



“When You Talk - We Listen!”



MANITOBA PUBLIC UTILITIES BOARD

Re :

MANITOBA HYDRO

2017/18 and 2018/19

GENERAL RATE APPLICATION

PUBLIC HEARING

Before Board Panel:

- Robert Gabor - Board Chairperson
- Marilyn Kapitany - Vice-Chairperson
- Larry Ring, QC - Board Member
- Shawn McCutcheon - Board Member
- Sharon McKay - Board Member
- Hugh Grant - Board Member

HELD AT:

Public Utilities Board
400, 330 Portage Avenue
Winnipeg, Manitoba
January 3rd, 2018
Pages 2896 to 3090

1

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1 --- Upon commencing at 9:02 a.m.

2

3 THE CHAIRPERSON: Good morning,
4 everyone, Happy New Year. Before we continue with Dr.
5 Williams, I'm going to ask counsel to tell us what's
6 happening today.

7 MR. BOB PETERS: Thank you. Good
8 morning, Mr. Chair, panel members, and Happy New Year
9 to all. There are a number of matters that will be
10 taken care of this morning. I can start off by
11 indicating that while hopefully most of us were
12 enjoying our holiday, Mr. Jonathan Niemczak of Hydro
13 was probably the one working the hardest because he
14 has provided to all parties copies of undertakings
15 that Manitoba Hydro has prepared. And of course, they
16 too were working over the holidays and we appreciate
17 those undertakings having been filed. They've been
18 put on the distribution list. So everybody will have
19 a copy of them.

20 They have also been marked as exhibits
21 on the Public Utilities Board website. So I would
22 encourage parties to make sure they're familiar with
23 them, and if there's any issues respecting those, they
24 should speak with either Board counsel or Manitoba
25 Hydro counsel and we can address that.

1 MS. ODETTE FERNANDES: Sorry, Mr.
2 Peters, sorry to interrupt. I'm interrupting already
3 and we've just started. I had a discussion with Mr.
4 Simonsen and we'll make some paper copies available
5 early this afternoon for parties who prefer to have
6 the paper.

7 MR. BOB PETERS: Thank you, Ms.
8 Fernandes. And I suspect you've just broken your New
9 Year's resolution with that interruption but let's
10 turn to the schedule for today.

11 The schedule that has been prepared in
12 advance is posted on the screen, and it is a
13 continuation of Manitoba Hydro's rates, cost of
14 service and bill affordability panel witnesses. I
15 would remind the witnesses that they're still sworn
16 and under oath, and there will be questions today from
17 the Intervenors.

18 I can indicate that the Consumers
19 Coalition will commence this morning in a matter of
20 fifteen (15), twenty (20) minutes with this panel and
21 then Green Action Centre will follow.

22 I can also indicate to the Board that
23 having been in communication with the City of
24 Winnipeg, it's our understanding that on reviewing the
25 transcript the City of Winnipeg is satisfied that its

1 questions have been -- been asked by Board counsel and
2 the City of Winnipeg will not be requesting time from
3 this panel today.

4 That doesn't necessarily mean the day
5 will end earlier because one (1) matter that is left
6 over from before the holidays has to do with Public
7 Utilities Board question of Manitoba Hydro, it's a
8 second round Information Request Number 57, and
9 you'll see this is the Information Request that has
10 the chart on the third page, and it's a -- it's noted
11 by most in this room because of all of the redactions
12 that Manitoba Hydro has -- has made. Those redactions
13 have been accepted by the Public Utilities Board, but
14 in the bottom right-hand corner there is a different
15 number from what was filed in the initial response.
16 And as a result of that we -- there's been requests
17 that Manitoba Hydro have a witness available to speak
18 to it and Mr. Miles has agreed to attend this morning
19 to address questions from Board counsel, and from
20 Consumers Association and Manitoba -- Winnipeg
21 Harvest, and that isn't expected to take very long,
22 but those questions will precede the questions that
23 will be asked of the ratepayers panel.

24 Mr. Chairman, Panel members, I -- I
25 still want to also remind parties that this panel,

1 that is the ratepayer, rates and cost of service
2 panel, will be up again tomorrow to address questions
3 from additional Intervenors, and then on Friday of
4 this week, the Consumers Coalition is putting up a
5 ratepayers panel, and those witnesses will be in the
6 morning and that will be followed by public
7 presentations and the public presentations, I believe
8 it was indicated last week, those will run the
9 afternoon. Those are witnesses who have come forward
10 and want to make a presentation. Under the new
11 procedures, those witnesses will be asked to affirm or
12 take an oath. They will also be subject to
13 questioning by the parties.

14 In addition to this Friday, January 5
15 being a date for public presentations, the Board has
16 also set aside time on January the 18th and following
17 the testimony in the morning, there will be public
18 presentations in the afternoon and when we get closer
19 to that date, parties will be reminded that the Board
20 needs to end by no later than four o'clock that day
21 for previous commitments.

22 And then there's even a third day for
23 public presentations and that is on February the 1st,
24 and that also follows some -- some evidence in the
25 morning from other witnesses, if that evidence is

1 required and the public presentations, it's a rather
2 lengthy schedule, will proceed long into the day on
3 that day as well.

4 We'll have more to say about that, Mr.
5 Chair and Panel members. There have been some
6 requests made of the panel to consider requests
7 related to ratepayer -- sorry, related to public
8 presentations and those matters will be brought to the
9 Board's attention today and as a result of them, I
10 expect we'll have further announcements to make for
11 the panel.

12 So, Mr. Chair and Panel members if --
13 if that was clear enough, those complete the opening
14 comments and I believe we're prepared to proceed with
15 Mr. Miles.

16 THE CHAIRPERSON: Thank you.

17

18 CONTINUED MANITOBA HYDRO PANEL 2 re REVENUE
19 REQUIREMENT

20 LOIS MORRISON, Previously Sworn

21 TERRY MILES, Previously Sworn

22

23 RE-CROSS-EXAMINATION BY MR. BOB PETERS:

24 MR. BOB PETERS: Good morning, Mr.

25 Miles.

1 MR. TERRY MILES: Good morning, Mr.
2 Peters.

3 MR. BOB PETERS: Thank you for
4 attending this morning, sir. On the screen is a copy
5 of the revised Public Utilities Board Manitoba Hydro
6 second round question 57, and you're familiar with
7 that, sir?

8 MR. TERRY MILES: I am, yes. I'm -- I
9 am familiar with the IR.

10 MR. BOB PETERS: And in addition to
11 that, Mr. Miles, there were a couple of undertakings
12 asked in respect of this -- in this Information
13 Request.

14 And you're familiar with those as well?

15 MR. TERRY MILES: I am, yes.

16 MR. BOB PETERS: All right. Let's
17 start with -- and we don't need to turn to it but if
18 you need it, I know Ms. Schubert has it available.

19 That in Manitoba Hydro's Undertaking 19
20 Manitoba Hydro was asked to provide an explanation of
21 the change in methodology and so let's start off, if
22 we can, looking at this screen where most of the
23 information is redacted, but explain to the Panel what
24 Manitoba Hydro did when it first answered the
25 question, and now what it's doing in the update?

1 Would you be able to do that, Mr. Miles?

2 MR. TERRY MILES: I'll -- I'll do my
3 best as distinct as I can --

4 MR. BOB PETERS: And to take a -- and
5 to take a lesson from your counsel, I want to
6 interrupt you and I want to remind you that at no time
7 are my questions to elicit commercially sensitive
8 information being placed on the public record. And I
9 believe I can speak for counsel opposite that when
10 they ask their questions, likewise, that is the case.

11 It's acknowledged by Manitoba Hydro is
12 it, Mr. Miles, that whatever has been redacted is
13 available to this panel, correct?

14 MR. TERRY MILES: That's correct, yes.

15 MR. BOB PETERS: All right. So if
16 it's a matter of looking under the redactions that's
17 available to the Panel. So let's see if we can
18 proceed without the need to detail what's under the
19 redactions.

20 Would that be acceptable?

21 MR. TERRY MILES: That's acceptable,
22 yes.

23 MR. BOB PETERS: All right, thank you.
24 So tell us, when Manitoba Hydro first answered Public
25 Utilities Board/Manitoba Hydro Information Request and

1 then second round 57, what did Manitoba Hydro do and
2 the methodology and then that's take that forward to
3 what they're doing now?

4 MR. TERRY MILES: Okay, so I think our
5 -- our first answer to the question was that we were
6 providing an update. Our initial answer did not have
7 values for this question, I don't believe.

8 So the initial -- initial filing of --
9 of marginal values to the -- to the Board, to the PUB
10 and through this process, was 2015 values. They are
11 based on 2015. And those values were based on a
12 methodology which is -- methodology changes not
13 significantly different, if you will, from -- from the
14 fundamentals of how we calculate marginal values, but
15 it is different, and I'll talk a little bit about --
16 about the two (2).

17 So the transmission and distribution
18 components of the marginal value calculation have not
19 changed. Those have been consistent with all the
20 values that we have filed and I think there's an
21 undertaking that clarifies that around the
22 distribution values, I think, that were put in.

23 The generation component then in our
24 system has two (2) components: One is the energy
25 component and one is the capacity component. And how

1 we value the energy component is we make an assumption
2 that a certain amount of energy then is freed up in
3 our system, and for our -- for all intents and
4 purposes, it's 500 gigawatt hours of generation.

5 And then we take that out of our system
6 and free it up to a couple of things; that's load that
7 we don't have to serve in Manitoba; and then that's
8 additional generation then that we can sell on the
9 export market. But it also in not having to serve
10 Manitoba load changes the way that we have them --
11 model our system for things like thermal generation
12 and imports to serve load.

13 So, we like to refer to that as overall
14 production costing and the production costing that we
15 calculate is a combination of export revenues that we
16 get and a combination then of reduced operational
17 cost, which is an operation -- operating our thermal
18 stations and importing.

19 Because when we have that load that we
20 have to serve in Manitoba, we have to serve it under
21 all conditions that we have and are all flow
22 conditions. So we, essentially, model that scenario
23 for that load, under the lowest to the highest flow
24 conditions. When we free up that load in our system
25 then, it frees up how we can manage our system and

1 what we can do with -- with the surplus.

2 So for the generation piece that we
3 have that hasn't changed; that's fundamentally the
4 same. We still do that same methodology for these
5 updated values as we did for the 2015 values.

6 The capacity component then is an
7 additional component to that and prior to this year --
8 and actually in the early -- probably prior to about
9 2000, we used a generation deferral component for
10 capacity. Market changes in around the 2000 timeframe
11 then, changed the value of capacity and what we could
12 achieve for value of -- of surplus capacity in our
13 system. Then it sort of switched over to the -- to
14 the market.

15 After around the 2000 timeframe then
16 the value of capacity was based on the value that we
17 could achieve from the export market. And we
18 maintained that methodology up until this year. Over
19 the last couple of years, though, we've been looking
20 at what that value was to us and how that's changed.
21 And the markets have changed a lot in the last three
22 (3) or four (4) years.

23 And we've been starting to figure out
24 how to manage and how to value capacity over the last
25 couple years and this year we made the fundamental

1 change, the change from, if you will, using an export
2 market value for capacity to a generation deferral
3 value for capacity. That's the fundamental change
4 between the two (2). And that's what's reflected on
5 these tables; a generation component which is how we
6 change the value for energy and how we model energy,
7 and then the capacity, what value can we really
8 extract for that surplus capacity in our -- in our
9 system.

10 MR. BOB PETERS: Thank you for that,
11 Mr. Miles. So focusing on the capacity component of
12 the methodology change that you've now told the Panel
13 about, would the Board be correct in understanding
14 that it was a policy decision by Hydro to assume that
15 there's no capacity value from export sales?

16 MR. TERRY MILES: I'd say it's likely
17 a combination of -- of those, considering how we value
18 it. In our rebuttal evidence that we talked about --
19 we talked about the value of capacity and how we would
20 get that value. And we've described, and it's been
21 discussed in there, how -- how we can achieve and what
22 value we can really achieve for that value.

23 From the revenue perspective, I know
24 there's the -- there's the discussion of the policy to
25 remove the -- the revenue component from -- for the

1 entire forecast period. We haven't done that with the
2 marginal value. We've looked at the time frame where
3 we can achieve the value for capacity and what's
4 reasonable to assume the value that we can get.

5 The market aspect of it is -- is the
6 value of capacity has been decreasing significantly,
7 and being pushed out in time. Now, our market
8 projections show value of capacity in that mid-2020
9 timeframe that might return or it might not, depending
10 on the situation in the marketplace that's there.

11 So from our perspective and from the
12 marginal cost perspective, I think it's more along the
13 lines of what value we can really achieve for that, as
14 opposed to a policy decision around removing it or not
15 removing it.

16 MR. BOB PETERS: Mr. Miles, you've
17 indicated that the value of capacity is now, in my
18 words, tied -- tied to Manitoba Hydro deferring
19 generation; correct?

20 MR. TERRY MILES: That's correct, the
21 calculation for the value is, yes.

22 MR. BOB PETERS: And that deferring of
23 new generation Manitoba Hydro assumes that the
24 generator that's being deferred is a natural gas
25 generator?

1 MR. TERRY MILES: That's correct, yes.
2 Which -- which, if I would add, is consistent with the
3 value that was being extracted, if you will, from the
4 export market. The value of capacity in the export
5 market was, essentially, based on a natural gas
6 turbine generator in the -- in the US marketplace.

7 MR. BOB PETERS: And so that deferred
8 generation resource is considered to be a peaking
9 combustion turbine?

10 MR. TERRY MILES: That's correct.

11 MR. BOB PETERS: It's just needed for
12 the peak load which, in my yard, was yesterday or the
13 day before.

14 MR. TERRY MILES: Whenever that would
15 be, yes.

16 MR. BOB PETERS: Is the generation
17 resource that's being deferred the least expensive one
18 in the portfolio of those available to Manitoba Hydro?

19 MR. TERRY MILES: It would be the
20 least capital cost intensive, yes.

21 MR. BOB PETERS: Mr. Miles, in
22 addition to looking at the capacity value from that
23 deferred natural gas generator, does Manitoba Hydro
24 put a value on the energy that could be prepared --
25 could be produced from that natural gas generator?

1 MR. TERRY MILES: So when you put the
2 resource in -- in the system, it's meant to run a
3 certain amount of time and that energy that's produced
4 then enters in as -- as energy in our overall system.
5 There's a cost to it, and the -- the energy would be
6 dispatched, if he will, on -- on a cost-use basis. So
7 there'd be an assumed amount of operation, and that
8 would be in our base. Those types of values would be
9 in our base, if you will, IFF calculation, and
10 everything as a resource out in -- out in time.

11 MR. BOB PETERS: So you're telling the
12 Panel that in addition to the deferred value based on
13 the capacity from this natural gas generator, Manitoba
14 Hydro has already included in its integrated financial
15 forecasts the benefit to the energy that would be
16 produced by this notionally deferred natural gas
17 generator?

18 MR. TERRY MILES: That's essentially
19 correct, yeah.

20 MR. BOB PETERS: Can you explain
21 briefly to the Panel how Manitoba Hydro arrived at the
22 value of this peaking resource?

23 MR. TERRY MILES: It would have a cost
24 estimate for a specific unit, if you will.

25 MR. BOB PETERS: And that's Manitoba

1 Hydro prepares that or does Manitoba Hydro acquire
2 that from another party?

3 MR. TERRY MILES: We acquire that from
4 an estimate, like, from another party, yes.

5 MR. TERRY MILES: Thank you. And that
6 estimate in terms of the cost of this deferred
7 generator, that's levelized over a number of years?

8 MR. TERRY MILES: Yes, that's correct.

9 MR. BOB PETERS: And it would be
10 levelized at a nominal cost of money to Manitoba
11 Hydro?

12 MR. TERRY MILES: Essentially, yeah.

13 MR. BOB PETERS: Are you able to
14 indicate how many years over which it's levelized?

15

16 (BRIEF PAUSE)

17

18 MR. TERRY MILES: It would it be -- it
19 would be thirty (30) years, basically, subject to
20 check.

21 MR. BOB PETERS: Mr. Miles, for those
22 who can remember some of the NFAT evidence, there was
23 much talk about the cost of new entry. Do you
24 remember some of that?

25 MR. TERRY MILES: I do, yes.

1 MR. BOB PETERS: And that,
2 essentially, was putting a value or a cost to someone
3 who wants to start up and provide a new resource in
4 the -- in the MISO market?

5 MR. TERRY MILES: That's correct.

6 MR. BOB PETERS: Is what Manitoba
7 Hydro is doing in terms of valuing the capacity from
8 the natural gas generator, essentially, the
9 calculation of the cost of a new entry for a natural
10 gas generator?

11 MR. TERRY MILES: I'd say it would be
12 similar except that it's our capital cost to be borne.
13 There's no market benefit back -- the CONE you're
14 talking about, Cost of New -- New Entry, does have a
15 component that is a value that an -- an owner or
16 generator would get back from the marketplace. Ours
17 is just the cap -- capital cost in our calculation.
18 So it's essential, but it just represents the real
19 cost in Manitoba.

20 MR. BOB PETERS: Mr. Miles, does
21 Manitoba Hydro have to make an assumption as to the
22 load factor to which that -- that natural gas
23 generator is deployed?

24 MR. TERRY MILES: Yes.

25 MR. BOB PETERS: And has that -- can

1 you -- are you prepared to indicate what the -- was it
2 a 100 percent load factor or is that a matter for
3 public record?

4 MR. TERRY MILES: From the perspective
5 of the marginal value calculation, it's just a capital
6 cost value, if you will.

7 From an operations perspective, it --
8 it fits in our system and it's operated and dispatched
9 as required to serve the load. So for the marginal
10 value perspective --

11 MR. BOB PETERS: It doesn't matter.

12 MR. TERRY MILES: -- it doesn't
13 matter, no.

14 MR. BOB PETERS: So for the operations
15 point of view that just -- whatever operation costs
16 are assumed in the load factor at which it's
17 operating, those costs are netted against the energy
18 that would come out of it in your IFF calculations?

19 MR. TERRY MILES: More -- more or less
20 but I think that's probably too much detail that we
21 would pull up for the marginal value numbers. That's
22 getting really -- really down into the weeds. That
23 wouldn't have a significant impact on the capacity
24 value in this -- in these tables.

25 MR. BOB PETERS: Okay. Thank you.

1 Mr. Miles, does Manitoba Hydro use the same value of a
2 peaking resource for the marginal value as Manitoba
3 Hydro uses in developing the reference discount on the
4 curtailable rates program?

5 Your colleague to the left may be of
6 some assistance.

7

8 (BRIEF PAUSE)

9

10 MR. TERRY MILES: It would be a
11 similar value, yes.

12 MR. BOB PETERS: Thank you. On the
13 Information Requests on the screen in front of us,
14 we're looking at page 3 of 3 but if we -- we go back
15 to page 1 of 3, at the very bottom, Mr. Miles, there's
16 an indication that the value of this capacity is
17 determined without new demand-side management
18 resources. You see that?

19 MR. TERRY MILES: I do, yes.

20 MR. BOB PETERS: Would you accept, Mr.
21 Miles, that Manitoba Hydro is confident in its DSM
22 forecast and that if Manitoba Hydro is forecasting DSM
23 into the future, it has reasonable expectation it will
24 achieve that DSM, demand-side management?

25 MR. TERRY MILES: I'll let Ms.

1 Morrison comment on achievability of DSM and
2 confidence.

3 MS. LOIS MORRISON: Traditionally when
4 we're doing our planning for demand-side management,
5 we are confident that we will achieve the overall
6 energy savings projected over the fifteen (15) years.
7 There may be puts and takes year to year, but what we
8 do is because we're looking at our programming every
9 year, if we see that we're not tracking towards the
10 overall target we make adjustments within our
11 programming in order to make sure that we will achieve
12 those overall savings.

13 So on a year-to-year basis there may be
14 adjustments, but the end result that we expect to see
15 is that we will achieve those savings by the end of
16 those fifteen (15) years. There -- those adjustments
17 may include an increased investment. So there may be
18 an increase cost to achieving those overall savings or
19 it may require adjustments to the technologies we're
20 pursuing or the markets that we're pursuing but
21 overall we are confident that we would be cheating
22 those savings at the end because we are adjusting on a
23 year-to-year basis.

24 MR. BOB PETERS: Thank you, Ms.
25 Morrison. And Manitoba Hydro was confident it will

1 achieve those demand-side management savings at
2 approximately the cost that's being budgeted?

3 MS. LOIS MORRISON: As I mentioned,
4 because we look at these programs every year to see if
5 we're tracking, we may see adjustments in the costing
6 as we move forward. We do believe that the costings
7 are a reasonable approximation of what we will have to
8 invest in order to achieve that.

9 Now, recognizing that that is based --
10 that what I'm speaking to is what is our current plan,
11 which was presented under the 2016 DSM long-term plan,
12 and we have not updated that plan in the last year,
13 and so there are maybe some adjustments as we go
14 forward, because we are not pursuing those. We are
15 awaiting Efficiency Manitoba to begin. They will be
16 setting a new path and a new plan.

17 MR. BOB PETERS: Okay. Mr. Miles,
18 back to you, sir. The last two (2) sentences on the
19 bottom of page 1 of 3 of Manitoba Hydro's revised
20 response to PUB/Manitoba Hydro Second Round Question
21 57, there's an indication in the second-last sentence
22 that if Manitoba Hydro's development sequence includes
23 demand-side management savings, the date for new
24 resources is in the 2039/'40 timeframe, correct?

25 MR. TERRY MILES: That's correct, yes.

1 MR. BOB PETERS: However, if Manitoba
2 Hydro removes DSM from its planning sequence, the need
3 for new resources comes forward, essentially, a decade
4 to 2030/'31, correct?

5 MR. TERRY MILES: Correct, yes.

6 MR. BOB PETERS: So what Manitoba
7 Hydro is indicating to the panel is that in
8 calculating marginal value, Manitoba Hydro has assumed
9 there's no DSM savings in the forward plan, correct?

10 MR. TERRY MILES: That's correct.

11 MR. BOB PETERS: And as a result of
12 assuming there's no demand-side management savings,
13 Manitoba Hydro has to assume that the natural gas
14 generator would be needed at an earlier timeframe?

15 MR. TERRY MILES: That's correct.

16 MR. BOB PETERS: Mr. Miles, is demand-
17 side management less expensive on a net basis than a
18 new combustion turbine?

19

20 (BRIEF PAUSE)

21

22 MR. TERRY MILES: It would depend on
23 the DSM program that --

24 MR. BOB PETERS: I know, and Ms.
25 Morrison wasn't, quite frankly, a lot of help on that

1 on -- when I asked her. She -- she has a budget.
2 She's spending money, but she's not sure whether the
3 budget will be met, or whether it'll be exceeded, or
4 whether it'll be reduced.

5 MS. LOIS MORRISON: Well, in terms of
6 the DSM initiatives that we put forward, I can say
7 that if you look at the portfolio of programs that we
8 have in play, and that were presented under the
9 2016/'17 long-term plan, the average costs on a
10 levelized basis is one point nine (1.9) cents a
11 kilowatt hour.

