate what is
12 happening in the world and how I fit into that
13 picture. And so I continue to this day to ask
14 myself: Have we, as professional biologists and
15 ecologists, contributed to this decline?

16 Further on that topic, I have to ask
17 myself: Does the work that my research practice
18 engages in, is this contributing to this decline?
19 Have environmental assessments contributed to this
20 decline? Overall, how effective is this EA
21 process? So I wanted to look into this a little
22 bit more.

23 This is a study done by Bradshaw and
24 others, and they actually examined the
25 effectiveness of the environmental assessment

1 process around the world. And they assessed a
2 couple of hundred countries, including Canada, and
3 ranked them by their relative environmental
4 impact.

5 The metrics that were assessed
6 included habitat loss, habitat conversion, natural
7 forest loss, marine catch, fertilizer use, water
8 pollution, carbon emissions, and the proportion of
9 threatened species.

10 So they looked at a number of
11 different variables. And overall, relatively,
12 Canada ranked 12 among the 20 worst nations in the
13 world.

14 This is a serious concern.

15 This is just another way of depicting
16 that same information, but it shows all of the
17 other countries, in addition to the 20 worst
18 countries. So you can sort of see where Canada
19 fits in globally. So again, Canada globally ranks
20 among the worst -- among -- one of the worst
21 countries in the world for the environmental
22 impact of nations.

23 There are other studies that have
24 looked at the effectiveness of the environmental
25 assessment process, and the message is the same.

1 One study looked at 35 environmental
2 impact statements in the South Saskatchewan River
3 watershed alone, and what they found is that the
4 indicators don't capture the benefits that we
5 receive from nature. They don't capture the
6 stress placed on our ecosystems.

7 Another study assessed numerous
8 environmental assessments in the United States,
9 and again, the same message was found.

10 A couple of more examples. The
11 Keeyask Generation Station environmental impact
12 statement from a few years ago was in the same
13 ballpark. Obviously the stress placed on our
14 ecosystems was not captured -- was not being
15 captured there as well.

16 There is also several B.C. case
17 studies, and the work that I'm engaged in through
18 Coldstream Ecology, which is my company,
19 demonstrates that ecological integrity is failing,
20 even though we try, and we try harder and harder
21 every day, to reduce the environmental impacts and
22 to mitigate the significant adverse effects.

23 But we still end up in the same boat.
24 Ecosystems are failing. Clearly, the
25 environmental assessment process in general is

1 failing.

2 So I go back around again. As a
3 professional biologist, I have to ask myself: Are
4 we asking the right questions in these
5 environmental assessments? Are those questions in
6 the correct context? What are we missing?

7 We have to be missing something, if we
8 keep seeing the rapid ecological degradation of
9 the environment. What are we, as professionals,
10 missing? Where, why, and how is this
11 environmental assessment process failing?

12 These are questions that I ask myself
13 every single day. And they are becoming
14 increasingly important.

15 So MMTP followed a similar
16 environmental assessment process as most
17 standardized environmental assessment frameworks
18 are. They are similar. And therefore, based on
19 that, I think it is probably safe to assume that
20 MMTP is unlikely to contribute to healthy
21 ecosystems. And the MMTP further demonstrates
22 issues that the EA process is largely ineffective.

23 It is time to reconsider the
24 relationship between human actions, human health,
25 human well-being, environmental quality, and

1 ecological integrity. The picture that I just
2 painted makes it clear that the current societal
3 approach that we take in interacting with the
4 planet, including the way we exploit natural
5 resources and, more relevant to this review and
6 this Commission hearing, the way we assess
7 consequential environmental impacts, needs to
8 change.

9 I'm not going to go into the evolution
10 of environmental assessments, as Dr. Fitzpatrick
11 covered that quite well. And so I guess I will
12 start with where we are today. And we are still
13 very much in a conventional environmental
14 assessment process that focuses on the mitigation
15 of adverse biophysical impacts.

16 She also touched on the expert panel's
17 report, Building Common Ground, and so I'm going
18 to just revisit some of those topics there.

19 I used Dr. Robert B. Gibson -- he is a
20 leading sustainability expert in Canada, and he
21 conducted a review of this expert panel's report.
22 He has been a past witness here, as well, to the
23 CEC and the PUB. He is a next-generation
24 environmental assessment researcher, and his main
25 premise for his research is he wants to promote

1 and he wants to enhance prospects for lasting
2 well-being.

3 He conducted an analysis of review of
4 the expert panel report, and basically he found
5 some very important recommendations. And the most
6 important recommendation was to ensure that the
7 core objective of assessment law and processes,
8 and all relevant assessments, make positive
9 contributions to sustainability.

10 So he further outlined what that meant
11 in his review. And an environmental assessment
12 regime with a sustainability focus would require
13 that every undertaking make positive contributions
14 to sustainability; that every assessment be
15 required to discourage trade-offs, to apply
16 explicit context-specific sustainability criteria,
17 identify the best available options, and seek
18 multiple mutually beneficial lasting gains, while
19 avoiding significant adverse effects.

20 He also noted four underlying
21 principles, again, that Dr. Fitzpatrick brought to
22 our attention earlier: Transparency, informed,
23 inclusive and meaningful.

24 So I used this context from the expert
25 panel's EA review and recommendations from

1 Building Common Ground to guide some of the scope
2 of this assessment.

3 Essentially, Manitoba Hydro used a
4 conventional approach in MMTP. And the following
5 presentation and reporting submission aims to
6 demonstrate where the MMTP falls short of
7 achieving positive contributions to sustainability
8 through lasting gains, and also falls short of
9 avoiding significant adverse effects.

10 I want to talk about environmental
11 externalities. Environmental externalities, in my
12 professional opinion, are part of the reason that
13 we are seeing this rapid global ecological
14 degradation. They can be defined as unintentional
15 impacts that result from human activity, such as
16 MMTP. They can be both negative and positive.
17 And certain examples include climate, the carbon
18 dioxide and greenhouse gas emissions, and
19 implications for climate change, just pollution:
20 water pollution, air pollution.

21 Essentially, these negative
22 externalities that are unaccounted for impact our
23 human health and our human well-being, and they
24 are not -- part of the reason for this is they are
25 not captured in the market economy. They are

1 rarely accounted for in our day-to-day decisions.
2 Business decisions, including Manitoba Hydro
3 development, personal decisions, national
4 accounting, we essentially give these
5 externalities a value of zero, and therefore they
6 are not included in our day-to-day
7 decision-making.

8 I wanted to take a look at
9 environmental externalities within MMTP EIS, and I
10 found that Manitoba Hydro does not recognize or
11 define externalities within the EIS explicitly, so
12 therefore there is no analysis within the EIS of
13 many of the proposed project impacts.

14 They need to be accounted for in the
15 environmental impact statement process. And if
16 they are not, then we are not addressing the
17 degradation of natural resources. And so in this
18 particular case, Manitoba Hydro did not
19 necessarily address the degradation of natural
20 resources within MMTP.

21 The repeated conclusion of no
22 significant residual cumulative effects is
23 questionable, because of this omission of
24 environmental externality in many cases. And this
25 ultimately costs society money.

1 Valuation of externalities in the
2 process is long overdue. There are several
3 estimates of what this global cost is, and it is
4 over \$700 billion in several cases. Essentially,
5 if we were to include the environmental
6 externalities, none of the top 20 industrial
7 sectors in the world would be profitable, if the
8 environmental costs were included.

9 The values are real; the health
10 implications are real. The long-term costs are
11 often permanent, and investments in mitigation
12 infrastructure are only capturing a tiny part of
13 these costs.

14 I want to talk about mitigation now.
15 Manitoba Hydro's statement of environmental
16 impacts that may potentially occur as a result of
17 the project makes the assumption that mitigation
18 measures are effective.

19 Mitigation is the most widely utilized
20 global practice in hydroelectric and related
21 projects. Mitigation is an attempt to avoid,
22 minimize, restore, or compensate for adverse
23 effects. Manitoba Hydro explicitly defines it as
24 the measures for the elimination, reduction, or
25 control of the adverse environmental effects of a

1 project, and includes restitution for damages to
2 the environment caused by those effects, through
3 replacement, restoration, compensation, or other
4 means.

5 Effectiveness of mitigation is
6 influenced by numerous factors that differ at
7 every site, and therefore imperfect knowledge
8 about particular sites where mitigation is
9 prescribed often inhibits the successful and
10 effective completion of those mitigation efforts.

11 In conclusion, mitigation and
12 rehabilitation and restoration efforts actually
13 don't work. There have been many studies that
14 have concluded this. The World Commission on
15 Dams, for example, concluded that dams are -- have
16 more negative than positive effects, and
17 mitigation was actually only effective 20 per cent
18 of the time.

19 Mitigation -- they also identified the
20 challenges with mitigating the cumulative effects.
21 There were numerous studies on wetland mitigation
22 efforts that basically conclude that studies don't
23 replace the structure and function of ecosystems,
24 so the literature out there concludes that
25 numerous studies on mitigation lead me to question

1 whether or not it is actually effective in
2 reducing significant adverse effects.

3 So going back to MMTP and the EIS, the
4 entire premise of the significant adverse effects
5 conclusions is that mitigation works and is
6 effective most or all of the time, and this is not
7 necessarily true. Mitigation is not necessarily
8 effective, and there is not sufficient evidence to
9 support this assumption. Failed mitigation
10 ultimately costs society money, and costs human
11 health and human well-being.

12 So I want to go back to the main
13 premise of the conventional environmental
14 assessment process, which is the mitigation of
15 adverse effects, mainly biophysical. And given
16 the global state of ecosystems and the sharp
17 declines of the benefits that we receive from
18 nature, and the failure of the current
19 environmental assessment process to eliminate
20 these effects and protect human and environmental
21 health, it is time to shift our focus away from
22 this conventional approach and turn to the
23 enhancement of environmental conditions and
24 ecosystem services, rather than the reduction of
25 significant effects.

1 The following sections in this
2 presentation report explore in detail how the MMTP
3 EIS, and other Manitoba Hydro project assessments
4 and monitoring frameworks, need to shift away from
5 this conventional environmental assessment
6 approach and decision-making framework, and begin
7 to focus more on conducting and monitoring
8 enhancement activities that create benefits for
9 humans.

10 So I want to talk more about benefits
11 for humans.

12 I probably would be more comfortable
13 if there was a stand-up mic; do we have a
14 stand-up ... ? Thank you.

15 So ecosystem services are based on the
16 holistic management of environmental systems. We
17 are a part of ecosystems. Both humans and
18 non-humans alike depend on the complex
19 interactions of the abiotic and biotic components
20 of our ecosystems.

21 Sorry; thank you for your patience.

22 All right. Where are we?

23 So what are ecosystem services?

24 Can you still hear me? Okay.

25 So, these are essentially the benefits

1 that we receive from nature. Ecosystems
2 provide -- they provide functions for us, and
3 these functions are of course habitat, biological
4 systems, and include the processes of ecosystems.
5 And they deliver specific services to us, in
6 perpetuity, that sustain and improve human and
7 non-human life, and they ultimately contribute and
8 provide life support for the social and ecological
9 functions that we depend on.

10 So they are comprised of market and
11 non-market benefits that we receive from
12 ecosystems. They are delivered to society as
13 goods and services, such as water, food, shelter,
14 purification of drinking water, waste
15 decomposition, flood regulation, carbon
16 sequestration. The most basic services example is
17 a daily supply of clean, fresh water from our
18 environment.

19 There is lots of local and regional
20 terrestrial and aquatic ecosystem services that
21 the MMTP region contributes to. The provision of
22 food, for example, for the local populations.

23 All of these benefits are collectively
24 referred to as ecosystem services. The United
25 Nations conducted a Millennium Ecosystem

1 Assessment over ten years ago, and they basically
2 estimated and found that over 60 per cent of the
3 ecosystem services that were examined were being
4 degraded or used in a way that was not
5 sustainable.

6 This graphic shows us the different
7 categories of ecosystem services as they were
8 classified by the MEA, and how they interact and
9 are interdependent upon one another, and how they
10 ultimately contribute to human health and human
11 well-being.

12 This is another example of ecosystem
13 services from my own research practice. This is
14 some art that I commissioned. And it basically
15 depicts, in the top right corner, water
16 purification, for example; nutrient cycling. The
17 cultural services in the bottom left: Soil
18 creation, economics, food, water. These are all
19 parts of the benefits that we receive from nature.

20 So let's examine how MMTP utilized
21 ecosystem services within the EIS. I want to
22 recognize that as I mentioned, I've been here
23 before; I've presented to the CEC before, and I
24 was an expert witness for Keeyask, and I do want
25 to recognize that MMTP does have a broader

1 examination of these ecosystem services included
2 in the EIS, so Manitoba Hydro has definitely made
3 improvements.

4 However, given the rapid degradation
5 of the global environment, are these improvements
6 really enough?

7 Some ecosystem services were assessed
8 within the EIS, but not necessarily in the right
9 context. And I will explain this in the next
10 section, on human and environmental health.

11 Essentially, the assessment of
12 significant and cumulative effects requires an
13 integrated approach across all of the relevant
14 information.

15 So how do changes in the environment
16 also affect human health and well-being? We need
17 to look at them together, not separately. MMTP,
18 therefore, shouldn't assess them separately; they
19 also need to look at them together.

20 The reduction or the decline in these
21 services has local and global human health and
22 human well-being implications, and we need to
23 start paying attention to these.

24 Here is a depiction of how the
25 degradation of ecosystems, on the left, impacts

1 the deterioration of ecosystem services, in the
2 middle, and how ultimately those services impact
3 human health. And degradation consequently leads
4 to negative health impacts for us.

5 I want to talk a little bit about
6 health now. The World Health Organization defines
7 health as a state of complete physical, mental,
8 and social well-being, and not merely the absence
9 of disease or infirmity.

10 So this is a broad concept that
11 extends well beyond just getting sick in the
12 doctor's office, and also extends beyond just
13 humans. It encompasses more of an ecosystem
14 approach. And it also encompasses the ecological
15 underpinnings and the drivers and the protectors
16 of human health.

17 So I want to use biodiversity as an
18 example to explain this further. Globally, the
19 diversity of species regulates earth's material
20 and energy flows in response to change. At the
21 micro scale, our diversity in our own bodies
22 contribute to our personal health, and help to
23 regulate our immune system, and also prevent
24 infections, for example.

25 Biodiversity provides goods and

1 services that are essential to human health and
2 well-being. It is therefore a key determinative
3 of human health. And environmental degradation
4 reduces the availability of ecosystems to continue
5 to provide these life-sustaining services.

6 Consequently, the maintenance and
7 enhancement of ecosystem services ultimately
8 benefits human health. Again, you can't take them
9 apart and look at them separately; they have to be
10 looked at together.

11 Therefore, it is important that
12 policies that govern the development of projects
13 such as MMTP should actually prevent the loss of
14 biodiversity. This would simultaneously promote
15 environmental health protection and human health
16 protection during the lifetime of a project such
17 as MMTP.

18 I want to go back to Dr. Gibson's
19 review of the expert panel's report, and I assume
20 you are familiar with that report, but it just
21 came out in April, so it is very relevant to
22 environmental assessment processes and where the
23 country will be going with those.

24 Traditionally, there has been three
25 pillars of sustainability. Well, that has now

1 been broadened out and expanded to actually
2 include human health and culture.

3 This is obviously not a novel idea.
4 It is typical First Nation philosophy of a
5 holistic interconnected web of life, where humans
6 are interacting with nature and a part of nature.
7 It is an integrated lens, and is a relatively new
8 Western scientific concept.

9 And there is actually a brand new
10 discipline, called planetary health, that uses an
11 integrated framework. The planetary health
12 discipline provides a fresh lens to assess our
13 relationship with the natural world, and more
14 relevant to this review, assess our relationship
15 with environmental assessments and their
16 effectiveness.

17 So planetary health can be defined as
18 the health of human civilizations and the natural
19 systems on which they depend; again, the two
20 concepts tied together, not taken apart.

21 The environmental determinants of
22 health, and the recognition of biodiversity and
23 health linkages, are emphasized in this
24 discipline, and it's the foundation for the
25 integration of relevant ecological and social

1 information to be valued, and presented in public
2 health and environmental policies.

3 And Manitoba Hydro should consider
4 using planetary health, and exploring it, to
5 facilitate more effective environmental
6 assessments.

7 There are other non-traditional
8 approaches to -- that can be utilized in
9 environmental assessments. I want to provide an
10 example from my research practice.

11 This is some more art that we have
12 created, and it is a -- it basically demonstrates
13 the complexity, interconnectiveness, and
14 integration of human health and environmental
15 health in my local community.

16 We are surrounded by hydro power dams,
17 and so they dominate our watersheds. And so the
18 way that we sort of look at the world, with this
19 lens, is that if all of the headwaters and the
20 tributaries are blocked or impaired, then the
21 collective aquatic ecosystem declines.

22 And this is analogous to the
23 circulatory system of the human body, where if our
24 arteries are blocked, then we may have a heart
25 attack.

1 This is evident in the work that we do
2 through Coldstream Ecology. We are documenting
3 the decline and the potential near-term
4 extirpation of several species of salmon in our
5 local watersheds, in response to flow regimes
6 from -- downstream of dams.

7 Now, this is not just a fish concern;
8 this is a human health concern. And the way the
9 conventional environmental assessments approach
10 these topics of global decline -- in particular,
11 salmon, in my watershed -- is not -- they are not
12 using an integrated approach. And it is time to
13 start looking at how these declines affect human
14 health and human well-being.

15 The indigenous communities that I work
16 with, as well as, I'm told, several Manitoba First
17 Nations and Metis Federation people, have a
18 similar philosophy. There is numerous references
19 within past Clean Environment Commission hearings
20 that connect human health and the natural
21 ecosystems that support human health.

22 For example, there are areas rich in
23 medicinal plants, that are referred to as our
24 pharmacy, or our medicine cabinet. One specific
25 example is that the Washow Peninsula was being

1 described as a kidney for Lake Winnipeg.

2 So this integrated philosophy and
3 observation of the lake health has a parallel to
4 the human system, and the ecosystem contributions,
5 or the kidney, the organ contributions that are
6 needed for the lake or the human body to function
7 effectively.

8 This concept of a kidney integrates
9 both of those ideas, and these references
10 demonstrate how traditional knowledge identifies
11 this complexity. And this can be really useful
12 information, environmental assessment processes.
13 And it is perhaps time to start including these
14 concepts within project EIS's, like MMTP, for
15 example.

16 There is other human health and
17 well-being impacts that I'm sure you've heard lots
18 about from the Commission. There's social and
19 psychological impacts of ecological degradation,
20 such as loss of identity, cultural impacts, a loss
21 of sense of place. This often leads to
22 depression, emotional stress.

23 There is also physical implications
24 for human health for -- with the degradation of
25 ecosystem services. There is risk to crops, a

1 risk to food, loss of potential pharmaceuticals in
2 the world, loss of wild food crops, but also an
3 increase in zoonotic diseases. Let's talk about
4 ticks a little bit to explore this integrative
5 concept of human health and biodiversity a little
6 bit further.

