



“When You Talk - We Listen!”



MANITOBA PUBLIC UTILITIES BOARD

re:

MANITOBA HYDRO

2023/24 and 2024/25

GENERAL RATE APPLICATION

Hearing

Before Board Panel:

Robert Gabor, KC - Board Chairperson

Marilyn Kapitany - Board Vice Chair

Carol Bellringer - Board Member

Hamath Sy - Board Member

George Bass, KC - Board Member

HELD AT:

Public Utilities Board

400, 330 Portage Avenue

Winnipeg, Manitoba

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Pages 1090 to 1136

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| | | |
|----|-------------------------------------|----------|
| 1 | Table of Contents | |
| 2 | | Page No. |
| 3 | | |
| 4 | | |
| 5 | DAYMARK PANEL: | |
| 6 | JOHN ATHAS, Resumed | |
| 7 | DOUGLAS SMITH, Resumed | |
| 8 | JEFFREY BOWER, Resumed | |
| 9 | | |
| 10 | Cross-examination by Mr. Bob Peters | 1093 |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | Certificate of Transcript | 1136 |
| 17 | | |
| 18 | | |
| 19 | | |
| 20 | | |
| 21 | | |
| 22 | | |
| 23 | | |
| 24 | | |
| 25 | | |

1 --- Upon commencing at 9:00 a.m.

2

3 THE CHAIRPERSON: Good morning,
4 everyone. Mr. Peters, do you want to take us through
5 the daily overview?

6 MR. BOB PETERS: Yes. Thank you.
7 Good morning, Mr. Chair, Board members, Daymark
8 witness, counsel, ladies and gentlemen.

9 The plan today is to start the morning
10 on the public record for approximately an hour so that
11 I, on behalf of the Board, can complete the questions
12 that we have for Daymark on the public record.

13 Following that, we're going to ask the
14 Board for the morning break because there will need to
15 be a technology turnover to ensure that the in camera
16 session will be held totally off of the record and
17 that parties are not given access through any of the
18 technological means.

19 And after we are set up for the in
20 camera portion, Manitoba Hydro, due to witness
21 availability, is putting forward I believe Mr. Fogg
22 who will be testifying on a revenue requirement
23 matter, and that will take a short period of time.
24 And after that is finished, we'll resume with Manitoba
25 Hydro's panel on the exports.

1 So there's a little bit of juggling for
2 witness availability, but we're confident we can
3 finish relatively on schedule, sir.

4 THE CHAIRPERSON: Okay. If you'd like
5 to proceed.

6 MR. BOB PETERS: Yes, I would, and of
7 course we note that we are on the public record. This
8 sparse audience suggests that people thought it was
9 Dr. Williams or Mr. Hacault who was going to be on the
10 microphone, but we'll -- we'll excuse them. They're
11 watching by the live stream, I'm sure.

12 THE CHAIRPERSON: I suspect they're on
13 the highway already.

14

15 DAYMARK PANEL:

16 JOHN ATHAS, Resumed

17 DOUGLAS SMITH, Resumed

18 JEFFREY BOWER, Resumed

19

20 CROSS-EXAMINATION BY MR. BOB PETERS:

21 MR. BOB PETERS: Good morning to Mr.
22 Smith, Mr. Bower, Mr. Athas. We are on the public
23 record, as I've indicated a couple of times, so again
24 I want you to -- none of my questions are -- are at
25 this time seeking to elicit anything that would be

1 confidential. I'd ask you to be cautious of that.

2 I'd also suggest to you that we do not
3 need to hear you repeat what you've told the Board
4 yesterday. If you've already told the Board that, you
5 can -- you don't need to repeat it for us today.

6 So with that general understanding,
7 gentlemen, I -- I have asked Ms. Schubert to put up
8 pages in Board counsels' second book of documents,
9 Exhibit PUB-19-2. On page 5, there's a -- a chart
10 about precipitation.

11

12 (BRIEF PAUSE)

13

14 MR. BOB PETERS: You're familiar
15 generally with this chart, are you?

16 MR. DOUGLAS SMITH: Yes, we are.

17 MR. BOB PETERS: And the thrust of it,
18 Mr. Smith, is that system precipitation starting back
19 in September of 2020 through to November of 2021 was
20 certainly below normal?

21 MR. DOUGLAS SMITH: Yes.

22 MR. BOB PETERS: And it was also below
23 the other major drought that we remember in Manitoba
24 in the 2002/2003 fiscal year?

25 MR. DOUGLAS SMITH: Correct. This is

1 showing total system precipitation, and it's -- it's
2 below that as well.

3 MR. BOB PETERS: Yeah. And then on
4 the next page, 6, we have a couple of other charts
5 that I'm not planning to go into detail with you on.
6 The top one deals with hydraulic energy from inflows,
7 and you're generally familiar with that as well?

8 MR. DOUGLAS SMITH: Correct.

9 MR. BOB PETERS: And at the bottom of
10 the page is the energy in storage. You're generally
11 familiar again with that?

12 MR. DOUGLAS SMITH: Yes.

13 MR. BOB PETERS: The thrust of it was
14 that, in the 2021 fiscal year, 2021/'22 fiscal year,
15 both of those indicators were all below normal for
16 most of the year if not all of the year?

17 MR. DOUGLAS SMITH: Yes, that's what
18 those are showing.

19 MR. BOB PETERS: All right. Now, if
20 we turn to Daymark's report on page 83, Daymark is
21 telling this Board that some of the key activities --
22 and it's been highlighted for the convenience of those
23 reading it.

24 You say that in that year, the drought
25 management planning document provided some direction,

1 and yet other activities occurred more on an ad hoc
2 basis, correct?

3 MR. DOUGLAS SMITH: Yes.

4 MR. BOB PETERS: And the ad hoc basis
5 is to reflect that not everything was in writing.
6 There was still discussion, consensus, judgment being
7 used in how to manage through the drought?