12 When you look at that portfolio as a
13 whole, I think Mr. Miles could then answer your
14 question in terms of on a cost perspective as to
15 whether or not a combustion line is more expensive or
16 less expensive than DSM. If you were to adjust our
17 portfolio and pursue more expensive initiatives, that
18 value would then, of course, go up.

19 MR. TERRY MILES: So if I could -- if
20 I could add to -- to this discussion, just as to why
21 we chose the 2030 timeframe, if you will, from a
22 supply/demand perspective, we looked at when is it
23 that capacity starts to have value, or more value in
24 the Manitoba Hydro system, and we looked at what
25 resources we had in place.

1 We're building Keeyask. We have a new
2 interconnection coming online. We have that
3 supply/demand tables that include those as resources
4 that are being constructed in our system and will be
5 in our system in the 2030 timeframe. DSM programs are
6 being put in place, and we're achieving those pieces,
7 but we haven't achieved those yet. I thought, if we
8 take those out, when do we really need capacity in the
9 system? And it's that 2030 timeframe.

10 So that allowed us to give the
11 timeframe for when we would want to -- considering the
12 value of capacity from a Manitoba system perspective,
13 and that's an assumption that we made in order to add
14 that value. In terms of what is the cheapest capacity
15 resource at that timeframe, we don't have to make that
16 decision today, but we would definitely consider that
17 as we go out in time as to what resource we would need
18 to put in place at that time.

19 DSM, the DSM piece, as we go forward,
20 if that's the resource -- sorry, that'll be the
21 resource that's -- that's in there, or if that's
22 what's mandated, that'll be the resource that's there,
23 but from a 2030 timeframe perspective in the marginal
24 value calculation, that's how we came up with a 2030
25 value and why we have that in the marginal value

1 calculation.

2 THE VICE-CHAIRPERSON: Mr. Miles,
3 could you add to that what the cost per kilowatt hour
4 would be for a single cycle gas turbine?

5 MR. TERRY MILES: Off the top of my
6 head, in the order of -- I think in the order of eight
7 cents (\$0.08) a kilowatt hour, seven (0.07) or eight
8 cents (\$0.08) a kilowatt hour or something like that.

9 THE VICE-CHAIRPERSON: Thank you.

10 MR. TERRY MILES: And a lot of
11 assumptions that go into that, but depending on the
12 resource, it would be somewhere in that, seven (7) to
13 nine (9), maybe, depending on how much it was
14 dispatched and what resource was put into place.

15 If you were going to put in a resource
16 to reduce the actual energy cost that's there, you
17 might put in a slightly different resource than a
18 peaking resource that we talked about. You might put
19 in a more efficient combined cycle resource. You
20 would have to do the economics around what was
21 required to serve all load, not just capacity load.

22 For this case, we were just looking at
23 what was the capacity value piece that was there, but
24 to serve load, you're correct that you need both
25 energy and capacity, and in -- in order to do that,

1 you would need to find the most effective resource to
2 come up with the value you're talking about in terms
3 of the dollars per kilowatt hour of the resource.
4 Does that help? Okay.

5

6 CONTINUED BY MR. BOB PETERS:

7 MR. BOB PETERS: Mr. Miles, haven't
8 you just told the Vice Chair that DSM is a less
9 expensive option on capacity than is the combustion
10 turbine?

11

12 (BRIEF PAUSE)

13

14 MR. TERRY MILES: I'm not sure I can
15 answer that specifically. I think it -- it -- Ms.
16 Morrison was explaining to me that most of our DSM
17 programs are energy-based programs, and I think from a
18 capacity perspective, we'd have to look at what
19 programs were available for that, and -- and then look
20 at the value of those to see which were the cheapest
21 if you will, at that point in time.

22 MR. BOB PETERS: Did Manitoba Hydro
23 do that in -- in determining the marginal value in
24 this information response?

25 MR. TERRY MILES: No, we did not.

1 MR. BOB PETERS: And picking up a
2 point, again, I believe it was in your response to the
3 Vice Chair, if Manitoba Hydro's demand-side management
4 targets are met, it will push out the year of need,
5 and you've agreed with that?

6 MR. TERRY MILES: It -- it will push
7 of the year of need. And -- and if I could, just a
8 comment on whether or not we -- we looked at which --
9 which were the cheaper options, right now, marginal
10 value is an important component in the determination
11 of what DSM projects and components are more economic.
12 So for example, if we used the marginal value as an
13 indicator of an option for capacity value out in time,
14 and we value DSM programs against that, and they come
15 out as the cheaper option, if you will, moving
16 forward, then that would be the option that would be -
17 - would be considered in programs that Ms. Morrison
18 would have that have capacity components with certain
19 values -- would fall out as being those values.

20 And I think a primary use of the
21 marginal value that we have now is in assessing DSM
22 programs out in time. So in essence, to respond to
23 your question, Mr. Peters, if we use the marginal
24 value from a combined cycle, and DSM programs are less
25 costly than those programs, we'd likely proceed in

1 advance of that.

2 MR. BOB PETERS: Your answer, Mr.
3 Miles, is -- is what the Corporation will do from a
4 operational perspective out in 2030, correct?

5 MR. TERRY MILES: I guess as we
6 approach that timeframe.

7 MR. BOB PETERS: Okay, that's fair.
8 But I want to get you back to calculating the marginal
9 value today. You've made assumptions, and your
10 assumptions don't have the opportunity to test which
11 resource is going to be factually the cheapest,
12 because that still many years into the future,
13 correct?

14 MR. TERRY MILES: I think that's a
15 fair statement.

16 MR. BOB PETERS: Okay. So then if --
17 if we can't assess the value of demand-side management
18 in terms of deferring a new generation resource, how
19 is that any different than the value of Keeyask in
20 deferring the need for the next generation source?

21 MR. TERRY MILES: Keeyask is under
22 construction. I'm not sure --

23 MR. BOB PETERS: Well, Ms. Morrison's
24 demand-side management program is under construction,
25 and it's -- it's going to provide the Utility with

1 some benefits. Now, I appreciate you haven't been
2 able to quantify the capacity benefit yet?

3 MR. TERRY MILES: Yeah, I think from
4 that perspective, I think the DSM is annual spending,
5 and the programs are cumulative over time. That's the
6 comment I would make on -- on that, suggest Keeyask is
7 being constructed. It's an upfront cost that's there.
8 We're spending that. It's being built. The DSM
9 programs are built over time, and they are cumulative.
10 There's spending that goes year-in-year, and they bill
11 on the various programs that are -- that are out in
12 time. I don't know if that answers the question, but
13 I think that --

14 MR. BOB PETERS: Well, let -- let me -
15 - let me continue with a thought that Manitoba Hydro's
16 calculation of the marginal value starts with the
17 2030/'31 timeframe, when the deferred generation would
18 be that of the gas turbine, correct?

19 MR. TERRY MILES: That's correct.

20 MR. BOB PETERS: Why does the value of
21 generation deferral only commence in the year the
22 generation resource is expected to be deferred?

23 MR. TERRY MILES: Because it's
24 marginal. It's incremental to what the system will
25 be. Like, our marginal value that we have -- or how

1 we calculate marginal value, it's incremental to the
2 state of the system as we -- as we know it, and the
3 state of the system as we know it will have certain
4 resources in place, and those are based to our base
5 assumptions, if you will, in the IFF, and our base
6 planning horizon. So this is a marginal or
7 incremental value, and that deferral of that resource
8 would be incremental to a base assumption of serving
9 load at that time. That would be my perspective.

10 MR. BOB PETERS: All right. Is there
11 any value, Mr. Miles, to deferral -- to the deferral
12 prior to the 2030/'31 timeframe?

13 MR. TERRY MILES: No, I wouldn't think
14 so. Programs that are put in place ahead of that, if
15 you will, that have surplus capacity, or at capacity
16 of the system, if there's no value to that capacity,
17 the value would come in at the point where the system
18 would require it, which is in the 2030 timeframe, so.

19

20 (BRIEF PAUSE)

21

22 MR. TERRY MILES: So -- I need a
23 drink. There is no value to the deferral before that
24 deferral date, no, because you're not deferring
25 anything before that timeframe.

1 MR. BOB PETERS: Okay, I -- I
2 understand your answer, and your answer comes back to
3 you've got to determine what's on the margin on that
4 particular year, so there's no advance benefit to any
5 plan deferral. Is that correct?

6 MR. TERRY MILES: That's correct.

7 MR. BOB PETERS: All right. If we
8 look, then, at page 3 of 3 of this Information
9 Request, the one, again, with a lot of the data
10 redacted, and again, mindful of the admonition
11 respecting confidential information, why does it
12 appear that transmission and distribution deferrals
13 recognize a value of deferral in each and every year
14 when you've just told the panel that the generation
15 deferral really only hits home in 2030/'31, when the
16 new resource would be otherwise needed?

17 MR. TERRY MILES: Because it's my
18 understanding that there are distribution and
19 transmission projects that are contemplated in those
20 timeframes that could potentially be deferred, or
21 there is some value associated with that with -- with
22 those projects.

23 MR. BOB PETERS: Does that suggest to
24 the panel, Mr. Miles, that in this revised information
25 request response, that a transmission and distribution

1 project can be displaced in each and every year that's
2 shown?

3 MR. TERRY MILES: I think the folks
4 that calculate the transmission and distribution
5 marginal costs could comment more specifically, but I
6 believe there's various components of various projects
7 that -- that can be. You know, when they do their
8 calculation, they look at their portfolio of projects
9 and the components of those projects that are
10 associated with -- with load, or system growth, and
11 that's what these values reflect is the components
12 that could potentially defer from system growth.

13 MR. BOB PETERS: Mr. Miles, can you
14 tell the panel whether, if Ms. Morrison's DSM --
15 demand-side management programs are successful,
16 whether that will also translate to reduced
17 transmission and distribution investment?

18

19 (BRIEF PAUSE)

20

21 MR. TERRY MILES: Yeah, maybe just a
22 correction. Not reduced, but avoided. It would be
23 deferred or -- or avoided, I think is the
24 clarification, from my perspective.

25

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: Yeah, I -- I'm going
4 to have to ask you help me on that, Mr. Miles. What's
5 the difference between avoided or reduced expenditure?

6 MR. TERRY MILES: I guess that's
7 pushed out in -- probably pushed out in time. So I --
8 I -- if I were to clarify it in my -- sort of in my --
9 in my head, the DSM programs reduce load and load
10 requirements in various areas, and -- and some might
11 be more specific and focused in the city, or rural,
12 elsewhere that might have specific locations on
13 certain projects, and those projects or components
14 might be allowed to be deferred, because a load
15 requirement isn't there.

16 So the cost is -- is deferred, so if --
17 if deferred and avoided means reduced in that year,
18 than that would be -- we could agree on that
19 terminology, then.

20 MR. BOB PETERS: All right. Thank
21 you. Mr. Miles, you told the panel in your previous
22 answers to me that the generation deferral methodology
23 that we've been talking about is the same that was
24 used by Manitoba Hydro prior to approximately the year
25 2000?

1 MR. TERRY MILES: I believe that's
2 correct, yes.

3 MR. BOB PETERS: Other than the
4 magnitude of the value of the deferral, Mr. Miles, is
5 Manitoba Hydro applying this methodology in exactly
6 the same way as it did prior to 2000?

7

8 (BRIEF PAUSE)

9

10 MR. TERRY MILES: I -- I'd suggest
11 similarly applying it, given our -- our current
12 situation.

13 MR. BOB PETERS: And just highlight
14 the differences, if you're able.

15 MR. TERRY MILES: I -- I can't
16 highlight the differences specifically.

17 MR. BOB PETERS: Are you aware, Mr.
18 Miles, prior to the year 2000, whether Manitoba Hydro
19 applied the value of generation deferral only
20 beginning in the year in which the deferral was
21 expected to take place?

22 MR. TERRY MILES: I believe it would
23 defer those resources based on certain in-service
24 dates. So that's -- from that perspective, yes.

25 MR. BOB PETERS: On --

1 MR. TERRY MILES: I do think -- just
2 to comment, I think the -- the change in -- in the --
3 in the approach to that, and it gets complicated from
4 a deferral perspective. And Mani -- if -- if we
5 didn't have the export market, and the -- and the
6 energies, and the revenues, and the opportunity to do
7 that, it would primarily be a capital cost deferral
8 calculation, and when we have the generation component
9 that has a revenue component and a deferred capital
10 cost component, combining those two (2) in a marginal
11 value calculation gets complicated in terms of how you
12 make the assumptions and how you evaluate the
13 differences.

14 And change in between is deferral
15 methodology versus market value for capacity and
16 deferring resources. In particular, when you have
17 large resources like large Hydro resources, say if
18 those are the resources that you're trying to defer, I
19 think prior to 2000, there was an opportunity to defer
20 a number of different types of resources. So the
21 calculation then was different from that perspective,
22 but...

23 MR. BOB PETERS: Mr. Miles, on page 2
24 of 3 of this Public Utilities Board Information
25 Request Second Round 57, there is a chart containing

1 thirty (30) year levelized marginal values, and you're
2 familiar with that, sir?

3 MR. TERRY MILES: Yes, I am.

4 MR. BOB PETERS: And we see, Mr.
5 Miles, that the distribution capacity marginal value
6 declined by 12 percent, correct?

7 MR. TERRY MILES: That's correct.

8 MR. BOB PETERS: And I believe my
9 colleague Ms. Steinfeld may have an undertaking
10 outstanding on that, but are you able at this time to
11 explain the reason for that reduction?

12

13 (BRIEF PAUSE)

14

15 MR. TERRY MILES: Sorry, I was just
16 clarifying when we planned to file that -- that
17 undertaking. I think it was Undertaking 20, I think
18 to clarify.

19 MR. BOB PETERS: Yes. Yes, sir.

20 That's what we have it as too.

21 MR. TERRY MILES: So if you could just
22 bear with me for just a second.

23

24 (BRIEF PAUSE)

25

1 MR. TERRY MILES: My -- my general
2 understanding is that it's a difference between a
3 preliminary number -- number versus the final number,
4 and a preliminary number came out. It was -- it was
5 revised by the time the final report came out, and
6 that's what the differences was between those two (2)
7 numbers that were there. So it wasn't any fundamental
8 different methodology. That's my general
9 understanding.

10

11 (BRIEF PAUSE)

12

13 MR. BOB PETERS: Mr. Miles, just so
14 we're not talking at cross purposes here, looking at
15 page 2 of 3 again on the screen, the chart, which is
16 the thirty (30) year levelized marginal values, I'll
17 maybe start by asking you to confirm that your
18 evidence to the panel was that for transmission and
19 distribution, there have been no changes in the
20 methodology, and that's what I took from one of your
21 previous answers?

22 MR. TERRY MILES: And that's -- that's
23 my understanding, yes.

24 MR. BOB PETERS: All right. So
25 assuming there's been no change in methodology, I see

1 that on this chart, in the column that's called
2 2015/'16 marginal value in 2016 dollars, for
3 distribution, it's a eighty-seven cents (\$0.87),
4 correct?

5 MR. TERRY MILES: That's correct.
6 2015 values, yes.

7 MR. BOB PETERS: And then that's just
8 updated for 2017 dollars and becomes eighty-nine
9 (\$0.89) a kilowatt hour?

10 MR. TERRY MILES: That's correct.

11 MR. BOB PETERS: And so between the
12 methodology used in 2016, now jumping over to the
13 2017/'18 marginal value, the value declines to
14 seventy-eight cents (\$0.78) -- a -- a point seven (.7)
15 -- sorry, point seven-eight (.78) cents a kilowatt
16 hour?

17 MR. TERRY MILES: I see that, yes.

18 MR. BOB PETERS: All right. Is that
19 point seven-eight (.78) cents a kilowatt hour -- and I
20 apologize if I misspoke earlier about the values -- is
21 that as a result of methodology change, or just a new,
22 better calculation of the -- the costs?

23 MR. TERRY MILES: I believe that's
24 just an updated value of the cost.

25 MR. BOB PETERS: And so from 2015,

1 when this -- when this was first prepared, there was
2 no update until 2017?

3 MR. TERRY MILES: Yes.

4

5 (BRIEF PAUSE)

6

7 MR. BOB PETERS: And there's no
8 decline correspondingly related to the transmission
9 capacity marginal value, correct?

10 MR. TERRY MILES: That's correct.

11 MR. BOB PETERS: And the transmission
12 calculation has also been refreshed in 2017; has it,
13 sir?

14

15 (BRIEF PAUSE)

16

17 MR. TERRY MILES: You know, I can't
18 comment on the details of the transmission and
19 distribution. I know that the documents are on file.
20 I'd have to look more specifically at those to
21 determine, but I don't believe there's any fundamental
22 changes between the two (2). They're updated and
23 refreshed numbers between the calculations that are
24 there. I think the values that they used, the studies
25 themselves, I think are a couple of years old, and

1 these numbers are just refreshed based on those --
2 those studies that are there. But I don't think
3 there's any fundamental changes between those.

4 MR. BOB PETERS: All right. Well,
5 thank you, Mr. Miles. We have your response and if
6 for any reason you determine that needs to be revised,
7 you'll work through your counsel to get that to us.
8 Mr. Chair, thank you.

9 I'd like to thank Mr. Miles for making
10 himself available. Those are my questions related to
11 this matter. And I know Mr. Williams will also have
12 questions as soon as the panel is finished.

13 THE CHAIRPERSON: Ms. Kapitany...?

14 THE VICE-CHAIRPERSON: Just one (1)
15 last question, Mr. Miles.

16 Can you -- you may have answered this
17 already, and I apologize if you have, but can you
18 confirm for me whether or not DSM is included in your
19 integrated resource planning?

20 MR. TERRY MILES: DSM is -- so it's --
21 it's foundational to our resource plan, yes. It's in
22 our supply demand tables. It's in there as a
23 resource, yes.

24 THE CHAIRPERSON: Dr. Williams...?

25 DR. BYRON WILLIAMS: Yes. Good

1 morning, members of the panel. And I can just
2 indicate in conversations with My Learned Friend Ms.
3 Fernandes, as well as Mr. Hacault, I'll be changing
4 the order of my cross because we want to be -- get Mr.
5 Miles out of here by coffee break, or perhaps before.
6 I believe that Mr. Hacault may have some questions for
7 Mr. Miles tomorrow as -- as well. So I think that's
8 kind of where we are schedule wise.

9 MS. ODETTE FERNANDES: That's correct.
10 And Mr. Miles will make himself available tomorrow
11 morning as well --

12 THE CHAIRPERSON: Thank you.

13 MS. ODETTE FERNANDES: -- for Mr.
14 Hacault.

15

16 RE-CROSS-EXAMINATION BY DR. BYRON WILLIAMS:

17 DR. BYRON WILLIAMS: And, Mr. Miles,
18 just following up in terms of Board member Kapitany's
19 question. You're familiar with the concept of
20 integrated resource planning, sir?

21 MR. TERRY MILES: I am, yes.

22 DR. BYRON WILLIAMS: And that is
23 sometimes known as least cost resource planning?
24 That's not familiar. Okay, that's fine, sir.

25 MR. TERRY MILES: They call it a

1 number of things, but yes.

2 DR. BYRON WILLIAMS: Okay. And I'll -
3 - I'll remind you as well to speak up, sir.

4 MR. TERRY MILES: Sorry, yes. So I --
5 so just from a least cost perspective, you can call it
6 least cost. That has a whole bunch of other --

7 DR. BYRON WILLIAMS: Okay.

8 MR. TERRY MILES: -- connotations
9 around what we mean by least cost.

10 DR. BYRON WILLIAMS: You'll agree
11 though, sir, that an integrated resource plan
12 determines what supply-side and des -- demand side
13 resource mix is in the best interests of utility
14 customers and -- and the utility; agreed?

15 MR. TERRY MILES: In -- in the best
16 interest? Yes, I think that is open for, I -- I
17 guess, the time discussion, near-term, long-term. I
18 think that opens the door to a whole bunch of other --
19 it's a broad perspective I think.

20 DR. BYRON WILLIAMS: And the thinking
21 behind that broad prescr -- perspective and looking at
22 best practices for integrated resource planning, sir,
23 involves placing every resource option on an equal
24 footing; agreed?

25 MR. TERRY MILES: That's fair.

1 DR. BYRON WILLIAMS: And in particular
2 the innovation and thinking that integrated resource
3 planning represents is putting demand-side resources
4 on an equal footing with supply-side; agreed, sir?

5 MR. TERRY MILES: That's correct, yes.

6 DR. BYRON WILLIAMS: And integrated
7 resource planning is critical in determining the least
8 cost combination of resources; agreed, sir?

9 MR. TERRY MILES: So by integrated
10 you're comparing a number of different options and
11 determining what might meet a number of different
12 criteria and objectives, if you will in terms of least
13 cost.

14

15 (BRIEF PAUSE)

16

17 MR. TERRY MILES: Is that better?

18 Okay.

19 DR. BYRON WILLIAMS: It's hard coming
20 back after a couple days off, sir. I find it is as
21 well myself. I'm not saying you had any time off
22 because I know how hard folks at Hydro work.

23 MR. TERRY MILES: Well, thanks for
24 that. I appreciate that.

25 DR. BYRON WILLIAMS: Sir, just in

1 terms -- but one (1) -- in -- in terms of the broad
2 approach taken to resource planning, one (1) expected
3 outcome of integrated resource planning is that in the
4 best interest of consumers the mix that flows from
5 that will be the least cost combination of resources,
6 taking into account other policy objectives?

7 MR. TERRY MILES: That's fair.

8 DR. BYRON WILLIAMS: And, Mr. Miles, I
9 want to -- let's stay on this table, being page 2 of 3
10 of Public Utilities Board 2nd Round Information
11 Request 57 revised. Sir, what this table presents are
12 the est -- Hydro's estimate of thirty (30) year
13 levelized marginal values as used in the 2016 DSM
14 plan, as well as in its 2017 update of 2017 marginal
15 value.

16 Is that fair?

17

18 (BRIEF PAUSE)

19

20 MR. TERRY MILES: That's correct, yes.

21 DR. BYRON WILLIAMS: And under the
22 "Used in 2016 DSM Plan," sir, the -- the second column
23 is in essence the Hydro's estimate of marginal value
24 as used in the 2016 DSM plan and -- and presented in
25 2016 dollars; agreed?

1 MR. TERRY MILES: That's correct, yes.

2 DR. BYRON WILLIAMS: Moving one (1)
3 column to the right, we see the -- the same
4 information, but presented in 2017 dollars; agreed?

5 MR. TERRY MILES: That's correct, yes.

6 DR. BYRON WILLIAMS: And -- and a
7 small point, sir, but you'll note that for
8 transmission the value increased slightly as it did
9 for distribution, sir?

10 MR. TERRY MILES: Yes.

11 DR. BYRON WILLIAMS: For generation,
12 the value in 2017 dollars does not change as presented
13 in this result, sir?

14 MR. TERRY MILES: I see that, yes.

15 DR. BYRON WILLIAMS: And, Mr. Miles,
16 can you explain why when the generation values were
17 updated to 2017 dollars, the -- they -- they were not
18 changed?