7 Recent research finds that it is
8 impossible to disconnect the mutual influences of
9 global changes such as deforestation, land-use
10 change and climate change on tick-born pathogen
11 systems.

12 Evidence suggests that biodiversity
13 declines actually increase disease transmission to
14 humans. The global changes that are occurring
15 impact host availability, vegetation cover, and
16 climate, and subsequently the tick distribution is
17 changing. So the MMTP region was identified by
18 Manitoba Health as a high-risk location for ticks.

19 Now, just in the last month, in -- the
20 CBC published three articles on ticks, alone, for
21 Manitoba. The Manitoba Lyme Disease Society
22 predicted a really bad year for tick disease here
23 in Manitoba. Canada's top public health office
24 cited this increased disease transmission from
25 ticks as a major cause for concern for 2017.

1 Another article published on -- I
2 think it was May 17th -- recounted hikers on the
3 Mantario Trail pulling off hundreds of ticks in
4 three days of hiking. That's pretty scary.

5 So this example just demonstrates the
6 interaction between biodiversity and human health,
7 and specifically between hosts, such as ticks,
8 human disease, and the changing risk of disease
9 transmission in relation to changing environmental
10 conditions.

11 There is no discussion in the MMTP on
12 how potential cumulative impacts or residual
13 effects regarding changes in host development for
14 ticks, for example, and how changes in the
15 environment may or may not influence the
16 prevalence of wildlife and human diseases in
17 affected communities. This is a significant and
18 concerning gap in the environmental impact
19 statement.

20 We need to start asking the questions:
21 Does land-use change actually pose a risk to human
22 health? And if so, how?

23 And I don't think that that was
24 appropriately assessed within MMTP. MMTP did in
25 fact conduct a health impact assessment, so they

1 did look at disease. But they looked at disease;
2 they looked at a few other factors specifically in
3 relation to human health, but they failed to
4 actually integrate the two concepts of ecological
5 degradation, land-use changes with human health.
6 So they missed the link. And that's what is
7 important.

8 So MMTP would have been more effective
9 if an integrated environmental health assessment
10 approach was taken. Specific links and vectors
11 associated with biodiversity decline and disease
12 transmission should have been included in this
13 assessment, for example.

14 I just wanted to use -- I just used a
15 few examples to sort of highlight some of these
16 significant issues.

17 So I want to move on to addressing
18 some of the significant adverse residual and
19 cumulative effects.

20 Going back to Building Common Ground,
21 in the expert panel report, Dr. Gibson in his
22 review of that report explicitly pointed out that
23 the panel recommended the avoidance of adverse
24 effects and the minimization of tradeoffs.

25 "A sustainability approach seeks to

1 ensure that projects are planned to
2 avoid or minimize harm and deliver
3 benefits for current and future
4 generations."

5 So I wanted to examine this a bit more
6 closely within MMTP. What does this significant
7 adverse residual and cumulative effects look like
8 within the project?

9 To that end, we compiled a high-level
10 summary of those effects. And Manitoba Hydro did
11 note that some negative effects will occur;
12 however, due to mitigation and other factors, such
13 as environmental resilience and the low magnitude,
14 frequency, and duration of exposure of those
15 effects, that overall, the effects of the project
16 and the impacts are predicted to not be
17 significant.

18 Let's take a little bit closer look at
19 that.

20 You can't really see that, can you?

21 So here, in this table, on page 19 of
22 the report, Slide 4T, you will see in the sixth
23 column, we have have the valued component. These
24 are the chapters that we reviewed.

25 I want to take your attention to the

1 third and the fourth columns. If you look, the
2 residual effects of the project are predicted to
3 not be significant. And this is sort of the pace
4 for all of the columns, the third and the fourth
5 columns.

6 So the main message in the EIS is that
7 there will be no significant adverse effects or
8 cumulative effects after mitigation.

9 Now, I know that this is the way that
10 the conventional environmental assessment process
11 works. The whole goal of the conventional
12 environmental assessment process is to reduce
13 significant adverse effects, or eliminate
14 significant adverse effects.

15 But as an ecologist, who participates
16 in impact assessments on a day-to-day basis, I
17 question this approach. We currently document the
18 decline of ecosystems across the world every day.
19 The environmental impact of nations, slides from
20 before, depict that clearly, we are -- clearly,
21 ecological systems are degrading.

22 So, again, this goes back to -- what
23 are we missing? Are we asking the wrong
24 questions? Because this says that there is going
25 to be no impacts at all. And it is clear that

1 there are impacts from all of these projects, and
2 we need to start thinking about whether or not
3 this process here is meaningful. Because clearly
4 there are impacts and effects, but yet this entire
5 environmental impact statement says that there
6 will be no significant adverse effects.

7 Again, the conclusion is based on the
8 assumption that mitigation is effective. We
9 already established that mitigation measures are
10 not actually documented as being particularly
11 effective, and they are clearly not proven
12 effective in maintaining, replacing, or enhancing
13 the critical life-sustaining ecosystem services
14 that we all depend on.

15 So going back to Dr. Gibson's
16 next-generation environmental assessment
17 principles and the expert panel's report from
18 Building Common Ground, and going back to the
19 global ecological decline that was presented
20 earlier, I'm really forced to ask myself: How
21 meaningful are these conclusions of no significant
22 adverse effects in the MMTP EIS?

23 I want to explore this concept a
24 little bit further, with traditional food and
25 nutrition as an example.

1 Malnutrition is a leading cause of
2 global disease. Even one single serving of
3 traditional animal foods may result in
4 significantly increased clinical levels of energy,
5 protein, vitamin A, vitamin B6-12, Vitamin D,
6 Vitamin E, riboflavin, iron, zinc, magnesium, and
7 fatty acids, thus reducing the risk of
8 micronutrient deficiency. Even one single serving
9 can affect all of these micronutrients.

10 This is obviously a primary concern
11 brought forward by the First Nations, and Manitoba
12 Hydro heard that loud and clear. And they
13 focused, actually, on this valued component.

14 They looked at it in a couple of
15 different ways. They looked at country food
16 quality; they looked at effects to plant
17 harvesting, wildlife, and wildlife habitat. And
18 they identified many significant impacts.

19 Here are a few for example.

20 Section 19.5.5, Manitoba Hydro states:

21 "Based on the available information,
22 it is likely that the project will to
23 some degree alter, interfere with
24 access to and participation in
25 traditional and cultural activities

1 and may contribute to decreased
2 consumption of subsistence foods and
3 traditional medicines for some
4 community members."

5 Example 1.

6 Example 2, on Slide 45.

7 Section -- another section states:

8

9 "The assessment of residual effects
10 for plant harvesting will result in
11 adverse effects on plant harvesting by
12 decreasing the availability of
13 traditional use plant species and
14 reducing the land base available for
15 traditional plant harvesting
16 activities."

17 Another example is in the residual
18 cumulative effects.

19 "Effects are listed as expected to be
20 permanent, continuous, and
21 irreversible. Cumulative effects on
22 several of the VCs that influence
23 traditional land and resource use will
24 also experience permanent effects.

25 The cumulative assessment of change in

1 habitat availability that indicated
2 that the contribution of future
3 projects to wildlife mortality risk in
4 the wildlife habitat RAA will be
5 permanent, and that birds, a source of
6 food identified by the Peguis First
7 Nation, will be the most vulnerable to
8 cumulative effects."

9 So these are explicitly taken from the
10 EIS. Quote unquote.

11 We've established that wildlife
12 populations are really an important dietary source
13 of nutrients. Populations without wild meat
14 consumption have been shown to have a higher risk
15 of iron deficiency and anemia. They have been
16 shown to have sickness and death from infectious
17 diseases, a reduction in IQ and learning ability,
18 a reduced capacity for physical activities.

19 Essentially, degradation of these
20 services, the services of food provision, could
21 cause a nutritional crisis. If wildlife
22 populations are no longer sufficient to support
23 harvest of human nutrition, well, what will be the
24 substitute? Is it the same nutritional value?
25 How will it be substituted? What will it cost?

1 These are questions that were not in the MMTP EIS.

2 Slide 47.

3 So I just presented some of the
4 impacts that are explicitly stated in the EIS, so
5 now I'm moving on to the summary, the conclusions
6 in chapter 19. They state, quote unquote:

7 "Project residual effects on community
8 health and well-being are assessed as
9 not significant.

10 Project effects on Aboriginal health
11 related to the availability of
12 traditionally harvested food, and thus
13 food security will not be significant,
14 because changes in harvested foods
15 within the RAA will not contribute to
16 acute or chronic physical or mental
17 health outcomes via adverse changes
18 that are irreversible and detectable
19 at a population level using existing
20 population indicators."

21 And finally:

22 "Cumulative effects on community
23 health and well-being are assessed as
24 not significant."

25 So for Manitoba Hydro to make those

1 conclusions, they have to make essentially three
2 assumptions. One is that the food and nutritional
3 quality of that food can be easily replaced by
4 hunting or gathering in another area. Another
5 assumption is that local changes in biodiversity
6 do not actually affect the nutritional quality of
7 food. And also the final assumption is that these
8 changes are actually detectable at a population
9 level.

10 All three of these assumptions are
11 likely incorrect some of the time.

12 Manitoba Hydro essentially failed to
13 examine these parameters in an integrated way,
14 looking at biodiversity and land-use changes and
15 the effects and implications for human health.

16 Furthermore, there is no plan in place
17 to actually continue to monitor how -- community
18 health and well-being VCs, because the law doesn't
19 require it.

20 I want to go back to the health impact
21 assessment again. The MMTP socio-economic and
22 land use environment, TDR, technical data report,
23 actually is a good starting place to start to
24 integrate some of these changes and document them
25 and learn from them.

1 They looked at a number of diseases.
2 They looked at diseases for Manitoba First Nations
3 and Metis Federation and the regular population.
4 They gathered that information, but they failed to
5 integrate it in a discussion or assessment with
6 land-use changes. But it is a good starting point
7 to begin to integrate the interactive human
8 environmental health effects.

9 So, we basically just went through the
10 significant effects table and some of the
11 conclusions that Manitoba Hydro explicitly
12 recognizes in their EIS. They conclude that there
13 will be no significant adverse effects, and that's
14 the whole goal of conducting an environmental
15 impact statement.

16 But I question, was this really -- are
17 these conclusions really, actually, very
18 meaningful, given what is happening in the world?
19 Does this assessment have anything to do with
20 that, potentially?

21 The environmental assessment was of
22 course conducted by Manitoba Hydro. They filed
23 the environmental assessment. And maybe we should
24 be thinking about independent assessments.

25 So now what? Now where do we go?

1 We've painted a pretty grave picture, and
2 essentially I think we need to start talking about
3 regenerative sustainability and design.

4 The foundation of the industrial
5 activity in the last couple of hundred years has
6 basically been based on degenerative design. We
7 take earth's materials, make them into stuff we
8 want, and use it for a while, and then throw it
9 away. It is a one-way system that runs counter to
10 the living world, and it is literally devouring
11 the sources of its own sustenance.

12 Going back to Dr. Gibson's review. As
13 a sustainability expert, he points out that the
14 federal environmental assessment expert panel's
15 position on commitments to positive contributions
16 to sustainability; but the expert panel says,

17 "Sustainability should be central to
18 the federal impact assessment. To
19 meet the needs of current and future
20 generations, federal impact
21 assessments should provide assurance
22 that approved projects, plans, and
23 policies contribute a net benefit to
24 environmental, social, economic,
25 health, and cultural well-being."

1 Again we go back to this net-benefit
2 model that is becoming apparent.

3 So the environmental assessment expert
4 panel report, and this MMTP EIS submission,
5 basically present evidence that the current
6 societal approach we have taken in interacting
7 with the planet isn't working. This is including
8 the way that we exploit natural resources. This
9 is also including the way that we assess the
10 consequential environmental impacts of projects
11 such as MMTP.

12 Now, I'm a biologist who conducts
13 these environmental impact assessments. This is
14 relevant to me in my practice, too. We need to
15 change the way that we conduct these assessments
16 and assess the impacts, and it needs to reflect a
17 new, more holistic and interdependent relationship
18 with the earth. One framework that I presented
19 before to you, that does this, is the planetary
20 health discipline.

21 So I want to shift away from impacts
22 and start talking about benefits.

23 I finally looked at the Manitoba Hydro
24 environmental impact statement specifically for
25 contributions and co-benefits, as I went through

1 and conducted the review. So what are the
2 co-benefits, besides job sharing and revenue
3 sharing? Does the MMTP clearly identify benefits?

4 The ecological benefits from the
5 project, within each chapter, were not expressly
6 identified, or were difficult to locate, with one
7 exception. There was one specific area that
8 focused on net benefits, and that was in reference
9 to the golden-winged warbler. Critical habitat
10 enhancement is planned for this particular bird
11 species of concern.

12 Now, this is a model that should be
13 extended right through the EIS, to all of the
14 ecosystems that the projects interact with. We
15 have to focus -- start focusing on the net-benefit
16 model.

17 Manitoba Hydro is the largest
18 industrial employer in Manitoba, with the most
19 infrastructure. So using this model approach, one
20 would therefore logically conclude that Manitoba
21 Hydro projects and infrastructure should confer
22 the largest benefits to ecosystems and humans.
23 This is the sort of mindset that we need to be
24 shifting to.

25 There are many uncertainties with this

1 model. There are many knowledge gaps that exist
2 in the integration of ecosystems and human health
3 and human well-being. I want to present to the
4 CEC some recommendations on how Manitoba Hydro
5 could start to actively fill those knowledge gaps
6 and reduce that uncertainty with projects like
7 MMTP.

8 So there are complex linkages between
9 ecosystems and public health. We don't have all
10 of the answers, but we need to start asking the
11 questions, so that we can identify, characterize,
12 understand, and integrate this framework into
13 environmental assessments.

14 So some specific steps that could be
15 taken to reduce these uncertainties and increase
16 the effectiveness of the environmental assessment
17 process. During the lifetime -- the life span of
18 a project such as MMTP should focus on valued
19 components that actually encompass the ecological
20 determinants of human health and human well-being.
21 We can catalogue the ways in which the changes to
22 the environment directly or indirectly impact
23 human health.

24 Manitoba Hydro projects should
25 facilitate a better understanding of the health

1 services provided by biodiversity, and how changes
2 to ecosystems influence disease. Manitoba Hydro
3 could focus on documenting how their project
4 policies and management actions and subsequent
5 environmental changes improve environmental health
6 and human health.

7 Projects could focus on changes in the
8 availability of critical ecosystem services, like
9 the quality of water and food, how changes in land
10 and water use affect biodiversity, and ultimately
11 how those changes impact infectious diseases and
12 infectious agents.

13 Projects could focus on reducing
14 uncertainty regarding effects of changes on
15 frequency when it comes to extreme events in
16 terrestrial and aquatic systems.

17 Projects should make intentional
18 decisions and design for environmental and human
19 health co-benefits by looking purposely for
20 win/win situations.

21 Projects should facilitate key actions
22 before key ecosystems services that we rely on
23 disappear, and irreversible ecosystem changes
24 occur.

25 Manitoba Hydro projects should build

1 on local resources and capacities to steer to
2 steward ecosystems and their services, ultimately
3 for the protection of both human and environmental
4 health.

5 So, given the rapid earth changes that
6 we are witnessing and we are a part of, and the
7 escalating degradation of the benefits that we
8 receive from nature, it is important that we in
9 this review not only assess the actual content of
10 the EIS, but that we examine the effectiveness of
11 the process itself.

12 To that end, we engaged in an
13 examination of the broad relationship that was
14 adopted in the Manitoba Hydro MMTP project
15 approach, the assessment and the conclusions,
16 again, focusing on the one overarching question:
17 Did the MMTP EIS reinforce healthy relationships
18 between human beings and the environment? So this
19 presentation report submission detailed our
20 examination of that relationship.

21 In final conclusion, a small but
22 significant set of issues were identified. The
23 highlighted issues -- again, I took a broad
24 approach to this review -- included the context
25 and the overall effectiveness of the MMTP EIS, was

1 the EA effective.

2 There were concerns regarding the
3 effectiveness of mitigation, so we were
4 questioning whether mitigation is effective.

5 There are significant gaps in
6 important information relating to biodiversity,
7 ecosystem services, human health, and human
8 well-being. And most importantly, there is a
9 failure to link the relevant ecological
10 information to human health and well-being within
11 the project's specific and cumulative effects.

12 So in a lot of the cases, the pieces
13 are there -- a lot of the cases they are not,
14 but -- the pieces may in fact be there, but there
15 is this failure to link the two concepts of human
16 health and environmental health.

17 So, basically, these highlighted
18 issues, even though they numbered but a few, they
19 lead me to question the conclusions in the MMTP
20 EIS. Are they actually accurate or meaningful?
21 I'm not sure of that. They also do not appear to
22 be effective in safeguarding the environment and
23 protecting human health and well-being, and this
24 is clear, given the global degradation that we are
25 witness to.

1 Environmental assessments provide an
2 immense opportunity for society, and Manitoba
3 Hydro, and those impacted by the proposed
4 projects, to engage in meaningful, truthful, and
5 transparent reporting and assessment processes
6 about potential project implications.

7 So, Manitoba Hydro -- and myself
8 included, as an ecologist -- we need to start
9 embracing this integrated framework and begin
10 accounting for the essential life-sustaining
11 ecosystem services. We need to account for those
12 externalities that are not part of the process
13 that we have right now. We need to move away from
14 moderating and mitigating adverse effects towards
15 a net-benefit model.

16 Manitoba Hydro projects should be
17 appropriately scoped to include the full range of
18 potential risks, impacts, and benefits.

19 The scope in the EIS should reflect
20 today's ecological realities and today's societal
21 values.

22 Planetary health is just one example,
23 but it can be used as a foundation for
24 environmental assessments.

25 We need to start focusing on

1 nature-based solutions. Nature can and will
2 contribute to addressing the health and social
3 challenges of our time. By focusing on integrated
4 health, environmental, cultural, and socioeconomic
5 effects, risks, and most importantly benefits, we
6 have a real opportunity to start designing win/win
7 situations.

8 That's it. So I hope that this helps
9 with your recommendations. Thank you for your
10 time.

11 THE CHAIRMAN: Thank you, Ms. McHugh,
12 for a very thoughtful or thought-provoking and
13 far-reaching presentation.

14 Are there questions from Manitoba
15 Hydro? Yes.

16 MR. BEDFORD: Good afternoon,
17 Ms. McHugh. My name is Doug Bedford, and I'm one
18 of the legal counsel at this hearing for Manitoba
19 Hydro.

20 Do you have access to the version of
21 your written report that was circulated last week?

22 MS. MCHUGH: I do.

23 MR. BEDFORD: You made, I notice,
24 changes to the version that was circulated
25 mid-morning today, didn't you?

1 MS. MCHUGH: I did. I inserted a
2 figure.

3 Can you hear me now?

4 Yes, you are correct. I inserted one
5 figure.

6 MR. BEDFORD: I understand, obviously,
7 that you favour a very different method of doing
8 environmental assessment than the one that my
9 client chose to follow. Is that correct?