8 MR. DOUGLAS SMITH: Yes. I think that
9 is in part what is -- is meant here. I think in
10 addition -- so, the -- in addition to the -- to the
11 highlighted place, it says, "as conditions warranted."

12 And -- and what we meant by that is
13 that, as -- as conditions progressed throughout that
14 fiscal year, they continued to adjust and take
15 additional actions. And not all of those, as you say,
16 were -- were documented. Some of those were executing
17 professional judgment or responding to conditions and
18 events as they occurred.

19 MR. BOB PETERS: And from those charts
20 that I showed you just briefly, Mr. Smith, you would
21 agree that there were -- in the -- in the 2021/'22
22 fiscal year, there were periods of increased drought
23 risk throughout that year?

24 MR. DOUGLAS SMITH: I think -- as a
25 shorthand for -- for a complex situation, I think

1 that's -- that's a fair assessment. Precipitation was
2 low. It was not uniformly low. And -- and the -- but
3 it was -- it was unfolding over the course of months.
4 It was increasingly severe.

5 MR. BOB PETERS: Manitoba Hydro, to
6 your understanding, recognized the escalation of the
7 increased risk of drought throughout that year, and
8 they took certain steps as that progressed?

9 MR. DOUGLAS SMITH: Correct.

10 MR. BOB PETERS: In your report that's
11 on the screen you indicate that because of the drought
12 that was eminent or happening, there were some steps
13 taken by Manitoba Hydro, the first of which was to
14 strike an oversight committee in August of 2021,
15 correct?

16 MR. DOUGLAS SMITH: Yes. I believe
17 the first meeting was on or about the 4th of August.

18 MR. BOB PETERS: And that oversight
19 committee was to guide the weekly resource planning
20 team that was -- that was meeting?

21 MR. DOUGLAS SMITH: I don't -- I don't
22 want to be overly specific about what -- what their
23 intentions were. They were providing oversight. They
24 were receiving reports that were a summation of some
25 of the key points related to -- to the unfolding

1 conditions, both in the markets and in hydrology.

2 And -- and there was clear evidence
3 that there was discussion back and forth with members
4 of that weekly team and the oversight committee to --
5 to address potential actions and -- and how to
6 respond.

7 MR. BOB PETERS: All right. On -- on
8 Daymark's slide 53 of the Daymark slide deck that was
9 shown yesterday which is marked as Exhibit Daymark
10 number 4, you say -- you say essentially that, on the
11 first bullet:

12 "To adhere to the Drought Management
13 Plan biweekly meetings were
14 established starting in early
15 August."

16 You said now August 4, 2021, correct?

17 MR. DOUGLAS SMITH: Yes, subject to
18 check, that's -- that's my recollection of the first
19 meeting.

20 MR. BOB PETERS: And if we go to
21 Manitoba Hydro's application to appendix 5.3, in their
22 appendix 5.3, page 12, the -- there's a sentence that
23 starts off:

24 "The CFO business unit is in the
25 process of implementing an

1 enterprise risk management
2 framework."

3 You see that?

4 MR. DOUGLAS SMITH: I do.

5 MR. BOB PETERS: Were you aware that
6 that -- that the -- the chief financial officer, the
7 business unit under -- under his control, was in the
8 process of implementing an enterprise risk management
9 framework?

10 MR. DOUGLAS SMITH: I'm generally
11 aware of -- of that fact. I did not investigate what
12 exactly that meant.

13 MR. BOB PETERS: All right. The last
14 sentence then on that paragraph is that:

15 "Currently oversight of these risks
16 ..."

17 And these risks are referring to
18 drought.

19 "...is the responsibility of a team
20 of executives including the Vice
21 Presidents."

22 And there's three (3) Vice Presidents
23 listed, correct?

24 MR. DOUGLAS SMITH: As well as the
25 Chief Financial Officer, yes.

1 MR. BOB PETERS: Actually, I think --
2 I think that's the third Vice President. And maybe
3 I'm not counting them correctly.

4 Yeah. The -- the Vice President and
5 Chief Financial Officer would be the -- would be the
6 third Vice President? I probably didn't ask that very
7 clearly.

8 MR. DOUGLAS SMITH: I -- yes, I see
9 that.

10 MR. BOB PETERS: Okay. Thank you.
11 If we go down to the next paragraph and we -- we look
12 at the second sentence:

13 "During periods of increased drought
14 risk, executive will be updated
15 regularly and in greater detail and,
16 if appropriate, review and approve
17 risk tolerances and risk mitigation
18 strategies."

19 Correct?

20 MR. DOUGLAS SMITH: Yes.

21 MR. BOB PETERS: That executive being
22 regularly updated is what you understand started on
23 August the 4th through those additional meetings, or
24 the oversight meetings?

25 MR. DOUGLAS SMITH: My understanding

1 is that is when a specific committee was -- was stood
2 up to receive presentations and have discussions. I -
3 - I can't speak to whether there was communication
4 between that team of executives and the -- our PPS
5 prior to that. I -- I did not investigate any email
6 traffic or other things but the official start of
7 formal presentations to that group started in early
8 August.

9 MR. BOB PETERS: And my recollection
10 of the evidence from Mr. Gawne is that there would be
11 -- there would be monthly reports that -- that he
12 would send up to his Vice President.

13 You're not aware of that?

14 MR. DOUGLAS SMITH: I did not review
15 monthly reports prior to...

16 MR. BOB PETERS: Well, in terms of
17 this oversight committee that was struck and first met
18 on August the 4th of 2021, that was to deal with the
19 increased drought risk, correct?

20 MR. DOUGLAS SMITH: I'm sorry, could
21 you repeat that?

22 MR. BOB PETERS: The oversight
23 committee that you are aware was struck and then first
24 met on August the 4th of 2021 was to deal with
25 increased drought risk?

1 MR. DOUGLAS SMITH: That is my
2 understanding.

3 MR. BOB PETERS: Do you know why that
4 committee wasn't struck in April or May or in June in
5 light of the precipitation, the energy and storage at
6 that point in -- in those earlier months?