19

20 (BRIEF PAUSE)

21

22 MR. TERRY MILES: Specifically, no.
23 The cent per kilowatt hour change that's in there that
24 can be rounding, depending on the magnitude of the
25 dollars that were there.

1 (BRIEF PAUSE)

2

3 DR. BYRON WILLIAMS: Or it could be a
4 typo?

5 MR. TERRY MILES: I don't believe it's
6 a typo, but I, like...

7 DR. BYRON WILLIAMS: Okay.

8

9 (BRIEF PAUSE)

10

11 MR. TERRY MILES: Okay. It could be.
12 It could be a typo. I can't confirm that, but...

13 DR. BYRON WILLIAMS: Mr. Miles, just
14 by way of undertaking, if Manitoba Hydro can review
15 that figure, being the estimated marginal value in
16 2017 dollars for generation of six-point-three-four
17 (6.34) and -- and review whether it's accurate or --
18 or if it's been appropriately updated for 2017
19 dollars.

20 Would you take that by way of
21 undertaking?

22 MR. TERRY MILES: I will do that, yes.

23

24 --- UNDERTAKING NO. 30: Manitoba Hydro to
25 determine if the estimated

1 marginal value in 2017
2 dollars for generation of
3 6.34 is accurate or has
4 been updated for 2017
5 dollars

6

7 CONTINUED BY DR. BYRON WILLIAMS:

8 DR. BYRON WILLIAMS: And you went
9 through, sir, this -- most of this table with Mr.
10 Peters. But if we follow that generation line across
11 to the -- the next column being the 2017/'18 marginal
12 value in 2017 dollars, the figure presented for
13 generation is four-point-three nine (4.39) cents or
14 four-point-three-nine (4.39) cents per kilowatt hour,
15 sir?

16 MR. TERRY MILES: That's correct, yes.

17 DR. BYRON WILLIAMS: And Hydro based -
18 - calculates that to be a 32 percent change downwards;
19 agreed?

20 MR. TERRY MILES: Yes.

21 DR. BYRON WILLIAMS: And that's as a
22 result of the methodological change primarily of which
23 you spoke previously, sir?

24 MR. TERRY MILES: It -- it's a result
25 of a significant reduction in energy value, so market

1 price. And it's a combination of the two (2), yes.

2 DR. BYRON WILLIAMS: Yes, and thank
3 you. My question was imprecise. It's a combination
4 both of changes in the marketplace, as well as the
5 significant methodological change, sir; agreed?

6 MR. TERRY MILES: Yes.

7 DR. BYRON WILLIAMS: And in terms of
8 the -- the total change, sir, we see that the 2015/'16
9 marginal value updated for 2017 dollars is seven-
10 point-nine-four (7.94) cents a kilowatt hour, sir;
11 agreed?

12 MR. TERRY MILES: Yes.

13 DR. BYRON WILLIAMS: And that has been
14 reduced in -- in Hydro's revised estimate, reflecting
15 both market and methodological changes to five-point-
16 seven-five (5.75) cents per kilowatt hour; agreed?

17 MR. TERRY MILES: Agreed.

18 DR. BYRON WILLIAMS: A minus 28
19 percent change; correct?

20 MR. TERRY MILES: That's correct.

21 DR. BYRON WILLIAMS: And Mr. Peters
22 went through this, but I -- I have -- I do want to
23 talk about the methodological change, perhaps from a
24 similar but slightly different angle, Mr. Miles.

25 The 2017 updated figures include a

1 change in the methodology for the valuation of the
2 generation capacity marginal value; correct?

3 MR. TERRY MILES: That's correct.

4 DR. BYRON WILLIAMS: And at -- at a
5 high level, and given uncertainty in the generation
6 capacity value in the export market, Hydro determined
7 that the value of generation capacity would be, in
8 this updated approach, be based on the deferral of a
9 new generate race -- new generation resource in
10 Manitoba; correct?

11 MR. TERRY MILES: That's correct.

12 DR. BYRON WILLIAMS: And in essence,
13 as you discussed with Mr. Peters, the value for
14 capacity is based on the deferral of a peaking type
15 natural gas combustion turbine built in 2030/'31;
16 correct?

17 MR. TERRY MILES: That's correct.

18 DR. BYRON WILLIAMS: And in terms --
19 as you discussed with Mr. Peters but I just want to be
20 clear, the 2030/'31 time frame corresponds with the
21 need date for new resources in Manitoba if we take out
22 projected savings from new DSM beyond 2017 from the
23 base planning sequence; agreed, sir?

24 MR. TERRY MILES: That's what we
25 assumed, yes.

1 DR. BYRON WILLIAMS: And I think you
2 canvassed this with Mr. Peters, but I just want to
3 make sure for Mr. Harper's benefit, that up to
4 2030/'31, the value of generation is just the value of
5 surplus energy sales, and there's no imputed capacity
6 value.

7 Is that correct, sir?

8 MR. TERRY MILES: That's correct.

9

10 (BRIEF PAUSE)

11

12 DR. BYRON WILLIAMS: Noting that the
13 projected savings from new DSM beyond 2017 are removed
14 from the base planning sequence, would it be fair to
15 conclude that -- that Hydro has concluded that no new
16 DSM beyond 2017 would be cost effective?

17 MR. TERRY MILES: That's not a
18 conclusion that I drew in doing that calculation, no.
19 That was just solely to provide an indication of when
20 the value of capacity entered into the -- into the
21 system.

22 DR. BYRON WILLIAMS: And just so I'm
23 clear, Mr. Miles, has Hydro concluded in any way that
24 investing in new DSM just to make increased
25 opportunity sales is not cost justified?

1 MR. TERRY MILES: I can't -- I can't
2 answer that. That's -- Ms. Morrison, can you?

3

4 (BRIEF PAUSE)

5

6 MS. LOIS MORRISON: I'm -- I'm
7 somewhat unsure about the question, Mr. Williams. DSM
8 and our -- Manitoba Hydro's investment -- past
9 decisions to invest in DSM have never been solely
10 based on opportunities or value of the opportunities
11 market. Manitoba Hydro has always taken the position
12 that our investment in DSM is a long-term solution,
13 which is why for the most part we've pursued
14 technologies or opportunities that have a long-term
15 benefit to both the customer and to our system.

16 For example, we'll pursue opportunities
17 will have a measure of life that would be longer or
18 have the opportunity to have ongoing reinvestment in
19 that measure of life. So it's -- it's not something
20 that we've ever looked at in terms of the
21 opportunities market. And Mr. Miles can comment in a
22 little more detail about the valuation of the marginal
23 values as to how much the opportunities market plays
24 in that assessment. But our investment in DSM has
25 always taken a long-term perspective.

1 (BRIEF PAUSE)

2

3 DR. BYRON WILLIAMS: And indeed the
4 benefit of DSM is that it not only provides capacity
5 but it also frees up more energy for export; agreed?

6 MS. LOIS MORRISON: That is true. As
7 I mentioned, in the past our concern has been around
8 energy constraints and the value of energy. And so
9 the majority of the initiatives that we have pursued
10 to date have been primarily opportunities that -- that
11 deliver energy savings. Now, there are benefits of
12 different initiatives that we've used the marginal
13 values to help shape, whether we pursue them or not.

14 And those would be initiatives that
15 traditionally have more energy savings in the winter
16 months or may have additional capacity benefits in the
17 winter months. Those have seen -- been seen to have
18 better economics, and so we put more effort and -- and
19 pursue those opportunities. So programs such as the
20 Home Insulation Program or the Building Envelopes
21 Program for commercial buildings are ones that we've
22 pursued because they have benefits in the winter
23 months --

24 DR. BYRON WILLIAMS: Okay.

25 MS. LOIS MORRISON: -- from an energy

1 and capacity perspective.

2 DR. BYRON WILLIAMS: Mr. Miles, I -- I
3 can take you to a reference if you require it, but it
4 would -- it would be fair to say that oppor --
5 opportunity sales for Manitoba Hydro over recent years
6 have tended to average over two (2) cents on average?

7 MR. TERRY MILES: Could you provide
8 the reference, please, Mr. ...

9 DR. BYRON WILLIAMS: Yeah, if you want
10 to go to MFR-28, page 2 of 7, and you can look at
11 table 1 and table 2, sir. We'll pull it up.

12

13 (BRIEF PAUSE)

14

15 DR. BYRON WILLIAMS: Sir, let's focus
16 on -- on opportunity sales, and then we'll go to on-
17 peak and off-peak in just a second.

18 But would it be fair to say that for
19 the period from '05/'06 to 2016/'17 opportunity sales
20 have averaged over two (2) cents a kilowatt hour based
21 upon this response?

22

23 (BRIEF PAUSE)

24

25 MR. TERRY MILES: Based on the table,

1 yes.

2 DR. BYRON WILLIAMS: And go down to
3 table 2, if you -- you might, please, Kristen. If you
4 could pull it up. Thank you.

5 And, sir, focusing on off-peak
6 opportunity exports, would it be fair to say that even
7 in 2016/'17 off-peak opportunity exports averaged over
8 two (2) cents a kilowatt hour, sir?

9

10 (BRIEF PAUSE)

11

12 MR. TERRY MILES: Based on the table,
13 yes.

14 DR. BYRON WILLIAMS: Perhaps if we can
15 go to PUB-MFR-61 attachment to page IV. And this will
16 be for Ms. Morrison.

17 Ms. Morrison, this table examines the -
18 - this -- you'll accept subject to check this was used
19 the in the twenty (20) -- just give me one second --
20 in the 2016 DSM plan; agreed?

21 MS. LOIS MORRISON: That is correct.

22 DR. BYRON WILLIAMS: And we discussed
23 a few weeks ago that a similar table did not appear in
24 the 2017 DSM plan.

25 Do you recall that?

1 MS. LOIS MORRISON: Yes, that is
2 correct.

3 DR. BYRON WILLIAMS: And, Ms.
4 Morrison, if I was trying to get a sense of how
5 Manitoba Hydro looked at the calculation of total you
6 -- total resource cost, would I combine the -- the
7 green of the customer costs with the blue of the
8 utility cost?

9 MS. LOIS MORRISON: Yes.

10 DR. BYRON WILLIAMS: And it would be
11 fair to say that when we -- when we look at this table
12 there are a number of DSM resources for Manitoba Hydro
13 that are at or below two (2) cents in terms of a total
14 resource cost?

15 MS. LOIS MORRISON: In terms of a
16 levelized resource cost, there are a number of
17 initiatives that are -- there's about four (4) that
18 appear to be below the two (2) cents a kilowatt hour.
19 And I should qualify that one (1) of things that we
20 need to keep in mind when we're talking about a
21 customer cost is, as I mentioned, I think, previously
22 we're looking at the incremental costs.

23 So in a lot of our cases, when we're
24 pursuing a DSM opportunity we're pursuing that
25 opportunity at the point where the customer is making

1 a decision. So if the customer is making a decision
2 to, say, redo the siding on their house or on their
3 building, we will attempt to engage at that point to
4 have them upgrade the insulation.

5 So what would be included in the cost
6 of that project, from our perspective, would be the
7 incremental costs of upgrading their insulation at the
8 time they're redoing the siding. So it wouldn't
9 include the cost of the siding per se, but it would
10 include only the cost of the axial in -- actual
11 insulation. So that's -- when we look at the cost to
12 the customer we're looking at the incremental cost to
13 the customer.

14 DR. BYRON WILLIAMS: Mr. -- Mr. Miles,
15 you had a bit of this conversation with Mr. Peters,
16 but it would be fair to say that the marginal cost of
17 meeting new demand in 2030/'31 is not necessarily the
18 cost of a new natural gas turbine; agreed?

19 MR. TERRY MILES: That's possible,
20 yes.

21 DR. BYRON WILLIAMS: It may be that
22 some of the new DSM that was previously rem -- removed
23 might be -- might be lower cost; agreed?

24 MR. TERRY MILES: It -- it wasn't --
25 it wasn't removed, I think, in terms of that part, but

1 --

2 DR. BYRON WILLIAMS: Can't hear you,
3 sir.

4 MR. TERRY MILES: It -- it wasn't
5 removed in terms of was it removed or not. I think
6 the comment I made was that it defined the time frame
7 that was there. And I also commented on that it
8 depends on what value of DSM program is required to
9 serve the load. But it is possible, yes, that the
10 resource will be cheaper than a peaker and that
11 there's other resources other than DSM that are --
12 that are available to us as well.

13 DR. BYRON WILLIAMS: And to that
14 degree, sir, it -- it's possible that the marginal
15 cost of generation is -- is overstated, as estimated
16 in PUB-257 revised?

17 MR. TERRY MILES: And from what
18 perspectives are you referring to, Mr. Williams, that
19 it's overstated?

20 DR. BYRON WILLIAMS: Well, sir, it's -
21 - it's not necessarily that the marginal costs of
22 meeting new demand in 2031 is going to be the natural
23 gas turbine. That's the perspective.

24 MR. TERRY MILES: That's fair. I
25 would --

1 DR. BYRON WILLIAMS: Go ahead, sir.

2 MR. TERRY MILES: -- I would make this
3 comment, too, just for the Board's benefit. The
4 tables that you referred to are -- are -- and the
5 values that we were talking about were from actual
6 records, if I were to -- to confirm. And the periods
7 that are defined there are periods where we have well
8 above average water conditions. So the average actual
9 value per unit of generation will be considerably
10 lower, because we have lots of system surplus that
11 would have been spilled, lots of more off-peak energy,
12 and a lot more energy that we are just selling
13 wherever we can in the marketplace to be there. So
14 under those situations, yes, the unit value of the
15 energy will be lower.

16 The value that we have when we
17 calculate for the marginal value will be the average
18 of all flow conditions that we have. As flow
19 conditions vary it will change. At lower flow
20 conditions the marginal value of energy will be
21 higher. Under higher flow conditions the -- they're
22 the -- not the marginal but -- but the market value of
23 energy that we're able to achieve per unit of sale
24 will be higher, because we have less to sell. Under
25 high flow conditions that we had the last few years,

1 we're selling more into the -- into the marketplace.

2 So that reduces the unit value.

3 So to use that as a comparison for
4 these values on the table is not necessarily a
5 consistent comparison that's there. There is no
6 guarantee that we will have flow conditions of those
7 magnitude for the next thirty (30) years, if you will,
8 consistently which is the programs that Miss Morrison
9 defines the period over. And that's what we calculate
10 the marginal values over as well.

11 DR. BYRON WILLIAMS: And, sir, just to
12 confirm one (1) point from -- from that comment, in
13 times of higher flow conditions the average cost of
14 exports is drawn down, or -- or reduced because you're
15 selling off-peak wherever you can -- where -- wherever
16 you can find the value?

17 MR. TERRY MILES: We've filled up
18 likely the higher priced periods and we're selling now
19 into the lower price periods, correct.

20 DR. BYRON WILLIAMS: Okay. That's --
21 that's helpful. Thank you. From my perspective,
22 subject to any questions from the Board I'm prepared
23 to go to the remainder of my conversation. I don't
24 know if the Board has any questions on -- on this, or
25 if this is a good time for a break. I'm happy to.

1 THE VICE-CHAIRPERSON: So pardon my
2 confusion, but I thought you told me, Mr. Miles, when
3 we were talking about this earlier that most DSM
4 programs are energy based and so that it would be a
5 different story to provide capacity -- when we were
6 talking about the cost per kilowatt hour for a gas
7 turbine. And then later on, I think that Ms. Morrison
8 said that DSM provides capacity and energy.

9 Could you just clarify that, please?

10 MR. TERRY MILES: I -- I think the
11 comment was that primarily the DSM programs have been
12 around energy. There are capacity benefits from the
13 DSM programs, but a lot of that are -- there might be
14 independent that might come along with the energy
15 reductions, if you will. But I think the comment was
16 around that primarily they have been to reduce energy
17 requirements. But there are capacity DSM programs.
18 Maybe Ms. Morrison can comment --

19 MS. LOIS MORRISON: Yeah, so --

20 MR. TERRY MILES: -- more -- more on
21 that.

22 MS. LOIS MORRISON: When we first
23 moved into the area of DSM, Manitoba Hydro was looking
24 at future energy constraint concerns. And so we
25 weren't capacity constraint. Like, our first year of

1 needing, say, new generation or new investment wasn't
2 being driven by a requirement to meet a capacity need.
3 It was being driven by a need to meet energy needs.
4 And so because of that we focused our efforts for DSM
5 on pursuing those initiatives that delivered energy
6 savings.

7 Now, obviously with a number of the
8 energy save -- and the number of the initiatives that
9 we're pursuing there is a capacity that comes with
10 that, so a capacity saving that comes with that. So
11 when you're reducing the energy requirements of a
12 building or a -- an operation, there's a reduction in
13 the capacity that's required also.

14 So although -- so when we're looking at
15 the benefits of a program, we look at all of those
16 benefits because there are capacity benefits within
17 the system under the marginal values that were
18 provided. So that was what we were looking at in
19 terms of balancing out and pursuing the most cost-
20 effective measures.

21 However, we were not focused on
22 initiatives that had a capacity only benefit, so
23 something that only reduced the capacity requirements
24 but didn't also deliver an energy reduction, say a
25 demand controller program or that. Those weren't

1 initiatives that we were pursuing in the early years
2 because they didn't derive enough benefit for us based
3 on the marginal values that we were provided.

4 So, really, when we're looking at
5 assessing demand-side management programs, it was
6 looking at the energy was the focus because that's
7 where the majority of the value was, but there was
8 value in the capacity. And so, therefore, we were --
9 we were presenting both.

10 THE CHAIRPERSON: Ms. McKay...?

11

12 (BRIEF PAUSE)

13

14 BOARD MEMBER MCKAY: I just want to go
15 back to PUB/MH-11-57 revised. I know this was asked
16 earlier. I just want to make sure that all the
17 numbers are going to be double checked on this table?

18 MR. TERRY MILES: I'll confirm all the
19 numbers on the table.

20 BOARD MEMBER MCKAY: Yeah, because
21 there's a number of them that are wrong.

22 MR. TERRY MILES: We'll -- we'll
23 confirm the numbers on the table, yes.

24 BOARD MEMBER MCKAY: Okay. Thank you.

25 MR. TERRY MILES: So that's an under -

1 - Manitoba Hydro will confirm the thirty (30) year
2 levelized marginal value table on page -- included in
3 PUB/MANITOBA HYDRO 2-57 revised.

4 BOARD MEMBER MCKAY: Yeah, it's --
5 it's just a simple addition of those. I don't know
6 about the actual values but the columns appear not to
7 be added properly. Thank you.

8 MR. TERRY MILES: Okay. We'll confirm
9 that.

10

11 --- UNDERTAKING NO. 31: Manitoba Hydro will
12 confirm the thirty (30)
13 year levelized marginal
14 value table included in
15 PUB/MANITOBA HYDRO 2-57
16 revised

17

18 THE CHAIRPERSON: Yeah. Dr. Williams,
19 I think that maybe we'll take the break now. I would
20 rather not keep disrupting your cross-examination
21 break in fifteen (15) or twenty (20) minutes unless
22 you tell me there's a natural place. So we'll --
23 we'll break now for fifteen (15) minutes. Thank you.

24

25 --- Upon recessing at 10:19 a.m.

1 --- Upon resuming at 10:41 a.m.

2

3 CONTINUED MANITOBA HYDRO PANEL 3 re COST OF SERVICE,
4 RATE DESIGN AND BILL AFFORDABILITY:

5 PAUL CHARD, Previously Sworn

6 COLLEEN GALBRAITH, Previously Sworn

7 GREGORY MASON, Previously Sworn

8 LOIS MORRISON, Previously Sworn

9 GREG BARNLUND, Previously Sworn

10

11 THE CHAIRPERSON: Dr. Williams...?

12

13 CONTINUED CROSS-EXAMINATION BY DR. BYRON WILLIAMS:

14 DR. BYRON WILLIAMS: Yes, and I

15 suspect that most of my questions will go to Mr.

16 Barnlund, but anyone on the Hydro panel will -- should

17 feel free to jump in and Ms. Galbraith, I have a

18 couple of very small short snappers for your rate at

19 the -- at the end.

20 I wonder if we can start with Hydro's

21 response to PUB2-52 and go down to the... And, Mr.

22 Barnlund, you'll recall this response relates to a

23 discussion of Manitoba Hydro's internal guidelines for

24 the limits to bill impacts on customers in the event

25 of an overall requested rate change?

1 MR. GREG BARNLUND: Yes, it was
2 referring to the guidelines that Manitoba Hydro has
3 internally with respect to potential additional
4 impacts to customers as a result of addressing revenue
5 shifts between customer classes and revenue shifts
6 within customer classes due to rate design change.

7 DR. BYRON WILLIAMS: Thank you. Thank
8 you for that. In essence, sir, what this response
9 tells the reader is that in the event of an overall
10 rate change of 7.9 percent, Hydro's guidelines
11 contemplate another 2 percent over and above that in
12 terms of revenue shifts between customer classes
13 related to revenue cost coverage rate -- ratio
14 outcomes?

15 MR. GREG BARNLUND: Yes, that would be
16 the -- the ceiling that Manitoba has in its --
17 Manitoba Hydro has in its guideline, yes.

18 DR. BYRON WILLIAMS: And using the
19 residential class as an example, another potential
20 shift could be within the class of an additional 3
21 percent related to rate design changes; correct?

22 MR. GREG BARNLUND: Yes, that's
23 correct.

24 DR. BYRON WILLIAMS: So notionally
25 Hydro guidelines would enable a 12.9 percent impact

1 for the worst affected residential customers, sir?

2 MR. GREG BARNLUND: Well, I think that
3 -- that we would examine that impact within those
4 guidelines and -- and I think we would be very
5 hesitant to be pushing an impact that would approach
6 or exceed 10 percent.

7 And so while these are guidelines and
8 maximums, they are for guidance only and -- and there
9 would have to be further consideration given in terms
10 of the overall average level of -- of rate increases
11 being requested at that time as well, sir.

12 DR. BYRON WILLIAMS: And, sir, you'll
13 recall that in response to a request from the Public
14 Utilities Board Manitoba Hydro presented an
15 alternative rate design approach which we'll get into
16 later, but the effect of that, if it was accepted,
17 would be that for standard electrical ratepayers the
18 rate increase could be in the range of 9.7 percent; if
19 that was accepted, all other things being equal, sir?

20 MR. GREG BARNLUND: That was what was
21 modelled in that illustrative rate design that we had
22 put before, yes.

23 DR. BYRON WILLIAMS: And so that goes
24 to the issue of revenue shifts within customer
25 classes, sir?

1 MR. GREG BARNLUND: Yes.

2 DR. BYRON WILLIAMS: Agreed?

3 MR. GREG BARNLUND: Yes.

4 DR. BYRON WILLIAMS: And you're aware
5 as well, and familiar with Mr. Bowman's proposal with
6 regard to optional time-of-use rates for certain large
7 customers, sir?