10 MS. MCHUGH: Yes, that is correct.

11 MR. BEDFORD: And because of your
12 preference for a very different methodology, you
13 felt compelled to state at the end of your written
14 report -- and I quote from page 23 of last week's
15 version:

16 "Conclusions in the MMTP EIS are not
17 necessarily accurate or meaningful,
18 nor do they appear to be effective in
19 safeguarding the environment and
20 protecting human health and
21 well-being."

22 MS. MCHUGH: Yes, that is correct.

23 MR. BEDFORD: You support, I gather,
24 projects that incorporate plans to make positive
25 contributions to sustainability?

1 MS. MCHUGH: Yes.

2 MR. BEDFORD: You would support, then,
3 a project that includes planting tall-grass
4 prairie on a right-of-way?

5 MS. MCHUGH: Yes, that would be a
6 benefit.

7 MR. BEDFORD: You would support the
8 planting of wild flowers and plants on a
9 right-of-way that bees rely upon?

10 MS. MCHUGH: Yes, that would be a
11 benefit.

12 MR. BEDFORD: You would welcome
13 growing plants on a right-of-way that are
14 important to the survival of monarch butterflies?

15 MS. MCHUGH: Yes, I would welcome
16 that.

17 MR. BEDFORD: You would support the
18 use of corridors across rights-of-way to
19 facilitate the movement of wildlife?

20 MS. MCHUGH: That is correct.

21 MR. BEDFORD: And you acknowledge, we
22 all heard in your presentation, but it is in your
23 paper -- at least, last week's version -- the
24 positive contribution that the MMTP project will
25 also make for the habitat of the golden-winged

1 warbler?

2 MS. MCHUGH: Yes.

3 MR. BEDFORD: So at a minimum, these
4 are meaningful things to do, are they not? And
5 they are quite likely going to assist in
6 safeguarding the environment?

7 MS. MCHUGH: They will assist, yes.

8 MR. BEDFORD: Is not shifting
9 mankind's appetite for energy away from fossil
10 fuels to renewable resources an example of a
11 positive contribution to sustainability?

12 MS. MCHUGH: Yes. However, this
13 proposed project would move power from Keeyask
14 Generation Station; is that correct?

15 MR. BEDFORD: It will transmit energy
16 from, I think, all of Manitoba Hydro's northern
17 generating stations, because it is an integrated
18 system.

19 So should not a project like the one
20 that you've just mentioned, and that is the
21 subject of this hearing, that transmits
22 hydro-generated energy, should not such a project
23 also be entitled to some of the same recognition
24 as projects that shift mankind's appetite away
25 from the consumption of fossil fuels?

1 MS. MCHUGH: I'm not sure that
2 shifting away from fossil fuels to shifting
3 towards hydroelectric power generation would
4 contract positive benefits to biodiversity and
5 ecosystem services. In fact, as I mentioned in
6 the report, the World Commission on Dams notes
7 that hydroelectric power generated by dams causes
8 more negative than positive contributions to the
9 world.

10 MR. BEDFORD: You know, years ago, for
11 the Wuskwatim project, I was handed the report of
12 the World Commission on Dams one day before one of
13 its authors was to testify. My recollection is
14 that report runs to some 400 pages; correct?

15 MS. MCHUGH: I can't recollect the
16 amount of pages in the report.

17 MR. BEDFORD: It was published in
18 2003, if my memory serves me correctly.

19 MS. MCHUGH: I would have to check my
20 references.

21 MR. BEDFORD: The only dam in North
22 America that was subject to that report is the
23 Hoover Dam in the United States?

24 MS. MCHUGH: That may be the case, but
25 that doesn't mean that the conclusions aren't

1 relevant to North America.

2 MR. BEDFORD: Hoover Dam generates
3 6,000 megawatts of energy; do you know?

4 MS. MCHUGH: No, I'm sorry, that's out
5 of my expertise.

6 MR. BEDFORD: I can tell you that
7 exceeds the entire generation of the Province of
8 Manitoba. I would suggest to you that the World
9 Commission on Dams report focused on very, very
10 large dams, most of them in other parts of the
11 world and North America; correct?

12 MS. MCHUGH: That may be the case.
13 However, there are numerous studies that indicate
14 that dams within North America are causing
15 ecological degradation, so there are numerous
16 studies in North America that would support the
17 conclusions in the World Commission on Dams'
18 report.

19 MR. BEDFORD: If that's true, however,
20 you chose, oddly enough, in your presentation and
21 your report, to cite the World Commission on Dams,
22 not any of these other numerous reports that you
23 believe exist?

24 MS. MCHUGH: Well, due to budgetary
25 constraints, and resource constraints, and time

1 constraints, it was not -- we were not able to do
2 a comprehensive review of all of the reporting
3 documents and include all of that information in
4 this report.

5 However, the main message is clear,
6 and still resonates in North America, that dams
7 such as the dams in my own territory are not
8 necessarily producing positive contributions;
9 rather, they are contributing to the degradation
10 of ecosystems.

11 So while that information was not
12 included in the report, the conclusions are still
13 the same in North America.

14 MR. BEDFORD: You do understand, I'm
15 sure, as a professional, that the methodology used
16 by my client and the topics in this particular
17 environmental impact statement were guided by,
18 first, a scoping document issued by the Province
19 of Manitoba; secondly, the National Energy Board
20 Electricity Filing Manual; and thirdly, feedback
21 from engagement with the public and with a number
22 of indigenous communities?

23 MS. MCHUGH: I do.

24 MR. BEDFORD: And I expect -- but you
25 will tell me -- that you appreciate that if my

1 client had ignored all of those guidelines, and
2 had chosen to foresee and follow the
3 recommendations of the expert panel released on
4 April 5 of 2017, the likely consequence would have
5 been advice from this Commission to a Minister
6 that my client had presented an environmental
7 assessment that was not responsive to government
8 direction, although perhaps well-meaning and
9 visionary?

10 MS. MCHUGH: Could you clarify the
11 question?

12 MR. BEDFORD: Be delighted.

13 You appreciate, but I'm sure you will
14 tell me, that if my client had ignored all of the
15 guidance that it was given from both the
16 Provincial and Federal Government, and from its
17 public and First Nation and Metis engagement
18 processes, and presented an environmental
19 assessment on the lines of the methodology that
20 you advocate here, that the likely outcome of
21 doing that would have been this Commission
22 reporting to a Minister that my client had
23 presented an assessment that was not responsive to
24 government direction, although it may well have
25 been well-meaning and visionary?

1 MS. MCHUGH: Sorry, I can't speculate
2 on that.

3 MR. BEDFORD: You write -- at least,
4 in the version of the paper that I read last
5 week -- that you were told that Manitoba Hydro is
6 the largest employer in the Province of Manitoba.

7 I have to tell you that Manitoba Hydro
8 is not the largest employer in the province. Who
9 told you that it was?

10 MS. MCHUGH: I'm sorry, I can't recall
11 who told me that, but perhaps I miswrote that they
12 were the largest employer. But I'm certain that
13 they are one of the largest industrial employers
14 in the province.

15 MR. BEDFORD: The version of your
16 paper that I read last week, dated May 23, 2017,
17 you've already forgotten the source of that
18 information?

19 MS. MCHUGH: I don't think that's
20 relevant to the point that I was trying to make.
21 The point I was trying to make was that Manitoba
22 Hydro has a large footprint, a large amount of
23 infrastructure, a large amount of employees, a
24 large amount of resources, and therefore should
25 contribute one of the largest amount of benefits

1 in the province.

2 So I don't think that we should be
3 hung up on where Manitoba Hydro ranks in the
4 province; rather, we should recognize that they do
5 have a large influence on infrastructure and
6 development of -- and land-use changes within the
7 province, and so therefore they should be
8 contributing the largest -- a large amount of
9 benefits.

10 So I don't think that we should get
11 hung up on where Manitoba Hydro ranks. The point
12 is that they should be contributing a large amount
13 of benefits.

14 MR. BEDFORD: The point, perhaps, that
15 I think you will agree with me, is that we should
16 strive, as professionals, to be accurate in our
17 facts and in our work.

18 MS. MCHUGH: I agree with you there,
19 and I think I'm accurate in the main point.

20 MR. BEDFORD: In the version of the
21 paper that was circulated last week, on page 17,
22 you write, and I quote:

23 "Further, the assumption for the
24 formula for residual and cumulative
25 effects, mitigating, offsetting, no

1 net loss, is not scientifically
2 acceptable or agreed upon. Mitigation
3 is not scientifically or traditionally
4 accepted as being effective at
5 reducing environmental impacts, so it
6 is unclear how meaningful the MMTP EIS
7 conclusions of no significant effects
8 really are."

9 Ms. McHugh, if it is really true that
10 mitigation is not scientifically or traditionally
11 accepted as being effective at rendering
12 environmental impacts, this Commission ought not
13 to recommend that there be any mitigation, ought
14 it?

15 MS. MCHUGH: No, I would not agree
16 with that. I think that scientifically it is
17 established that mitigation is not necessarily
18 always effective, and the conclusions of no
19 significant adverse effects are generally made on
20 the assumption that mitigation is effective most
21 or all of the time. And it is clear that
22 mitigation is not effective most or all of the
23 time, and therefore, the Commission should make
24 recommendations on improving the effectiveness of
25 mitigation.

1 MR. BEDFORD: On page 17 of last
2 week's version of your paper, you cite in support
3 of your statement that mitigation is not
4 scientifically or traditionally accepted, an
5 article by Ms Nicole Hayes and Mr. Angus
6 Morrison-Saunders from Western Australia. Do you
7 recall that?

8 MS. MCHUGH: I do.

9 MR. BEDFORD: The article in question
10 is specifically about environmental offsets, is it
11 not?

12 MS. MCHUGH: Environmental offsets are
13 recognized as a mitigation technique.

14 MR. BEDFORD: Indeed, environmental
15 offsets are just one type of mitigation, are they
16 not?

17 MS. MCHUGH: Correct.

18 MR. BEDFORD: And Ms. Hayes and
19 Mr. Morrison-Saunders define them as actions
20 outside of a development that compensate or
21 counterbalance an adverse effect, don't they?

22 MS. MCHUGH: I don't have their paper
23 in front of me, so I can't specifically say, but
24 that sounds correct, yes.

25 MR. BEDFORD: I have counted

1 361 proposed mitigation activities in the
2 environmental impact statement that's before this
3 Commission. I expect you have not examined all
4 361 proposed mitigation measures. Correct?

5 MS. MCHUGH: That is correct. I took
6 a broad approach to this review. I did not
7 specifically look at details of mitigation efforts
8 for every single site location.

9 MR. BEDFORD: But you did, at least at
10 one time, read the Hayes and Morrison-Saunders
11 article that you cite?

12 MS. MCHUGH: I did.

13 MR. BEDFORD: Ms. Hayes and
14 Mr. Morrison-Saunders write that there is a
15 mitigation sequence that's recognized
16 internationally. Do you recall that?

17 MS. MCHUGH: Please refresh my memory.

18 MR. BEDFORD: First, you avoid.

19 Does that sound familiar?

20 MS. MCHUGH: Yes.

21 MR. BEDFORD: Second, you minimize.

22 Does that sound familiar?

23 MS. MCHUGH: Yes.

24 MR. BEDFORD: Third, you rectify.

25 Do you recall that?

1 MS. MCHUGH: Um-hum.

2 MR. BEDFORD: Fourth, you reduce.

3 Do you recall that?

4 MS. MCHUGH: Yes.

5 MR. BEDFORD: And finally, and

6 fifthly, you utilize offsets as a last resort.

7 Do you remember?

8 MS. MCHUGH: Yes.

9 MR. BEDFORD: So an example of "avoid"
10 would be not placing lattice steel towers where
11 species of conservation concern have been located.
12 Correct?

13 MS. MCHUGH: Correct.

14 MR. BEDFORD: And an example of
15 "minimize" would be choosing not to use chemicals
16 to manage vegetative growth in sensitive sites
17 that contain plants of importance to indigenous
18 people. Correct?

19 MS. MCHUGH: Correct.

20 MR. BEDFORD: An example of "rectify"
21 would be rehabilitating shorelines immediately
22 after they have been disturbed. Correct?

23 MS. MCHUGH: Can you use that language
24 one more time? I think you said --

25 MR. BEDFORD: An example of "rectify",

1 some sources might use the word "restore," but in
2 Western Australia -- and internationally, I
3 gather -- they use the word "rectify".

4 An example of "rectify" would be
5 rehabilitating shorelines immediately after they
6 had been disturbed?

7 MS. MCHUGH: Well, that is an example
8 of rectification, as you put it. However, it is
9 not clear that the ecosystem services and the
10 benefits that humans and non-humans alike receive
11 from that particular shoreline would be
12 rehabilitated immediately, right away, or in the
13 long term.

14 MR. BEDFORD: An example of "reduce"
15 would be using reduced timing windows for
16 construction and maintenance operations so as not
17 to disturb wildlife during calving, nesting, and
18 hibernation; correct?

19 MS. MCHUGH: That is one example.

20 MR. BEDFORD: And an example of an
21 offset would be creating an artificial structure
22 for an unoccupied nest that had to be removed.
23 Correct?

24 MS. MCHUGH: Not necessarily,
25 because -- just because you create a nest

1 structure doesn't mean that it will be utilized,
2 or is effective in replacing the services that
3 were lost.

4 MR. BEDFORD: And indeed, the concern
5 of Ms. Hayes and Ms. Morrison-Saunders that you
6 relied upon is that there are a number of concerns
7 about the effectiveness of offsets. Correct?

8 MS. MCHUGH: Yes, and that is just one
9 paper out of many that assess the effectiveness of
10 mitigation -- or in that particular case, offsets.

11 MR. BEDFORD: But it is not, I suggest
12 to you, at all accurate to say that mitigation is
13 not scientifically or traditionally accepted as
14 being effective on the basis of the paper written
15 by Ms. Hayes and Mr. Morrison-Saunders.

16 MS. MCHUGH: I disagree with that.

17 MR. BEDFORD: It is written in
18 chapter 2 of the environmental impact statement
19 that Manitoba Hydro -- and I quote -- "developed a
20 process that included involving the public
21 throughout transmission line routing and
22 environmental assessment stages, providing clear,
23 timely, and relevant information and responses,
24 delivering a public engagement process that is
25 adaptive and inclusive, informing the public as to

1 how their feedback influenced the project,
2 documenting and reporting on feedback received."

3 Does that not sound very much to you
4 like the four principles that you cite for
5 assessment processes, namely transparent,
6 informed, inclusive, and meaningful?

7 MS. MCHUGH: That is one part of the
8 process, yes.

9 MR. BEDFORD: Ms. McHugh, with the
10 greatest of respect for the work that you do and
11 the passion that you evidently bring to it, with
12 the benefit now of a wee bit of hindsight, are you
13 able to acknowledge that it was too aggressive to
14 condemn as not accurate or meaningful the work of
15 people who, like you, also have years of
16 experience and an equal passion for the work that
17 they do?

18 MS. MCHUGH: No, I do not think that
19 this was too aggressive. As a professional
20 biologist who engages in the documentation of the
21 decline of the natural systems all around us, I am
22 extremely concerned. And it is imperative that
23 professionals like myself step out of the
24 day-to-day, everyday business as usual and start
25 to ask ourselves, why is this happening? Are we a

1 part of this process? Is this environmental
2 assessment process effective at maintaining the
3 life-sustaining services that we require?

4 And given the state of the global
5 ecological decline, I would have to disagree with
6 you.

7 MR. BEDFORD: Thank you.

8 I have no further questions.

9 THE CHAIRMAN: Thank you for those
10 questions, Mr. Bedford. And thank you,
11 Ms. McHugh, for your answers.

12 Are there questions from the panel?

13 All right, no questions.

14 Sorry, there are questions -- well,
15 there are no more questions from the panel, that's
16 true. There are questions from CAC, so -- yes.

17 MS. WHELAN ENNS: Mr. Chair, a quick
18 comment, if I may before we move to our table at
19 the back.

20 I wanted to make sure that you and the
21 panel are aware that the addition of a cover page
22 and one graphic to Alyson McHugh's report, in the
23 version that was printed for today, was in fact
24 discussed with the secretary of the CEC before we
25 took those steps.

1 THE CHAIRMAN: Okay. Thank you for
2 that.

3 MS. WHELAN ENNS: Thank you.

4 THE CHAIRMAN: Okay. Next will be
5 question or questions from Ms. Pastora Sala.

6 MS. PASTORA SALA: Thank you,
7 Mr. Chair and members of the panel. CAC Manitoba
8 appreciates the opportunity to question Ms. Alyson
9 McHugh on one discrete but important issue, and
10 that is the issue of ecosystem services.

11 Good afternoon, Ms. McHugh.

12 MS. MCHUGH: Good afternoon.

13 MS. PASTORA SALA: My name is Joelle
14 Pastora Sala, and my role in this hearing is as
15 legal counsel to the Consumers' Association of
16 Canada, Manitoba branch. Thank you for your
17 presentation this morning.

18 As you just heard, my questions for
19 you this afternoon -- this afternoon, I guess, not
20 morning -- relates entirely to the concept of
21 ecosystem services, and I anticipate approximately
22 20 minutes of questions for you.

23 So Ms. McHugh, this is the second time
24 you've presented before the CEC. Correct?

25 MS. MCHUGH: That is correct.

1 MS. PASTORA SALA: And the last time
2 you appeared before the Clean Environment
3 Commission was in 2013, within the context of the
4 Keeyask hearing?

5 MS. MCHUGH: That is correct.

6 MS. PASTORA SALA: And just some
7 questions with respect to your qualifications,
8 Ms. McHugh. Am I correct in stating that your
9 bachelor's and master's degrees are in science?

10 MS. MCHUGH: That's correct.

11 MS. PASTORA SALA: Your bachelor's in
12 science focuses on fisheries and wildlife
13 management?

14 MS. MCHUGH: Yes.

15 MS. PASTORA SALA: And your master's
16 was entitled "Missing Baseline Information for
17 B.C. Forests: Can timber crews' data fill some
18 gaps?"

19 MS. MCHUGH: Yes, my master's degree
20 was on sustainable forest management.

21 MS. PASTORA SALA: And I stated the
22 correct title?

23 MS. MCHUGH: Of the thesis, yes.

24 MS. PASTORA SALA: And recognizing
25 that there are a variety of methods in achieving

1 credibility and recognition as an expert, it would
2 be correct, Ms. McHugh, that you do not have any
3 peer-reviewed publications?

4 MS. MCHUGH: That is correct. As a
5 consultant, there is no time for publishing in a
6 peer-reviewed scientific journal.

7 MS. PASTORA SALA: Moving now to your
8 report prepared for the MMTP. On page 2 of your
9 report, and I believe at page 4 of your
10 PowerPoint -- and when I refer to "your report",
11 I'm referring to the version of your report which
12 was circulated last week; I'm not sure if your
13 page number changed.

14 MS. MCHUGH: Okay.

15 MS. PASTORA SALA: So page 2, you have
16 framed the overarching question for the
17 examination of the MMTP as being: Did the MMTP
18 EIS reinforce healthy relationships between human
19 beings and the environment? Correct?