7 MR. DOUGLAS SMITH: I -- I do not know
8 why it was not set up earlier.

9 MR. BOB PETERS: In Daymark's view,
10 would it have been beneficial for that comm -- for
11 that oversight committee to -- to have engaged
12 earlier?

13 MR. DOUGLAS SMITH: I think in -- in
14 our view, it would be beneficial to have oversight
15 like that full-time. And I think that is my
16 understanding of what has occurred subsequent to this
17 drought period, is a reconstitution of a oversight
18 committee that would meet periodically as -- as, sort
19 of, part of their process.

20 MR. BOB PETERS: And do -- do you know
21 -- and if I could ask Ms. Schubert to just scroll to
22 the -- just a few lines up to see the top paragraph on
23 this page.

24 Is that -- is that activity that you're
25 referencing now, part of the Enterprise Risk

1 Management framework and this updated governance
2 model, that's causing this oversight committee to have
3 full-time meetings?

4 MR. DOUGLAS SMITH: My understanding
5 is that is part of that -- I -- I don't know, that I'd
6 speak to causation, but it is embedded in that
7 activity and effort.

8 MR. BOB PETERS: On page 87 of the
9 Daymark Exhibit 4 report, there's a paragraph that was
10 authored -- yes, thank you.

11 And the -- the upshot of what I heard
12 yesterday, Mr. Smith, was that Daymark was critical of
13 Manitoba Hydro because there is still a large amount
14 of knowledge that resides only in the minds of its
15 personnel and that that knowledge hasn't been reduced
16 to writing or incorporated into Manitoba Hydro's
17 existing policies.

18 Would that be a fair summary of the
19 Daymark conclusion?

20 MR. DOUGLAS SMITH: I -- I think what
21 we were -- what we were observing is that the process,
22 as described to us, involved a great many experts who
23 reflect the various positions of -- of the components
24 of Manitoba Hydro and the stakeholders that they
25 serve.

1 And that, in the course of our
2 interactions with the Manitoba Hydro team, they were
3 able to produce experts who could talk us through
4 pieces of what was happening at the time, what was
5 going on and why the -- why the team was working the
6 way it was.

7 And -- and they were very helpful in
8 that, but frequently they were producing knowledge
9 from their heads or producing a -- a document for us
10 at the time that would help us understand the complex
11 relationships. They were not necessarily pointing us
12 to existing documents that sort of laid that all out
13 in detail.

14 And so, the -- the point of this is
15 that's always the case with an expert system, you can
16 never capture everything that experts know
17 structurally in documents or in -- but this might be
18 an area in which additional investigation on the -- on
19 the part of Manitoba Hydro to -- to look at that from
20 a risk perspective and to see if there is more that
21 they can do to mitigate potential risks around the --
22 the concept of -- of expert knowledge that does not
23 exist memorialized in -- in documentation.

24 MR. BOB PETERS: So, you're telling
25 this Board that Daymark came into situations where it

1 wanted or needed information and the information
2 didn't reside in the meeting room or the Zoom call
3 that you were on?

4 MR. DOUGLAS SMITH: It resided in --
5 in the explanations or the discussion with the people
6 in the meeting room or the Zoom room. And it did --
7 it was not something that they could just hand to us
8 for us to read. It was -- it was in conversation. It
9 was in illustrations. It was provided in examples
10 and, in some cases, producing a document to better
11 illustrate the points they were making.

12 That's the nature of expert knowledge.
13 There was enough of that, that we thought it was worth
14 calling out the question of whether more systematic
15 documentation would be helpful.

16 MR. BOB PETERS: Did Daymark determine
17 why it hadn't been reduced to writing?

18 MR. DOUGLAS SMITH: No.

19 MR. BOB PETERS: Did Daymark determine
20 that the lack of written information or written
21 directions cause any identifiable concerns during the
22 2021 drought management?

23 MR. DOUGLAS SMITH: No.

24 MR. BOB PETERS: There's no examples
25 that you -- you can provide to this Board?

1 MR. DOUGLAS SMITH: No, the -- the --
2 in -- in -- in fact, it was clear that the expert
3 knowledge was available to the RPPS team; that
4 the breadth of -- of involvement in that team brought
5 the necessary expertise to those weekly meetings.

6 The -- the point that we're -- we're
7 making is that was -- that was possible because of the
8 breadth of expertise that was in that virtual room, in
9 that discussion, but not that there was a lack but
10 that there could be a future concern, given the amount
11 of that that resides in their experts and their
12 expertise and their -- their experience.

13 MR. BOB PETERS: Do I take from that
14 answer that the source of that expertise may not have
15 been in the room -- that that very person might not
16 have been available, but the other experts had an
17 understanding of that area and could discuss it at a
18 higher level, but not to the minutiae that the subject
19 matter expert would have been able to address?

20 MR. DOUGLAS SMITH: I -- I'm sorry,
21 which -- are you -- are you asking about the room
22 right when we were talking to them or the RPPS?

23 MR. BOB PETERS: The RPPS.

24 MR. DOUGLAS SMITH: My understanding
25 is the RPPS included all experts necessary to have --

1 have that dialogue and reach that consensus.

2 MR. BOB PETERS: Thank you. On page
3 84 of Daymark's report, there is a -- a sentence
4 highlighted that senior management are informed of
5 operating conditions and review and approve decisions
6 related to drought management outside of established
7 controls and approval authority of line management.

8 Do you see that?

9 MR. DOUGLAS SMITH: I do.

10 MR. BOB PETERS: Can you tell this
11 Board, as an example, what decisions did this
12 oversight committee approve that were outside of the
13 established controls of line management?

14 MR. DOUGLAS SMITH: So, an example of
15 that would be the trading group needed to receive
16 approvals for volumes for products that they wished to
17 engage in hedging prior to engaging in -- in those
18 transactions.