8 MR. GREG BARNLUND: Yes, I am.

9 DR. BYRON WILLIAMS: And, sir, if Mr.
10 Bowman's proposal with regard to optional time-of-use
11 rates was accepted, then those costs of -- avoided by
12 large industrial users would have to be made up
13 somewhere; agreed?

14 MR. GREG BARNLUND: That would be
15 Manitoba Hydro's perspective, yes.

16 DR. BYRON WILLIAMS: And -- and that
17 could relate, sir, at least notionally to a revenue
18 shift between customer classes; agreed?

19 MR. GREG BARNLUND: It could result in
20 that, yes, sir.

21 DR. BYRON WILLIAMS: And notionally,
22 sir, approval of the 7.9 percent, plus the alternative
23 rate design proposal for residential customers, plus
24 acceptance of Mr. Bowman's time-of-use proposal could
25 place residential standard clo -- customers very close

1 to or above the 10 percent benchmark; agreed?

2 MR. GREG BARNLUND: It -- it is
3 possible because I would have to take a look at the --
4 the math of adding one and a half million dollars to
5 that revenue requirement, but it would definitely move
6 it above 9.7.

7 DR. BYRON WILLIAMS: I wonder if we
8 can turn to Coalition first round Information Requests
9 of Hydro 130(a), page 5 of 7.

10 And, sir, you'll agree that this
11 response looks at a breakdown of the bills, actual
12 bills for all residential customers for the full
13 fiscal year 2016/'17; correct?

14 MR. GREG BARNLUND: Yes, sir.

15 DR. BYRON WILLIAMS: And you'll see on
16 the extreme left-hand side of this table it's divided
17 into straight -- strata based upon the bills in terms
18 of a certain number of kilowatt hours per month, sir;
19 agreed?

20 MR. GREG BARNLUND: That's correct,
21 yes.

22 DR. BYRON WILLIAMS: Ranging from --
23 at the low -- at the top, bills of up to 250 kilowatt
24 hours a month; correct?

25 MR. GREG BARNLUND: Yes, sir, yes.

1 DR. BYRON WILLIAMS: And at the bottom
2 bills exceeding 4000 kilowatt hours a month; correct?

3 MR. GREG BARNLUND: Yes, that's right.

4 DR. BYRON WILLIAMS: And, sir, just
5 let's focus on the left-hand side of this table for a
6 moment under bills in each strata the four (4) columns
7 there.

8 I'll suggest to you that it inc --
9 considers the number of bills in each strata both by
10 number and percentage; correct?

11 MR. GREG BARNLUND: Yes, it does.

12 DR. BYRON WILLIAMS: And so, for
13 example, for the up to 250 kilowatt hours a month, we
14 see that there were 437,771 bills in that -- in that
15 between 20 -- in the 2016/'17 year, sir?

16 MR. GREG BARNLUND: Yes, sir.

17 DR. BYRON WILLIAMS: And as a
18 percentage of all residential customer bills that was
19 about 9 percent, correct?

20 MR. GREG BARNLUND: Yes, sir, yes.

21 DR. BYRON WILLIAMS: And just moving
22 up, sir, you'll see by the time we get to this -- the
23 750 to a thousand kilowatt hours a month and moving
24 along four (4) columns to the right, that up to that
25 point that represents 56 percent of the number of

1 bills for the year 2016/'17 for all residential
2 consumers, correct?

3 MR. GREG BARNLUND: Yes, that's
4 correct.

5 DR. BYRON WILLIAMS: Just finally on
6 this side of the table going up from -- to ones 1750
7 to 2000 kilowatt hours a month, you'll see
8 cumulatively up to -- up to that level results in 82
9 percent of the -- of the bills for the '16/'17 year
10 for all residential customer, sir; agreed?

11 MR. GREG BARNLUND: Yes.

12 DR. BYRON WILLIAMS: And turning to
13 the right-hand side we see billed consumption in each
14 -- in each strata measured both in gigawatt hours as
15 well as the percentage of consumption, sir; correct?

16 MR. GREG BARNLUND: Yes.

17 DR. BYRON WILLIAMS: And starting
18 again at the bottom at the top, excuse me, bills for
19 usage of 250 kilowatt hours a month or less consumed
20 cumulatively 64 gigawatt hours or 1 percent of -- of
21 consumption for the wri -- all residential customers
22 in '16/'17, sir.

23 MR. GREG BARNLUND: Yes, that's
24 correct.

25 DR. BYRON WILLIAMS: And if we go all

1 the way down to 1750 to 2000 and then across to the
2 right, you'll see that in -- in terms of con -- in
3 terms of consumption cumulatively up to that level
4 that was 50 percent of consumption for all residential
5 customers for the full fiscal year '16/'17, sir?

6 MR. GREG BARNLUND: Yes, it was.

7 DR. BYRON WILLIAMS: And just to
8 remind you, sir, that in terms of the percentage of
9 bills, just moving four (4) columns to the left,
10 between 1750 and 2000 cumulatively accounts for 82
11 percent of the bill, sir?

12 MR. GREG BARNLUND: Correct, it's 82
13 percent of the bills but only 50 percent of the energy
14 consumed.

15 DR. BYRON WILLIAMS: In other words,
16 sir, 18 percent of the bills account for 50 percent of
17 the consumptions?

18 MR. GREG BARNLUND: That would be my
19 conclusion, yes.

20 DR. BYRON WILLIAMS: Okay. And if we
21 go up, sir, finally, to over 4000 kilowatt hours a
22 month, and again to the right-hand side, the second
23 last column, 21 percent of the consumption in that
24 year for all residential customers was related to
25 monthly bills in excess of 4000 kilowatt hours a

1 month, sir; correct?

2 MR. GREG BARNLUND: That's what that
3 represents, yes.

4 DR. BYRON WILLIAMS: If we could turn
5 to GAC/Manitoba Hydro's second round 1, (a) to (c)
6 with thanks to Mr. Gange for borrowing a few of his
7 IRs.

8 Subject to check, Mr. Barnlund, you'll
9 agree that Hydro estimates that there's roughly
10 142,000 customers at or below LICO-125?

11 MR. GREG BARNLUND: Yes, sir.

12 DR. BYRON WILLIAMS: And what -- based
13 upon the 2014 residential use survey, this tells us
14 that Hydro estimates that for residential customers at
15 LICO-125 or below, there are 63,884 estimated to be
16 heating their home with electric heat; agreed?

17 MR. GREG BARNLUND: That's correct,
18 yes.

19 DR. BYRON WILLIAMS: If we can go to
20 the next page, please. This relates to the
21 nonelectric heat, sir, which would include the
22 standard consumers --

23 MR. GREG BARNLUND: Yes.

24 DR. BYRON WILLIAMS: -- agreed?

25 MR. GREG BARNLUND: Yes.

1 DR. BYRON WILLIAMS: And this suggests
2 in terms of the residential population of LICO-125
3 customers, Hydro estimates in the range of 78,000 who
4 do not heat their home with -- with electricity;
5 agreed?

6 MR. GREG BARNLUND: Yes, that's
7 correct, yes.

8 DR. BYRON WILLIAMS: And so of that
9 142,000, over 60,000 heat their homes with electricity
10 and around 78,000 do not of the LICO-125 population,
11 sir?

12 MR. GREG BARNLUND: That's what the
13 data represents, yes.

14 DR. BYRON WILLIAMS: Again with thanks
15 to Mr. Gange GAC/Manitoba Hydro 1-(a) to (h). And
16 page 3 of 3.

17 Sir, this is focusing on the LICO low
18 income cutoff 125 customers electric heat; agreed,
19 sir?

20 MR. GREG BARNLUND: Yes, it is.

21 DR. BYRON WILLIAMS: So it's not the
22 standard population, it's the electric heat population
23 that we're looking here at the table at the top of
24 this information response?

25 MR. GREG BARNLUND: Yes, that's

1 correct.

2 DR. BYRON WILLIAMS: And I want to
3 direct your attention, sir, you'll see on the left-
4 hand side of this table we're looking at various
5 months, running from April to March of a particular
6 year, sir?

7 MR. GREG BARNLUND: Correct. That's
8 the breakdown by month, yep.

9 DR. BYRON WILLIAMS: And at the top of
10 this table we see consumption varied and in -- in
11 various increments starting at under 900 kilowatt
12 hours a month and moving up to over 4000 kilowatt
13 hours a month, sir?

14 MR. GREG BARNLUND: Yes, sir.

15 DR. BYRON WILLIAMS: And let's go
16 down, if we can on this column -- or this table to
17 December and move across all the way to the right to
18 the over 4,000 kilowatt hours.

19 Sir, this would suggest that for the
20 LICO-125 population of customers heating their home
21 with electricity, 22 percent of their bills in
22 December of the particular year in question were for a
23 monthly bill of over 4000 kilowatt hours a month;
24 correct?

25 MR. GREG BARNLUND: Yes, sir. Yes.

1 DR. BYRON WILLIAMS: And for January,
2 just moving down that line, over 33 percent of their
3 bills in that particular month were for consumption
4 over 4000 kilowatt hours, sir?

5 MR. GREG BARNLUND: That's correct.

6 DR. BYRON WILLIAMS: For February over
7 30 percent --

8 MR. GREG BARNLUND: Yes, sir.

9 DR. BYRON WILLIAMS: -- correct? And
10 for March over 22 percent was for cont -- of the bills
11 were for consumption over 4000 kilowatt hours a month,
12 sir?

13 MR. GREG BARNLUND: Yes.

14 DR. BYRON WILLIAMS: And if we could
15 go to AMC to Manitoba Hydro first round 51, (a) to (c)
16 and, in particular, response (a) and (b), that would
17 be great.

18 Sir, when we focus our attention on on
19 reserve First Nation households, Hydro estimates that
20 82 percent are all electric as of March 2017, sir?

21 MR. GREG BARNLUND: That's correct.

22 DR. BYRON WILLIAMS: And the average
23 electricity consumption for all electric on reserve
24 was about 30,000 kilowatt hours for 2016/'17?

25 MR. GREG BARNLUND: Yes, sir, that's

1 correct.

2 DR. BYRON WILLIAMS: And, sir, subject
3 to check, and I don't think we need to go there, but
4 if you need a reference it's the electric load
5 forecast page 18. It' found in MFR-65.

6 You will agree that if we took the
7 2016/'17 year and compared -- and compared the -- we
8 would see that the average heat bill for electric heat
9 customers was 22,000 kilowatt hours, roughly?

10 MR. GREG BARNLUND: Roughly speaking,
11 it would be, yes.

12 DR. BYRON WILLIAMS: So it would be
13 significantly lower than the average annual
14 electricity consumption for households identified as
15 all electric on reserve?

16 MR. GREG BARNLUND: Yes, that's true.

17 DR. BYRON WILLIAMS: And generally,
18 you would expect that consumption on reserve would
19 generally be higher than consumption off reserve, sir,
20 for all electric households?

21 DR. BYRON WILLIAMS: I'm not sure
22 about that. I mean, I'm -- I'm assuming we have some
23 households off reserves that have some fairly large --
24 there will be some customers who have fair -- fairly
25 high consumption.

1 DR. BYRON WILLIAMS: Let me put that
2 a different way, sir. On average, you would expect
3 all electric consumption on reserve to be higher than
4 the -- the population as a whole?

5 MS. LOIS MORRISON: I think it would
6 have to be subject to check. As Mr. Barnlund
7 mentioned, there are a number of housing, single
8 detached. We also have to compare single detached
9 housing to single detached housing. So when you're
10 comparing to the electric bill -- heat billed value of
11 22,000 kilowatt hours a customer that you mentioned in
12 the -- from our table 14 in our residential load
13 forecast -- sorry, in our forecast.

14 That represents all type of housing
15 that heats with electricity. So that'll include on
16 multi unit; it will include apartment suites that have
17 en suite heating that's on the bill. So, you're not
18 necessarily cha -- comparing apples to apples.

19 I would agree with you that it is
20 likely the case that on housing in First Nation
21 communities has a higher energy bill, higher
22 electricity bill than a single detached house not on
23 reserve, but to the degree will not be what's
24 reflected here in our discussion. It's not the 22,000
25 versus 30,000.

1 DR. BYRON WILLIAMS: And Ms. Morrison,
2 and thank you for that thoughtful answer. And -- and
3 has Manitoba Hydro ever done that analysis?

4 MS. LOIS MORRISON: Are you asking if
5 we've done the analysis of comparing single detached
6 on reserve versus single detached off reserve housing?

7 DR. BYRON WILLIAMS: Exactly. Thank
8 you for ask -- answering the question better -- or
9 clarifying the question better than it was asked.

10 MS. LOIS MORRISON: With another
11 question.

12 DR. BYRON WILLIAMS: Yeah

13 MS. LOIS MORRISON: I think we have
14 looked at it in the past. I cannot tell you what the
15 final results were. That is why I'm drawing the
16 conclusion that I do believe, based on recollection,
17 that it was higher but I cannot tell you the degree
18 that it was higher.

19 DR. BYRON WILLIAMS: I can give you a
20 reference if you require, Ms. Morrison, which is AMC/
21 Manitoba Hydro 1-50 (a) to (b) -- (a) and (b).

22 But Man -- Manitoba Hydro would agree
23 that the average elect -- energy consumption for
24 electrically heated single detached homes is greater
25 in MKO communities as compared to the average co --

1 consumption First Nation communities overall?

2 MS. LOIS MORRISON: That's what we
3 wrote in that reference, that IR, yes?

4 DR. BYRON WILLIAMS: Okay. Ms.
5 Morrison, I'm not going to ask you to -- to do any
6 work that you haven't done already, but I'm going to
7 ask you to review your records to see whether Manitoba
8 Hydro has compared the average consumption in
9 electrically heated single detached homes on reserve
10 to electrically heated single detached homes off
11 reserve.

12 And if you have done that analysis to
13 provide the -- the conclusions from that analysis.

14 MS. LOIS MORRISON: Yes, we can do
15 that.

16 DR. BYRON WILLIAMS: Is that
17 undertaking sufficient for the -- I've got the thumbs
18 up from -- from the court reporter, which is rare. So
19 I'll take that.

20

21 --- UNDERTAKING NO. 32: Manitoba Hydro to review
22 their records to see
23 whether Manitoba Hydro has
24 compared the average
25 consumption in

1 electrically heated single
2 detached homes on reserve
3 to electrically heated
4 single detached homes off
5 reserve. And if so,
6 provide the conclusions
7 from that analysis.
8

9 CONTINUED BY DR. BYRON WILLIAMS:

10 DR. BYRON WILLIAMS: And, Ms.
11 Morrison, in -- in terms of the reality that
12 consumption associated with single detached homes in
13 MKO communities is -- is greater, one (1) of the key
14 factors that Hydro attributes that to is the colder
15 weather associated with those communities; agreed?

16 MS. LOIS MORRISON: Yes, we would
17 agree.

18 DR. BYRON WILLIAMS: I thank you for
19 that and -- and, Mr. Barnlund, I believe we're back to
20 you. I'm going to pull up -- ask at Kristen to pull
21 up tab 9, page 2 of the Manitoba Hydro filing. And
22 just scroll down the page just a little bit more,
23 Kristen that's fine.

24 Sir, you'll see here presented under
25 subsection 9.1 of the Hydro General Rate Application

1 are six (6) Mani -- Manitoba Hydro general rate-making
2 objectives, agreed?

3 MR. GREG BARNLUND: Yes, sir.

4 DR. BYRON WILLIAMS: And among them
5 are -- one (1) of them is fairness and equity, sir,
6 correct?

7 MR. GREG BARNLUND: That's correct,
8 yes.

9 DR. BYRON WILLIAMS: And generally,
10 you'll accept that one (1) element of the
11 consideration in terms of fairness and equity is
12 whether individual customers are assumed to be
13 carrying their fair share of all -- of the overall
14 revenue requirement. Would that be fair?

15 MR. GREG BARNLUND: I think that as a
16 class, we would look at it that they were -- that as a
17 class of customers, they were -- that they were paying
18 a reasonable share of the rev -- of the revenue
19 requirement.

20 DR. BYRON WILLIAMS: Okay. So you
21 look at it in terms of whether the class, for example,
22 residential customers, are paying their fair share,
23 agreed?

24 MR. GREG BARNLUND: Correct.

25 DR. BYRON WILLIAMS: Of the revenue

1 requirement?

2 MR. GREG BARNLUND: Correct.

3 DR. BYRON WILLIAMS: And one (1)
4 common measure, or standard of fairness, you'll agree,
5 sir, is whether customers are paying what it costs to
6 serve them?

7 MR. GREG BARNLUND: That's correct,
8 yes.

9 DR. BYRON WILLIAMS: And it would be
10 fair to say that customers who are -- used similar
11 services and have similar cust -- consumption
12 characteristics and supply arrangements would be
13 expected to pay similar costs --

14 MR. GREG BARNLUND: Yes, sir.

15 DR. BYRON WILLIAMS: -- correct?

16 MR. GREG BARNLUND: Yes.

17 DR. BYRON WILLIAMS: And, sir, also in
18 terms of Manitoba Hydro's general rate-making
19 objectives, you'll see a reference to efficiency,
20 agreed?

21 MR. GREG BARNLUND: Yes.

22 DR. BYRON WILLIAMS: And without
23 asking you for a legal opinion, it's your
24 understanding that Manitoba Hydro has a mandate to
25 promote the efficient and economic use of energy

1 within the Province of Manitoba, sir?

2 MR. GREG BARNLUND: Yes.

3 DR. BYRON WILLIAMS: And when we use
4 those terms "economic and efficient," we're referring
5 to the optimal use of energy, correct?

6 MR. GREG BARNLUND: That's correct.
7 It's the optimal use of the resource.

8 DR. BYRON WILLIAMS: And optimal
9 energy, sir, does not necessarily mean the least
10 possible consumption --

11 MR. GREG BARNLUND: That's correct.

12 DR. BYRON WILLIAMS: -- of energy,
13 correct?

14 MR. GREG BARNLUND: Yes.

15 DR. BYRON WILLIAMS: Certainly, Hydro
16 seeks to encourage customers not to be wasteful,
17 agreed?

18 MR. GREG BARNLUND: That's correct,
19 yes.

20 DR. BYRON WILLIAMS: But at the same
21 time, you will promote usage where it's appropriate?

22 MR. GREG BARNLUND: Right. You want
23 to pursue all of the appropriate use of energy,
24 definitely.

25 DR. BYRON WILLIAMS: And often, we

1 refer to that as sending the right price sig --
2 signal, sir?

3 MR. GREG BARNLUND: Yes, sir.

4 DR. BYRON WILLIAMS: And that's linked
5 to concepts of economic eff -- efficiency and marginal
6 cost, correct?

7 MR. GREG BARNLUND: Yes, sir.

8 DR. BYRON WILLIAMS: And with caution,
9 because there is real economists in the -- in the
10 room, certainly neoclassical economics assumes that
11 when we send the right price signal, overall societal
12 welfare is -- is improved, right?

13 MR. GREG BARNLUND: That's the theory,
14 yes.

15 DR. BYRON WILLIAMS: I'm not even
16 going to look at Board Member Grant because I don't
17 want to see him rolling his eyes at that particular
18 time.

19

20 (BRIEF PAUSE)

21

22 DR. BYRON WILLIAMS: Mr. Barnlund,
23 apart from the revenue requirement, rate-making also
24 involves determination of how the costs will be
25 allocated among different customer classes, correct?

1 MR. GREG BARNLUND: Yes, sir.

2 DR. BYRON WILLIAMS: And cost of
3 service studies are an important element of those
4 discussions because they provide a rough estimate of
5 the degree -- the degree to which current revenues are
6 recovering costs, correct?

7 MR. GREG BARNLUND: That's correct.
8 Yes. I -- I agree with that.

9 DR. BYRON WILLIAMS: And, sir, you,
10 like others in this room, sat through the lengthy cost
11 of service proceedings culminating in Order 164/'16?

12 MR. GREG BARNLUND: Yes, sir.

13 DR. BYRON WILLIAMS: And you'll agree
14 that leaving aside other rate-making considerations,
15 and pursuant to that Order 164/'16, the cost of
16 service study presented by Manitoba Hydro in this pris
17 -- proceeding is about providing a rough -- rough
18 estimate of that fairness question.

19 Would you agree with that, sir?

20 MR. GREG BARNLUND: I think so. I
21 think it's -- it's a matter -- I mean, prefaced with
22 rough estimate, I think it's -- it's a good
23 approximation of the allocation of those costs, yes.

24 DR. BYRON WILLIAMS: It's an estimate
25 of whether customers are paying what it costs to serve

1 them?

2 MR. GREG BARNLUND: That's correct,
3 yes.

4 DR. BYRON WILLIAMS: And, sir, you'll
5 agree as well that the cost of service study is not
6 the be-all and end-all of rate making?

7 MR. GREG BARNLUND: It's a useful
8 tool, but it's not the only information we take into
9 consideration in rate making, yes.

10 DR. BYRON WILLIAMS: And so when we
11 move from that estimate of costs and into the broader
12 rate making decision, it's your understanding that is
13 open to the Board and to -- certainly to Manitoba
14 Hydro to take into account other rate making
15 considerations, the other five (5) that are on your
16 list, agreed?

17 MR. GREG BARNLUND: In addition to the
18 five (5) that are on a list from Manitoba Hydro's
19 perspective, I believe that this Board has the ability
20 to take in other policy considerations as it sees fit.

21

22 (BRIEF PAUSE)

23

24 DR. BYRON WILLIAMS: Mr. Barnlund,
25 you've been involved in cost of service studies I --

1 I'm -- I'll suggest for a decade or two (2)?

2 MR. GREG BARNLUND: I've -- I've seen
3 one (1) or two (2) of them, yes.

4 DR. BYRON WILLIAMS: And it would be
5 fair to -- to say that there is a significant degree
6 of judgement involved in those studies, sir?

7 MR. GREG BARNLUND: I think that's the
8 -- that's a -- that's a -- an appropriate statement,
9 yes.

10 DR. BYRON WILLIAMS: An
11 understatement?

12 MR. GREG BARNLUND: It's a fair
13 statement.

14 DR. BYRON WILLIAMS: And cost of
15 service studies, sir, frequently involve choices
16 between methodologies in terms of how the cost of
17 shared facilities and activities should be allocated
18 to customer classes?

19 MR. GREG BARNLUND: That's very true,
20 yes.

21 DR. BYRON WILLIAMS: And one (1)
22 example of that you'll recall from Order 164/'16 was
23 the approval by this Board of this -- of this system
24 load factor to classify generation costs rather than
25 the much beloved equivalent peaker methodology?

1 MR. GREG BARNLUND: That's correct.
2 That was a significant change in -- in methodology.

3 DR. BYRON WILLIAMS: You might take
4 issue with my characterization of equivalent peaker as
5 much beloved, Mr. Barnlund.

6 MR. GREG BARNLUND: Yes.

7 DR. BYRON WILLIAMS: And without
8 second-guessing the Board's judgment, that call to use
9 the system load factor rather than the equivalent
10 peaker methodology would have a mathematical impact on
11 the revenue cost coverage estimate for the various
12 classes, agreed?