20 MS. MCHUGH: Correct.

21 MS. PASTORA SALA: In answering this
22 question in your report, one of the concepts you
23 discuss is ecosystem services.

24 MS. MCHUGH: Correct.

25 MS. PASTORA SALA: And you also relied

1 on this concept in both your written and oral
2 submissions for the Keeyask generation project.
3 Correct?

4 MS. PASTORA SALA: Correct.

5 MS. PASTORA SALA: Given you relied on
6 this concept for your submission for both the
7 Keeyask hearing and the current MMTP hearing,
8 would it be fair to assume that you are generally
9 familiar with the themes presented in the
10 literature on ecosystem services?

11 MS. MCHUGH: Yes.

12 MS. PASTORA SALA: I would like to
13 take you to page 11 of your report, where you
14 indicate that ecosystems can be defined as a
15 dynamic complex of plant, animal, and
16 microorganism communities with their non-living
17 environment interacting as a functional unit.

18 Do you see that?

19 MS. MCHUGH: Yes.

20 MS. PASTORA SALA: And you define
21 ecosystem services in your report as -- and in
22 your presentation this afternoon -- as the market
23 and non-market benefits to individuals,
24 households, communities, and economies received
25 from ecosystems. Correct?

1 MS. MCHUGH: Yes.

2 MS. PASTORA SALA: You would agree,
3 Ms. McHugh, that the literature makes the
4 distinction between ecosystem services and an
5 ecosystem approach, sometimes called a systems
6 approach?

7 MS. MCHUGH: Yes.

8 MS. PASTORA SALA: And broadly
9 speaking, you would agree that an ecosystem --
10 sorry, ecosystems approach -- can be defined as
11 the need to recognize that all things and beings
12 are connected?

13 MS. MCHUGH: Correct.

14 MS. PASTORA SALA: So in other words,
15 when one element or being or VC is impacted, other
16 elements or beings are also impacted?

17 MS. MCHUGH: Correct.

18 MS. PASTORA SALA: It is fair to say
19 that one of the criticisms that you offer of the
20 MMTP is that it does not use ecosystem services
21 approach?

22 I refer you to page 11 of your report,
23 where you indicate:

24 "MMTP and other Manitoba Hydro project
25 assessments and monitoring frameworks need to

1 shift away from the conventional environmental
2 assessment and decision-making frameworks and
3 begin to focus on ecosystem services."

4 I assumed by this statement one of
5 your criticisms of the MMTP is that it does not do
6 that. Correct?

7 MS. MCHUGH: It does not necessarily
8 do that in the correct context all of the time.

9 MS. PASTORA SALA: Okay.

10 MS. MCHUGH: But there are some
11 instances where, yes, ecosystem services were
12 included.

13 MS. PASTORA SALA: The ecosystems
14 approach -- ecosystem services approach was not
15 explicitly identified in the EIS for the MMTP.
16 Correct?

17 MS. MCHUGH: Correct.

18 MS. PASTORA SALA: And one of your
19 criticisms, I imagine, may be that the MMTP EIS
20 does not explicitly use the ecosystem services
21 approach. Correct?

22 MS. MCHUGH: Correct.

23 MS. PASTORA SALA: Ms. McHugh, would
24 it be accurate to say that since the publication
25 of the Millennium Ecosystems Assessment in 2005,

1 which you refer to in your report, interest on
2 ecosystem services assessment has grown in
3 environmental science and policy?

4 MS. MCHUGH: That is correct.

5 MS. PASTORA SALA: And in your report,
6 you reference the four categories which were
7 identified in the Millennium Ecosystem Assessment
8 from 2015?

9 MS. MCHUGH: Yes.

10 MS. PASTORA SALA: And these four
11 categories are provisioning services, regulating
12 services, supporting services, and cultural
13 services. Correct?

14 MS. MCHUGH: Correct.

15 MS. PASTORA SALA: And cultural
16 services are defined as -- and I'm quoting from
17 page 12 of the report now -- "non-material
18 benefits obtained from ecosystems." Correct?

19 MS. MCHUGH: That is one way to define
20 them, yes.

21 MS. PASTORA SALA: And it is the way
22 that is used in your report, at page 12. Correct?

23 MS. MCHUGH: Yes.

24 MS. PASTORA SALA: And you indicated
25 in your report, at page 15, that you have worked

1 with indigenous nations. Correct?

2 MS. MCHUGH: Correct.

3 MS. PASTORA SALA: Would it be fair to
4 assume that part of this work has been speaking
5 with and learning from elders and knowledge
6 holders?

7 MS. MCHUGH: Yes.

8 MS. PASTORA SALA: And you were aware,
9 based on your conversations with elders and
10 knowledge holders, that the connection to the
11 spiritual and sacred is at the core of indigenous
12 world views and legal orders?

13 MS. MCHUGH: Yes.

14 MS. PASTORA SALA: And within the four
15 categories as set out in page 12, there is no
16 express reference to spiritual or sacred world
17 views or laws. Correct?

18 MS. MCHUGH: Well, those would be
19 captured under the "cultural" category.

20 MS. PASTORA SALA: So spiritual and
21 sacred laws would be categorized under "cultural
22 practices"? Is that what you've indicated?

23 MS. MCHUGH: I have not indicated
24 anything in this report specifically about
25 spiritual and cultural laws.

1 MS. PASTORA SALA: So spiritual and
2 sacred world views would not be explicitly
3 captured within the four categories as set out in
4 page 12 of your report. Correct?

5 MS. MCHUGH: So some of the cultural
6 services -- can I give you a few examples of this
7 category?

8 MS. PASTORA SALA: Yes, keeping in
9 mind that my question is whether spiritual or
10 sacred world views or laws are expressly captured
11 in the four categories.

12 MS. MCHUGH: I think that the world
13 view is captured. The world view of the
14 interconnectedness, the holistic world view, is
15 captured in the Millennium Ecosystems Assessment,
16 because the four categories combine to interact
17 with each other and with human health and
18 well-being. So the --

19 MS. PASTORA SALA: Sorry, go ahead.

20 MS. MCHUGH: So the approach, the
21 ecosystem services approach, as defined by the
22 MEA, is a more holistic framework that includes
23 spiritual and cultural values.

24 MS. PASTORA SALA: We will come back
25 to the approach. Just in terms of four

1 categories, one more question: There is no
2 express reference to Mother Earth. Correct?

3 MS. MCHUGH: In the -- in this figure,
4 you are correct, no. And in the report, there is
5 no express language specifically to Mother Earth.

6 MS. PASTORA SALA: You speak in your
7 evidence of the value and benefits that come from
8 particular forest areas, like water and air
9 purification. Agreed?

10 MS. MCHUGH: Yes.

11 MS. PASTORA SALA: And you make the
12 point that the loss of these areas ultimately
13 costs society money and should be valued.
14 Correct?

15 MS. MCHUGH: Yes.

16 MS. PASTORA SALA: And ultimately you
17 are seeking to have these accounted for in
18 day-to-day decision -- day-to-day business
19 decisions. Correct?

20 MS. MCHUGH: Yes.

21 MS. PASTORA SALA: And when you speak
22 of attaching value to these services, Ms. McHugh,
23 you mean monetary value. Correct?

24 MS. MCHUGH: No. Value can be both
25 monetary and non-monetary.

1 MS. PASTORA SALA: I'm going to read
2 you a passage from the transcript from your
3 Keeyask testimony, and I'm just going to ask you
4 to acknowledge that these are in fact your words.

5 "Basically, ecosystem services are not
6 valued in today's economic paradigm in
7 decision-making frameworks. However,
8 the values are real. We need fresh
9 water and food to live. So I'm going
10 to talk a little bit about the
11 valuation of ecosystem goods and
12 services. As mentioned, they are not
13 currently integrated in today's
14 economic paradigm. Many of the
15 services are not captured in market
16 economy. They are rarely accounted
17 for in day-to-day decisions, and this
18 includes business decisions, personal
19 decisions, national accounting. So,
20 essentially, this implies a value of
21 zero, or nothing, to these benefits
22 that we depend on."

23 Would you acknowledge that those are
24 your words, Ms. McHugh?

25 MS. MCHUGH: Yes.

1 MS. PASTORA SALA: So in essence, you
2 are speaking to translate the value of water,
3 soil, air purification, cultural connection, into
4 a monetary value. Correct?

5 MS. MCHUGH: No, I would not
6 explicitly agree with that. As I said before,
7 there are monetary and non-monetary ways to
8 conduct ecosystem valuation. There are
9 quantitative and qualitative ways to conduct
10 ecosystem valuation.

11 One of the projects that I'm engaged
12 in uses a structured decision-making process,
13 where we give a qualitative non-monetary valuation
14 to specific services when examining alternative
15 scenarios for flow regimes below dams, for
16 example.

17 So monetary valuation is one way to
18 look at the inclusion of valuation, a valuation
19 for ecosystem services. And it is often used to
20 describe ecosystem services, because it's an easy
21 way for the world to sort of grasp what it means;
22 right? Everybody knows what a dollar means. But
23 when you are conducting non-monetary valuation of
24 ecosystem services, or the benefits that we
25 receive from nature, it is often more difficult to

1 quantify those.

2 So again, there's both monetary and
3 non-monetary valuation approaches. In fact, there
4 is a number of different approaches for valuation,
5 and what is appropriate in one specific area may
6 or may not be appropriate in another area.

7 MS. PASTORA SALA: You would agree
8 that the services would be then categorized within
9 the four categories which we've already spoken
10 about. Correct?

11 MS. MCHUGH: That is one way to
12 categorize them, yes.

13 MS. PASTORA SALA: And that's the way
14 you have identified in your report. Correct?

15 MS. MCHUGH: Yes.

16 MS. PASTORA SALA: You would agree
17 that one of the common criticisms of ecosystem
18 services identified in the literature is that it
19 comprises economic framing. Correct?

20 MS. MCHUGH: In some circumstances,
21 yes. But it doesn't always have to be an economic
22 valuation.

23 MS. PASTORA SALA: But you would agree
24 that that is one of the common criticisms in the
25 literature. Correct?

1 MS. MCHUGH: Yes.

2 MS. PASTORA SALA: In other words,
3 according to the literature, ecosystem services
4 often involves an economic valuation?

5 MS. MCHUGH: Sometimes yes, sometimes
6 no. As I said, I'm engaged in non-monetary
7 valuation.

8 MS. PASTORA SALA: And would you
9 agree, though, that that is a theme identified in
10 the literature?

11 MS. MCHUGH: It is one way to utilize
12 the approach.

13 MS. PASTORA SALA: And monetary
14 valuation, according to the literature, is
15 actually the most common type of economic
16 valuation?

17 MS. MCHUGH: I can't speculate on
18 that. It is a common type; I don't know if it is
19 the most common type. It is a way -- monetary
20 valuation is a way that some groups choose to
21 utilize the ecosystem services approach.

22 But again, it is not the only way to
23 utilize approach. There's lots of non-monetary
24 valuation methods out there as well.

25 MS. PASTORA SALA: Can I assume that

1 you are familiar with the articles that you have
2 referenced in your report?

3 MS. MCHUGH: Yes.

4 MS. PASTORA SALA: So if I say to you,
5 and cite to you directly from the Costanza & Folke
6 report, you would be familiar with that?

7 MS. MCHUGH: Yes.

8 MS. PASTORA SALA: So this report
9 indicates, at page 51:

10 "Economic analysis is about making
11 choices among alternative uses of
12 scarce resources, and it is in this
13 context that valuation becomes
14 relevant."

15 You would be familiar with that?

16 MS. MCHUGH: Yes, and that is one
17 context. That report was specifically, I think,
18 referring to the valuation of natural capital.
19 And there is a reason that I stayed away from the
20 topic of natural capital and monetary valuation,
21 and that is because it is absolutely not
22 appropriate, in some cases, to apply a monetary
23 value to an ecosystem service.

24 MS. PASTORA SALA: And at page 50 of
25 that same report, it states:

1 "We can not avoid the valuation issue,
2 because as long as we are forced to
3 make choices, we are doing valuation.
4 But we need to be as comprehensive as
5 possible in our valuations and choices
6 and ecosystems and sustainability,
7 recognizing the relationship between
8 goals and values, valuing ecosystems
9 with efficiency fairness, and
10 sustainability."

11 You would be familiar with that?

12 MS. MCHUGH: I'm not familiar with
13 that specific sentence, but I'm familiar with that
14 paper. It was one of the flagship papers for this
15 concept.

16 MS. PASTORA SALA: Which you've cited
17 in your report?

18 MS. MCHUGH: Yes.

19 I don't memorize all the sentences in
20 the reports.

21 MS. PASTORA SALA: But it would be
22 familiar to you?

23 MS. MCHUGH: Yes.

24 MS. PASTORA SALA: It is accurate to
25 say that there is no commonly accepted approach

1 within the ecosystem services approach to dealing
2 with uncertainties relating to economic valuation?

3 I believe this was actually a question
4 asked by one of the panelists during Keeyask
5 hearing.

6 MS. MCHUGH: So you are specifically
7 talking about economic valuation?

8 MS. PASTORA SALA: Correct.

9 MS. MCHUGH: I want to make the point
10 that the valuation of ecosystem services does not
11 necessarily need to be economic. There is the --
12 as you've pointed out, the concept has come a long
13 way since 2005, and there's many tools out there,
14 dozens of tools out there, that facilitate the
15 non-monetary valuation of ecosystem services, as
16 well as the monetary valuation.

17 MS. PASTORA SALA: Sorry, Ms. McHugh,
18 would you like me to repeat my question?

19 MS. MCHUGH: Yes, please.

20 MS. PASTORA SALA: Is it accurate to
21 say that there is no commonly accepted approach
22 within the ecosystem services to dealing with
23 uncertainties relating to economic valuation?

24 MS. MCHUGH: The specific topic of
25 economic valuation, I would say, I can't speculate

1 on that, because economic valuation is not within
2 my area of expertise.

3 MS. PASTORA SALA: But ecosystem
4 services would be. Correct?

5 MS. MCHUGH: That's correct, but
6 there's lots of tools out there for non-monetary
7 valuation of ecosystem services. So I am not an
8 economic valuation expert. So that's ...

9 MS. PASTORA SALA: Economic monetary
10 evaluation is part of ecosystem services.
11 Correct?

12 MS. MCHUGH: It is one way to conduct
13 valuation. It is not necessarily a part of
14 ecosystem -- the ecosystem services concept. It
15 is one tool in the toolbox to understand how the
16 benefits contribute to our health and well-being.

17 MS. PASTORA SALA: In your report and
18 your oral presentation today, you made reference
19 to a holistic world view. Correct?

20 MS. MCHUGH: Correct.

21 MS. PASTORA SALA: And you've also
22 made reference to the First Nation world view,
23 First Nations with whom you work. Agreed?

24 MS. MCHUGH: Yes.

25 MS. PASTORA SALA: For example, at

1 page 15, you indicate:

2 "The indigenous communities I work
3 with, and Manitoba First Nations who
4 participate in CEC hearings, make
5 numerous reference that connect their
6 health to the natural world and
7 ecosystems they rely on."

8 MS. MCHUGH: Correct.

9 MS. PASTORA SALA: And in your
10 presentation from Keeyask, you quoted from an
11 article in the Climate Change journal, at
12 page 4474 of the transcript, which related to the
13 sacredness of water. Would this be familiar to
14 you? Do you recall?

15 MS. MCHUGH: I recall the sacredness
16 of water, as it is a familiar, common topic. But
17 I don't recall the exact report that you are
18 referring to. That was three and a half years
19 ago.

20 MS. PASTORA SALA: Would you like me
21 to just read the quote?

22 MS. MCHUGH: Sure.

23 MS. PASTORA SALA: So you indicated
24 during your Keeyask presentation that you read
25 from an article in the Climate Change journal

1 which stated:

2 "Water is sacred. This is tradition.
3 In contrast to the non-tribal
4 utilitarian view of water, native
5 Americans revere water, and water is
6 life. It is integral to many native
7 American practices, such as
8 purification and blessing rituals, and
9 it is used to acknowledge all
10 relations, and to establish
11 connections to Mother Earth and Father
12 Sky."

13 Do you recall?

14 MS. MCHUGH: Yes.

15 MS. PASTORA SALA: You received a copy
16 this morning of the Ogichi Tibakonigaywin, or The
17 Great Binding Law. Correct?

18 MS. MCHUGH: Correct.

19 MS. PASTORA SALA: And for the
20 purposes of the panel, you should all still have a
21 copy of The Great Binding Law.

22 Have you had a chance to review the
23 statement?

24 MS. MCHUGH: I have.

25 MS. PASTORA SALA: You are aware that

1 it was prepared in ceremony by elders and
2 knowledge holders who were working with the
3 Assembly of Manitoba Chiefs within the context of
4 a federal environmental assessment hearing in
5 2015?

6 MS. MCHUGH: No. Thank you for that
7 context.

8 MS. PASTORA SALA: So in preparing
9 your evidence, you did not have any reference to
10 The Great Binding Law?

11 MS. MCHUGH: No. In preparing my
12 evidence, I specifically reviewed the
13 environmental impact statement and associated
14 technical data reports.

15 MS. PASTORA SALA: As you've had a
16 chance to review The Great Binding Law, I would
17 just like to ask you a few questions as it
18 specifically relates to ecosystem services.

19 The Great Binding Law states that it
20 is through the original instructions from Kizhay
21 Manitou that indigenous people were given the
22 responsibility to love and take care of Mother
23 Earth.

24 Is this consistent with what you have
25 heard from elders and knowledge holders?

1 MS. MCHUGH: Yes.

2 MS. PASTORA SALA: It says that Mother
3 Earth has a spirit.

4 "Mother Earth is alive and she is the
5 Original Mother of life. She has a
6 living spirit and she is sacred."

7 Is this consistent with what you've
8 heard from elders and knowledge holders?

9 MS. MCHUGH: Yes.

10 MS. PASTORA SALA: It also says that
11 Mother Earth holds teachings, which are described
12 in The Great Binding Law as natural laws. Is this
13 consistent with what you've heard?

14 MS. MCHUGH: Yes.

15 MS. PASTORA SALA: The statement also
16 tells us that we are all brothers and sisters, and
17 we have responsibility to take care of and make
18 alliance with Mother Earth. Is this consistent
19 with what you have heard?

20 MS. MCHUGH: Yes.

21 MS. PASTORA SALA: The elders and
22 knowledge holders remind us in the statement that
23 our actions have consequences, and that Mother
24 Earth is out of bounds. Is this consistent with
25 what you have heard?

1 MS. MCHUGH: Yes.

2 MS. PASTORA SALA: And these
3 statements, according to the four categories that
4 you have presented earlier today, would fit under
5 cultural practices. Correct?

6 MS. MCHUGH: No, I'm not sure that
7 that would be a correct interpretation. Can you
8 clarify that a little bit more?

9 MS. PASTORA SALA: The Millennium
10 Ecosystem Assessment report, which is from 2005,
11 which you reference in your report and you
12 referenced in your presentation earlier today,
13 makes references to four categories, which we
14 described earlier as being provisioning services,
15 regulating services, supporting services, and
16 cultural services. Correct?