19 MR. BOB PETERS: And that approval was
20 provided by the three (3) Vice-Presidents' oversight
21 committee?

22 MR. DOUGLAS SMITH: The -- the
23 approvals depended on the level being requested of the
24 volumes being requested and the products being
25 requested. I -- I don't recall, specifically, who

1 approved what, but that's outlined in the policy, and
2 they -- they followed the policy with respect to
3 acquiring those approvals.

4 MR. BOB PETERS: And, in your report,
5 Daymark sets out that drought management fundamentals
6 were established and, then, it goes on and it talks
7 about, just before the bullets, the principles
8 articulated.

9 So, my -- my basic question is: Are the
10 drought management fundamentals those five (5)
11 bullets?

12 MR. DOUGLAS SMITH: So, I think the --
13 there -- there's, obviously, more to the drought
14 management funding document than -- than that. When
15 they stood up the -- the Oversight Committee, in the
16 first presentation that they did, they presented some
17 material, and my recollection is they -- they, as part
18 of that presentation, they established some of the --
19 the guiding principles behind how drought is managed.

20 I don't think it was intended to be
21 all-inclusive but more introductory, and to start a
22 conversation -- a dialogue with -- with that oversight
23 committee, and to -- to introduce concepts around how
24 there would be interacting.

25 MR. BOB PETERS: And the first

1 principle was that economic decisions, on average,
2 continue until energy security is binding? I think I
3 added a word there, but that's how Manitoba Hydro was
4 operating during the drought?

5 MR. DOUGLAS SMITH: That was the --
6 the articulation of the -- the high level principles
7 that -- that Manitoba -- that the RPPS presented to --
8 to the committee.

9 MR. BOB PETERS: Briefly, what did
10 Daymark understand that first bullet to mean?

11 MR. DOUGLAS SMITH: Briefly, we
12 understand that -- that to mean -- and we talked about
13 this in -- in some detail yesterday, that their --
14 their modelling, their decision -- their approach to
15 determining operations of the -- of their system are
16 to optimize the economics within the given constraints
17 that they have to operate on at -- at any point in
18 time.

19 MR. BOB PETERS: The second last
20 bullet talks about plan to supply firm load with firm
21 resources.

22 Do you see that bullet?

23 MR. DOUGLAS SMITH: I do.

24 MR. BOB PETERS: What is the
25 alternative to that?

1 MR. DOUGLAS SMITH: The -- the
2 alternative to that would be to -- to be open to a
3 viametric (phonetic) risk and rely on an uncertain
4 market to -- to serve firm commitments.

5 MR. BOB PETERS: Did these five (5)
6 drought management fundamentals exist before the
7 Executive Oversight Committee was struck? Is that
8 what I took from your --

9 MR. DOUGLAS SMITH: That's my
10 understanding, yes.

11 MR. BOB PETERS: All right. There's
12 also indication on this same page, just below that,
13 that during the drought Manitoba Hydro monitored MISO
14 market. If we can scroll, please, just to see that's
15 -- there's your point.

16 What communications with MISO are --
17 are being monitored at this point in time?

18 MR. DOUGLAS SMITH: So, the monitoring
19 was of MISO conditions. Obviously, the MISO market is
20 a -- a significant market for balancing their --
21 Manitoba Hydro's load and demand. They're -- they're
22 generally either selling or purchasing from MISO.

23 So, as their -- as -- as Hydro's water
24 conditions were becoming more of a constraint, they
25 needed to also consider what was happening in their

1 significant southern market because they -- they --
2 the need for supporting purchases were -- was growing.

3 So, that market was taking on an even
4 more important role than it already does. I -- I
5 don't think they -- this -- that was -- that was not
6 intended to state that they all of a sudden started to
7 monitoring MISO. MISO is -- is an important component
8 of their -- their supply and demand all the time, but
9 it became even more critical.

10 It was presented to the Executive
11 Committee on a regular business, what was -- what was
12 occurring. The Executive Committee's presentations
13 covered a wide range of -- of topics, including the
14 MISO markets and availability of energy to meet their
15 -- their projected growing need.

16 MR. BOB PETERS: On page 83 of the
17 Daymark Exhibit 4 report, another one (1) of the
18 activities that you highlighted was -- was the
19 increase in energy conservation as the -- as the
20 fourth point.

21 Do you see that?

22 MR. DOUGLAS SMITH: I do.

23 MR. BOB PETERS: What -- what does
24 that -- what -- what is Daymark writing about there?

25 MR. DOUGLAS SMITH: I wouldn't want to

1 try to -- to get too specific in -- in terms of
2 actions, but -- but my understanding is that as
3 inflows decreased there were constraints in terms of
4 what -- what they could dispatch and what levels of
5 reservoirs they needed in order to ensure that the
6 system could continue to operate reliably, and that
7 those constraints included -- included conservation
8 efforts to -- to preserve water for future.

9 MR. BOB PETERS: All right. This
10 wasn't -- this wasn't asking customers to turn off the
11 lights or turn down the heat. This was --

12 MR. DOUGLAS SMITH: Not to my
13 knowledge, no.

14 MR. BOB PETERS: Do you know if
15 Efficiency Manitoba had any involvement with the
16 oversight committee or the RPPS?

17 MR. DOUGLAS SMITH: I don't have any
18 specific knowledge either way.

19 MR. BOB PETERS: All right. In Board
20 counsels' book of documents, page 27, was a chart that
21 reviewed -- was reviewed earlier in the week. Are you
22 -- page 27, yes, thank you.

23 Are you generally familiar with this
24 chart, Mr. Smith?

25 MR. DOUGLAS SMITH: Yes.

1 MR. BOB PETERS: And lots going on on
2 this chart, but one (1) of your answers was that
3 Manitoba Hydro was, within their constraints, trying
4 to maximize their economic recovery -- or economic
5 position relative to exporting energy?

6 MR. DOUGLAS SMITH: Yeah. They're
7 trying to maximize the -- the value of -- of water.
8 That -- that isn't quite the same as -- as maximizing
9 the value of exports because the value of storage
10 water is a part of their optimization.