13 MR. GREG BARNLUND: Well, I think to
14 be -- to be safe here, the previous methodology was a
15 weighted energy allocator as opposed to an equivalent
16 peaker. An equivalent peaker was a concept that was
17 discussed within that particular hearing, and, you
18 know, the previous methodology -- that was a weighted
19 energy allocator, and so that was a significant
20 departure from the previous, and created a significant
21 change in the outcomes of the weighting of -- of
22 energy versus capacity-related costs, and also created
23 a different outcome in terms of revenue to cost
24 coverage ratios between various customer classes.

25 DR. BYRON WILLIAMS: Thank you for the

1 better answer again than the question. And it would
2 be accurate and fair to say that cost of service
3 studies frequently reply -- rely on simplifying
4 assumptions?

5 MR. GREG BARNLUND: Yes, sir.

6 DR. BYRON WILLIAMS: And it would be
7 fair to say as well that the data used in cost of
8 service studies is often based on estimates from sant
9 -- sample date -- data, or particular snapshots in
10 time as well?

11 MR. GREG BARNLUND: The data is -- is
12 essentially -- the financial data -- the cost data is
13 either -- from Manitoba Hydro's plant records, the
14 cost data that we're dealing with is information -- or
15 forecast information of the test year of the IFF.
16 There are various, I guess, subroutines and various
17 allocators that are derived, and some of those are
18 derived on a periodic basis. Others are updated
19 automatically with the refreshing of information
20 within a cost of service study.

21 DR. BYRON WILLIAMS: And to that
22 point, sir, for example, the estimates used for the
23 coinc -- coincident peak and non-coincident peak
24 allocators would be derived from load research data,
25 agreed?

1 MR. GREG BARNLUND: Yes.

2 DR. BYRON WILLIAMS: And similarly,
3 the weightings applied to customer counts for purposes
4 of allocating various customer service sub functions
5 are usually based upon a snapshot in time, sir?

6 MR. GREG BARNLUND: That's correct,
7 yes.

8 DR. BYRON WILLIAMS: And so, sir, it
9 would be fair to say that while the results of a cost
10 of service study appear to present arithmetic
11 exactitude, a cost of service study involves
12 considerable judgement?

13 MR. GREG BARNLUND: It does, and as a
14 result, it's -- it's a reasonable approximation as
15 opposed to being something that's absolutely precise.

16 DR. BYRON WILLIAMS: And there is no
17 single industry standard that applies to all cost of
18 service decisions?

19 MR. GREG BARNLUND: There is a NARUC
20 handbook that -- that is often referred to, but
21 typically, there is a significant variation between --
22 between jurisdictions in terms of the application of
23 different methodologies in cost of service study.

24 DR. BYRON WILLIAMS: I wonder if we
25 can turn up the Coalition's response to Manitoba

1 Hydro's Information Request 9. And I think page 18 of
2 -- of that document -- that's fine.

3 Without going to this -- this response
4 just yet, Mr. Barnlund, would it be fair to say that
5 recognizing that cost of service is hardly a precise
6 study, regulators have tended to establish revenue to
7 cost ratio ranges within which it is considered that a
8 customer class is paying its fair share of costs?

9 MR. GREG BARNLUND: Yes, sir.

10 DR. BYRON WILLIAMS: And those ranges
11 are often referred to as a zone of reasonableness,
12 sir?

13 MR. GREG BARNLUND: Yes.

14 DR. BYRON WILLIAMS: And the purpose
15 as you understand it of a zone of reasonableness is to
16 evaluate a -- a class's revenue to cost coverage ratio
17 -- ratios and determine whether class revenues are
18 sufficient, agreed?

19 MR. GREG BARNLUND: I think that's an
20 accurate statement, yes.

21 DR. BYRON WILLIAMS: And, sir, if you
22 recall this, great. If not, we'll survive. To your
23 understanding, the zone of reasonableness articulated
24 in Order 164/'16 was ninety-five (95) to a hundred and
25 five (105)?

1 MR. GREG BARNLUND: I believe that --
2 that -- the ninety-five (95) to a hundred and five
3 (105) was originally established back in 1996. And
4 I'm not aware that the Public Utilities Board has
5 buried since that point in time.

6 DR. BYRON WILLIAMS: And you're aware
7 that a number of Canadian regulators use that ninety-
8 five (95) to o-five (05) (sic) standard?

9 MR. GREG BARNLUND: Yes I am. Yeah.

10 DR. BYRON WILLIAMS: You're also aware
11 that others use the ninety (90) to -- to a hundred and
12 ten (110) standard, sir?

13 MR. GREG BARNLUND: Yes, that's
14 correct, yes.

15 DR. BYRON WILLIAMS: And, sir, for the
16 purposes of this hearing, would it be correct to
17 suggest that Hydro is leaning towards the 90 to 110
18 percent zone of reasonableness?

19 MR. GREG BARNLUND: We had -- we had
20 indicated that in our initial materials that were
21 filed, and -- and again, I think we spoke to it
22 earlier before Christmas, and -- and discussing the
23 fact that the change in cost of service methodology
24 was an abrupt shift which created some different
25 outcomes with respect to different customer classes

1 and their revenue to cost coverage ratios, and that
2 there might be some accommodation, or some short
3 period of time in terms of examining what should be
4 done with revenue -- class revenues, because that was
5 such a significant shift if that occurred with that
6 Order 164 of '16.

7 DR. BYRON WILLIAMS: Sir, the -- the -
8 - you'll recall that what is before you is an excerpt
9 from Mr. Harper's response to Manitoba Hydro
10 information request?

11 MR. GREG BARNLUND: Yes.

12 DR. BYRON WILLIAMS: And does Hydro
13 except Mr. Harper's portrayal of the regulatory
14 landscape as laid out in this response.

15 MR. GREG BARNLUND: I would have no
16 reason to -- to question it at this point in time, no.
17 No.

18 DR. BYRON WILLIAMS: And, sir, just at
19 a high level, would you be comfortable acknowledging
20 that what it suggests is that -- that the ranges most
21 typically used are the 90 to 110 percent, or the 95
22 percent to 105 percent?

23 MR. GREG BARNLUND: Right. I think
24 that ninety-five (95) to one-o-five (105) seems to be
25 the most frequently selected one, and -- and after

1 that, it's ninety (90) to one-ten (110), yes.

2 DR. BYRON WILLIAMS: Thank you.

3

4 (BRIEF PAUSE)

5

6 DR. BYRON WILLIAMS: We're going to,
7 in a couple minutes, go to MIPUG/Manitoba Hydro First
8 Round 23 (a) to (b), page 2. But Mr. Barnlund, while
9 we're going there, the residential class as currently
10 defined includes all residential customers, with the
11 exception of those served by diesel. Is that correct,
12 sir?

13 MR. GREG BARNLUND: Yes, that's
14 correct.

15 DR. BYRON WILLIAMS: So it would
16 include those who -- whose homes are heated with
17 electricity, who Hydro describes as all-electric?

18 MR. GREG BARNLUND: Correct.

19 DR. BYRON WILLIAMS: Those whose homes
20 are used for other purposes, but not for heating,
21 which Hydro describes as basic standard?

22 MR. GREG BARNLUND: That's correct.

23 DR. BYRON WILLIAMS: And also seasonal
24 --

25 MR. GREG BARNLUND: Yes.

1 DR. BYRON WILLIAMS: -- residential
2 customers, sir?

3 MR. GREG BARNLUND: And in addition to
4 that, there is a flat rate water heating service that
5 is -- is covered under the residential class.

6 DR. BYRON WILLIAMS: Thank you. And I
7 knew I was missing something, so I appreciate that.

8 Since the uniform rates legislation,
9 rural and urban residential customers, with the
10 exception of diesel, are treated as one (1) class,
11 sir?

12 MR. GREG BARNLUND: Yes, that's
13 correct.

14 DR. BYRON WILLIAMS: And they pay the
15 same rate per kilowatt hour?

16 MR. GREG BARNLUND: They do.

17 DR. BYRON WILLIAMS: If we could go to
18 MIPUG/Manitoba Hydro 1-23 (a) to (b), page 2, Mr. --
19 Mr. Barnlund, you'll recall that the results of peak -
20 - the -- the cost of service study for 2018, that as a
21 class, residential customers, their revenue cost
22 coverage ratio was estimated to be 94.8 percent.
23 You'll accept that, subject to check, sir?

24 MR. GREG BARNLUND: Yes, I will, yeah.

25 DR. BYRON WILLIAMS: So just outside

1 the ninety-five (95) to one-o-five (105) range, sir?

2 MR. GREG BARNLUND: Yes.

3 DR. BYRON WILLIAMS: And sir, I'll
4 suggest to you that -- that this response is --
5 Hydro's providing a high level estimate of the impact
6 on revenue to cost coverage ratios when Bipole III
7 comes online in 2020? Do you recall that, sir?

8 MR. GREG BARNLUND: Yes, there is a --
9 I think the rest this information request provides a
10 discussion of the qualifications that went into that
11 estimate.

12 DR. BYRON WILLIAMS: And there were a
13 considerable number of qualifications?

14 MR. GREG BARNLUND: Correct. Correct.

15 DR. BYRON WILLIAMS: The -- the thrust
16 of this, though, sir, is that recognizing those
17 caveats, Hydro estimated at a high level that when
18 Bipole III is in service, residential would be at 96.7
19 percent, sir?

20 MR. GREG BARNLUND: Yes.

21 DR. BYRON WILLIAMS: I wonder if we
22 could turn to Order 164/'16, page 53, please.

23

24 (BRIEF PAUSE)

25

1 DR. BYRON WILLIAMS: And if -- focus -
2 - let's focus on the -- the paragraph starting
3 "allocating." So let's pull that -- that's great
4 there.

5 Mr. Barnlund, you and I have already
6 discussed how cost causation underpins the cost of
7 service methodology?

8 MR. GREG BARNLUND: That's correct.

9 DR. BYRON WILLIAMS: And that the PUB
10 has stated, then, that Hydro's agreed that other rate-
11 making considerations are appropriately considered
12 after one leaves the cost of service stage, sir?

13 MR. GREG BARNLUND: Yes, that's
14 correct.

15 DR. BYRON WILLIAMS: And among those
16 other objectives are the objectives of efficiency and
17 equity, sir?

18 MR. GREG BARNLUND: Yes.

19 DR. BYRON WILLIAMS: And in
20 considering issues related to efficiency signals,
21 regulatory practice may involve consideration of the
22 relationship between marginal costs and rates, sir?
23 Would that be fair?

24 MR. GREG BARNLUND: Yes, it's a
25 consideration, and I think that the important

1 distinction to -- to make, here, is that we are
2 looking at an embedded cost study, and we're -- we're
3 looking at recovering the embedded cost to the
4 Utility. There is going to be a difference between
5 the outcome from an embedded cost perspective than
6 from a marginal cost perspective.

7 Marginal cost is useful in informing
8 decisions of designing rates if you're going to, for
9 example, design a conservation rate where you had two
10 (2) blocks, and you wanted to price the tail block
11 appropriately. And so it -- it's useful in informing
12 those types of decisions, but at the end of the day,
13 we are trying to recover the revenue requirement of
14 the Utility, which is -- which are embedded costs and
15 not marginal costs.

16 DR. BYRON WILLIAMS: And it's your
17 understanding that the -- the Board's direction from
18 order 164/'16 was that marginal cost considerations
19 are more appropriately addressed in the rate design
20 stage of rate making, sir?

21 MR. GREG BARNLUND: They were very
22 clear with that, yes.

23 DR. BYRON WILLIAMS: And I wonder if
24 we can turn to the GRA filing, Tab 8, page 31, please.
25

1 (BRIEF PAUSE)

2

3 DR. BYRON WILLIAMS: And we can go
4 down to figure 8.14. Thank you.

5

6 (BRIEF PAUSE)

7

8 DR. BYRON WILLIAMS: Sir, we -- we've
9 never actually defined marginal costs, but would it be
10 fair to suggest that marginal costs are forward-
11 looking, and based on the cost of serving an
12 additional increment of -- of load in terms of the
13 incremental facility costs and expenses that would be
14 incurred?

15 MR. GREG BARNLUND: Yes, sir. To be
16 clear, there is short run and long run marginal costs.
17 Short run marginal costs, you're not adding plant.
18 Long run marginal costs, you're taking on a longer
19 perspective.

20 DR. BYRON WILLIAMS: And what we see
21 here, sir, and let's -- let's be clear. First of all,
22 this is not the result of a marginal cost study as
23 that term is understood?

24 MR. GREG BARNLUND: No, that's --
25 you're correct.

1 DR. BYRON WILLIAMS: It's a simp --
2 simplified marginal cost evaluation which does look at
3 -- at long run marginal costs.

4 MR. GREG BARNLUND: It looks at the
5 marginal values as -- as Mr. Miles has described them
6 as being defined earlier today. So there is a slight
7 difference between that and -- and true marginal
8 costs, because these are levelized.

9 DR. BYRON WILLIAMS: And it's Manitoba
10 Hydro's position that differences between marginal
11 costs and financial embedded costs may be used as a
12 framework for the evaluation of revenue to cost
13 coverage ratios and the bounds established in the zone
14 of reasonableness?

15 MR. GREG BARNLUND: It -- it could
16 have some use in that regard, yes.

17 DR. BYRON WILLIAMS: And this is one
18 (1) example of how marginal costs and concepts may be
19 a consideration for rate setting apart from
20 conservation rates?

21 MR. GREG BARNLUND: Yes, that's
22 correct.

23 DR. BYRON WILLIAMS: And just to be
24 clear, sir. If we were to -- if one was to undertake
25 a marginal cost study, one would refine this analysis

1 to take into factors like load shape and seasonality,
2 sir?

3 MR. GREG BARNLUND: Yes, you'd look at
4 differences between various customer classes in that
5 analysis.

6 DR. BYRON WILLIAMS: And so while the
7 results from this are expected to be directionally
8 consistent with those of a more detailed marginal cost
9 study, we have to recognize that there are significant
10 refinements that would be undertaken if we were to go
11 to that detail, sir?

12 MR. GREG BARNLUND: Yes, that's
13 correct.

14 DR. BYRON WILLIAMS: With those
15 caveats, sir, just looking at figure 8.14, we see on
16 the left-hand side, the different classes of
17 customers, sir?

18 MR. GREG BARNLUND: Yes.

19 DR. BYRON WILLIAMS: And moving
20 towards the middle of this figure, we see Hydro's
21 estimate of levelized marginal values, which, as we
22 discussed with Ms. Morrison earlier, was used in the
23 2016 Demand-side Management Plan?

24 MR. GREG BARNLUND: Yes.

25 DR. BYRON WILLIAMS: And the next

1 column, which is the sixth column in, provides the
2 average revenue per kilowatt hour for the different
3 classes, sir?

4 MR. GREG BARNLUND: Yes.

5 DR. BYRON WILLIAMS: And so we'll see
6 the average reg -- revenue for the residential class
7 is eight -- eight cents (\$0.08) per kilowatt hour,
8 sir?

9 MR. GREG BARNLUND: Yes, that's
10 correct.

11 DR. BYRON WILLIAMS: And at the other
12 end of the spectrum, for GSL, large -- general service
13 large, greater than a 100 kV, it's four -- four point
14 zero-one (4.01) cents per kilowatt hour?

15 MR. GREG BARNLUND: That's correct,
16 sir.

17 DR. BYRON WILLIAMS: And, sir, moving
18 one (1) column to the right, this would be a high-
19 level estimate of a -- a margin -- the -- the marginal
20 costs -- revenue to cost estimates, sir. Would that
21 be --

22 MR. GREG BARNLUND: Yes, sir. Yeah.

23 DR. BYRON WILLIAMS: And so for
24 residential, in essence, what Manitoba Hydro has done
25 has taken the average res -- residential revenue of

1 eight cents (\$0.08) per kilowatt hour, divided that by
2 the estimated levelized marginal value of seven point
3 seven-seven (7.77), and achieved an estimate of 103
4 percent. Is that --

5 MR. GREG BARNLUND: Yes, that's
6 correct.

7 DR. BYRON WILLIAMS: That similar
8 calculation would have been done for general service
9 large greater than 100 kV to achieve the 58.1 percent,
10 sir?

11 MR. GREG BARNLUND: Yes, that would
12 have been done that way. Yes.

13 DR. BYRON WILLIAMS: And one (1)
14 column to the right, sir, you'll see the results of a
15 similar analysis undertaken in 2008 --

16 MR. GREG BARNLUND: Yes.

17 DR. BYRON WILLIAMS: -- agreed? And
18 finally, you'll see at the extreme right of this
19 table, the estimates of the revenue to cost coverage
20 ratios for the distinct classes on an embedded cost
21 basis as estimated in the cost of service study for
22 '18?

23 MR. GREG BARNLUND: Yes, that's right.

24 DR. BYRON WILLIAMS: Now, Mr. Miles is
25 -- is no longer in the room, Mr. Barnlund, but you'll

1 recall that Hydro -- we do not need to go there -- in
2 PUB 2-57 provides updated marginal values?

3 MR. GREG BARNLUND: Yes, we did.

4 Yeah.

5 DR. BYRON WILLIAMS: And at a high
6 level, sir, if we look at this old marginal value of
7 seven point seven-seven (7.77) cents for residential
8 in 2016 dollars, you'll recall that?

9 MR. GREG BARNLUND: Yes. Yeah.

10 DR. BYRON WILLIAMS: You'll agree that
11 the estimate provided in PUB 2-57 based on the new
12 methodology and in 2017 dollars is about five (5) --
13 in terms of cents, five point seven-five (5.75) cents,
14 sir?

15 MR. GREG BARNLUND: Yes, sir.

16 DR. BYRON WILLIAMS: Mr. Barnlund. I
17 -- I want to test your memory slightly and take you
18 back to the time before Order 164/'16, which was the
19 cost of service -- the most recent cost of service
20 order by the Board. Do you recall that time, sir?

21 MR. GREG BARNLUND: Yes, I do.

22 DR. BYRON WILLIAMS: And it would be
23 fair to say that Hydro's previous cost of service
24 methodology prior to that order incorporated a number
25 of features that addressed rate-making objectives

1 other than cost causality?

2 MR. GREG BARNLUND: I think that's a
3 fair statement.

4 DR. BYRON WILLIAMS: And one (1) of
5 these, sir, was the uniform rate adjustment, which
6 prior to Order 164/'16 was an example of a, I'll
7 suggest to you, a policy consideration embedded in the
8 -- that prior cost of service study?

9 MR. GREG BARNLUND: Very much so, yes.

10 DR. BYRON WILLIAMS: And again, hoping
11 not to test your memory too much, that uniform rate
12 adjustment was explicitly reflected in the revenue to
13 cost coverage outputs of studies prior to PCOSS18 and
14 prior to Board Order 164/'16?

15 MR. GREG BARNLUND: Right. So it
16 would have been assigned to -- to the export class,
17 and would have been therefore a charge against export
18 revenues, and therefore would be reflected
19 ultimately in the RCCs for each of the customer
20 classes as they would then be receiving their share of
21 -- of the net export revenue that was produced.

22 DR. BYRON WILLIAMS: And we'll come
23 back to that point, and I appreciate your assistance.
24 If we could turn for moment to PUB/Manitoba Hydro 2-
25 93, and page 3 of 5, please. Mr. Barnlund, you'll

1 recall that this was an information request of the
2 Public Utilities Board seeking to separate the revenue
3 to cost coverage ratios for the existing residential
4 class into separate residential electric -- electric
5 heating and non-heating customers subclasses, as well
6 as the seasonal customers, sir?

7 MR. GREG BARNLUND: Yes. So that was
8 flowing from -- from the information that Manitoba
9 Hydro provided in its residential rate design study.
10 And so by separating out -- Manitoba Hydro separated
11 out revenues by electric heat and -- and standard
12 customers, and therefore, this was the follow-up step
13 was to separate costs for each of those subclasses
14 accordingly.

15 DR. BYRON WILLIAMS: And sir, in terms
16 of that analysis, you'll agree that other parts of
17 this response outlined some of the -- the challenges
18 and caveats associated with that analysis?

19 MR. GREG BARNLUND: That's correct,
20 yes.

21 DR. BYRON WILLIAMS: But the -- the
22 output -- the -- the conclusion flowing from that in
23 terms of the residential standard customers was that
24 their revenue to cost coverage ratio at current -- as
25 a percentage of current rates was 103.6 percent, sir?

1 MR. GREG BARNLUND: Yes.

2 DR. BYRON WILLIAMS: And for the all-
3 electric customers, it would be 90.1 percent?

4 MR. GREG BARNLUND: Yes, that was the
5 outcome of the study, yeah.

6 DR. BYRON WILLIAMS: Based on this
7 high level analysis, sir, it suggests that this all-
8 electric standard were essentially custom -- covering
9 their estimated costs to serve, agreed?

10 MR. GREG BARNLUND: They were, yes.

11 DR. BYRON WILLIAMS: And that the all-
12 electric class was within 10 percent of the estimated
13 cost to serve based upon this high level analysis?

14 MR. GREG BARNLUND: Yes, that's
15 correct.

16 DR. BYRON WILLIAMS: Mr. Barnlund,
17 would it be accurate to say that leaving aside
18 residential customers in apartment buildings, large
19 farm operations, and diesel residential customers, all
20 other residential customers are served on the same
21 voltage?

22

23 (BRIEF PAUSE)

24

25 MR. GREG BARNLUND: I think that would

1 be -- I think that -- that would be an accurate
2 assessment, yes.

3 DR. BYRON WILLIAMS: I see Ms.
4 Morrison's -- feel free to pop in if you -- he's
5 correct?

6 MS. LOIS MORRISON: Mr. Barnlund is
7 correct.

8 DR. BYRON WILLIAMS: And, sir, in
9 terms of the customer service activities associated
10 with all electric customers and also with basic
11 standard residential customers, in terms of meter
12 reading, billing, and support, they would be the same
13 for -- for them?

14 MR. GREG BARNLUND: Generally
15 speaking, they would be, yes.

16 DR. BYRON WILLIAMS: And what this
17 high-level response suggests to us is that from an
18 embedded cost of service perspective, it costs more
19 cents per kilowatt hour to serve a heat -- an all
20 electric heat customer than a standard or non-heat
21 customer,

22 Would that be fair?

23 MR. GREG BARNLUND: Yes. Yes, that's
24 correct.

25 DR. BYRON WILLIAMS: And if you can

1 answer this, great. If not, I shall not be offended.
2 I'll suggest to you that a key factor in the higher
3 cost to serve all electric customers is that the
4 residential heat customer segment has a lower load
5 factor than the residential non-heat -- heat customer
6 seg -- segment, whether measured on coincident peak or
7 non-coincident peak.

8 Would you accept that, sir?

9 MR. GREG BARNLUND: I think so, yes.

10 DR. BYRON WILLIAMS: And that means
11 that any demand related costs allocated to the
12 residential heat customer must be recovered over fewer
13 kilowatt hours.