17 MS. MCHUGH: Correct.

18 MS. PASTORA SALA: And you indicated,
19 when I spoke -- when I asked you earlier about
20 indigenous world views and laws, that they would
21 fit under the cultural aspects. Correct?

22 MS. MCHUGH: I think that they would
23 fit under the concept as a whole.

24 MS. PASTORA SALA: Okay. On page 5 of
25 your report, you say that you used Dr. Gibson's

1 review and expertise in conducting your own review
2 of the MMTP, and you cited Dr. Gibson in your
3 presentation today on a few of your slides.

4 Correct?

5 MS. MCHUGH: Correct.

6 MS. PASTORA SALA: And in your
7 references, you cite two papers by Dr. Gibson.

8 Correct?

9 MS. MCHUGH: Correct.

10 MS. PASTORA SALA: One being a 2006
11 report which Dr. Gibson prepared as a review of
12 the Mackenzie Gas project?

13 MS. MCHUGH: That is one of the
14 reports.

15 MR. BEDFORD: And the other one is a
16 report by Dr. Gibson which analyzes the CEAA
17 expert panel report, Building Common Ground.

18 Correct?

19 MS. MCHUGH: That is correct.

20 MS. PASTORA SALA: And the specific
21 article that you cite from 2017 is entitled
22 "Sustainability in Canada's Assessment Process
23 Review." Correct?

24 MS. MCHUGH: Yes.

25 MS. PASTORA SALA: And would I be

1 correct in assuming that while this report is
2 cited as "Gibson, S", it should have been cited as
3 "Gibson, R"?

4 MS. MCHUGH: Yes.

5 MS. PASTORA SALA: Would it be correct
6 to say that this report hasn't been -- that this
7 is a report that was circulated by Dr. Gibson
8 among persons concerned with EA reform?

9 MS. MCHUGH: I'm not sure exactly who
10 the report was circulated to. It was a report
11 that -- it was an expert review -- I think it is
12 on -- publicly available on his website. But it
13 was a report -- it was an expert review, just
14 recently out, right, because the Building Common
15 Ground came out in April of 2017. So this report
16 just recently became available. I'm not sure who
17 he circulated it to.

18 MS. PASTORA SALA: This report is not
19 available or published by Dr. Gibson yet?

20 Let me rephrase that: It has not yet
21 been made published by Dr. Gibson?

22 MS. MCHUGH: I'm not sure. He sent me
23 a Word copy of it. It is an expert analysis. It
24 may in fact be a draft.

25 MS. PASTORA SALA: It is not yet

1 available online?

2 MS. MCHUGH: I'm not sure.

3 MS. PASTORA SALA: You would agree
4 that this draft paper by Dr. Gibson does not
5 specifically mention ecosystem services?

6 MS. MCHUGH: I'm not exactly sure that
7 that specific paper mentions ecosystem services or
8 not. But I actually know, in my Keeyask
9 presentation, I utilized Dr. Gibson's material,
10 and there was some explicit recognition of the
11 concept, or direct parallels with the concept.

12 So I guess the point I'm using, his
13 reports were -- was the -- the main findings.

14 MS. PASTORA SALA: I will come back to
15 that.

16 You would agree that this paper does
17 not explicitly advocate for the use of ecosystem
18 services in environmental assessments?

19 MS. MCHUGH: That's not what the paper
20 was about. So yes, you are correct.

21 MS. PASTORA SALA: Is it correct to
22 say that the other report you cite by Dr. Gibson,
23 which is the 2006 review of the Mackenzie Gas
24 project, also does not explicitly mention
25 ecosystem services?

1 MS. MCHUGH: I'm not exactly sure
2 about that, but his reporting is about
3 sustainability and next-generation environmental
4 assessment, so he may not have explicitly used the
5 term "ecosystem services".

6 MS. PASTORA SALA: Dr. Gibson does not
7 explicitly advocate for the use of ecosystem
8 services in environmental assessment in this
9 report, or in the Keeyask report that he prepared.
10 Correct?

11 MS. MCHUGH: He is not advocating for
12 ecosystem services explicitly, as a concept, I
13 don't think.

14 I'm not sure, actually. I should
15 clarify that. I don't know -- that's outside of
16 my expertise, what Dr. Gibson is advocating for.
17 These reports were specifically about
18 sustainability principles. The principles are
19 relevant to the concept of ecosystem services.

20 MS. PASTORA SALA: To be clear, while
21 Dr. Gibson may refer to ecosystems approach, which
22 earlier you identified as the concept -- or you
23 agreed with my definition as the concept to
24 recognize that all things are connected, this is
25 different from ecosystems services approach.

1 Correct?

2 MS. MCHUGH: Yeah, I think that the
3 two concepts are different, as you've defined
4 them.

5 MS. PASTORA SALA: Do you recall,
6 Ms. McHugh, that during your cross-examination for
7 the Keeyask hearing, the lawyer for Manitoba Hydro
8 indicated that there has been no -- that during
9 your questioning, the lawyer indicated that there
10 has been no environmental impact assessment done
11 in Canada which include the ecosystem service
12 valuation process. Do you recall that?

13 MS. MCHUGH: I do recall that. But I
14 do want to go back to -- I do have a copy of my
15 slides from Keeyask. And actually there was
16 explicit mentioning in Dr. Bob Gibson's -- Robert
17 Gibson's reporting that I used then, on the topic
18 of improving the ecological basis of our
19 livelihoods and wealth.

20 The goal was build human ecological
21 relations to establish and maintain the long-term
22 integrity of socio-biophysical systems and protect
23 the irreversible life support functions upon which
24 humans, as well as ecological well-being, depend.

25 And the explicit theme in this report

1 from Dr. Gibson was the maintenance of ecological
2 services and regulations.

3 MS. PASTORA SALA: And that additional
4 comment that you indicated, about ecosystem
5 services, was not explicitly indicated in
6 Dr. Gibson's report that he prepared for CAC
7 Manitoba. Correct?

8 MS. MCHUGH: You know, I'm not clear
9 on that. These two references that I used in this
10 reporting may or may not have explicitly said the
11 term "ecosystem services". But the concepts are
12 relevant, and he did explicitly use that term as a
13 main theme in a past CEC contribution.

14 MS. PASTORA SALA: So just to be
15 clear, right now you are referring to your
16 PowerPoint in the Keeyask hearing, not the
17 PowerPoint presented by Dr. Gibson during the
18 Keeyask hearing. Correct?

19 MS. MCHUGH: Correct.

20 MS. PASTORA SALA: Going back --

21 MS. MCHUGH: And I've quoted him.

22 MS. PASTORA SALA: Going back to my
23 question relating to your testimony in the Keeyask
24 hearing, when Ms. Mayor indicated that there has
25 been no environmental impact assessment done in

1 Canada which includes the ecosystem services
2 valuation process -- do you recall that?

3 MS. MCHUGH: Well, now I do. Thank
4 you.

5 MS. PASTORA SALA: And as part of your
6 response at that time, you indicated that none of
7 the EIS supports an ecosystem services assessment
8 in Canada. Correct?

9 MS. MCHUGH: Well, as I mentioned here
10 today, there are definitely some ecosystem
11 services included in the Manitoba Hydro MMTP EIS.

12 MS. PASTORA SALA: As part of your
13 response in answering Ms. Mayor's question, you
14 indicated that none of the EIS's in Canada support
15 an ecosystem services assessment approach.
16 Correct?

17 And I can give you the reference,
18 subject to check, if you would like.

19 MS. MCHUGH: Sure.

20 MS. PASTORA SALA: It is page 4501 of
21 the transcript, if you would like to check after.

22 MS. MCHUGH: I believe you.

23 MS. PASTORA SALA: Is it consistent
24 with your understanding that there remains no
25 environmental impact assessments in Canada which

1 include explicitly the ecosystem services
2 valuation process?

3 MS. MCHUGH: No, I don't necessarily
4 agree with that. I think that there are
5 environmental assessments that do include the
6 ecosystem services approach.

7 MS. PASTORA SALA: Explicitly?

8 MS. MCHUGH: Yes.

9 MS. PASTORA SALA: Can you name one?

10 MS. MCHUGH: Sure. The work that I
11 do, in fact, in British Columbia, we use an
12 ecosystem services approach, and we conduct
13 structured decision-making to evaluate alternative
14 scenarios below dams. And that is is a
15 non-monetary qualitative and quantitative
16 integrated approach, focusing on the benefits from
17 different proposed flow scenarios.

18 There is many examples -- in fact, in
19 the Keeyask hearings, I think there was an
20 ecosystem services assessment in the Lake Winnipeg
21 watershed that specifically -- that one of the
22 First Nations conducted, that specifically
23 utilized that approach.

24 So the approach is a concept; right?
25 There's lots of services within that concept that

1 may or may not be included in specific
2 environmental assessments.

3 MS. PASTORA SALA: Thank you,
4 Ms. McHugh. Those are my questions.

5 THE CHAIRMAN: Thank you for those
6 questions, and the responses, Ms. McHugh.

7 Yes, Ms. Whelan Enns.

8 MS. WHELAN ENNS: Mr. Chair, I wanted
9 to make sure that the CEC is aware that the use of
10 Dr. Bob Gibson's materials in the report, in
11 preparation for presentation in the hearings, was
12 done with the assistance of Dr. Gibson, with the
13 permission to use the Keeyask materials. And
14 also, it appears, with him providing us with a
15 report that is yet not fully public and published.

16 So we would never, under any
17 circumstances, take this approach without in fact
18 having communicated with Dr. Gibson.

19 THE CHAIRMAN: All right. Thank you
20 for that.

21 All right. It is 10 to 4, so we will
22 take a ten-minute break and be back for our panel.

23 Thank you.

24 (Recessed at 3:50 to 4:05 p.m.)

25 THE CHAIRMAN: All right. If the

1 panel is ready, we are ready. Okay. We will just
2 begin with a little tobacco ceremony.

3 Ernie Daniels (prayer).

4 MR. WHELAN: Good afternoon, everyone.
5 My name is Jared Whelan. Thank you, Ernie
6 Daniels.

7 We have Grand Chief Jerry Daniels
8 here; myself, Jared Whelan; now Councillor June
9 Thomas from Roseau; Gord BlueSky from Brokenhead;
10 William Abraham from Little Black; Dave Daniels,
11 back row, from Long Plain. And of course elder
12 Ernie Daniels.

13 Our Grand Chief is going to do opening
14 comments. I'm going to speak briefly, and then
15 the rest of the panel will go.

16 CHIEF DANIELS: Well, good afternoon,
17 everyone, Mr. Chairman, and others who are in
18 attendance here. Thank you for joining us today.

19 So who is SCO? Membership; 33 members
20 in Southern Manitoba, representing half of the
21 First Nations in Manitoba. Memberships include
22 Anishinaabe, Dakota, Cree Nations. SCO membership
23 includes signatories of Treaties 1, 2, 3, 4, 5,
24 and Dakota Nations, who did not sign Treaty.

25 I am Jerry Kim Daniels; I'm from Long

1 Plain First Nation. SCO is here today on behalf
2 of the First Nations. SCO does not replace the
3 individual voices of the 33 individual First
4 Nations, which are members of the organization.

5 SCO is an independent political forum
6 established by the Chiefs of Southern Manitoba.
7 Its mission is to protect, preserve, promote,
8 enhance First Nations' inherent rights, languages,
9 customs, traditions, through the advocacy and
10 implementation of the spirit and intent of the
11 treaty-making process.

12 SCO's mission is to establish an
13 independent political forum to protect, preserve,
14 promote, and enhance First Nations peoples'
15 inherent rights, languages, customs, traditions,
16 through the application and implementation of the
17 spirit and intent of --

18 Had I had more time, I probably would
19 have slowed down; it is just that we are at the
20 end of the day.

21 SCO acknowledges that its member
22 nation, Peguis, is also a participant in the CEC
23 proceedings. SCO also acknowledges that it is
24 joined by representatives from four member nations
25 here today.

1 Article 1 of the SCO Constitution and
2 Accord, 1.1, to assist members of First Nations in
3 the advancement and achievement of their goals, as
4 mandated by the Chiefs' Meeting in Summit.

5 1.2, to provide the common front for
6 initiatives mandated by the Chief's Meeting in
7 Summit.

8 1.3, to promote and assist member
9 First Nations in providing good government for
10 First Nations.

11 1.4, to assist member First Nations in
12 promoting and defending Treaty and Aboriginal
13 rights, as mandated by the Chiefs in Summit.

14 1.5, to assist member First Nations in
15 holding the Crown and holding the Federal,
16 Provincial Governments responsible for the
17 fulfillment of their fiduciary duties and other
18 responsibilities and obligations, in accordance
19 with the SCO Constitution and Accord.

20 In 2004, the Dakota Tipi First Chiefs
21 in Summit passed Resolution 16, environmental
22 stewardship, which resolved that the First Nations
23 must participate as active members in public,
24 private, environmental stewardship programs and
25 initiatives. All southern First Nations performed

1 their own environmental research and studies in
2 regards to environmental stewardship in their
3 traditional territories, and the Grand Chief shall
4 support and lobby for financial support from the
5 Federal and Provincial Governments to participate
6 in all environmental stewardship programs and
7 initiatives.

8 During this hearing, SCO appreciates
9 that on multiple occasions, Manitoba Hydro has
10 acknowledged the importance of indigenous
11 knowledge, and that it funded SCO member nations
12 to perform their own studies.

13 However, there is still more work to
14 be done. Indigenous knowledge needs to be
15 incorporated at a much earlier stage in the
16 process.

17 You will hear more from Dave Daniels
18 and June Thomas with regards to how last-minute
19 route changes meant they were not able to walk and
20 properly study certain segments of the line.

21 First Nations governments are the most
22 resource-constrained governments in Canada.
23 Without adequate funding, First Nations cannot
24 fully participate fully in environmental
25 proceedings. Funding needs to be available, not

1 just during the project's approval stage, but
2 during the life cycle of the project.

3 SCO acknowledges that Manitoba Hydro
4 did fund First Nations to perform their own
5 environmental research and studies in regards to
6 environmental stewardship in their traditional
7 territories, but more needs to be done, again, as
8 indigenous knowledge benefits everyone.

9 First Nations have a deep
10 understanding and connection with the land. They
11 have knowledge to offer, but they need to be in an
12 equitable playing field to achieve this.

13 This picture helps to elaborate the
14 challenges that First Nations often face. We are
15 expected to keep up with the baseball game, but we
16 are placed in a position where we can not even see
17 the game.

18 First Nations need support to perform
19 their own environmental research and studies in
20 regards to environmental stewardship in their
21 traditional lands, as this will benefit First
22 Nations, but also Manitoba Hydro and the southern
23 populations alike.

24 SCO acknowledges and appreciates that
25 Manitoba Hydro funded self-directed ATK studies.

1 However, there is still room for improvement.
2 Engagement needs to start earlier. ATK needs to
3 be incorporated into the routing process. Many
4 questions remain, and will be subject to further
5 Hydro decisions without CEC review. Herbicide
6 concerns. Manitoba Hydro indicates it will not
7 spray in areas where traditional practices occur,
8 but no firm commitments as to where.

9 EMF can alter the spiritual integrity
10 of traditional medicines. First Nations in
11 Manitoba are impacted not just by the transmission
12 line, but by all transmission lines and
13 rights-of-way in Southern Manitoba.

14 Bipoles 1 and 3 were built without
15 notification, consultation, or compensation for
16 affected SCO member nations. Changes in the route
17 meant that First Nations ATK studies remained
18 incomplete. Projects should be delayed until
19 these studies are completed.

20 The updated terms of reference make it
21 clear that the Commission is required to consider
22 effects of First Nations, Metis, and other
23 Aboriginal communities with respect to the impacts
24 of this project on the environment, might impact
25 First Nations, Metis, and other indigenous

1 communities.

2 SCO recognizes that there is a
3 separate and distinct Crown/Aboriginal
4 consultation process that is distinct and separate
5 from this process. To the best of SCO's
6 knowledge, the Section 35 consultations have not
7 been completed with all of its member nations.

8 SCO wants to state for the record that
9 given that this is an international power line,
10 SCO expects that the National Energy Board
11 hearings will also be held with respect to this
12 project.

13 It is important to recognize that
14 indigenous peoples were generous, for the most
15 part. Indigenous people assisted and sheltered
16 the settler populations when they first arrived.
17 Without the support of indigenous people, the
18 settlers may not have survived.

19 But this generosity was not returned.
20 The treaties, which were agreements to share the
21 land and respect the laws of both indigenous
22 peoples, as well as the settlers' law, have not
23 been fulfilled. Peguis First Nation, Roseau River
24 Anishinabe First Nation, Swan Lake First Nation,
25 Long Plain First Nation, Brokenhead Ojibway First

1 Nation, and many other First Nations were subject
2 to illegal surrenders of their reserve lands and
3 forced relocation.

4 First Nations are still waiting for
5 land that was promised to them in the 1870s, more
6 than 20 years after signing the Treaty Land
7 Entitlement agreement in 1996. Many Treaty land
8 entitlements remain unresolved. Crown lands are
9 rapidly disappearing, impacting the ability for
10 indigenous people to exercise their rights.

11 This is the tip of the iceberg of a
12 long colonial history. Residential schools, the
13 '60s scoop, prohibition of traditional indigenous
14 practices, indigenous people only receiving the
15 right to vote in 1960, the high rates of
16 incarceration among indigenous peoples, the over
17 10,000 children in care in our CFS system, the
18 flooding of entire indigenous communities by
19 hydroelectric developments.

20 The list of wrongs is too long to
21 outline the entirety of Canada's colonial history,
22 but this is a history that we must confront if we
23 are to truly move forward toward reconciliation.
24 If the Path To Reconciliation Act, which was
25 unanimously passed by all parties in the Manitoba

1 legislature, is to mean anything, if Manitoba
2 Hydro truly wants to achieve reconciliation with
3 the indigenous people in Manitoba, then part of
4 that requires recognition that everything we have
5 in this country stems from the use of natural
6 resources that properly belong to the indigenous
7 peoples of this country.

8 Got land? Thank an Indian. Got
9 hydroelectricity and transmission lines to
10 distribute power? Thank an Indian.

11 The Treaties place a fiduciary
12 obligation on Federal and Provincial Governments
13 to consider how decisions will impact First
14 Nations, including environmental licensing
15 decisions. The more and more Crown land that is
16 taken up, the less land that is left for First
17 Nations people. Indigenous legal traditions are
18 Canadian law, and need to be respected and treated
19 as law.

20 Here is a picture of treaty areas in
21 Manitoba. It is important to remember a few
22 points, however. The traditional territory of
23 First Nations people is not restricted to a single
24 Treaty zone. Our people have been, since time
25 immemorial, traveling, relocating, trading, and

1 intermarrying with different tribes over time.