11 MR. BOB PETERS: And so when we look
12 at this chart with that last answer, Mr. Smith, we see
13 that in May and in June of 2021, the light green bar
14 shows that Manitoba Hydro is exporting considerable
15 amounts of off-peak energy, correct?

16 MR. DOUGLAS SMITH: I see that.

17 MR. BOB PETERS: Did that energy have
18 a greater value had it been left in storage?

19 MR. DOUGLAS SMITH: The -- the best
20 models in that period -- so -- so when they -- when
21 they run their model, they are always using a value of
22 storage as part of their calculus.

23 So I don't -- I don't mean -- I don't
24 mean to be trite here, but -- but no because the model
25 compared the -- the value of -- of selling versus the

1 value of storage given all conditions: reservoir
2 levels, conditions throughout their system,
3 projections of future flows, as well as monitoring for
4 the -- ensuring the maintenance of sufficient end of
5 year -- end -- end of fiscal year storage to survive a
6 drought in the following year.

7 So all of that is -- is occurring
8 within the economic dispatch model, and the -- the
9 value of the water that comes out is -- is what -- is
10 what is planned for unless there are extenuating
11 circumstances that come out of the RPPS.

12 MR. BOB PETERS: All right. Let's
13 turn on that same chart to the months of maybe
14 December, January, and into February of 2022.

15 You can see that at the bottom?

16 MR. DOUGLAS SMITH: Yes.

17 MR. BOB PETERS: Do you -- are you
18 aware that in say January and February, Manitoba was
19 blessed with an abundance of that snow that you
20 remember being in Manitoba last time you were here?

21 MR. DOUGLAS SMITH: I am aware through
22 this review that precipitation was recovering
23 throughout the winter months.

24 MR. BOB PETERS: And in January and
25 February, we had lots of -- lots of snow on the

1 ground?

2 MR. DOUGLAS SMITH: I -- I've been
3 told that, yes.

4 MR. BOB PETERS: And then when we look
5 to see what's happening in January and February, even
6 though we have lots of water in the form of snow on
7 the ground, Manitoba Hydro has still high off-peak
8 imports, correct?

9 MR. DOUGLAS SMITH: Yes, I see that.

10 MR. BOB PETERS: And those off-peak
11 imports were probably expensive?

12 MR. DOUGLAS SMITH: I -- I don't know.
13 I certainly don't know sitting here that I -- I can
14 agree to that. Prices were certainly moving around a
15 lot in -- in the winter, but I think we have a -- a
16 chart or two (2) around prices that -- that suggest
17 that winter prices were not -- were not as high as --
18 as feared or expected.

19 MR. BOB PETERS: All right. And it
20 looks like it's in May of 2022 when Manitoba Hydro
21 gets back into its high levels of off peak exporting,
22 correct?

23 MR. DOUGLAS SMITH: The exports jump
24 dramatically in May of 2022 on this chart, yes.

25 MR. BOB PETERS: Because Manitoba

1 Hydro had a lot of water?

2

3

(BRIEF PAUSE)

4

5 MR. DOUGLAS SMITH: Manitoba Hydro had
6 a lot of water, and the -- the modelling of the
7 projection of -- of all of the complex factors that go
8 into determining exports suggested that it was
9 appropriately -- appropriate and economic to sell that
10 water.

11 MR. BOB PETERS: Would it have been
12 more economic and more appropriate to reduce the off-
13 peak imports and the on-peak imports earlier?

14 MR. DOUGLAS SMITH: I think that it
15 would require an analysis to -- to make an actual
16 determination of that.

17 But I also think it's important to --
18 to understand or to think about, in the midst of -- of
19 that period, Manitoba Hydro is still unclear as to how
20 the winter is going to unfold in terms of the
21 potential for extreme cold, for storms, for -- for a
22 variety of -- of adverse conditions that they have to
23 plan for during the winter.

24 So that still doesn't -- I can't answer
25 your question directly, but I -- I don't think that's

1 the only thing that they're considering when they're
2 making determinations of -- of buying and selling and
3 balancing their system in any given month, especially
4 in the winter.

5 MR. BOB PETERS: I'm not sure if I
6 asked you this, Mr. Smith. If I did, you can tell me
7 that.

8 Did Daymark determine who or what
9 committee at Manitoba Hydro finally determined or
10 acknowledged that they were in a drought situation?

11 MR. DOUGLAS SMITH: No. I -- we -- we
12 did not look for official designation of drought or
13 out of drought or --

14 MR. BOB PETERS: Was it the RPPS or
15 was it the oversight committee or was it a combination
16 of them, or was it none -- neither of them?

17 MR. WILLIAM HAIGHT: Mr. Peters, I
18 think he's answered that question that they didn't
19 look into that issue.

20

21 CONTINUED BY MR. BOB PETERS:

22 MR. BOB PETERS: You don't have that -
23 - an answer for that, then, as your counsel suggests?

24 MR. DOUGLAS SMITH: I -- I do not have
25 an answer as to who would have or did officially

1 designate or -- or if that was part of their process
2 to officially say, okay, now we're in drought. That's
3 not my understanding of how their process works.

4 MR. BOB PETERS: All right. I want to
5 turn with you just briefly on the topic of hedging.
6 And, Mr. Smith, I think that's also on your score
7 card.

8 On slide 60 of the Daymark slide deck
9 from yesterday, Exhibit DEA-4, on page 60, there's a
10 second bullet that suggests there doesn't appear to be
11 any distinction between the revenue risks borne by
12 purchase transactions versus the revenue risk borne by
13 sales transactions.

14 Do you see that?

15 MR. DOUGLAS SMITH: I do, although I
16 will add, the -- the last piece of this, I -- and I
17 think I mentioned this briefly yesterday, at least in
18 the documented plans and policies, which I think is an
19 important caveat to that statement.

20 MR. BOB PETERS: And then you talk
21 about the sales -- the purchase transactions where
22 Manitoba Hydro is purchasing the hedge, correct? Is
23 that what you mean in this sentence?