14 MR. GREG BARNLUND: That's correct.

15 DR. BYRON WILLIAMS: And that's from
16 an embedded cost perspective, sir?

17 MR. GREG BARNLUND: Correct.

18 DR. BYRON WILLIAMS: Would it also be
19 reasonable to suggest that heat customers have a
20 higher marginal cost than standard customers?

21 MR. GREG BARNLUND: I think one could
22 assume that, and I don't think we're going to delve
23 into anything that's commercially sensitive, but given
24 the weather sensitivity of their load they are going
25 to be consuming -- as we've seen in -- in the bill

1 frequency discussion that we had they're going to be
2 consuming -- their -- the majority of their
3 consumption in the December through March time frame.

4 And it's likely, if we look at a proxy
5 for marginal value through that period of time, that
6 the marginal value of energy on a short-term basis or
7 on a short run basis is higher through that period of
8 time. So -- so I think that that, in combination
9 together, is -- is actually the fact there, yes.

10 DR. BYRON WILLIAMS: And, sir, what
11 you're suggesting without, again, going into any
12 commercially sensitive in -- information is that the
13 short run winter marginal costs for Manitoba Hydro
14 tend to be higher than the summer marginal costs.

15 MR. GREG BARNLUND: Generally
16 speaking, correct, yes.

17 DR. BYRON WILLIAMS: And when you use
18 the words "in combination," sir, I'm assuming -- I'll
19 -- I'll suggest to you, you are also referring to the
20 -- the fact that heat customers have a lower load
21 factor.

22 MR. GREG BARNLUND: Correct.

23 DR. BYRON WILLIAMS: And as a result,
24 the marginal transmission and distribution costs,
25 which are calculated on a cents per kilowatt basis,

1 must be spread over fewer kilowatt hours.

2 MR. GREG BARNLUND: That would be
3 correct, yes.

4

5 (BRIEF PAUSE)

6

7 DR. BYRON WILLIAMS: Mr. Barnlund, I'm
8 going to travel back over a discussion that Mr. -- we
9 don't need to go there, but My -- M Friend Mr. Peters
10 had with Ms. Carriere on December 6th, 2017. I just
11 want to talk a little bit about the uniform rate
12 adjustment, which you've already provided some helpful
13 information on, sir.

14 MR. GREG BARNLUND: Certainly.

15 DR. BYRON WILLIAMS: And, sir, prior
16 to legislative uniform rate changes in 2001, grid
17 connected residential customers were categorized into
18 three (3) zones based upon an estimated cost to serve.

19 Would that be fair?

20 MR. GREG BARNLUND: Yes. Yes, that's
21 correct.

22 DR. BYRON WILLIAMS: And the cheapest
23 electricity rates -- let me rephrase that -- the least
24 expensive electricity rates that Manitoba Hydro
25 charged residential customers was in the City of

1 Winnipeg and in zone 1.

2 MR. GREG BARNLUND: Yes. So zone 1
3 being the City of Winnipeg, they had the lowest rates
4 of the three (3) zones.

5 DR. BYRON WILLIAMS: And the highest
6 rates were for the rural zone 3, which included rural
7 northern Manitoba, sir?

8 MR. GREG BARNLUND: Yes, sir.

9 DR. BYRON WILLIAMS: And the middle
10 ground, in essence, was zone 2, which covered a number
11 of mid-size towns or small cities?

12 MR. GREG BARNLUND: Rural -- rural
13 urban communities. Yes, certainly. Yeah.

14 DR. BYRON WILLIAMS: And generally
15 speaking, sir, at that point in time zone 1 rates were
16 lower because the estimated costs were lower than for
17 zone 2 and zone 3.

18 MR. GREG BARNLUND: That's right, and
19 that's reflective of the differences in customer
20 density and the differences in -- in customer load, I
21 would assume, between the three (3) zones.

22 DR. BYRON WILLIAMS: Some of those
23 differences that we've just been discussing, sir.

24 MR. GREG BARNLUND: Yes, very much so.

25 DR. BYRON WILLIAMS: And following

1 uniform rates legislation there were no longer three
2 (3) zones, just a residential class, leaving aside
3 diesel, sir?

4 MR. GREG BARNLUND: Yes. So the --
5 the outcome of the uniform rates legislation was to
6 basically apply the zone 1 rate across the province to
7 all residential customers. So while there was
8 additional revenues that were to be obtained through
9 zone 2 and zone 3 customers prior to that legislation
10 coming in, that Manitoba Hydro's revenues were reduced
11 at the -- at the time of that legislation coming in --
12 into effect.

13 DR. BYRON WILLIAMS: Thank you for
14 that. And just to break that into a couple of smaller
15 pieces, the rates for zone 2 and zone 3 were lowered
16 to the zone 1 rate, sir?

17 MR. GREG BARNLUND: Yes, they were
18 reduced to be equal to the zone 1 rate.

19 DR. BYRON WILLIAMS: So the customers
20 and zone 1 did not get a rate reduction?

21 MR. GREG BARNLUND: The customers in
22 zone 1 did not get either a rate reduction or a rate
23 increase.

24 DR. BYRON WILLIAMS: But the
25 mathematical outcome from that, sir, was for

1 residential customers as a whole, the revenues were
2 lower in a corr -- amount corresponding to the reduced
3 revenues from zone 2 and zone 3, sir?

4 MR. GREG BARNLUND: Yes, sir. That's
5 correct.

6 DR. BYRON WILLIAMS: And so with
7 revenue lower but costs the same, that had a
8 mathematical input -- impact on the revenue cost
9 coverage ratio?

10 MR. GREG BARNLUND: Yes, sir.

11 DR. BYRON WILLIAMS: And, Mr.
12 Barnlund, you've sat through this discussion, whether
13 in the hearing room or -- or monitoring the
14 transcripts for many years. But you'll recall, and
15 certainly as we shared, in -- in the proceedings
16 leading to Board Order 164/16, that there was
17 considerable debate in the Manitoba legislature about
18 this event?

19 MR. GREG BARNLUND: I'll accept that,
20 yes.

21 DR. BYRON WILLIAMS: And the -- I have
22 a reference for you if you require it, sir, but at a
23 high level the argument as articulated was that no
24 one's rates would be higher, because the -- the policy
25 change to go to -- from three (3) zones to one (1)

1 would be paid for by surplus export revenues.

2 MR. GREG BARNLUND: That was -- I read
3 that at one (1) point in time as being the rationale
4 behind it, yes.

5 DR. BYRON WILLIAMS: And, sir, you've
6 already articulated how the universal rate adjust --
7 uniform rates adjustment was made in practice in the
8 cost of service study.

9 MR. GREG BARNLUND: Yes.

10 DR. BYRON WILLIAMS: And in effect,
11 the theory of the uniform rate adjustment, I'll
12 suggest to you, was that given the policy commitment
13 that it would come out of export rates, an express
14 adjustment was made in the cost of service study prior
15 to 164/16 to include an amount of export revenues
16 commensurate with the decline in revenues associated
17 with lowering the rates for zone 2 and 3.

18 MR. GREG BARNLUND: Yes, that's right.

19 DR. BYRON WILLIAMS: And thank you for
20 that patience with that long question. We can go to
21 the Coalition 2-85, if you require, Mr. Barnlund. Or
22 would you accept that subject to check -- oh, there it
23 is. What this presents is the adjustment that would
24 have been done in PCOSS, the 2018 cost of service
25 study, if the uniform rate adjustment had not been

1 eliminated.

2 You'll accept that, sir?

3 MR. GREG BARNLUND: Yes, sir.

4 DR. BYRON WILLIAMS: And for the
5 residential class it was in excess of \$20 million?

6 MR. GREG BARNLUND: Yes.

7 DR. BYRON WILLIAMS: So again, without
8 offering any judgement about the merits of that
9 decision, mathematically that was a in excess of \$20
10 million reduction in the revenues allocated to the --
11 or the revenues for the residential class for the
12 purposes of the revenue cost coverage ratio.

13 MR. GREG BARNLUND: Maybe I'll have
14 you repeat that question, if you --

15 DR. BYRON WILLIAMS: I don't know if I
16 can. I think I -- I'd better do better. To the
17 degree that the uniform rate adjustment was -- was not
18 made that had imp -- implications for the revenue cost
19 coverage ratio for the residential class, sir.

20 MR. GREG BARNLUND: It did, yes. And,
21 in fact, it was an impact of about 1.6 percent to the
22 residential class.

23 DR. BYRON WILLIAMS: If we can turn to
24 appendix 9.14, page 14 of 20. Mr. Barnlund, you'll
25 recall we've already discussed -- and if we can have

1 both these proof -- proof of revenues on the screen
2 that would be helpful.

3 You've discussed the alternative --
4 alternative rate design proposal that was advanced by
5 Manitoba Hydro in the course of this proceeding?

6 MR. GREG BARNLUND: Yes.

7 DR. BYRON WILLIAMS: And in fairness,
8 it's -- it's not an approach that's endorsed by
9 Manitoba Hydro, but it was presented to provide
10 insight to the Public Utilities Board and Intervenors.

11 MR. GREG BARNLUND: Correct. So I
12 would -- I think you would characterize it as an
13 alternative rate design proposal that we had advanced.
14 And I think we referred to it as being a rate design
15 alternative that we are showing for illustrative
16 purposes for discussion here.

17 DR. BYRON WILLIAMS: Thank you for
18 that clarification. And, in essence, I'll suggest to
19 you that what this would do would be to segregate
20 residential electric heat billed customers from
21 residential non-heat billed customers, sir?

22 MR. GREG BARNLUND: Yes, that's
23 correct.

24 DR. BYRON WILLIAMS: And, in essence,
25 deliberately shift the portion of the proposed 7.9

1 percent rate increase from electric heat customers to
2 non-heat or standard customers?

3 MR. GREG BARNLUND: Yes.

4 DR. BYRON WILLIAMS: Okay. And
5 mathematically the shift would -- would be sufficient
6 to increase the energy charge for standard or non-heat
7 billed customers by about 1.8 percent?

8 MR. GREG BARNLUND: Yes, sir.

9 DR. BYRON WILLIAMS: So that would be
10 1.8 percent higher than the class proposed average of
11 7.9 percent.

12 MR. GREG BARNLUND: Yes.

13 DR. BYRON WILLIAMS: And this would
14 amount to roughly \$5.2 million, sir?

15 MR. GREG BARNLUND: That's correct,
16 yes.

17 DR. BYRON WILLIAMS: And, sir, if we
18 just look at what is figure 8 on page 14 of 20 of
19 appendix 9.14. And if we took the top line of the --
20 if we took the top line of the proof of revenue basic
21 standard, you'll see at the -- on the top side -- the
22 top table on this page, the difference in dollar
23 revenues would be -- from a 7.9 percent rate increase
24 would be about \$22.8 million, sir?

25 MR. GREG BARNLUND: For basic

1 standard, yes.

2 DR. BYRON WILLIAMS: And if we take
3 that same -- go down to the second part of the -- the
4 figure for basic standard we see the mathematical
5 results of -- of in -- increasing the rates -- the
6 rate change to 9.7 percent being \$27.99 million, sir?

7 MR. GREG BARNLUND: Yeah, very close
8 to 28 million, yes.

9 DR. BYRON WILLIAMS: Yeah. And that's
10 where the 5.2 million calculation comes from, sir?

11 MR. GREG BARNLUND: That's right, yes.

12 DR. BYRON WILLIAMS: If we can go back
13 one (1) page to figure 7, page 13 of 20. And right
14 there is perfect.

15 And, sir, in terms of the rate charged
16 to residential basic standard in terms of this
17 alternative rate design, it would be a bit over nine
18 (9) cents a kilowatt hour in terms of the energy
19 charge, sir?

20 MR. GREG BARNLUND: That's right. We
21 kept the basic charge identical between the classes
22 and only adjusted the energy charge.

23 DR. BYRON WILLIAMS: And for
24 residential basic all electric it would be eight-
25 point-seven (8.7) cents roughly per kilowatt hour,

1 sir?

2 MR. GREG BARNLUND: Right, roughly
3 speaking, yes.

4 DR. BYRON WILLIAMS: And that
5 alternative would benefit electric heating customers
6 in all months of the year, sir?

7 MR. GREG BARNLUND: Yes, it would.

8 DR. BYRON WILLIAMS: And it would not
9 be targeted based on income?

10 MR. GREG BARNLUND: No.

11 DR. BYRON WILLIAMS: If we can go to
12 Hydro's response to GAC-2-28(a) to (b), page 2.

13

14 (BRIEF PAUSE)

15

16 DR. BYRON WILLIAMS: GAC/Manitoba
17 Hydro 2-28 (a) to (b).

18

19 (BRIEF PAUSE)

20

21 DR. BYRON WILLIAMS: The second page,
22 the second last paragraph. Mr. Barnlund, I want to
23 direct your attention to the -- the last paragraph of
24 subsection (a), the -- the last sentence. Manitoba
25 Hydro makes a statement that the illustrative rate

1 structure shown in appendix 9.14 would serve to shield
2 higher usage low income customers from a portion of
3 the proposed rate increase.

4 You see that statement, sir?

5 MR. GREG BARNLUND: Yes, sir.

6 DR. BYRON WILLIAMS: Would it be fair
7 to say that the illustrative rate structure would also
8 serve to shield higher usage middle and high income
9 customers from a portion of the proposed rate
10 increase, sir?

11 MR. GREG BARNLUND: It would. It
12 would have that effect as well because we're not
13 taking income into consideration here. I was just --
14 we were just reporting that this is one (1) of the
15 outcomes.

16 DR. BYRON WILLIAMS: And, sir, if we
17 think of the all electric cust -- a category of
18 Manitoba Hydro consumers, it's not all low income,
19 sir?

20 MR. GREG BARNLUND: No, it's not. And
21 -- and I think we have information in appendix 9.14.
22 In fact, if we looked at figure 5 it would provide a
23 breakout of customers by usage and by income based on
24 the 2014 residential end use survey.

25 DR. BYRON WILLIAMS: And indeed we

1 went over some of that before, sir, in terms of the
2 sixty-eight thousand (68,000) estimated to be at LICO-
3 125, sir?

4 MR. GREG BARNLUND: So this is not
5 reporting necessarily in terms of LICO, but this is
6 segregated in annual incomes between twenty-five
7 thousand (25,000) -- twenty-five thousand dollar
8 (\$25,000) bins from twenty-five thousand (25,000) up
9 to one hundred and fifty thousand dollars (\$150,000)
10 of income.

11 DR. BYRON WILLIAMS: And what it tells
12 us, sir, is that a substantial element of the all
13 electric class is not low income, sir?

14 MR. GREG BARNLUND: True. And what --
15 what was also important about this was when we looked
16 at the lower income portion of the of the -- of this
17 chart, figure 5, the two (2) columns that are twenty-
18 five thousand dollars (\$25,000) of reported annual
19 income and fifty thousand dollars (\$50,000) of
20 reported annual income, when we have usage that is
21 above 20,000 kilowatt hours a year we have upwards of
22 potentially 25 percent of those customers in that
23 usage category. So that's -- that was not an
24 inconsequential number of customers to be paying that,
25 or to be consuming that amount of energy with that

1 level of income.

2 DR. BYRON WILLIAMS: Okay. And
3 indeed, sir, what this figure shows is that the
4 majority of the law -- all electric class are not all
5 low income? Maybe not this figure, but the LICO-125
6 figure we looked at before, sir.

7 MR. GREG BARNLUND: That's right.
8 When we referred to that previous IR, yes.

9 DR. BYRON WILLIAMS: And when we look
10 at the standard category of -- of Manitoba Hydro
11 consumers, you'll agree with me as well that that
12 category, sir, are not all high income either.

13 MR. GREG BARNLUND: Correct.

14 DR. BYRON WILLIAMS: And indeed,
15 there's a substantial population that is low income;
16 agreed?

17 MR. GREG BARNLUND: I assume that,
18 yes.

19 DR. BYRON WILLIAMS: And we -- we
20 discussed that estimate of seventy-eight thousand
21 (78,000) approximately.

22 You recall that, sir?

23 MR. GREG BARNLUND: That's correct,
24 yes.

25 DR. BYRON WILLIAMS: And the seventy-

1 eight thousand (78,000) is the standard customers
2 estimated by Manitoba Hydro to be at LICO-125 or -- or
3 below?

4 MR. GREG BARNLUND: Or less. Yes,
5 that's correct.

6 DR. BYRON WILLIAMS: And so, sir, if
7 we think through the alternative rate scenario, would
8 it be fair to suggest that absent other action, low
9 income persons in the all -- in -- in the standard
10 residential class could see themselves paying higher
11 rates to support all electric customers, including a
12 majority who are not low income, sir?

13 MR. GREG BARNLUND: They would see
14 higher rates, definitely. Now, we -- you'd have to
15 look at the consumption of the basic standard
16 customers and understand the magnitude of the impact
17 to them on a monthly bill. If they're not heating
18 with electricity, typically you'd expect them to be
19 lower consumption customers than a heating customer.

20 Even though they're paying higher
21 rates, the -- the actual impact to them on a dollar
22 per month basis will vary because there -- there could
23 be some very low usage customers that even though
24 they're paying, say, 2 percent higher rate for energy
25 -- for their energy. If they're using 250 kilowatt

1 hours a month it's -- it's a very small bill impact
2 itself.

3 DR. BYRON WILLIAMS: I understand the
4 nuance in your answer, sir. But you're -- you're
5 certainly not meaning to suggest that a 9.7 percent
6 rate increase for a low income person using
7 electricity is standard -- is -- is necessarily
8 inconsequential?

9 MR. GREG BARNLUND: No, I would agree
10 that it -- that it -- it would, you know, it is
11 something that is -- that, you know, has -- carries an
12 impact, definitely.

13 DR. BYRON WILLIAMS: Sir, in terms of
14 the Manitoba Hydro's alternative rate, which is being
15 presented for illu -- illustrative purposes. You --
16 you -- it is -- it would not be limited to winter
17 months, sir?

18 MR. GREG BARNLUND: No, it would be
19 for all consumption for the twelve (12) month period.

20 DR. BYRON WILLIAMS: So that would
21 include a number of non-heating months, sir?

22 MR. GREG BARNLUND: It would, yes.

23 DR. BYRON WILLIAMS: And it would
24 provide differential rate protection to all electric
25 customers, regardless of income, sir?

1 MR. GREG BARNLUND: Yes.

2 DR. BYRON WILLIAMS: Would it be fair
3 to suggest that Manitoba Hydro has not undertaken
4 consumer research in terms of the acceptability of
5 providing relief to electric heat customers in all
6 months of the year, versus just the heating months?

7 MR. GREG BARNLUND: We have -- we have
8 not undertaken any research in that regard.

9 DR. BYRON WILLIAMS: And has Manitoba
10 Hydro undertaken consumer research into the
11 acceptability of rate designs focused just on low
12 income electric heat customers, as compared to all
13 electric heat customers, sir?

14

15 (BRIEF PAUSE)

16

17 MS. LOIS MORRISON: No, Manitoba Hydro
18 has not undertaken research specifically exploring
19 general public acceptance of a rate that provides
20 differential for low income electric heat customers.

21 DR. BYRON WILLIAMS: And in terms of
22 rate design, Mr. Barnlund, Manitoba Hydro has not
23 presented an -- an illustrative rate design approach
24 focus for example, on customers on reserve, and not in
25 receipt of assistance?

1 MR. GREG BARNLUND: No, we have not --
2 we have not prepared that.

3 DR. BYRON WILLIAMS: That would be a
4 smaller population than the all electric customers?

5 MR. GREG BARNLUND: Well, and I think
6 that -- I'm not sure that -- that Manitoba Hydro would
7 be necessarily supportive of creating a rate for a
8 specific group of customers as defined -- as you
9 ve defined them.

10 DR. BYRON WILLIAMS: I understand
11 that, sir. You've not conducted that research as well
12 though?

13 MR. GREG BARNLUND: We've not
14 conducted that research either, no.

15 DR. BYRON WILLIAMS: And you haven't
16 presented a illustrative rate design focused on all
17 electric low income exclusively?

18 MR. GREG BARNLUND: No, we have not.

19 DR. BYRON WILLIAMS: And there's not
20 been an illustrative rate design focused on all
21 residential low income.

22 Would that be fair, sir?

23 MR. GREG BARNLUND: That's correct.

24 DR. BYRON WILLIAMS: And, Mr.
25 Barnlund, it would be accurate to suggest that

1 Manitoba Hydro's illustrative rate proposal rate, the
2 illustrative alternative that it's presented, would
3 consciously ask lower average costs than -- standard
4 residential customers to pay more per kilowatt hour
5 than higher average cost electric customers.

6 MR. GREG BARNLUND: Yes, and I think
7 that if we follow through in reflecting upon the cost
8 to service RCC outcomes that we spoke of before that
9 those would actually -- those would actually -- the --
10 for the all electric customers would decline as well
11 because the analysis that was provided that you and I
12 just looked at was based on paying a single uniform
13 rate for -- for all energy. And if we are charging
14 them less for energy, we have less revenue coming from
15 those customers. And so the -- the point-nine (.9)
16 RCC that we spoke of would actually be lower than that
17 after we hit that rate design was the point.

18 DR. BYRON WILLIAMS: Sir, it would be
19 -- would not be a cost-based decision. It would be a
20 policy decision?

21 MR. GREG BARNLUND: It would be, yes.

22 DR. BYRON WILLIAMS: Ms. Galbraith, I
23 apologize for neglecting all the very important work
24 that you're doing. I have a couple of short snappers
25 just to finish up in terms of some of the -- I -- I

1 assume they go to you. And I wonder if we can go to
2 Coalition/Manitoba Hydro 1st Round 126, page 2 of 2.

3 Ms. Galbraith, you recall that there
4 was, in the working group on energy poverty, some
5 recommendations relating to the equal payment plan?

6 MS. COLLEEN GALBRAITH: I do. And,
7 unfortunately, I might not be able to answer your next
8 question. This might be my colleague, Mr. Chard. But
9 I'll entertain it.

10 DR. BYRON WILLIAMS: Oh, well, no, I
11 feel -- I feel very badly for bothering. Well, thank
12 you for your generosity. I'll direct it to the Hydro
13 panel.

14 And it would be fair to suggest that
15 Hydro is contemplating and planning expanding the
16 equal payment plan to include a second component known
17 as the Energy Affordability Instalment Program?

18 MR. PAUL CHARD: Yes. And I think
19 it's fair to say that we're looking at a new program
20 that's in addition to equal payment plan that
21 incorporates the equal payment plan.

22 DR. BYRON WILLIAMS: Thank you. And -
23 - and the new program would, in effect, offer
24 customers the option of an interest-free loan equaling
25 their arrears with -- amortized over up to thirty-six

1 (36) months, sir?

2 MR. PAUL CHARD: That's correct.

3 DR. BYRON WILLIAMS: In essence, the
4 accumulated arrears would be removed from the account
5 and billed out in monthly instalments; correct?