2 Many First Nations signed Treaty 1,
3 but are located in another treaty area, or in the
4 case of the Dakota, did not sign Treaty at all.
5 Treaty rights are not restricted by Treaty areas.
6 First Nations people can exercise their Treaty
7 rights anywhere in Canada where there is
8 unoccupied lands. Indeed, many First Nations
9 people travel hundreds of kilometres to exercise
10 their traditional practices, based on seasonal and
11 other patterns, as we have always done.

12 SCO recognize that consultation is
13 distinct from engagement. SCO recognizes that
14 there are separate provincial and federal
15 Section 35 consultation processes that are ongoing
16 and beyond the scope of the CEC hearing. But
17 CEAA 2017, 5-C, and the CEC terms of reference,
18 require consideration of the effects on Aboriginal
19 peoples.

20 In the context of Treaties, however,
21 it is also important to briefly comment on the
22 duty to consult. In particular, we must remember
23 that Canada and Manitoba have a constitutional
24 duty in accordance with natural law, the Treaties,
25 and Section 35 of the Canadian constitution, to

1 meaningfully consult with and accommodate the
2 concerns of indigenous peoples.

3 It should also be noted that with
4 Canada finally signing on to UNDRIP, our
5 understanding of the duty to consult maybe
6 modified by subsequent court decisions. The new
7 test will not be only to consult and accommodate
8 wherever possible, but in accordance with 32 of
9 UNDRIP, pre-and prior informed consent before
10 approval of a new project may become the new
11 standard.

12 Crown land is where indigenous peoples
13 can exercise their inherent rights. Intact land
14 is also culturally significant.

15 The Western concept of ownership of
16 land is foreign to the indigenous world view.
17 Since the arrival of this other population, the
18 places where indigenous peoples can exercise their
19 indigenous rights has been greatly diminished.
20 The more Crown land that is taken up, the less
21 land is left for the First Nations people.

22 In accordance with the 1930 Natural
23 Resources Transfer Act, the attached agreement,
24 Manitoba is responsible for respecting and
25 fulfilling treaty obligations, particularly with

1 respect to Crown lands.

2 SCO contacted Dr. Petr Cizek as part
3 of its participating in this CEC hearing. His
4 analysis showed that between 1930 and 2016, more
5 than one-fifth of the forested land has been lost
6 in routing planning area, and linear features have
7 more than doubled in the same area over the same
8 time frame.

9 This chart clearly shows that the
10 trend, with the blue line being forest-covered
11 land, consistently decreasing since 1930, while
12 non-forested land, the red line, has also
13 correspondingly increased.

14 Linear features, such as roads,
15 pipelines, and transmission rights-of-way, have
16 also consistently increased, more than doubling
17 over the study period.

18 To put the amount of forested land
19 into context, we have lost 1,231 square kilometres
20 of forested land in just the study area alone, or
21 about 304,200 acres. That is the equivalent to
22 about twice the size of Winnipeg. But even then,
23 there is still more than 300 square kilometres.
24 With that left-over room, you could also fit two
25 Brandons, four Portage la Prairies, and almost

1 four Dauphins into that land loss.

2 Also keep in mind that at 76,203
3 square kilometres, the study area is only about
4 one-85th of the total area of Manitoba, being
5 647,797 square kilometres. So all across
6 Manitoba, and in Southern Manitoba particularly,
7 much more than 304,200 acres have been lost.
8 Indeed, if this sample is representative of the
9 number, it is likely that more than 10 million
10 areas in Southern Manitoba alone have been lost.
11 This loss of unoccupied land has had a substantial
12 impact on indigenous peoples.

13 Provided is a map prepared by Whelan
14 Enns Associates. It is a map of the traditional
15 knowledge data for the Aboriginal traditional
16 knowledge surveys of Sagkeeng, Roseau, Long Plain,
17 Black River, and Swan Lake.

18 As you can see, the Manitoba-Minnesota
19 study area is a very important area for indigenous
20 traditional practices, particularly the areas just
21 to the east of the Watson P. Davidson Wildlife
22 Management Area . The area where the route was
23 adjusted, near Piney, is also an important area
24 for SCO members, and therefore further study in
25 this area is needed.

1 Thank you.

2 MR. WHELAN: Good afternoon. This is
3 Jared Whelan again. Just a couple of minutes.

4 We were contracted to take the maps
5 inside the ATKS studies in the appendices to
6 Manitoba Hydro's EIS, and put that data on one
7 map, minus the data from Peguis First Nation. So
8 that's what this map is. It is the map from the
9 Long, Swan, Black River study, the Roseau study,
10 and the Sagkeeng study.

11 Again, as the Grand Chief pointed out,
12 it shows the importance of the area to the east of
13 Watson WMA, and areas -- polygons of areas used
14 for hunting and gathering.

15 If there are any questions on that
16 map, we can do that later.

17 MS. THOMAS: Good afternoon. My name
18 is June Thomas. I'm a member of Roseau River
19 Anishinabe First Nation, and I was the project
20 coordinator for the Aboriginal traditional
21 knowledge study.

22 Roseau consists of three communities:
23 Roseau River 2, which is the main community,
24 located east on Highway 75 and Highway 201; Roseau
25 River 2A, which is the Rapids community, located

1 northeast of Highway 201 and 218; Roseau River B,
2 which is a commercial area, community, located
3 northwest of the City of Winnipeg, on Highway 1
4 and Highway 6.

5 Current population, total registered
6 membership is approximately 2,548, according to
7 INAC.

8 Roseau River, we signed an agreement
9 with Manitoba Hydro to participate in the study,
10 and by hiring a community project researcher,
11 which was myself, to promote and share the
12 Manitoba-Minnesota transmission line proposal.

13 Manitoba Hydro is -- was proposing
14 construction of a 500-kilowatt alternate current
15 transmission line from Dorsey Conversion Station
16 to international border between Manitoba and
17 Minnesota. And that's in our area.

18 I was hired August 20th, 2014, and I
19 worked as a pre-development on the project,
20 recruitment of participants, and basically putting
21 the office together and meeting the contacts from
22 Manitoba Hydro. I didn't officially start the
23 project until September 22nd, when we held the
24 kickoff meeting, we called, with a group of elders
25 from the community.

1 At the beginning, I recruited
2 40 participants to participate in the project, and
3 Chief and Council were -- at the time were
4 involved in selection process. So out of the 40,
5 15 elders were selected, and 6 youth. So a
6 total -- I worked with 20 to 24 members, which we
7 called the focus group.

8 At first, we started the project, we
9 were about two or three months behind, or behind
10 schedule from the other First Nations that started
11 back in June. We started late in the year, so we
12 weren't able to do any site visits and do
13 research, so we had meetings two or three times a
14 month with the group, and basically kept up to
15 date with the information that Hydro was providing
16 us. We discussed impact, the concerns that we may
17 have when the line went up.

18 We didn't start doing the site visits
19 until the spring. So we were able to, as a group,
20 go to a site in the -- right where the line was
21 going towards Minnesota, on Highway 201, by
22 Sundown. There was property there that belonged
23 to a partner of the Roseau River First Nation, and
24 she was concerned of the line going right through
25 her property. So she invited us to her property,

1 which was 300 acres east of Sundown.

2 We spent the whole day there. We --
3 there was a total of 18 focus group members,
4 including elders and youth. And we kind of
5 explored the area and identified plants, medicines
6 that were known to the elders there. And we
7 basically just wrote down the names, took
8 pictures. And we explored further, north of the
9 property, where we found freshwater marsh, and we
10 found a lot of freshwater creeks there, and a lot
11 of lands and trees that we traditionally use as
12 medicines.

13 For a lot of the elders that were
14 there, it was very emotional for them, because it
15 brought back a lot of memories of their -- when
16 they used to camp and hunt and gather in that area
17 with their parents and with their children, and
18 where they used to hunt was right around that
19 freshwater marsh.

20 A lot of that area from Roseau River,
21 the main community, right up to Buffalo Point
22 First Nation, was marked. And when we were doing
23 our memory -- was it memory marking -- memory
24 mapping, right up to -- north of Winnipeg, right
25 up to Turtle Mountain Provincial Park, and the

1 Sandilands. So all that whole area was -- elders
2 verified that it was traditional area for Treaty 1
3 and Roseau River.

4 The elders also mentioned there was a
5 lot of burial sites in all of that area, because
6 how we used to travel, how we used to live off the
7 land, was follow the river, and we camped wherever
8 the hunting was good or the berries were being
9 harvested. And when they would -- a person would
10 pass, they would bury them wherever the camp was.
11 So they said the burial sites were all across that
12 land.

13 Elders also mentioned that the
14 hunting, trapping practices, they mentioned that
15 the hunters have to travel further and further
16 away because of the forest -- I guess the trees
17 being cut, and the wildlife moving further and
18 further away from where they usually hunt.

19 Fishing is also -- has been impacted
20 by the flooding of the rivers, and contamination
21 from the land, pesticides, whatever.

22 Elders also mentioned that -- their
23 concern that the Hydro project may alter some of
24 the plants and some of the vegetation, and that
25 would also affect -- have an impact on the animals

1 that feed on the plantation. And also the
2 migration, they felt that it would impact the
3 migration of the birds, because of the lines.

4 Roseau River has used most of the
5 southern part of Manitoba as recreation for
6 cultural camps, gatherings, traditional
7 gatherings, ceremonies, and has a -- personal
8 healing quests.

9 Fishing. They also noticed in the
10 last ten years the spawning areas for the fish has
11 declined dramatically. The birthing areas of
12 deer, fox, rabbits along the Red Roseau Rapids
13 have been disturbed and impacted by natural
14 disasters and/or farming activities.

15 The primary concerns of the study
16 would be protection of the traditional areas
17 identified on the mapping. Other questions from
18 this project, including how long would the
19 community of Roseau River Anishinabe First Nation
20 benefit from the revenue sharing of the
21 Corporation of power lines going through their
22 territory? What type of Hydro rebates, long-term
23 employment and/or long-term compensation would be
24 included in this project? How high is the
25 potential for ecological damage to the plants,

1 hunting, and fishing for the present and future
2 generations? How can we work together to ensure
3 the protection and monitoring, the traditional
4 areas are mapped and not overlooked during
5 construction of this project? How can we register
6 these traditional areas and/or property with the
7 Province?

8 Suggested mitigations. The suggested
9 mitigations expressed during discussion with
10 community members include resource and revenue
11 sharing of the Manitoba-Minnesota transmission
12 line, Bipole III, St. Vital proposed transmission
13 lines, and agreement between Manitoba Hydro and
14 Roseau River First Nation that will honour the
15 resources and revenue sharing of these projects,
16 as well as future projects.

17 It is recommended that more time and
18 funding is provided to complete the sensitive
19 traditional site study and identifications of
20 Phase 2 of this project. The focus group has
21 proven to be a valuable tool as a working group to
22 develop future initiatives for the communities of
23 Roseau River Anishinabe First Nation.

24 We want our land to be accessible in
25 the future for economic development initiative for

1 Roseau River for future land purchases. We want
2 economic opportunities. Our Roseau River
3 Anishinabe First Nation, our unemployment rate is
4 97 per cent. We need revenue sharing, and we felt
5 this project was not long enough to provide more
6 detailed findings, impacts on what this project
7 would have on Roseau River Anishinabe First
8 Nation.

9 Miigwech.

10 MR. BLUESKY: Good afternoon. (Native
11 Language)

12 My name is Gordon Bluesky. I'm a
13 member of the Brokenhead Ojibway Nation. I'm
14 currently the lands and resources manager of the
15 Brokenhead Ojibway Nation. I also carry a few
16 more hats, I guess, just to also further explain
17 my background.

18 I'm the Chair of the Manitoba USKE,
19 which is a regional lands managers association.
20 I'm also the Chair of the National Aboriginal
21 Lands Management Association, NALMA, for Canada.
22 I'm also the southern spokesperson when it comes
23 to the Lake Winnipeg Indigenous Collective.

24 Some of our work that we do in those
25 groups is that we network and share with our First

1 Nation communities and colleagues across the
2 province. Some of the common themes that I have
3 in our discussions is the continual impacts of
4 developments like this one, in terms of the Hydro
5 industry. That's a pretty common thread
6 throughout our region here in Manitoba, and I
7 don't think that comes as a surprise to anyone
8 here.

9 I think we also have some more things
10 that I will be discussing here that are not
11 surprises to anyone in the room. Some of the
12 points that were already brought forward by my
13 colleague here from Roseau, and the other
14 communities that will be speaking here also will
15 be the same.

16 We've had opportunities here in
17 Brokenhead to participate in a few other Clean
18 Environment Commission hearings, one being -- the
19 most recent, I guess, is the Lake Winnipeg
20 regulations that we had in Brokenhead. We
21 actually had some opportunity to have the panel
22 come there.

23 With that being said, we acknowledged
24 our way, first, before we began. It is great to
25 hear the elder today to bring us in in a good way.

1 I think, in a lot of cases, we have
2 issues that we initially have is just the process
3 of these hearings and the process of consultation
4 within our region, fully incorporating the First
5 Nations' protocol. I think that's something that
6 we will have to work on into the future, and I do
7 appreciate the opportunity to come here and speak
8 today. I appreciate the work that the
9 Commissioners do, and I also appreciate the work
10 that everyone in here does. I also would like
11 that being granted to the ones that we have here,
12 to the panel.

13 We had discussions on how our
14 territory here at Treaty 1, and what we've given
15 since 1871, and I think that's going to be some of
16 the discussion, my focus is going to be on what we
17 have left and where we are going.

18 The impact of the development that we
19 are talking about today is just added on top of
20 the impacts of developments that have been
21 happening within the Treaty 1 territory, and also
22 within Manitoba. Our lands are continually being
23 displaced, with no real consideration being given
24 to the well-being of my First Nation, and the
25 well-being of our communities' needs.

1 First Nations were at one time -- I'm
2 sure everyone in here can agree -- were
3 independent, healthy and wealthy people. And we
4 have been now reduced to 14,000 acres. That's
5 what Brokenhead's current reserve is comprised of,
6 within the Treaty 1 territory in Canada, in terms
7 of use and benefit.

8 The interpretations of our treaty has
9 taken a couple of wrong terms, from our
10 perspective. When Na-sha-ke-penais sat down in
11 1871 and signed the Treaty with the Crown, the
12 intention of that Treaty was to share our lands
13 and open it. And we were one of the first ones in
14 Treaty 1 to open that land up for development and
15 immigration, and I'm sure there is more than a few
16 in here that benefited from immigrating to Canada,
17 and now becoming Canadians and living within
18 Treaty 1.

19 We've always had the perspective of
20 sharing of our lands and sharing of the benefits.
21 And I think at the time when Na-sha-ke-penais
22 signed in 1871, it was from the perspective of
23 sharing. Some think that we were conquered; some
24 think it was a final showdown.

25 I'm not sure that we share that same

1 opinion. We were coming from a position of
2 authority in regards to Aboriginal title. We had,
3 I guess, a few unknowns; I know we knew there was
4 things coming to this territory. But I don't
5 think that Na-sha-ke-penais, my
6 great-great-grandfather, had the position of
7 decision-making that included 900,000,
8 approximately, new members of Treaty 1 residency
9 showing up in 2017.

10 I think we had -- issues that we had
11 initially was those issues with the creation of
12 municipalities, the creations of rights-of-way,
13 the creations of industries, the creations of
14 lands and development that didn't include or take
15 into consideration our well-being and our
16 traditional livelihoods and pursuits.

17 Our communities currently live with
18 the impacts of not only Hydro development, but
19 everything else that you see around here. I don't
20 know if some of you are from other places in this
21 country, but when you fly in here, you can see my
22 territory has been reduced to a farm field, and
23 we -- our community sits in the middle of that
24 farm field. There is absolutely nothing left for
25 our community to do, in terms of traditional

1 pursuits. While little is left, we want to fight
2 hard for, in terms of protection.

3 And I think that's the point that I
4 want to make today, is that no matter what type of
5 development it is -- and I know, today, we are
6 talking about this transmission line and the
7 corridor that travels through Treaty 1 -- that
8 corridor and that Treaty territory needs to take
9 into consideration the well-being, and that needs
10 to continue to develop, if Hydro continues to
11 develop in our territory, and in this case the
12 development of the transmission line going to
13 another country, for their benefit, my
14 understanding -- and I'm not an expert on Hydro's
15 billing and how they sell their power, but my
16 understanding is for a lesser cost to Americans
17 than it is for us here in Manitoba.

18 And I guess that helps to increase
19 export. I'm not an economist either.

20 But what I do know is that the benefit
21 doesn't flow to my community. What I do
22 understand, though, is that a transmission line --
23 and I think it was approximately -- I know we have
24 a few familiar faces here from Hydro that I've
25 been working with over the past little while -- I

1 think the corridor is around 100, 200 kilometres,
2 through our territory.

3 And what we had stated was that that
4 corridor, that right-of-way for that transmission
5 line, was not something that was specifically
6 contemplated at the time in Treaty. When we talk
7 about sharing and using of our lands, when we talk
8 about Treaty and relationships with our Crown, and
9 the relationships that we believe that we should
10 have with our ongoing developments with the
11 corporations, and especially Crown Corporations
12 that are represented by the Provincial Government
13 here in Manitoba, have a responsibility to ensure
14 that the well-being of our communities are taken
15 into consideration from every step of the game.

16 And I honestly believe that we here in
17 Manitoba could be leaders in that across the
18 country. I would really love to see that the
19 Crown Corporation, Hydro, takes steps to resolve
20 those issues.

21 And I think that when we talked about
22 initially -- and I had an opportunity to sit down
23 with, I believe, the acting CEO of Manitoba Hydro,
24 we had talked about what we consider to not be
25 something that was not considered under Treaty.

1 It was just -- which is this transmission line,
2 that's going to another country and to another
3 government and to another people. That was not
4 something that we agreed to under our Treaty.

5 Again, it is the same case with the
6 pipelines that are running through here, but I'm
7 not going to get into that; that's another
8 hearing.

9 But the right-of-way that we have
10 here, in this particular matter, it does not
11 service any of our communities; it doesn't
12 service, from my understanding -- and I'm not
13 going to get into the operations of Hydro; that's
14 not my expertise -- but it doesn't serve to
15 benefit specifically the territory that it runs
16 through.

17 So the impacts of those rights-of-way
18 are of great concern to us, depending on, again,
19 meaningful impacts -- or a meaningful impact
20 benefit agreement potentially being developed
21 between the communities here today and the
22 corporation, Manitoba Hydro, and ultimately the
23 responsibility that I believe falls underneath the
24 Crown of Manitoba, the Province of Manitoba.

25 We don't believe that these issues

1 have been accommodated, and we don't believe that
2 the steps have been taken yet to address these
3 issues that have not been covered under Treaty,
4 these uses of our lands to accommodate or support
5 another government -- or another province, for
6 that matter. We haven't had those opportunities
7 to have those discussions, and I think that's the
8 first place that we need to start.

9 And I know we have the Southern Chiefs
10 here, and I know we have already opened the
11 discussions on having those meetings to discuss
12 how do we take forward the issues that we have
13 here, of very limited opportunity to pursue our
14 traditional activities within our territory.