24 MR. DOUGLAS SMITH: So, a hedge is a
25 forward transaction. So, what our -- understanding of

1 what Manitoba Hydro is doing is they're looking ahead
2 and saying, we expect to need 'X' quantity of energy,
3 either need it and -- need to purchase it or we
4 project that we will be selling it.

5 And when they do that, they -- they
6 look ahead, and they see that they are -- that their
7 results, that their -- their financial results are,
8 therefore, subject to volatility of the market.

9 If -- if I expect to sell a hundred
10 megawatt hours, I don't know -- next month, I don't
11 know for certain what price I will get, so I am
12 subject to that volatility.

13 If I lock in price for some portion of
14 that, if I purchase ahead, then for that quantity that
15 I have purchased, I am not longer subject to
16 volatility in the spot market. That is what we mean
17 and what they are referring to when they hedge.

18 MR. BOB PETERS: But the revenue risk
19 on a purchase is known, is it not? You know the price
20 you're going to pay in the future for that -- for that
21 hedge whether you take physical delivery or just
22 financial delivery?

23 MR. DOUGLAS SMITH: If you enter into
24 a hedge, you know the -- the price. You -- you
25 negotiate with that counter party and you have a

1 price. At that point, you know that.

2 Prior to doing that though, prior to
3 engaging with a counter party to purchase ahead -- so
4 if I'm sitting in October and I'm looking at the
5 winter months and saying I expect to need to purchase
6 some amount of energy from the market to meet my
7 demand, I don't have enough water, I don't project
8 that I will have enough water, so I need -- need to --
9 to purchase that energy in those months ahead, in the
10 winter, sitting there in October, I do not know what
11 price I will be paying for that water.

12 MR. BOB PETERS: Because nobody knows
13 what the future market price is going to be?

14 MR. DOUGLAS SMITH: Correct.

15 MR. BOB PETERS: Okay. So -- so, the
16 purchase -- sorry, the purpose of a purchase hedge is
17 to provide certainty of what that -- what that revenue
18 risk is to the Company?

19 MR. DOUGLAS SMITH: Yeah, that's -- I
20 think that's a fair summation. It's -- it's to --
21 it's to eliminate that -- that pricing risk.

22 MR. BOB PETERS: All right. We're
23 still on the public record, Mr. Smith. And I just
24 want to make sure we remind ourselves that.

25 You -- you contrast that in this second

1 bullet to deal with sales transactions, correct?

2 MR. DOUGLAS SMITH: What we just
3 talked about applies to sales as well. So, if I -- to
4 just do this briefly. If I'm projecting ahead for a
5 few months and I see that I expect to make some block
6 of sales, then sitting -- if I'm sitting -- and just --
7 -- just to use the same months, if I'm sitting in
8 October and I'm expecting to sell in the winter,
9 probably not happening, but -- but just to use the
10 same -- same time frame, sitting in October, I don't
11 know what price I will get for that energy that I am
12 projecting to sell forward. So my financials are
13 still subject to the uncertainty of the market.

14 If I sell ahead, if I find a counter
15 party that wants to buy my energy ahead and I sell for
16 those months, I have now ensured Manitoba Hydro
17 against that future volatility. I now know my price
18 for a sale of that energy, so, in that sense, it's the
19 same activity.

20 What I -- what we were getting at in --
21 in this comment is the -- the risk to Manitoba Hydro's
22 financials is asymmetric. It is not the same in a
23 purchase versus a sale.

24 MR. BOB PETERS: All right. At the
25 risk of Mr. Haight and Ms. Fernandes snapping a little

1 bit to attention on this, and a 'yes' or 'no' answer
2 would be sufficient for my question, I suggest, but
3 did you find that Manitoba Hydro was entering into
4 sales transactions for the drought year?

5 MR. DOUGLAS SMITH: No.

6 MR. BOB PETERS: Thank you. I want to
7 turn to page 45 of Board counsels' book of documents.
8 And if you need a copy for the plane ride home, we can
9 get you one. There's a chart on this page that talks
10 about the difference between using forty (40) years of
11 flow data versus a hundred years of flow data.

12 You're generally familiar with that?

13 MR. DOUGLAS SMITH: Yes.

14 MR. BOB PETERS: We know that Manitoba
15 Hydro didn't do any retrospective analysis to
16 determine which gave a more accurate forecast.

17 You're aware of that?

18 MR. DOUGLAS SMITH: Yes.

19 MR. BOB PETERS: Did Daymark actually
20 test forty (40) years versus a hundred years to
21 determine which one was more accurate?

22 MR. DOUGLAS SMITH: No.

23 MR. BOB PETERS: But you did hear from
24 Manitoba Hydro that, according to Manitoba Hydro, the
25 forty (40) year record captures about 95 percent of

1 the flow variability of the hundred plus year flow
2 record?

3 MR. DOUGLAS SMITH: Correct.

4 MR. BOB PETERS: Does Daymark believe
5 there's any benefit to doing an analysis to see which
6 methodology provides the more accurate forecast?

7

8 (BRIEF PAUSE)

9

10 MR. DOUGLAS SMITH: Well, I'll start
11 by acknowledging I am not a hydrological engineer or a
12 hydrology expert.

13 I -- I think the way I would answer
14 that is, in -- in any change in systems to the extent
15 possible, investigating the actual results of that
16 change, the -- the efficacy of -- of a change, is
17 always valuable. It's not always easily possible,
18 especially when you're talking about a forecasting
19 into the future.

20 Typically, evaluating forecasting
21 methodologies occurs over a long period of time. You
22 can't look at any one result and conclude that it's
23 better or worse. In other words, there's variability.
24 There's uncertainty.

25 You could have a better method that

1 produces a worse result in some particular
2 circumstance and would not be indicative that that
3 result was -- that that method was -- was improper.

4 So, you need to be careful in any
5 circumstance where you're evaluating forecasting
6 methodologies, how you approach that evaluation.

7 MR. BOB PETERS: And is it Daymark's
8 understanding that the physical based inflow
9 forecasting methodology was only developed after the
10 last GRA that brought you to Manitoba?