6 MR. PAUL CHARD: They would be
7 segregated within the account, yes.

8 DR. BYRON WILLIAMS: Now, this
9 response, sir, suggests that implementation for the
10 Energy Affordability Instalment Program is targeted
11 for early 2019, dependent on certain resources;
12 correct?

13 MR. PAUL CHARD: So it says early
14 2018.

15 DR. BYRON WILLIAMS: Oh, I misspoke.
16 I was being too soft on you, sir.

17 MR. PAUL CHARD: And, yes, my latest
18 information maybe pushes it -- let's say the first
19 half of 2018 would be still fair.

20 DR. BYRON WILLIAMS: And does Hydro
21 have an estimate of the target population that -- that
22 this program will assist?

23 MR. PAUL CHARD: We haven't looked at
24 that, in particular. It would be the customers who
25 are currently in arrears.

1 DR. BYRON WILLIAMS: And all customers
2 regardless of income level, sir?

3 MR. PAUL CHARD: Yes. It is, I think,
4 in terms of implementation intended to be targeted at
5 low in -- lower income customers, so sort of normal
6 credit and collection activities would -- that's how
7 customers will be identified for eligibility. And it
8 would be in cases where customers are not able to
9 establish a payment plan of a shorter duration that
10 this would need to be implemented for them.

11 DR. BYRON WILLIAMS: And in terms of
12 the targeting based upon income, as a -- that's --
13 that's what you mentioned, Mr. Chard?

14 MR. PAUL CHARD: So income would be --
15 would become a factor, yes, in the evaluation of the -
16 - the customer's needs.

17 DR. BYRON WILLIAMS: And Manitoba
18 Hydro would obtain this information pursuant to a
19 request to the customer then?

20 MR. PAUL CHARD: And -- and, quite
21 frankly, through conversation. So we're not talking
22 about income verification or anything of that sort.

23

24 (BRIEF PAUSE)

25

1 DR. BYRON WILLIAMS: And again, I'm
2 not sure which -- I just have two (2) more short
3 snappers before I finish up my discussion with this
4 panel, members of the panel. Perhaps if we can pull
5 up PUB/Manitoba Hydro 1st Round-126(a), attachment 1,
6 page 4 of 20. Or alternatively, page 5 of 21 as
7 they're numbered. It's under the -- yeah, it's
8 attachment 1.

9

10 (BRIEF PAUSE)

11

12 DR. BYRON WILLIAMS: Could you scroll
13 to the top of this page, please, just so I can see
14 what page. If you could go to the next page, please.
15 And just scroll towards the bottom of the page. Thank
16 you.

17 Manitoba Hydro will see on the third
18 last bullet reference to on an agreement reached with
19 the Dakota Ojibway Tribal Council in terms of an
20 energy advocate for the Portage la Prairie community.

21 MS. COLLEEN GALBRAITH: That is
22 correct.

23 DR. BYRON WILLIAMS: And that there
24 were no energy -- there was no energy advocate
25 available for 2016.

1 You see that reference?

2 MS. COLLEEN GALBRAITH: That is
3 correct.

4 DR. BYRON WILLIAMS: Is Hydro able to
5 provide an update in terms of whether that position is
6 filled now?

7 MS. COLLEEN GALBRAITH: Certainly. So
8 when we initially looked at opportunities in the
9 Portage la Prairie area -- pardon me, not Portage la
10 Prairie, with Dakota Ojibway Tribal Council they were
11 looking at not only opportunities within their own
12 housing stock, so in Winnipeg, Portage, and Brandon.
13 There were some challenges initially to identify an
14 energy advocate. We did actually successfully -- and
15 I should say Dakota Ojibway Tribal Council did secure
16 an energy advocate.

17 They were in field approximately four
18 (4) months, and actually did not have any success in
19 recruiting any applications despite their efforts
20 through community contacts and door knocking to
21 encourage participation in the Affordable Energy
22 Program.

23 So subsequently with no applications
24 coming in, we felt that it was -- and also the cold
25 weather, because typically when we're out canvassing

1 we're out there when the weather is a little bit
2 nicer, we find that people like to open their doors
3 and talk to us a little bit more. We decided that we
4 would reevaluate for the following season, warmer
5 season.

6 DR. BYRON WILLIAMS: And just my final
7 short snapper relates to the next bullet.

8 And you see reference to an advocate --
9 energy advocate in collaboration with the Manitoba
10 Metis Federation, Ms. Galbraith?

11 MS. COLLEEN GALBRAITH: That is
12 correct.

13 DR. BYRON WILLIAMS: And the
14 suggestion that while the position was filled in 2016
15 canvassing had been deferred?

16 MS. COLLEEN GALBRAITH: That is
17 correct. The Manitoba Metis Federation, through their
18 head office here in Winnipeg, felt that we could
19 perhaps reach a larger amount of their citizens by
20 doing a much more concerted effort than just solely
21 focusing on Thompson.

22 I should point out the reason that we
23 initially were working with the Manitoba Metis
24 Federation and Thompson is we knew that there were
25 opportunities in the City of Thompson, and had

1 approached actually the Thompson Neighbourhood Renewal
2 Corporation.

3 They were unable to find an energy
4 advocate. And because we have a relationship with the
5 Manitoba Metis Federation and were aware that they had
6 a regional office in Thompson, we entered in
7 conversation to see if perhaps they would like to host
8 an energy advocate. But again, they felt that perhaps
9 that we could come up with a better solution to reach
10 the larger citizenship.

11 DR. BYRON WILLIAMS: And so just in
12 terms of the canvassing of the members of the MMF, has
13 that -- is that now underway?

14 MS. COLLEEN GALBRAITH: What ended up
15 happening is that the Manitoba Metis Federation
16 contacted all of their regional offices, and without
17 getting into specifics felt that certain regional
18 offices were perhaps more proactive in supporting an
19 energy advocate in their region. And what ultimately
20 we're working on right now is securing one (1) in the
21 northwest region, primarily in the Dauphin, but of
22 course outside of that.

23 The Manitoba Metis Federation currently
24 has an agreement in their hands and we are awaiting
25 their signature so that we can proceed. Given the

1 extreme cold temperatures at this current time it
2 perhaps will probably be deferred into the warmer
3 months as well.

4 DR. BYRON WILLIAMS: Ms. Galbraith,
5 you mentioned the objectives -- or the -- the
6 perceived need for an energy advocate in Thompson
7 itself? You're nodding your head.

8 Is that a "yes"?

9 MS. COLLEEN GALBRAITH: Yes, that is.

10 DR. BYRON WILLIAMS: And what's the
11 status of an energy advocate for Thompson itself?

12 MS. COLLEEN GALBRAITH: We do not have
13 one (1) currently in place in Thompson.

14

15 (BRIEF PAUSE)

16

17 DR. BYRON WILLIAMS: And does Hydro --
18 Manitoba Hydro intend to seek an energy advocate for
19 Thompson, or is the uncertainty related to Efficiency
20 Manitoba curtailing those efforts?

21 MS. COLLEEN GALBRAITH: Until the
22 transition over to Efficiency Manitoba occur --
23 Efficiency Manitoba occurs, Manitoba Hydro continues
24 to pursue all energy efficiency opportunities. So,
25 yes, we would still continue to pursue opportunities

1 in the area of Thompson for an energy advocate. But,
2 of course, it would depend on the transition and
3 timing.

4 DR. BYRON WILLIAMS: So is Manitoba
5 Hydro actively pursuing an energy advocate for
6 Thompson?

7

8 (BRIEF PAUSE)

9

10 MS. COLLEEN GALBRAITH: Not at this
11 time. As we discussed, or I earlier mentioned, the
12 Thompson Neighbourhood Renewal Corporation, as we
13 often partnership with Neighbourhood Renewal
14 corporations, was the one (1) that we first
15 approached. They were unable to secure one (1).
16 Also, hopefully working with the Manitoba Metis
17 Federation at some point in there. But otherwise
18 we'll -- ultimately what we're looking for is a
19 community organization to host an energy advocate on
20 our behalf to help promote the Affordable Energy
21 Program.

22 DR. BYRON WILLIAMS: Just as a final
23 question, apart from those two (2) organizations
24 approached, has Manitoba Hydro approached any other
25 community organizations in Thompson?

1 MS. COLLEEN GALBRAITH: We have
2 approached other organizations in Thompson. I cannot
3 specifically speak to which ones, but I can also tell
4 you that we've entertained energy advocates in other
5 areas of the province, and surprisingly have run into
6 challenges with different community organizations in
7 hosting them.

8 I can give you a particular example, in
9 Morden. I believe it was the Friendship Centre. They
10 were interested, as we recognized opportunities. But,
11 unfortunately, they do not run payroll. It's a
12 volunteer-based. So that was one (1) of the
13 hindrances in setting one (1) up in there. We were
14 also looking in the Steinbach area. And again, it was
15 a matter of trying to find an organization to host, to
16 have employment for an energy advocate to promote the
17 opportunities.

18 So it continues to be a challenge to
19 find organizations to host them. We have great
20 success in Winnipeg, and we've had it previously in
21 Brandon, again, with the Neighbourhood Renewal
22 corporations. But ultimately we're just looking for
23 somebody to help promote our program.

24 DR. BYRON WILLIAMS: Thank you. And
25 to the members of the panel, I -- I thank you for your

1 time. There is one (1) undertaking related to
2 Manitoba Hydro 2-57 revised, related to levelized
3 costs, which we understand is forthcoming. And apart
4 from that and any existing undertakings that closes
5 the cross-examination for this panel of the Coalition.

6 THE CHAIRPERSON: Thank you. Ms.
7 Fernandes, before we break do you want to deal with
8 these documents which were handed out beforehand?

9 MS. ODETTE FERNANDES: Certainly.
10 These were -- these documents that we provided just
11 after the break were the responses to undertakings
12 which were provided over the course of the holiday
13 break. So I just quickly, the response to Manitoba
14 Hydro Undertaking Number 15 was marked as Manitoba
15 Hydro Exhibit Number 89.

16

17 --- EXHIBIT NO. MH-89: Response to Manitoba Hydro
18 Undertaking Number 28

19

20 MS. ODETTE FERNANDES: The response to
21 --

22 THE CHAIRPERSON: Sorry. I have -- on
23 mine I have 89 as the response to Undertaking 28. And
24 15 is the res -- is Number 90.

25 MR. KURT SIMONSEN: That's the way we

1 have them in the record.

2 MS. ODETTE FERNANDES: Okay. So 28 is
3 number --

4 MR. KURT SIMONSEN: 89.

5 MS. ODETTE FERNANDES: -- 89.

6 MR. KURT SIMONSEN: Okay.

7 MS. ODETTE FERNANDES: And Number 15
8 is Number 90?

9 MR. KURT SIMONSEN: Right.

10 THE CHAIRPERSON: Correct.

11

12 --- EXHIBIT NO. MH-90: Response to Manitoba Hydro
13 Undertaking Number 15

14

15 MS. ODETTE FERNANDES: Okay. And then
16 91 would be --

17 MR. KURT SIMONSEN: 19.

18 MS. ODETTE FERNANDES: 19. Okay.

19 MR. KURT SIMONSEN: Undertaking 19.

20

21 --- EXHIBIT NO. MH-91: Response to Manitoba Hydro
22 Undertaking Number 19

23

24 MS. ODETTE FERNANDES: That's the one
25 (1) I'm missing. Okay. So then I have Manitoba Hydro

1 Exhibit Number 92 as the IRs to MGF --

2 MR. KURT SIMONSEN: Correct.

3 MS. ODETTE FERNANDES: -- filed.

4

5 --- EXHIBIT NO. MH-92: Information Requests to
6 MGF

7

8 MS. ODETTE FERNANDES: Okay. And then
9 the follow-up questions to Manitoba Hydro Undertakings
10 Number 7 and 8 --

11 MR. KURT SIMONSEN: That'd be 93.

12 MS. ODETTE FERNANDES: -- are 93. And
13 then Undertaking Number 24 response would be
14 Undertaking -- Exhibit Number 94.

15 MR. KURT SIMONSEN: Correct.

16

17 --- EXHIBIT NO. MH-93: Response to Manitoba Hydro
18 Undertakings Number 7 and
19 8

20

21 --- EXHIBIT NO. MH-94: Response to Manitoba Hydro
22 Undertaking Number 24

23

24 THE CHAIRPERSON: Okay. We don't have
25 copies of 92.

1 MR. KURT SIMONSEN: They haven't filed
2 the responses yet, but that's forthcoming.

3 THE CHAIRPERSON: Okay. Good. Okay.
4 Thank you. We'll -- we'll break for lunch until 1:15.
5 Thank you.

6
7 --- Upon recessing at 12:08 p.m.

8 --- Upon resuming at 1:17 p.m.

9
10 THE CHAIRPERSON: Okay, if we -- if we
11 could resume. Mr. Gange...?

12 MR. WILLIAM GANGE: Thank you, Mr.
13 Chair. First of all, I -- we've circulated
14 continuation of the GAC book of documents, which is --
15 has previously been entered as Exhibit 15. And so we
16 have GAC-15, pages 12 to 42, that -- that reference
17 will be made to.

18 The second point, Mr. Chair, may
19 require a ruling from you because what we -- in -- in
20 the spirit of being innovative, I -- the -- the
21 process that we have contemplated for this cross-
22 examination is that I will be dealing with the rate
23 design portion of -- of this panel. And there is also
24 -- we have a number of points with respect to bill
25 affordability which is what Exhibit 16 deals with is -

1 - is bill affordability.

2 Professor Miller was part of the bill
3 affordability panel and rather than having a
4 legalistic cross-examination, our hope is to have a
5 discussion between Professor Miller and primarily Mr.
6 Barnlund with respect to the matters that came out of
7 the bill affordability workshop and the working group
8 on bill affordability.

9 So, I can see that it is an unusual
10 process, but it -- are -- are hope is that with
11 Professor Miller it perhaps would be a little bit less
12 confrontational than -- than might be the process
13 under legalistic cross-examination.

14 Ms. Fernandes has indicated to me that
15 -- that she may have some concerns with that. And I -
16 - I certainly am prepared to turn it over to Ms.
17 Fernandes with respect to her concerns.

18 THE CHAIRPERSON: Ms. Fernandes...?

19 MS. ODETTE FERNANDES: Thank you. We
20 are not quite sure where Mr. Miller will be going.
21 This is for purposes of cross-examination of Manitoba
22 Hydro's evidence. The way Mr. Gange has illustrated
23 what will occur is a further discussion between Mr.
24 Miller and Mr. Barnlund and I think that's where we
25 have the concern.

1 GAC is free to propose that further
2 discussions or collaborations can occur following this
3 hearing but to have it during the course of a cross-
4 examination, I don't think this is the appropriate
5 forum for that.

6 THE CHAIRPERSON: Mr. Gange, how do
7 we take it into evidence? How do we take a discussion
8 into evidence?

9 MR. WILLIAM GANGE: The -- well, so
10 the material that -- that has been provided is a
11 synopsis of the various evidentiary material that's
12 been previously provided. There is reference Mr. --
13 or Professor Miller intends to make reference to some
14 previous evidence that was presented in the 2014/'15,
15 2015/'16 General Rate Application from Mr. Colton.

16 And the evidentiary value, the evidence
17 will come from the mu -- the answers that are provided
18 by the Hydro panel in -- in the same fashion as any
19 other cross-examination would take place.

20 THE CHAIRPERSON: Why don't we
21 proceed, Mr. Gange, with your cross-examination on
22 rate design and then we'll take a break and -- I'm not
23 prepared to make a decision without talking to the
24 rest of the panel about it.

25 MR. WILLIAM GANGE: Sure, that's --

1 that's fair. And -- and I just would say, Mr. Chair,
2 that if -- if -- if it helps the Board that you may --
3 you may wish to see how matters progress with
4 Professor Miller, and if it -- if you -- the
5 conclusion that you come to is that it's -- it's not
6 fitting within the format of a regulatory hearing, you
7 may advise us and -- and we'd have to change
8 elsewhere. But, we do -- well, let -- let -- let me
9 do my rate design cross-examination and -- and if you
10 want to hear further submissions at that point, happy
11 to make them.

12 THE CHAIRPERSON: Yes. I guess the
13 other question I would have, Mr. Gange, is you're --
14 you're bringing forward evidence at a later time, as
15 well, aren't you?

16 MR. WILLIAM GANGE: That's correct.

17 THE CHAIRPERSON: Now, how much of
18 that evidence in this piece is going to be brought
19 forward in your --

20 MR. WILLIAM GANGE: Very little, if
21 any. Most of the evidence that we expect to bring
22 forward next week with Mr. Chernick is separate from
23 the -- the -- the discussion that -- that Professor
24 Miller would like to see with respect to the
25 affordability path.

1 THE CHAIRPERSON: Okay. So why don't
2 we go ahead with the rate design material.

3 MR. WILLIAM GANGE: Thank you.

4

5

6 CROSS-EXAMINATION BY MR. WILLIAM GANGE:

7 MR. WILLIAM GANGE: Mr. Barnlund, if I
8 could start with you. I know that's a surprise to you
9 but with respect to rate design, the general position
10 that has been -- that Manitoba Hydro has taken has
11 been that this is not the time period for the
12 introduction of an inverted rate proposal.

13 Is -- that's -- that's a narrow
14 recapsulation of -- of what Hydro's position is; is
15 that fair, sir?

16 MR. GREG BARNLUND: I think it's safe
17 to say that in 2016 the decision was made that
18 certainly for this application that it wasn't the
19 appropriate time to be bring that proposal forward.

20 MR. WILLIAM GANGE: Yes. And you
21 have, however, provided in appendix 9.14 a rate design
22 report with respect to -- I'm -- I'm -- you said it's
23 not an alternative rate design, it's -- it's a rate
24 design that's been provided to the Board for
25 illustrative purposes; correct, sir?

1 MR. GREG BARNLUND: Correct because
2 it's not a formal appro -- proposal that has been
3 approved by the Manitoba Hydro Electric Board, but I
4 would say that -- that Manitoba Hydro expects that
5 matters of rate design are subject for -- for some
6 very fulsome discussion in this hearing and probably
7 after this hearing is completed, and the matters of
8 cost of service study have been -- now, those matters
9 have been settled. I think that it's appropriate that
10 we can move on and -- and tackle some issues in terms
11 rate design.

12 MR. WILLIAM GANGE: Yes. And so not
13 now but in the future is basically the -- the -- the -
14 - Manitoba Hydro's position?

15 MR. GREG BARNLUND: Well, we're
16 certainly having those discussions now and then,
17 ultimately, we'll need to determine -- or Manitoba
18 Hydro will need to determine what it would bring
19 forward in terms of a rate design proposal, if any, in
20 its next General Rate Application.

21 MR. WILLIAM GANGE: You'd agree with
22 me, sir, that -- and -- and I guess, as you know, Dr.
23 Williams likes to bring his material forward under
24 literary headings from time to time; the best of
25 times, the worst of times.

1 This probably comes under a biblical
2 phrase, the sins of the father. So I -- I -- I'm
3 going to go through a number of things, sir, that --
4 that have been on the record. So if you look at GAC
5 15 and page 12. So this is the Board Order from
6 February of 2003, Board Order 7 of '03 and GAC 15,
7 page 13.

8 The Board talked about -- back in -- in
9 February 2003, the fact that -- that Hydro had been
10 ordered in Board Order 51 of 1996 to undertake a study
11 and report to the Board with respect to a
12 comprehensive rate design policy.

13 Now, I'm going to say, sir, that the
14 Board Orders that are available online only go back to
15 the year 2000, so I wasn't able to provide the
16 historical document 51/'96, but I'm going to take the
17 Board at its word that -- that Hydro was supposed to
18 come back at the next GRA from 1996 to develop a
19 comprehensive rate design policy.

20 That meets with your recollection as
21 well, does it, sir?

22 MR. GREG BARNLUND: Oh, that would be
23 my understanding of it and I think that that needs to
24 be understood in the context that following that Board
25 Order that there was a rate freeze where Manitoba

1 Hydro's rates and rate design did not change for a
2 period of at least five (5) years, and the first
3 application that -- or the first hearing that Manitoba
4 Hydro had been involved in was the status update
5 hearing, and I believe this is the Order that arri --
6 that is -- that is from that particular hearing.

7 So there was -- there was a period of -
8 - of several -- or of a number of years where there
9 was no rate change or no rate design change for
10 Manitoba Hydro and no activity in terms of any rate
11 hearings before this Board.

12 MR. WILLIAM GANGE: But you'd agree
13 with me, sir, that it certainly appears from my review
14 of Board Order 7/'03 that the Public Utilities Board
15 was dissatisfied with the failure of Manitoba Hydro to
16 come back to it -- to the Board with -- with that
17 consideration of rate design possibilities.

18 You'd agree with that, sir?

19 MR. GREG BARNLUND: Well, and I
20 believe that's -- that's the -- the Board has
21 expressed that on your page 13 of your exhibit there,
22 sir.

23 MR. WILLIAM GANGE: Right. And then
24 if you look at page 15, which was page 104 of Board
25 Order 7/'03, the Board comments about inverted rates

1 and rate structure in -- in that -- the highlighted
2 paragraph.

3 Do you see that, sir?

4 MR. GREG BARNLUND: Yes.

5 MR. WILLIAM GANGE: And in particular,
6 the Board said that it will direct Hydro to prepare a
7 study on the merits of an inverted rate structure
8 across all rate classes, including transition and
9 implem -- implementation issues, and that that study
10 should be filed by no later than December 31st, 2003.

11 Now, I understand, sir, you weren't the
12 guy at the time which is my reference to the sins of
13 the father, but you'd agree with me, sir, that that
14 didn't take place?

15 MR. GREG BARNLUND: No, I believe that
16 what did take place was that there was a consultant
17 that was retained NERA, N-E-R-A, that undertook to do
18 a study on time of use and inverted rate structures
19 for application in Manitoba. It wasn't filed in -- by
20 December 31st. And I'm not sure if there's a review
21 and vary that had followed this -- this particular
22 Order or not to address that particular matter, but I
23 know that it was included in the 2005 cost of service
24 review that was before this Board, and that this
25 report can be found at appendix 11.4 of that -- of

1 Manitoba Hydro's application in the 2005 cost of
2 service review.

3 MR. WILLIAM GANGE: Okay. Manitoba
4 Hydro did not, however, move forward with proposing to
5 the Board in -- an inverted rate structure.

6 You'd agree with me on that, sir?

7 MR. GREG BARNLUND: Yes, not at that
8 time. It took some time before that actually came to
9 pass.

10 MR. WILLIAM GANGE: Right. So then at
11 page 19 of Exhibit 15, I've provided Board Order 90 of
12 '08 from June 30th, 2008.

13 And at that time, sir, the Board did
14 order as they say -- as -- as they describe it on page
15 20 of Exhibit 15, introduction -- the modest
16 introduction of inverted rates for the residential
17 class that that was ordered at that point, sir?

18 MR. GREG BARNLUND: Yes, sir.

19 MR. WILLIAM GANGE: And in the more
20 expansive Order of Board Order 116 of '08, July 29th,
21 2008, the Board at -- at page 24 of the inverted rate
22 -- or pardon me, of -- of the Order, the Board
23 encouraged Manitoba Hydro to develop -- to develop
24 plans to employ an inverted rate structure for all
25 customer classes initially to be designed on a revenue

1 neutral to Manitoba Hydro basis and to send a price
2 signal for every kilowatt hour of energy used to
3 promote conservation.