15 I can definitely testify that
16 Brokenhead has never been, during my tenure as a
17 lands manager, has never been approached by the
18 Province of Manitoba or Manitoba Hydro to return
19 any lands back to wildlife territories, to return
20 lands back to the use and benefit of First Nations
21 people. That's never happened during my tenure,
22 and I will probably guarantee that it's never
23 happened at all for Brokenhead.

24 For me, when we are here talking about
25 clean environment, or we talk about taking into

1 consideration environmental impacts, for us, we
2 have never been approached to balance the economy,
3 the economic interests that Brokenhead has. When
4 we look at the Treaty agreement that we have, we
5 never once relinquished any interest that we have
6 within our Treaty territory. We never once
7 relinquished any interest that we have
8 economically in our Treaty territory.

9 And those are the issues that I
10 believe, when we talk about an impact of the
11 development and we talk about environment, all of
12 those things are interconnected, from our
13 perspective.

14 And I'm sure I can debate until the
15 end of time with any one of the lawyers here about
16 the issues that I'm bringing forward today. And I
17 don't think that would be very meaningful
18 discussion in terms of what it is that we are
19 coming here.

20 I will never be convinced -- my
21 grandfathers and grandmothers fought hard,
22 survived, to bring us to where we are today, to
23 bring this issue of indigenous consultation, to
24 bring the issues of the well-beings of our
25 communities forward, and I take that

1 responsibility with great respect and regard. And
2 I won't ever sit around and allow developments to
3 go forward that don't take into consideration our
4 communities' children, and children of their
5 children.

6 And I think it is difficult for me to
7 sit here and to be clear about the impacts of
8 these developments, the impacts of the continual
9 taking of land in Treaty 1 without replacing any
10 of it anywhere, without taking into consideration
11 those children that I have been speaking about,
12 and I'm sure others will speak about today.

13 I have never been approached to return
14 those lands to support wildlife, to returning
15 those lands to look at traditional pursuits, to
16 returning those lands to look at economic
17 endeavors. We have never signed an agreement or
18 partnership of any form with Manitoba Hydro, other
19 than a 22 Permit -- I think we might be familiar
20 with those -- that we get under the Indian Act,
21 that allows a Hydro distribution line to be
22 connected up to one of our homes. Those are
23 agreements that we have signed with Manitoba
24 Hydro, that just allows for power to be
25 distributed through our community.

1 Again, the interconnectedness of the
2 transmission line that is going to be running
3 through Treaty 1, we were never part of the
4 initial power generation of the North. We have
5 agreements that we have in place in the Brokenhead
6 Ojibway Nation that includes all First Nations,
7 and I don't understand why the Province includes
8 First Nations of the North, or any other area or
9 territory of this province in gaming pursuits, but
10 don't include other First Nations when it comes to
11 potential impacts of Hydro development. A
12 percentage of the casino that operates within
13 Brokenhead goes to all communities.

14 Those are steps that I think are
15 really easily done through projects like this,
16 that would allow for at least meaningful
17 acknowledgment of our communities that live in the
18 South, that live on the lake, that live with the
19 inundation of water flooding that comes from
20 supporting the developments of hydroelectric
21 generation in the North.

22 And I think that's the thing that we
23 have, is that -- how do we sit at the table, from
24 a Treaty perspective in a Treaty jurisdiction, and
25 the only option that comes to our community, and

1 when I get a call for consultation, is basically
2 we are being consulted on a project that's going
3 to go forward.

4 There is no option of saying no.
5 There is no option of our community saying that --
6 you know, "We've given enough to you; we've given
7 enough to the support of the Manitoba economy."

8 Until we start to see some of these
9 lands returned that will support our traditional
10 pursuits, our economic pursuits, if we look at
11 other territories, the first thing that they do in
12 the province here is that they talk about the
13 critical habitat for moose. The first thing that
14 they do is they shut down Treaty hunting, and
15 hunting of those moose to protect that.

16 But don't ever shut down forestry;
17 don't ever shut down mining pursuits; don't ever
18 shut down hydroelectric pursuits in those
19 territories. But the first thing they do is come
20 after my rights, and tell us to stop, as if we are
21 the impact.

22 I will have to sit here and probably
23 guarantee, without having the scientific
24 background or studies being here to support me,
25 but I can guarantee that the First Nation hunting

1 was not the reason why the moose population is at
2 a critical state. I can guarantee that it is not
3 because of us that the migration trails in our
4 territory, Treaty 1, was because of First Nation
5 hunting that has it has been impacted.

6 I can guarantee that the hunting
7 pursuits that we have in our territory wasn't --
8 we laugh, sometimes, but you know, when I'm at the
9 Manitoba Moose game, and we see the -- in the Jets
10 game we see the -- what's his name, Mickey the
11 Moose, drumming at their games, and we sometimes
12 tease, he is the last moose left in Treaty 1.

13 And it is unfortunate. The
14 developments that we do have in our territory have
15 not taken into consideration those well-beings.
16 And I think that's where we have to start.

17 And I'm here today to let the group
18 here know that we've already started discussions
19 with other First Nations, with the Southern
20 Chiefs, that we've given enough. We have no more
21 to give. If you are going to take any more, I
22 don't care if it is an inch or a kilometre or an
23 acre, those lands have to be replaced somewhere
24 else.

25 The need for our children to prosper

1 is now, and the need for us to focus in on that
2 and look at our partners, potentially, our
3 partners, Manitoba Hydro, the Province of
4 Manitoba, to take steps to reclaim, to reach the
5 pursuits of our communities I think is today.

6 And I would also like to state that
7 if -- what I consider ourselves as First Nations
8 people is that we are the last line of defence.
9 And I'm sorry to say it this way, but our last
10 line of defence to the total annihilation of our
11 territories. We are not Europe; we don't come
12 with those four concepts of -- use it all until it
13 is gone; there will be another place to go.

14 This is where we are from. You talk
15 about those communities up north that are losing
16 jobs, and potentially those miners will go
17 somewhere else, but we don't go anywhere else. We
18 stay in the same place.

19 The understanding that our communities
20 have given enough, we want a zero loss. Those
21 regulations that you put on the -- the Province of
22 Manitoba puts on business that operate --
23 industries that operate or private companies that
24 operate within our territory, but yet at the same
25 time those same regulations are not being put on

1 them, and they are Crown Corporations.

2 So with that, I would like to just say
3 miigwech. I would like to say that we are going
4 to push for a zero loss. If you take an acre, we
5 would like to see that acre replaced. Replace
6 even more -- two acres, three acres, four acres,
7 five acres -- I don't know how we want to explain
8 that, but I think here, down in the south, we need
9 to take these types of approaches, because when
10 Na-sha-ke-penais sat down and signed his X for
11 Treaty, he sat down and signed with the spirit of
12 sharing, with the consideration of well-being of
13 the immigrants that would come here and take up
14 residence within our territory.

15 But what is happening now, with the
16 continual coming and taking of land for the
17 benefit of one group of people, without meaningful
18 benefit to my community or communities like mine,
19 then that's what we call stealing.

20 And at this point I would like to just
21 outline that from Brokenhead's perspective this
22 type of development, without any appropriate
23 compensation, or without appropriate sharing of
24 revenue, or without appropriate consideration of
25 those territories that we have -- very limited --

1 for hunting, we consider that stealing. And we
2 consider that misuse of power.

3 And I think that our communities are
4 very open, and have been very open to sitting down
5 and setting a new path of working with this
6 industry, Manitoba Hydro, with working with the
7 Province of Manitoba, and to provide opportunity
8 for us all to benefit, not just for one.

9 So I would like to just say miigwech,
10 and thank you for the opportunity today.

11 MR. ABRAHAM: Good afternoon. My name
12 is William Abraham. I'm an elder from Black
13 River. And I was kind of pushed into this this
14 afternoon, late, so I don't know.

15 But anyway, in regards to Hydro, from
16 where I come from, in Black River, we have a lot
17 of -- what you call it with Hydro right now -- we
18 are in the process of doing a land development in
19 our area from Winnipeg River in regards to the
20 dams that they have up in the river. Winnipeg
21 River.

22 And they gave us a deadline of
23 June 28th. I don't know if that's fair to us. We
24 had -- we were asking for -- what they call it, an
25 extension to that, so we can do a land-use study.

1 What our ancestors benefited before the dams came
2 into effect there, and the damage that has been
3 done to our territory in Lake Winnipeg.

4 In regards to this corridor that's
5 going to the States also, we were involved in that
6 process also. Because we did some hunting down
7 that way also. We did hunting there before --
8 that was in the late '60s, I guess.

9 So it affects our hunting and our
10 rights as an Anishinaabe people here. Whatever
11 Hydro does, it affects our hunting rights
12 treaty -- we lost quite a bit of land, in fact,
13 from our territory in Black River; some of it
14 floated away about four years ago. It was a large
15 chunk of it.

16 And these are the things that we would
17 like to get -- see if we can get compensated for
18 some of the stuff.

19 And I also asked Hydro, about 15 years
20 ago, to see if they could do a riprap in our
21 cemetery, because it is close to the river, and it
22 is coming up to the -- and they said they would.
23 And that was 15 years ago. Never heard nothing
24 from them. So I don't know if they are -- if they
25 are going to do a riprap for us or not.

1 These things, these are the things
2 that we face every day in our reserve.

3 So I don't have very much, like, to
4 say right now, but because, like I said, I was
5 kind of pushed into this the last minute. But I
6 want to thank you all for listening, thank you
7 very much. Miigwech.

8

9 MR. DAVE DANIELS: Hi. I'm Dave.
10 That's my English name. And I would like to draw
11 your attention to that map that we had on --
12 Number 11, I think it was. That one.

13 For the record, I have been to the
14 University of Manitoba, Brandon University, a few
15 credit courses short of a degree. I am an
16 Aboriginal advisor to several corporations across
17 Canada, in Ontario, Alberta, and here in Manitoba.
18 I'm the advisor to several greenhouses in
19 Manitoba, and on occasion, I'm a guest lecturer at
20 the University of Winnipeg. I mentor
21 master's-degree university students from Dalhousie
22 to Vancouver, and I've helped several authors
23 prepare their manuals, as well.

24 Back in nineteen- -- not nineteen,
25 2014, I was engaged by three First Nation

1 communities -- Long Plain, Black River, and Swan
2 Lake -- to conduct a botanical survey, a plant
3 survey of the affected area.

4 So if you can go back to that map,
5 Jared, please. If you can go back to the map.

6 What we did, we spent considerable
7 time on the east side. We considered around
8 Lonesand, and we spent several days in the
9 southern part, because it was important that we
10 have.

11 In our study, we did study some of
12 this area. We went in the spring, and also in the
13 fall, because there are the spring plants, the
14 summer plants, and also the autumn plants.

15 Then we submitted our report. We
16 discovered or identified in this particular area
17 over 300 plants that were growing there. It was
18 important for us to identify them in English and
19 Latin, and several of the words -- several of the
20 plants -- I would say, oh, 50 per cent of the
21 plants -- were done in Ojibway.

22 Of the 300 plants that we found and
23 documented -- there were more than 300 plants,
24 because we -- you know, there is an oak tree,
25 there's an elm tree, and there's a -- you know, a

1 spruce tree; we didn't identify every specific
2 species that we did see, but we did identify
3 several plants.

4 95 per cent of those plants were used
5 by Aboriginal people at one time or another, or
6 are currently being used, now, as herbs or
7 medicines, tools, and the like, or food.

8 As a consultant to these First
9 Nations, I submitted my full report to the people
10 who hired me, Long Plain, Swan Lake, and Black
11 River. It was their wisdom not to include my full
12 report in the environmental assessment, or this
13 report, for several reasons.

14 One is that it -- my report contained
15 culturally sensitive information. It contained
16 our intellectual property, the names of our plants
17 in Ojibway. We wanted to prevent the general
18 public from having access to that particular
19 report, in that if they were to know our plants,
20 they would -- we wanted to prevent people from
21 harvesting our plants, because this particular
22 area that I'm talking about here is considered a
23 safe zone, because a safe zone -- because it is
24 free of contamination from the agricultural areas
25 over here.

1 In other studies that I have
2 conducted, a lot of those berries and the plants
3 that we use for medicines are highly contaminated.
4 So this area here was considered and is considered
5 a safe zone for our food and our medicines. We
6 need to protect those plants, and if we were to
7 provide that full report, we would have disclosed
8 information that was important to us.

9 What we had discovered in this
10 particular report is that there was at least the
11 minimum of ten S2, S3, and S1 plants, which you
12 can take pictures of now.

13 In this particular forest area, we
14 found several areas that are important. One of
15 them is the black ash forest area, which is an
16 island in the south part of the route. And if
17 they were to harvest the black ash, it would
18 deplete a lot of the black ash that's being highly
19 prized by industry, because it is the quality of
20 the wood. But it is one of the few last standing
21 black ash forest stands that were still, one would
22 say, virginal territory. So it is important that
23 we preserve that.

24 Your transmission line is dab centre,
25 or going through that same forest. One of the

1 things in our study is that we were prevented or
2 did not have the time to finalize our study, based
3 on your final recommended route. The last
4 40 kilometres of that line was not completely
5 studied to our satisfaction.

6 Yes, we did go through that area; yes,
7 we did go through and identify a lot of those
8 plants. A lot of those particular plants, it was
9 important for us to identify those rare plants.
10 We discovered plants that hadn't been seen there
11 since the 1920s. So those are extremely rare
12 plants. Those plants were also used in our
13 cultural practices.

14 If you want to go to the next slide,
15 please. Next slide.

16 In this summary report, only one is
17 identified, but here we have an important plant.
18 Unfortunately, it is in Latin, and if you don't
19 speak Latin, you will have as much luck as I do.

20 This is the slender leaf false
21 foxglove. The flower that you will see right
22 there, the little pink flower that you see right
23 there, only blooms four days out of the year. So
24 we were able -- we were very fortunate to find
25 that. And we found that particular plant in

1 several locations along the transmission line. It
2 is an S2, S3 plant.

3 The next one.

4 Asarum canadense is wild ginger. Wild
5 ginger is one of our traditional plants that's
6 used for cardiovascular systems. And that's an S3
7 plant.

8 The next one, please.

9 These next two are the leathery great
10 fern, that is found mostly in Ontario and down in
11 the States. What is it doing in Manitoba? But we
12 did find it there. The Carex tetanica. Anyway,
13 that's the rigid sedge, that we did find along the
14 ditch. It is important for us to be able to
15 identify those particular plants that are rare in
16 Manitoba.

17 Next one.

18 This is the narrow leaf Jersey tea.
19 It is a medicine plant that is only found in the
20 Sandilands. It is a tea that is used by our
21 herbalists, and you are going to go right through
22 part of that patch.

23 Okay, next one.

24 Here is a wonderful plant; it is
25 Manitoba's only snapdragon. You open the -- you

1 squeeze the lips or the cheeks of that particular
2 plant, and a little turtle tongue comes out, and
3 you will see why it is called the turtlehead.
4 That's an S2 plant, by the way; it is very rare,
5 and it's almost -- you shouldn't be able to
6 harvest that. But this particular plant is also a
7 highly medicinal plant in our culture.

8 Next one.

9 This is an enchanted nightshade, this
10 particular plant. Again, it is not supposed to be
11 in Manitoba, but it is there. Mostly grows in the
12 boreal forest of -- in Ontario, Minnesota,
13 Wisconsin area. But it is not supposed to be
14 here. But here it is, dead centre of our
15 community.

16 Next one.

17 This plant also belongs -- doesn't
18 belong here, but there it is. It is called
19 sundrops. Or another English common name is small
20 evening primrose, which is different from the tall
21 primrose that we find. But this is a small
22 evening primrose. It is an S1 plant.

23 For those of you who don't know, those
24 S1 plants, they are in the report here someplace,
25 wherever you define what S1 and S2 plants are.

1 But this is a rare plant. This was
2 found along the roadside, this particular one.

3 Next one.

4 This is the hairy sweet cicely. That
5 is an S2 plant, rare, almost extinct, though not
6 as bad as an S1. And this particular plant is
7 right in the middle of one of your paths that
8 cross that highway by Sundown. The related family
9 to this plant is the smooth sweet cicely, that we
10 use that for children, with people who have
11 anorexia nervosa, the eating disease, or the --
12 they don't want to eat; people that are starving
13 themselves. We would use that particular plant to
14 save those children or those people.

15 The next one.

16 This one is your *Fraxinus nigra*, which
17 is your S1 -- or S2, S3 plant. That is your black
18 ash. The plant -- and that's the little forest
19 that -- part of the patch that you are going to go
20 through. We want to preserve that particular
21 plant, because again, some of these trees are
22 medicinal trees for us.

23 Next one.

24 Here is a pretty plant. It is a large
25 pink or a large pink ladyslipper. This is another

1 rare plant; you don't find it all -- very many
2 places. It took me 50 years to find one of those.
3 First time, when I was much younger, I found that
4 particular plant, but it is also rare.

5 In this particular area, as well, too,
6 we do have the white showy ladyslipper. It is
7 very rare. It's a protected species.

8 Next one.

9 There are other plants that we found,
10 like the *Spiranthes cernua*, which is the lady's
11 tresses. It is a beautiful plant. We don't have
12 a picture of it here, but that was another plant
13 that we found.

14 We found 300 different plants, and I
15 have over 1,000 pictures of those plants that we
16 documented. Not only did we document them, we
17 took samples of them. Where -- if they're rare
18 rare, we didn't bother them; if there was more
19 than ten species, we harvested several species of
20 them, and now they are sitting at the University
21 of Manitoba herbarium, where they will be there in
22 perpetuity for future reference for people that
23 wanted to see.

24 But it is one of our projects that we
25 did; we wanted to preserve this knowledge.

1 You might not see it clearly, but this
2 is called the British soldier lichen, because when
3 you look at the little heads over there, they look
4 like little British crowns. You know, the little
5 funny square triangular hats that they have. You
6 will see -- we found several types of lichens,
7 mushrooms, and mosses. We didn't document all of
8 the mosses and the lichens and the mushrooms,
9 because we were interested in the other ones.

10 Next one.

11 What you have here is not the monarch
12 butterfly; it is a butterfly that feeds on the
13 blazing star. So these two are highly combined.
14 They are very together. They can't live without
15 the other.

16 The next one, please.

17 This is called Indian pipe. It is a
18 mushroom. It is a plant that has no chlorophyll
19 in it, and it feeds off the rotted and the rotting
20 parts of the boreal forest. We found that there.

21 The interesting part of this
22 particular plant is it is the plant that is used
23 to combat epilepsy. It is a cure.

24 As we travelled -- next one.

25 What you don't see, but you will see

1 this fellow here. And this one here. We found
2 salamanders in this particular study. We found --
3 and it is a particular -- I'm not sure that's a
4 species.

5 The next one.

6 But we also found a lot of birds. We
7 found merlins, shrikes, sandhill cranes, ducks,
8 geese, all kinds of warblers and other songbirds
9 in the forest; we didn't document them all. What
10 we did not do is have a bird specialist with us,
11 or an insect specialist with us, because we were
12 doing a plant study.