11 MR. DOUGLAS SMITH: That is my
12 understanding, yes.

13 MR. BOB PETERS: So, that would mean
14 there would be approximately five (5) years only of
15 comparable years that could be analyzed.

16 Is that correct?

17

18 (BRIEF PAUSE)

19

20 MR. DOUGLAS SMITH: I -- I don't think
21 I'm qualified to -- to take it further in terms of how
22 they should or could evaluate those two (2) methods.

23 MR. BOB PETERS: All right. Let's
24 turn to Manitoba Hydro's uncontracted energy and
25 capacity. And maybe not to scale I like, but Ms.

1 Schubert, Manitoba Hydro had filed Exhibit 30, which
2 was their slide presentation when they testified.

3 And I would ask if you could find
4 Exhibit Manitoba Hydro 30 and, particularly, page 28
5 probably is high level enough, even though it's -- the
6 scale doesn't do it justice.

7 But you're generally familiar with this
8 one as well?

9 MR. JEFFREY BOWER: This is Jeff
10 Bower. We saw this yesterday and -- but we're not --
11 like I testified to yesterday, not very familiar with
12 what -- what goes on behind the numbers here. But --
13 but I have seen this before.

14 MR. BOB PETERS: All right. And, in
15 fact, I think you had some kind of a chart in your own
16 presentation, but this one shows both energy and
17 capacity, right?

18 MR. JEFFREY BOWER: Yes. We -- we had
19 some similar figures. Again, the -- the data behind
20 it -- since I haven't reviewed the data behind this,
21 it's hard to know how well it aligns with -- with what
22 was in our report.

23 MR. BOB PETERS: We've got the data
24 behind it, so I'm not going to go there with you, Mr.
25 Bower. You can relax about that.

1 What I'm suggesting -- if we look to
2 the right-hand side of the screen, we see a line of
3 dependable supply in red. Do you see that?

4 MR. JEFFREY BOWER: Yes.

5 MR. BOB PETERS: And Daymark
6 understands that that means that every gigawatt hour
7 of energy below that line is coming from Manitoba
8 Hydro's dependable supply?

9 MR. JEFFREY BOWER: Yeah. That would
10 be my interpretation of that line.

11 MR. BOB PETERS: And Manitoba Hydro's
12 dependable supply is the supply that Manitoba Hydro
13 would have available for the driest year on record?

14 MR. JEFFREY BOWER: Yes, that's --
15 that's our understanding.

16 MR. BOB PETERS: All right. And so,
17 if there is -- if there are -- if there is energy
18 below that red line that is not used by Manitobans or
19 is not part of dependable exports, it's still
20 dependable energy that would be available, correct?

21 MR. JEFFREY BOWER: Yes.

22 MR. BOB PETERS: And above that red
23 line, that's when we have surplus water -- maybe like
24 the year -- last year and this year -- we have water
25 that is somewhat above the dependable supply and it's

1 above average or even up to maximum.

2 That's all what we call opportunity
3 water or water that would be sold mostly for
4 opportunity sales into the export market?

5 MR. JEFFREY BOWER: Yes.

6 MR. BOB PETERS: Is it correct that
7 Manitoba Hydro's most valuable product to sell for
8 energy is dependable energy?

9 MR. JEFFREY BOWER: Currently, the...

10

11 (BRIEF PAUSE)

12

13 MR. JEFFREY BOWER: I think we can --
14 we can say -- we're conferring just about getting into
15 details and confidentiality of -- of contract prices
16 and that sort of thing.

17 So without -- without getting into any
18 of that, I think it's -- it's understood that the --
19 the dependable supply is -- is more valuable than
20 opportunity supply currently.

21 MR. BOB PETERS: All right. And with
22 dependable energy being more valuable, the Board is
23 hearing, in this Application, that Manitoba Hydro's
24 financial forecasts give dependable energy the same
25 price, the same value as average supply or even up to

1 non-dependable supply, correct?

2 MR. JEFFREY BOWER: For a portion that
3 is uncontracted, that -- that's correct.

4 MR. BOB PETERS: Yes. Thank you.
5 Something that -- maybe I'll -- in Daymark's view,
6 when Daymark was last in Manitoba at the 2017/18 GRA -
7 - and Mr. Bower, you probably were left back in Boston
8 -- but at that time, Daymark was critical of Manitoba
9 Hydro for not extracting some premium on account of
10 that dependable energy.

11 Would that have been right, Mr. Smith,
12 Mr. Athas?

13 MR. DOUGLAS SMITH: I think in that
14 GRA, we were -- we were critical that there was no
15 forecast of -- of any premium or additional dependable
16 sales.

17 MR. BOB PETERS: All right. And I
18 take it from the answers you've given to my colleagues
19 who have asked you questions on this, and I don't want
20 to repeat -- have you repeat any of those answers --
21 but the -- the biggest uptake is that MISO rules
22 having -- have not meaningfully changed where Manitoba
23 Hydro's non-emitting dependable energy would be valued
24 higher than other resources.

25 MR. DOUGLAS SMITH: I think that's a -

1 - a significant factor. And in the one case where it
2 is changing, the seasonal accreditation, there's
3 significant uncertainty as to -- or -- or an apparent
4 high potential that it is detrimental to Manitoba
5 Hydro's ability to monetize some of that -- firm --
6 those firm attributes.

7 MR. BOB PETERS: It's too early to
8 know what's happening in MISO. You've talked --
9 you've just talked about capacity, but the same
10 applies for energy.

11 It's just too early -- there's too many
12 moving parts right now?

13 MR. DOUGLAS SMITH: Yes.

14 MR. BOB PETERS: And those moving
15 parts are being lubricated by the Inflation Reduction
16 Act that provides strong incentives to develop local
17 energy resources, mostly renewables, such as wind and
18 solar?