13 In this particular part of the world
14 that we live in, in Manitoba, is rich in
15 diversity, and we are going to be cutting a path
16 through that.

17 Next one, please.

18 You don't see them here, but they are
19 right there. They are blister beetles that are
20 mating.

21 What we had recommended to Manitoba
22 Hydro -- and they listened to us -- is that --
23 stay away from the east side of that Watson
24 Davidson Wildlife Management Area. Major reason
25 that we would recommend that they do not go there

1 is that is the source of the Queen's water. Queen
2 Elizabeth gets her drinking water from there,
3 because the Marchand Water Company that produces
4 that water won three gold world medals for the
5 best drinking water.

6 If you put your line through that, on
7 the east side of that, you are going to destroy
8 that aquifer. You are going to destroy several
9 highly medicinal plant species. You are going to
10 destroy our safe zones. We had recommended that
11 you stay within that particular line, on the west
12 side of the road, west side of that wildlife
13 management area, because it is already disturbed.

14 It already has an agricultural based
15 community, and you don't have to do anything with
16 the land except deal with the landowners, or the
17 people, and satisfy their concerns. But the
18 damage that you do, that you may do, if you went
19 on the east side of that zone, is going to be
20 different. You will do more harm.

21 One of the areas of concern that we
22 talked about as we traveled this particular
23 pristine area is the amount of exposure that the
24 wildlife and the boreal forest will have. The
25 more boreal forest you disturb, the less habitat

1 our songbirds are going to have.

2 The less -- the more exposure you are
3 going to have to open areas -- yes, blueberries
4 like the sun, but they like the shade even better.
5 If you open that particular area, and you start
6 spraying herbicides on there, you are going to
7 contaminate the plants, and you are going to harm
8 our plants.

9 We are also saying that we do not have
10 a definitive study on that, but we can and do
11 measure the quality and potency of our medicines.
12 If you put it under a hydroelectric power line,
13 the potency of our medicine may not be as strong,
14 may not be as strong as those away from the lines,
15 the hydroelectric lines.

16 Without further adding to other
17 studies that we had done, but that is our belief,
18 that's what may happen to these medicines.

19 This area that you are talking about,
20 or that I'm talking about, has two archeological
21 sites in it which may have culturally sensitive
22 material. I know -- I've helped do archeological
23 digs, but we do not know what was the content of
24 these archeological sites near your -- this line.
25 I don't know if you will disturb or cause any

1 other disturbances to archeological sites, because
2 we have not walked that line, and I have not
3 studied the archeological sites or archeological
4 potential sites in that area.

5 The reason why it is important for us
6 is that this is not the first time that the
7 Emerson crossing has been used by immigrants from
8 other parts of the world. In the 1870s, during
9 the Minnesota War, where the uprising -- where the
10 Indian agent was -- said to the Dakota people,
11 "Our children are hungry", and he said, "Let them
12 eat grass."

13 So two warriors stuffed grass in every
14 orifice of his body, and that was the start of the
15 Minnesota War. They hung 40 chiefs at Mankato,
16 which was the start of the Rochester Mayo Clinic.

17 During that particular period of time,
18 with the persecution and the chasing of the Dakota
19 people across the boundary, that was the escape
20 zone. Those high ridges that are there were the
21 transition points and the escape zone for some
22 these people, and were also part of our trade
23 routes.

24 For us, that medicine line or the
25 boundary did not exist. In fact, John Tanner, the

1 Falcon, mentions traveling through there in the
2 1740s. As an additional note, Gordon Lightfoot
3 travelled that route, and he wrote a song called
4 "Sundown". That was the basis of that song. He
5 was impressed with that area.

6 Also, this was the edge of Lake
7 Agassiz. Where the edge of Lake Agassiz was, the
8 higher the ground was where the most likely point
9 where we would have harvested mammoths, woolly
10 rhinos, and the like; and the huge bison. Those
11 are the areas that we would have camped.

12 When we look at alternatives and
13 recommendations that we would put forward to the
14 Commission is that if you are going to put that
15 line through there, we would recommend you do not
16 use herbicides, but you use another method, called
17 silviculture. Silviculture is a method of
18 planting trees in the way of cutting down your
19 small growths underneath your lines.

20 As to prevent any further
21 contamination of all of these plants, it would
22 also provide continuous employment for certain
23 people that can do that 30-kilometre line of bush,
24 rather than doing damage through chemicals. And
25 as part of our philosophy, that you heard by other

1 presenters, that we do no harm to Mother Earth.

2 Grand Chief, that concludes my
3 presentation.

4 CHIEF DANIELS: Okay. Just a couple
5 of more things that I want to state.

6 First of all, I just want to thank the
7 people who are here to present as part of the
8 panel. Obviously we have -- some of them are gone
9 now, because our people are very busy people, but
10 this is very important for them to be a part of.

11 I mean, Gord shared some very
12 compelling words with you about the direction of
13 the future of our relationships. Even at his
14 own -- you know, dealing with his personal stuff,
15 he is still here to present to you, because his
16 knowledge and expertise is so valuable. And those
17 of you who know him know that it takes a lot for
18 him to be here.

19 I also want to just make a point, that
20 the future of humanity is directly connected with
21 our environment, and that there are now -- science
22 is starting to catch up with the knowledge that
23 indigenous people had, and we can even look as far
24 as just speaking with plants in your house, or how
25 the plants respond to singing, or to words. And

1 trees exhale oxygen and breathe in, take in what
2 we exhale.

3 And so our future, our future as
4 humanity, basically is connected with the trees.
5 And basically we breathe out; it breathes in. And
6 it breathes out, and we breathe in. And so I just
7 want to make that point as well.

8 Also, there was a reason why every
9 time we do anything with the environment, we
10 always put tobacco down, and we spoke to the land
11 and we spoke to the trees. And all of these
12 things, all of these medicines, are gifts that the
13 spirit gives back to us so that we can sustain, so
14 that we can live healthy and be prosperous in our
15 lives.

16 So I just want to say that. Thank
17 you.

18 THE CHAIRMAN: Thank you, Grand Chief.

19 MR. ERNIE DANIELS: I will be very
20 brief.

21 (Closing prayer)

22

23 Time is of essence, Mr. Chair. Today
24 the presenters got a lot of time to do their
25 presentations, and the lawyers asked a lot of

1 questions in that process, and our time was
2 limited here. I was wondering if you would
3 consider maybe dedicating one whole day to
4 indigenous people, or our youth, our elders, our
5 leaders do presentations, like what you heard here
6 today. I ask you that under advisement and maybe
7 you can get back to me later.

8 The other question I have is why it is
9 important for First Nations, indigenous people
10 here, to make a presentation to you.

11 Number 3, the information that you
12 receive from indigenous people, are you going to
13 use that in terms of your recommendations, or are
14 you just going through a motion of hearing us out,
15 and that's it?

16 You don't have to answer the questions
17 now, but -- like, you know -- it is up to you.

18 THE CHAIRMAN: The first question,
19 yeah, we will take that under advisement, the idea
20 of a whole-day session, if I understood you right.

21 The last question, absolutely, we will
22 take everything we heard today and every other day
23 in these hearings into consideration when we make
24 our decision. We heard many things today that
25 were useful to us, and as we did on other days,

1 too, and we will use all of that in forming our
2 recommendations.

3 The second question, I didn't quite
4 catch the question; if you wouldn't mind repeating
5 that one, please.

6 MR. ERNIE DANIELS: The first question
7 was -- the first question was to do with the
8 dedicating one whole day to a First Nations. And
9 the second question was the -- what was the second
10 question? I don't know.

11 MR. BEDDOME: I think you asked why is
12 it important for First Nations --

13 MR. ERNIE DANIELS: Yeah. Why do you
14 feel that First Nations indigenous people have an
15 input here? Is it important to you guys as
16 Commissioners?

17 THE CHAIRMAN: Well, I will speak for
18 myself; if the others would like to add anything,
19 they are of course free to do that.

20 You, and through your ancestors, have
21 known this land longer than other people who also
22 have presented, and also had very good things to
23 say, and very useful things to say to us. But
24 your information, your knowledge goes back the
25 furthest, so that is very, very important to us.

1 And we appreciate very much what you've had to say
2 today.

3 I don't know if anyone else wants to
4 add anything.

5 MR. NEPINAK: I was invited to -- a
6 few years ago, to move back to Manitoba, and to
7 do -- to work on my reserve. Prior to that, I
8 sweat, do ceremony all the time with my elder,
9 when he was alive.

10 And prior to being asked to move back
11 to Manitoba, for about two or three years I kept
12 hearing the spirit telling me, "Move home, move
13 home."

14 And eventually the time came when I
15 was -- when it was available. And I always knew
16 that I was here for a reason. And I kept
17 thinking, "Well, okay, maybe this is the reason",
18 but never -- things never made sense, until I got
19 a phone call, after presenting to the Commission
20 in 2012, I got a phone call by the Commission
21 asking if I would consider being on the
22 Commission.

23 And right away, it made sense, why the
24 spirits wanted me here. And that's why I sit here
25 today, to help with the Aboriginal voice, with our

1 voice.

2 And that's it. You know, that's why
3 I'm here.

4 THE CHAIRMAN: Well, thank you very
5 much.

6 It is my understanding that there may
7 be some questions, so I will ask Hydro first if
8 they have any questions of the panel. No?

9 It is also my understanding that
10 Mr. Toyne might have a question or two. For the
11 benefit of the panel, Mr. Toyne is with the
12 Southeast Stakeholders Coalition.

13 MR. TOYNE: Thank you very much,
14 Mr. Chair, and thank you very much to all you of
15 you for that presentation.

16 I will have a very small number of
17 questions for you, which I hope you have been told
18 to expect. But first of all, I will explain why
19 I'm asking.

20 So the group of individuals that I
21 represent is seeking to shift the line from where
22 Hydro is currently proposing it a bit further to
23 the east. So that rather than turning south near
24 Anola, the line would continue east towards Vivian
25 and then turn south, and then travel east of

1 Marchand and go in between the Pocock Lake
2 Ecological Reserve and the Watson Davidson
3 Wildlife Management Area.

4 As I understand it, somewhere between
5 the rail line and the road in that area, and then
6 eventually start to head southeast, towards Piney.

7 So the series of questions that I've
8 got for the panel are as follows.

9 First, could you tell the Commission
10 what other specific concerns you might have about
11 that, above and beyond the information that you've
12 already provided today?

13 Second, if the Commission was going to
14 recommend that the route be changed, along those
15 lines, what other types of study do you think
16 would be important to be done? Are there any
17 additional licensing concerns or conditions that
18 you might have?

19 And perhaps this final question might
20 be more directed towards the Grand Chief, to the
21 extent that he might know: What impact, if any,
22 might it have on current ongoing Crown
23 consultation processes, given the statement
24 earlier that they don't really seem to have got
25 too far yet?

1 So those would be my questions, and I
2 would be interested to hear what you have to say.

3 CHIEF DANIELS: Okay. Yep. Okay.
4 Thank you for your questions.

5 The first one, because SCO is not a
6 rights-holding body, we can't answer that, because
7 it has to be the communities that answer about
8 their concerns on the proposed route changes over
9 and above what has already been presented.

10 The types of engagement activities,
11 again, is mainly squarely on the communities
12 themselves. And so, as Grand Chief and as SCO, we
13 can't say what the community is doing in that
14 respect, because we are not given that right to do
15 that. It rests with the community.

16 With additional licensing, again, we
17 will support community decision-making. So
18 whatever the community supports, we are there to
19 help them in that decision-making. And they have
20 the sole discretion and the sole right.

21 And any information about the state of
22 current Crown consultations, that was the last
23 one, I did have one of my staff and Jared go to a
24 meeting recently, and I will give it to him to
25 answer, if you would like.

1 MR. WHELAN: First part, in terms of
2 engagement, I was asked by Grand Chief, with
3 another staff member from SCO, Joanne Soldier, to
4 go to the March meeting held by Manitoba Hydro in
5 terms of engagement on monitoring. And we
6 attended that.

7 In terms of Manitoba Crown/Aboriginal
8 consultation, again, as the Grand Chief said, you
9 have to go back to each individual nation in terms
10 of what they are doing with the province.

11 CHIEF DANIELS: Any other questions?

12 MR. TOYNE: Only if anyone else that's
13 on the panel wanted to provide any additional
14 information. If Mr. Daniels has --

15 Guy in the back, Dave Dave.

16 MR. DAVE DANIELS: Yes, there is a
17 railway line along the east side of that corridor,
18 as you mentioned. There is some level of
19 contamination there already, with the creosote and
20 the tar that's already there. The transmission
21 line and the access to that land would increase
22 the contamination that's there. The more you
23 disturb that contaminated area along the railway,
24 the more it is going to spread, in my opinion.
25 That's my opinion; okay?

1 Whereas the farmland now, where the
2 proposed line is, it is already disturbed with
3 chemicals, and some residue, and herbicides, and
4 the like. The damage that was done to that land
5 is already -- what more damage can you do, when
6 you put a Hydro transmission line through that?
7 Other than it might be unsightly; you don't want
8 it on your property, and the like.

9 But the -- you have to weigh the
10 amount of damage that you may potentially do to a
11 pristine area to damage to an area that's already
12 there.

13 That's my opinion, whether it is right
14 or wrong, but that would be my opinion. Because I
15 walked that line.

16 Thank you.

17 MR. TOYNE: Mr. Chair, with your
18 permission, and if Mr. Daniels is open to it, I've
19 got two brief questions for clarification to ask,
20 if that's okay, sir.

21 CHIEF DANIELS: Yes.

22 MR. TOYNE: So the two follow-up
23 questions would be: You spoke a lot during your
24 presentation about the east side of the wildlife
25 management area.

1 MR. DAVE DANIELS: Yes.

2 MR. TOYNE: So the first question for
3 clarification is, were you talking the large area
4 that's to the east, or the very specific area
5 that's next to it?

6 So that's the first follow-up
7 question. And then the second question is: Do
8 you have any concerns about the area further to
9 the north, say, closer to Vivian and Ross? And if
10 you do, if you could take a minute to tell the
11 Commission about that.

12 MR. DAVE DANIELS: We did walk that
13 particular line, and we did spend some time along
14 the east side of that. There is also an abandoned
15 railway, or an old town that was decommissioned;
16 we did walk through there as well, too, on that
17 particular place.

18 Where we did spend time is in this
19 area, and also in the Lonesand area. And we did
20 interview several people, and we did go along that
21 particular line. Right?

22 So we did not spend a great deal of
23 time over here, because it was just along the edge
24 of the agricultural field. So we didn't go north
25 of that particular -- the highway north of

1 Marchand, but we did spend some time going south
2 of Marchand, in that particular area.

3 And we did find some rare plants in
4 there. We would not want to see those aquifers
5 contaminated. If they are already contaminated by
6 the old line, further damage to it would be --
7 doesn't make any sense to me.

8 MR. TOYNE: Right. Thank you very
9 much.

10 THE CHAIRMAN: All right. Thank you,
11 Mr. Toyne, for those questions.

12 And I also, like Mr. Toyne, would like
13 to thank the panel for a very thoughtful and very
14 helpful presentation. And there is a lot of
15 experience on that panel, and we certainly
16 benefited from it.

17 So thank you all, and also, an apology
18 for keeping you so late.

19 Oh, I'm sorry, I forgot -- that's the
20 second time I've done this today.

21 Does the panel have any questions?

22 MR. GILLIES: Ian Gillies here, and my
23 question is directed to Grand Chief Daniels.

24 In your presentation, you said
25 something that really caught my ear, along the

1 lines of that you truly believe that we could be
2 leaders in incorporating consideration for the
3 well-being of First Nations that are affected by
4 Manitoba Hydro projects.

5 Can you elaborate on that statement?
6 I'm trying to get an idea of what that might look
7 like.

8 CHIEF DANIELS: Say that one more
9 time?

10 MR. GILLIES: Yeah. I think your
11 statement was along the lines of with respect to
12 Crown Corporations, and I think you were referring
13 specifically to Manitoba Hydro: "I honestly
14 believe that we could be leaders in taking into
15 consideration the well-being of First Nations."

16 CHIEF DANIELS: Which slide was that?

17 MR. GILLIES: I don't think it was in
18 relation to a specific slide; it was more in your
19 introductory remarks.

20 CHIEF DANIELS: It could be years
21 before -- say it one more time? Sorry.

22 MR. GILLIES: "I honestly believe that
23 we could be leaders taking into consideration the
24 well-being of First Nations."

25 CHIEF DANIELS: I don't think those

1 were my statements. I think those were the
2 statements that came from Gord Bluesky. But I can
3 answer.

4 MR. GILLIES: Yeah. I apologize; you
5 are right. It was another panelist who is not
6 here now.

7 CHIEF DANIELS: Without getting into
8 any specific references, I would say that
9 partnerships in other districts throughout Canada,
10 from his analysis, I guess, from his own
11 perspective, were that the partnerships are much
12 more beneficial towards First Nations. Because he
13 was talking about how development has created
14 prosperity among non-indigenous peoples in a more
15 substantive way than it benefits indigenous
16 peoples on reserve.

17 So he was saying that there need to --
18 that we could lead in ensuring that indigenous
19 peoples in Manitoba are benefiting much more than
20 we are today, and hopefully in a way that others
21 around the country can follow as a model, so that
22 maybe people in Ontario or in B.C. would say,
23 "Manitoba is leading, in terms of their work, in
24 bringing about better quality of life for First
25 Nations in their communities."

1 So I think that's where he was going.

2 MR. GILLIES: Thank you.

3 THE CHAIRMAN: Thank you for that
4 question, Mr. Gillies, and for the response, Grand
5 Chief Daniels. So once again, thank you very,
6 very much for that presentation, and for staying
7 so late.

8 Do we have documents to file?

9 MS. JOHNSON: Yes, we have a few.

10 CAC 007 is the outline, and CAC 008 is
11 Dr. Fitzpatrick's paper. 009 is the errata to
12 that paper. Number 10 is the presentation we saw
13 this morning. Number 11 is The Great Binding Law.
14 MWL 004 is Ms. McHugh's paper; 005 is her
15 presentation. And SCO 005 is the presentation we
16 just saw, and 006 is the map that goes with it.

17 (EXHIBIT CAC-07: Outline of
18 presentation)

19 (EXHIBIT CAC-08: Dr. Fitzpatrick's
20 paper)

21 (EXHIBIT CAC-09: Errata to Dr.
22 Fitzpatrick's paper)

23 (EXHIBIT CAC-10: Presentation by Dr.
24 Fitzpatrick)

25 (EXHIBIT CAC-11: Great Binding Law)

1 (EXHIBIT MWL-04: Ms. McHugh's paper)

2 (EXHIBIT MWL-05: Ms. McHugh's

3 presentation)

4 (EXHIBIT SCO-05: Slide presentation

5 by SCO)

6 (EXHIBIT SCO-06: Map by SCO)

7 THE CHAIRMAN: All right. Thanks very

8 much.

9 We are concluded for today, and we

10 will see you all here again at 9:30 tomorrow

11 morning. And thanks for your patience. It was a

12 long day.

13 (Adjourned at 6:00 p.m.)

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