19 MR. DOUGLAS SMITH: The potential
20 competitors for whatever comes out of the -- the
21 moving MISO market rule parts are being lubricated
22 currently by the IRA. And so, in addition to just the
23 uncertainty about market rules, you have uncertainty
24 about what competition Manitoba Hydro may face in the
25 future.

1 MR. BOB PETERS: All right. Let's --
2 some of the panel members, the Board members were
3 asking you to look a little bit in the future, as were
4 my colleagues. So -- so let's -- let's put our --

5 THE CHAIRPERSON: Mr. Peters, you're -
6 - you're at about ten (10) minutes.

7 MR. BOB PETERS: I'll be less.

8 THE CHAIRPERSON: Okay.

9

10 CONTINUED BY MR. BOB PETERS:

11 MR. BOB PETERS: Let's put on our
12 binoculars and let's look into the future, and maybe
13 it's a telescope, but you told one of my colleagues
14 who asked you questions yesterday that when the sun
15 shines and the wind blows, energy is available in the
16 MISO market, usually plentifully?

17 MR. JEFFREY BOWER: Yes. For wind and
18 solar resources, those conditions are -- are required
19 and there's a lot of wind and solar coming online in
20 MISO.

21 MR. BOB PETERS: And the sun might be
22 shining and the wind blowing at a time when there's
23 surplus energy available, correct, Mr. Bower?

24 MR. JEFFREY BOWER: Surplus -- maybe
25 you can, kind of, clarify what you mean?

1 MR. BOB PETERS: Well, with the --
2 with the solar and the wind, that energy is produced
3 because there's nothing else to -- they can't do
4 anything else with it. So they produce it and it may
5 be surplus to what's needed.

6 MR. JEFFREY BOWER: In -- in MISO,
7 there -- there -- especially as more (INDISCERNIBLE)
8 comes online, there could be increasing conditions
9 where there's more energy being generated by wind and
10 solar than can be used at that time.

11 MR. BOB PETERS: And yesterday, there
12 was some discussion that -- that, at some point,
13 energy can be stored in, what we -- what's been
14 called, a battery. Have I heard that right?

15 MR. JEFFREY BOWER: Correct.

16 MR. BOB PETERS: And that energy
17 storage in battery is -- when you think of the little
18 Energizer bunny, that's the battery. It's -- it's
19 taking it and putting it into a physical container
20 that can be used at a later date.

21 MR. JEFFREY BOWER: Yes, for, you
22 know, chemical battery -- yeah.

23 MR. BOB PETERS: So if we assume that
24 the wind stops and the sun doesn't shine, but somebody
25 has put some of that surplus energy into a battery,

1 then the energy can be withdrawn from the battery at
2 that time, correct?

3 MR. JEFFREY BOWER: Yes.

4 MR. BOB PETERS: Would you -- would
5 Daymark agree that energy coming from battery storage
6 will be valued higher than energy from renewables
7 generation?

8

9 (BRIEF PAUSE)

10

11 MR. JEFFREY BOWER: I'm -- I'm
12 thinking about the -- the definition of the term
13 'value'. I think the -- how -- how a battery -- how
14 energy from a battery is priced in the market. How --
15 how it -- it bids into the market, whether it sets
16 prices I -- I think is a -- is a -- something that --
17 that would probably evolve over time.

18 But the fact that it is available to
19 sort of load when renewable resources are not of --
20 you know, able to generate -- is a -- is a quality
21 that will be valued.

22 MR. BOB PETERS: And so, conceptually,
23 you've got this valuable energy coming from battery
24 storage, that is actually solving a capacity issue for
25 those renewable resources that generate electricity

1 only when the sun shines and the wind blows.

2 MR. JEFFREY BOWER: That is -- provide
3 an important component of -- of capacity.

4 MR. BOB PETERS: But that adds to the
5 value of the energy that would be coming from battery
6 storage.

7 MR. JEFFREY BOWER: It -- it adds to
8 the value of the battery storage, but I think I just
9 didn't -- didn't distinguish in between, you know, the
10 definition of energy and capacity, but -- but it adds
11 to the value over the resource.

12 MR. BOB PETERS: Did Daymark quiz
13 Manitoba Hydro, and again you're on the public record,
14 as to whether they were knocking on doors of various
15 utilities looking to sell some of the surplus capacity
16 that is seen on the left-hand side of -- of page 28 of
17 Manitoba Hydro's slide presentation?

18 MR. JEFFREY BOWER: I think -- you
19 know, it's -- it's appropriate to say in the public
20 session that we had conversations with them about --
21 about what they were -- actions they were -- they were
22 taking to -- to market their capacity.

23 MR. BOB PETERS: All right. Maybe
24 that's a matter that we'll talk about earlier this --
25 or -- this -- early this afternoon, Mr. Bower then.

1 I was just trying to get at whether or
2 not it's -- this surplus capacity is it, you know, is
3 it listed on Kijiji or is somebody out there actually
4 trying to sell it? And sending the sales people out
5 to -- to find a market for it and we'll talk about
6 that then in the -- in the next session, if we can.

7 Mr. Chair, Board members, I'd like to
8 thank Messrs Smith, Bower and Athas for their answers
9 to my questions. Those -- those answers conclude my
10 questions of this witness panel (INDISCERNIBLE)
11 record.

12 THE CHAIRPERSON: Mr. Haight, is there
13 any re-examination?

14 MR. WILLIAM HAIGHT: No re-
15 examination.

16 THE CHAIRPERSON: Okay. Thank you.
17 So, this concludes the public session for today. For
18 those who are on the live stream, we will be
19 discontinuing the live stream. We wish you a nice
20 long weekend and we will be resuming in the morning on
21 Tuesday.

22 For those who are in the room for the
23 CSI session, we'll take the morning break for fifteen
24 (15) minutes and we'll make sure that the -- the live
25 stream's cut and then we'll go to -- to CSI first to

1 deal with the -- one of the Manitoba Hydro panels.

2 Thank you.

3

4 --- Upon adjourning at 10:03 a.m.

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9 Certified Correct,

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14 _____
Wendy Woodworth, Ms.

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