4 Do you see that one, sir?

5 MR. GREG BARNLUND: I do, sir, and --
6 and I'm reflecting on that in that the Board was
7 certainly encouraging us to look at -- at inverted
8 rates for all customer classes and -- and I think that
9 the other factor that needs to be taken into
10 consideration here in the timing of this Order was
11 that we were still in a period where we had some
12 fairly sign -- you know, some much higher prices in
13 the opportunity -- or in the export market than we
14 currently see today.

15 But, under the circumstances at the
16 time, the -- the Board had encouraged Manitoba Hydro
17 to look at expanding the application of an inverted
18 rate at that point.

19 MR. WILLIAM GANGE: And page 307 of
20 Board Order 116/'08 is found on page 25 of Exhibit 15,
21 and that -- at that point the Board directed Manitoba
22 Hydro to file a plan by January 15th, 2009, outlining
23 the pros and cons of the various potential inverted
24 rate strategies under consideration and the Manitoba
25 Hydro proposed course of action to address this issue.

1 Was that ever done, sir?

2 MR. GREG BARNLUND: So -- I -- I --
3 that particular item has not been done, but I would
4 note that there were over the course of several
5 occasions in that -- in this time period Manitoba
6 Hydro had filed review and vary applications
7 subsequent to these Orders. I believe some of these
8 matters would have been addressed in the review and
9 vary application. There was also some of these --
10 some of these directions were -- were modified and so
11 I'm -- I don't have the chronology of those available
12 at my fingertips, but I just caution that in terms of
13 looking at discrete passages from discrete Board
14 Orders, that there was a whole continuum of activity
15 that was happening through that period of time and
16 we're just taking little snapshots of it and I can't
17 really provide you with -- other than to say, a
18 cautionary note in terms of the rest of the context
19 that was undergoing at the same time.

20 MR. WILLIAM GANGE: Is it your
21 recollection, sir, that -- that there was ever a very
22 -- a modify and vary direction with respect to
23 inverted rate strategies?

24 MR. GREG BARNLUND: I don't recall
25 off-hand. I -- I don't.

1 MR. WILLIAM GANGE: Would you be kind
2 enough, sir, that if -- if your staff and -- and -- is
3 able to identify a variation with respect to the order
4 of -- to file a plan by January 15th, 2009, you'll
5 provide that to us?

6 MR. GREG BARNLUND: We'll -- we'll
7 track that down, sir.

8 MR. WILLIAM GANGE: Okay. Thank you.

9 THE CHAIRPERSON: Sorry, is that an
10 undertaking?

11 MR. WILLIAM GANGE: I -- that should
12 be an undertaking --

13 THE CHAIRPERSON: Okay.

14 MR. WILLIAM GANGE: -- I -- because I
15 think it should be answered one way or the other, Mr.
16 Chair.

17 THE CHAIRPERSON: Yeah, no. I -- I
18 just want to make sure she has the undertaking. Do
19 you have it?

20

21 (BRIEF PAUSE)

22

23 --- UNDERTAKING NO. 33: Manitoba Hydro to identify
24 a variation with respect
25 to Order 116/'08

1 CONTINUED BY MR. WILLIAM GANGE:

2 MR. WILLIAM GANGE: But is it fair to
3 say, sir, that -- that there -- there has not been a
4 Manitoba Hydro plan that outlines the pros and cons of
5 potential inverted rate strategies?

6 MR. GREG BARNLUND: Aside from the
7 NERA report that had been filed that did a -- a very
8 good overview of -- of inverted rates with respect to
9 a number of customer classes, I'm not aware of a
10 subsequent study, sir.

11 MR. WILLIAM GANGE: And -- and, sir,
12 do you recall within Manitoba Hydro what the thought
13 process was as to why this direction would not be
14 followed?

15 MR. GREG BARNLUND: While I -- I don't
16 know the specifics of it, I would say, though, that --
17 that at this point, that we had embarked on an
18 inverted rate design, or the beginnings of an inverted
19 rate for the residential customer class, and that over
20 the course of the next three (3) rate approvals, that
21 -- that there was -- the -- the degree of inversion
22 was increased with each of those rate approvals to the
23 point, though, where the Utilities Board determined in
24 2010 or 2011 that it was time to step back from an
25 inverted rate, because there was concerns raised by

1 certain customer groups, and then Manitoba Hydro was
2 basically directed to revert back to a single energy
3 charge for its residential customer class.

4 MR. WILLIAM GANGE: Yes, but sir, if
5 you look at -- at the next page, page 308, which is
6 page 26 of this, the Board specifically directed
7 Manitoba Hydro, as it says, to put forward more
8 comprehensive plans to shield low income customers
9 from the impacts that will result from higher
10 electricity rates in a the sharply inverted rate
11 scheme. That never took place, did it, sir?

12 MR. GREG BARNLUND: I'm not aware of
13 any of that happening, no, sir.

14 MR. WILLIAM GANGE: And my
15 recollection of -- of the direction that the Board
16 eventually came to was to say there hadn't been
17 anything that had been developed that would shield low
18 income customers and that would shield all-electric
19 customers, particularly from the higher electricity
20 rates in a sharply inverted rate scheme. Do -- do you
21 agree with that, sir?

22 MR. GREG BARNLUND: I would agree with
23 -- with the last half of it. I think that the Board
24 referenced the impact on electric heat customers
25 specifically, but, you know, I'm not sure that they

1 actually went so far as to discuss that with regards
2 to the impact on low income customers separately. But
3 I know it was the electric heating customers that they
4 were deeply concerned about.

5 MR. WILLIAM GANGE: Yeah. Fair
6 enough. But part of -- part of the -- the rationale
7 that the Board eventually discussed was the fact that
8 -- that there hadn't been a plan that had come forward
9 that would protect the all-electric customers,
10 correct, sir?

11 MR. GREG BARNLUND: I -- I think
12 that's -- that's safe to say that -- that in the
13 absence of having any formal proposal for Manitoba
14 Hydro to modify the state of the inverted rate, as it
15 was, that the decision was made to revert back to a
16 single energy rate.

17 MR. WILLIAM GANGE: And if you look at
18 page 351, which is page 28 of Exhibit 15, in paragraph
19 23, the Board specifically indicated that -- that
20 there was this deadline of January 15th, 2009.

21 I already have your undertaking that
22 you'll provide to me any information that you can
23 gather with respect to deferring that order, correct,
24 sir?

25 MR. GREG BARNLUND: Yes, sir.

1 MR. WILLIAM GANGE: And then if we can
2 go to the -- page 29, so I'm now looking at Board
3 Order 5 of 12, January 17th, 2012. And at page 30 of
4 Exhibit 15, the Board specifically indicated that --
5 that Board Order 116/'08 had -- had directed a report
6 for January 15th, 2009.

7 And -- and this may be helpful in terms
8 of -- of the searching that you're going to do for
9 that undertaking. There's been no action by Manitoba
10 Hydro to date with respect to that directive.
11 Manitoba Hydro has acknowledged that a rate
12 accommodation will be required for electric heating
13 customers, but has not provided any specific proposals
14 that would mitigate a significant inverted rate
15 strategy.

16 So unless the Board was mistaken, sir,
17 certainly it would appear that by January 17th, 2012,
18 there hadn't been a request to modify the -- the Board
19 directive that a -- an inverted rate strategy was to
20 be submitted by January 15th, 2009. That's what I
21 read from that. Would you agree with that, sir?

22 MR. GREG BARNLUND: I -- I agree with
23 that too, yes. And -- and again, I'm just -- I was --
24 I was being cautious before, because I know that there
25 were -- there were a number of directives in general

1 that had been affected in a review and vary
2 application or two (2) review and varies previous to
3 that, so I was just being a little bit cautious in
4 terms of -- in terms of the -- the exact status of
5 those particular directives.

6 MR. WILLIAM GANGE: Yes. And then at
7 page 31 of Exhibit 15, again, the Board was requiring
8 Manitoba Hydro to file preliminary reports and status
9 updates on inverted rates, with a view to creating a
10 significantly higher priced second energy block, but
11 providing an accommodation to electric heat customers,
12 some of which do not have access for -- access to
13 natural gas for heating.

14 Was that ever done, sir?

15 MR. GREG BARNLUND: That was not
16 provided to the Board, and I think what we had
17 mentioned previously, when we -- when this panel was
18 testifying with regards to conservation rates, was
19 that there had been work that had been undertaken in
20 2016 with a consultant to -- to examine those matters.

21 But, and -- some of those materials, or
22 those materials, I should say, have been filed in the
23 course of this proceeding, but there has been nothing
24 approved by the Manitoba Hydro Electric Board to
25 advance that particular type of rate proposal at this

1 point in time.

2 MR. WILLIAM GANGE: And is there an
3 explanation for why not, why -- why the -- why these
4 Board directives have not been followed up on?

5 MR. GREG BARNLUND: Well -- and I
6 think that -- that in part, it -- it's a matter of --
7 there is a matter of some capacity to be able to do
8 certain -- some of these matters. We were certainly
9 involved through the 2010 period with the risk review.

10 We were also doing work on -- on cost
11 of service at that point in time, and we were doing
12 work on the time of use proposal with the general
13 service large customers, so there was a -- there was,
14 I think, a significant amount of work that was
15 currently underway with respect to that, but I -- I
16 don't have anything specific that I can -- that I can
17 state with respect of why this particular directive
18 has not been advanced, you know, any further than it
19 had been until 2016.

20 MR. WILLIAM GANGE: And -- and would
21 you agree with me, sir, that -- that given the staff
22 reductions that have been imposed upon Manitoba Hydro,
23 that -- that your capacity to -- to undertake
24 something like this today, after -- after the staff
25 reductions, continues to be eroded?

1 MR. GREG BARNLUND: Well, I think we
2 would we -- we would, you know, put it more to this
3 perspective of if there is a -- if this is indeed the
4 priority that we need to work on, and -- and Mr.
5 Shepherd committed to that, that, you know, there was
6 going to be resources that are going to be applied to
7 deal with rate design matters or possible solutions
8 with regards to some low income issues. And -- and I
9 think that -- that, you know, that given that we are
10 now through the cost of service review, and we are
11 beginning to work into a more fulsome discussion on
12 rate design, that I think that that's the next major
13 item we have on our to do list, or on our agenda, I
14 would think, collectively.

15 MR. WILLIAM GANGE: Mr. Barnlund, I
16 don't -- I don't want to put you into a position where
17 -- where you have to be disagreeing with the direction
18 that is -- has -- has been set by the Manitoba Hydro
19 Board, or by the Manitoba Hydro executive, meaning Mr.
20 Shepherd and -- and whoever else, but it does seem to
21 me that you have been, to -- to use Manitoba Hydro
22 terms in a different context, you've been capacity
23 constrained. As -- as you as you said in terms of --
24 of this document, Board Order 5 of 12, you were
25 capacity constrained on this.

1 You didn't have enough transmission
2 lines in terms of -- of your head office to be able to
3 get this done back then, correct, sir?

4 MR. GREG BARNLUND: Well, I guess that
5 all I can reflect on is Mr. Shepherd's commitment to
6 address this matter moving forward. And I, you know,
7 I mean, I think the only thing we can do is look at
8 this on a go-forward basis and determine what's the
9 best approach to take.

10 But I -- Mr. Gange, I would caution to
11 say that it's not just necessarily inverted rates. I
12 think we have to be looking at rate design almost from
13 a -- from a fresh perspective, here, because as we
14 talked earlier, this panel spoke of the potential
15 impact of -- of renewables like photovoltaics on the
16 system. And I spoke about the impact that it's had on
17 LDCs in Ontario, where they've had to move entirely to
18 a fixed cost recovery rate design. So I -- I don't
19 think that -- that we can look at this and -- and
20 specifically say that we need to sit down and do
21 something in terms of inverted or inclining block
22 rates.

23 I think we need to look at the question
24 of rate design and considering the issues we've got
25 with electric heat customers, with low income

1 customers, with the potential photovoltaics coming out
2 of the system, and I would add to that the information
3 we talked about this morning where the marginal value
4 of energy, if we -- if we strictly look at what is
5 being -- being calculated, suggests that you would be
6 looking to a declining block rate and not an inclining
7 block rate.

8 So I think that with all due respect,
9 Mr. Gange, we find ourselves in far different
10 circumstances today than we did in 2003, or 2008,
11 2009, and I think that we have to be alive to that
12 change in circumstances, and we have to be intelligent
13 terms of how we proceed with this. And I don't think
14 we should be dogmatic in terms of -- in terms of, you
15 know, test -- you know, simply following one (1)
16 approach because it was directed at one (1) point in
17 time. I think we need to have a very open and -- and
18 informed discussion about that.

19 But as I say, I think that we are
20 committed to doing -- to advancing work on the rate
21 design front, and that -- that shouldn't be fettered
22 by -- by, you know, this -- the conditions of the
23 past. We should be looking at the conditions of the
24 present and the conditions of the future in terms of
25 how we proceed.

1 MR. WILLIAM GANGE: Sure. And -- and
2 that's -- that's an admirable approach that, at the
3 next GRA, Professor Miller and I, God willing that
4 we're still both here, but would -- we'll -- we'll
5 probably highlight that answer to you.

6 But -- but the point is, sir, that --
7 and Kristen, if you can go back to page 13. That --
8 the -- the Board in 2003 did say that -- that -- in --
9 in that final paragraph on -- on that page:

10 "The Board is disappointed with the
11 inaction of Hydro to comply with the
12 spirit of Order 51/'96 with regard
13 to undertaking a study and reporting
14 to the Board by no later than the
15 next GRA to develop a comprehensive
16 rate design policy".

17 So what you've just said that is of --
18 of fundamental importance today goes back all the way
19 to 1996, nineteen (19) years ago. That -- that same
20 issue was outstanding back then, and we aren't there
21 yet.

22 Isn't -- isn't that a fair comment,
23 sir?

24 MR. GREG BARNLUND: Well, I mean, I --
25 I certainly don't dispute that -- that, you know, this

1 is what the Board observed and the Board found but all
2 I can say to you, sir, is that we need to commit to
3 move forward in some way, shape, or fashion. I can't
4 -- I can't atone for the sins of the fathers but, you
5 know, perhaps we can -- we can move forward in a far
6 more constructive manner from this point.

7 MR. WILLIAM GANGE: Okay. Fair
8 enough. And -- and I understand your point, sir, that
9 -- that moving forward we have a commitment from the
10 CEO, and we have the commitment of Manitoba Hydro to
11 be moving forward, to be developing a -- a proper rate
12 design policy which the Board has been requesting you
13 to do for the past nineteen (19) years.

14 Would you agree with me, sir, that one
15 of the -- one of the approaches, though, that -- that
16 may be expressed is that the time for that rate design
17 review is now and not in the future?

18 MR. GREG BARNLUND: Well, I think that
19 -- that we're doing a good job of -- of, in this
20 current application, of really starting to unearth
21 these matters and -- and giving them some examination.

22 But there is a lot of work that needs
23 to be done before we are in a position to be either
24 proposing or approving a change in rate design, and
25 part of that was alluded to this morning by Dr.

1 Williams in that there needs to be engagement and
2 involvement with the people that actually read the --
3 read their bills and pay their bills, to understand
4 what -- what their requirements are, and we also need
5 to look forward into the future and understand really
6 what is the future for Manitoba Hydro in terms of our
7 services, and I spoke a little bit about
8 photovoltaics.

9 But, you know, we've had discussions
10 internally and I expect that that's going to pick up a
11 lot of momentum as we move forward in terms of looking
12 at what service offerings Manitoba Hydro is going to -
13 - is going to put forth in the future and how it's
14 going to price its product.

15 And so, you know, I think it's timely
16 that we're having these discussions because I think
17 that -- I don't expect that it's -- that it's
18 reasonable that we would -- that we would have a rate
19 change -- a change in rate design for April 1 of 2018.
20 But we're certainly embarking on that -- on a path for
21 some form of rate design reform as we move forward.

22 MR. WILLIAM GANGE: Mr. Chernick has
23 provided in his evidence, table 6, page 30 -- my
24 fault, but in Mr. Chernick's evidence. Thank you.
25 Page 38, Kristen, and at the bottom of that page, Mr.

1 Chernick has -- as you know, sir, done a review of
2 rate design and -- and has provided a -- a rate design
3 proposal.

4 You're aware of that, sir?

5 MR. GREG BARNLUND: I am aware that
6 he's provided this information. Although, as I had
7 mentioned previously before this Panel, that I don't
8 believe that he's provided, to this point in time, an
9 actual proof of revenues of -- of the amount of
10 revenue that these rates are going to generate.

11 So I can't speak to the -- the
12 technical details of the various levels of -- of
13 charges he's indicated here with regards to first
14 block and second block charges, and whether basic
15 charges are included, or waved for different
16 subclasses of customers.

17 MR. WILLIAM GANGE: Okay. Thank you.
18 And we'll have Mr. Chernick review that next week when
19 he's -- when he's here.

20 One of the issues that Mr. Chernick has
21 raised, sir, deals with demand charges, and in the
22 Manitoba Hydro rebuttal at pages 72 to 74, Manitoba
23 Hydro disagrees with Mr. Chernick's position that
24 demand charges are counterproductive.

25 You're aware of that, sir?

1 MR. GREG BARNLUND: Yes.

2 MR. WILLIAM GANGE: Demand charges are
3 also something that have been long the -- the subject
4 of -- of controversy before this Board.

5 Is that fair, sir?

6 MR. GREG BARNLUND: Well, you know, I
7 -- I wouldn't go so far as to say controversy. I
8 think that there's been a significant evolution in
9 terms of how Manitoba Hydro bills demand charges over
10 the last fifteen (15) years.

11 We were ordered to do away with the
12 demand ratchet which we did. We have harmonized a
13 demand and energy charges for the general service
14 medium and small customers to alleviate some problems
15 that existed with regards to the rate re-balancing
16 that existed previously.

17 And so I think that where we are today
18 now is we've come to a point where we have a new cost
19 of service study that dramatically re-shapes costs in
20 terms of how much is considered to be capacity related
21 and how much is considered to be energy-related.

22 So I think that any, you know -- look
23 forward into rate design would have to take into
24 consideration the output of -- of the cost of service
25 study that was approved in 164/'16 and, you know, take

1 that, you know, seriously into consideration before,
2 you know, determining exactly where we would land with
3 demand charges.

4 MR. WILLIAM GANGE: Sir, if -- if --
5 and, Kristen, could you go back to GAC-15, and -- and
6 page 15 of that document, and at the bottom of that
7 page.

8 So again, back in 2003 the Board had a
9 discussion in Board Order 7 of '03 with respect to
10 demand charges and -- and the Board found that:

11 "The Board is of the belief that
12 lower demand charge and higher
13 energy charge may serve as an
14 impetus to further conservation of
15 electricity."

16 And on the next page the Board directed
17 Manitoba Hydro to file a report with respect to energy
18 charges, and including recommendation and a timetable
19 for possible implementation.

20 Was -- was the -- did -- did Manitoba
21 Hydro ever file a report with respect to demand
22 charges as required by Board Order 7 of '03?

23 MR. GREG BARNLUND: I -- I'd have to
24 check on that, sir. I know that through the course of
25 several General Rate Applications we either provided -

1 - it may not have been a full report, but we provided
2 some form of update with respect to that topic.

3 But again, I would suggest that -- that
4 as of, you know, the 20th of December 2016, that --
5 that we are in far different circumstances than where
6 we were in -- in 2003. And by adopting a system load
7 factor approach to addressing generation related
8 costs, for example, changes the output of the cost of
9 service model and -- and represents cost differently
10 in terms of the weighting between capacity or demand
11 and energy.

12 And so, notwithstanding that something
13 was, you know, addressed or discussed in 2003, I mean,
14 I think that we're -- where we are today in terms of
15 these matters, and -- and again, it's something that
16 in embarking on further rate design work, it's
17 certainly the -- the results of the cost of service
18 model are definitely -- have to be taken into
19 consideration in terms of any ultimate design of -- of
20 rates.

21 MR. WILLIAM GANGE: Would you agree
22 with me, sir, that Manitoba Hydro record -- recognizes
23 that transmission and distribution capacity needs are
24 driven by differ -- diversified load in various
25 transmission and distribution areas and not by

1 customer maximum demands?

2 MR. GREG BARNLUND: Well, I think
3 we're re-treading a bunch of ground that we've been
4 through in 2016, sir, and I believe the Board has --
5 has provided its -- its direction in terms of how
6 those matters are to be addressed. And I believe we
7 are fully compliant with their direction here in our
8 cost of service study.

9 So I'm personally not -- or as a
10 company, we're not proposing any further changes with
11 respect to the treatment of -- of the methodology of
12 cost of service.

13 MR. WILLIAM GANGE: Sir, we've
14 referred to commencing with Mr. Peters, PUB Manitoba
15 Hydro round 257 revised, and -- and in that document,
16 sir, right there, thank you, Kristen.

17 You -- you've -- Manitoba Hydro has
18 indicated that -- that the estimate of marginal
19 capacity cost is the cost of a new combustion turbine
20 in 2030/2031. Correct, sir?

21 MR. GREG BARNLUND: I believe Mr.
22 Miles testified to this this morning to that regard,
23 yes.

24 MR. WILLIAM GANGE: And -- and
25 hopefully the questions that I'm asking aren't going

1 to be so technical that we require Mr. Miles, but see
2 if we can get through them.

3 MR. GREG BARNLUND: Sure.

4 MR. WILLIAM GANGE: Is it -- is it
5 Manitoba Hydro's expect -- expectation that a
6 combustion turbine in 2030 will be a permitted energy
7 source pursuant to Federal regulations?

8 MR. GREG BARNLUND: With all respect,
9 sir, I think that's a question potentially for Mr.
10 Miles and certainly not for me.

11 MR. WILLIAM GANGE: Okay.

12 MS. ODETTE FERNANDES: If you have
13 questions in this hearing, Mr. Miles will be back
14 tomorrow morning. So if you --

15 MR. WILLIAM GANGE: Maybe there are a
16 couple questions that I will ask of -- of Mr. Miles if
17 -- if I have permission from the Board to do so.

18 So I'll -- I -- I will ask Mr. Miles if
19 -- if the Board allows me to do so.

20

21 (BRIEF PAUSE)

22

23 CONTINUED BY MR. WILLIAM GANGE:

24 MR. WILLIAM GANGE: Mr. Barnlund, are
25 -- are you able to answer questions on marginal cost

1 estimates? Or is that -- is that Mr. Miles' expertise
2 as well?

3 MR. GREG BARNLUND: It would be Mr.
4 Miles or -- or others in distribution and
5 transmission, sir. Are they distribution,
6 transmission, or generation related marginal cost
7 questions?

8 MR. WILLIAM GANGE: They're -- they're
9 really questions with respect to the -- Manitoba
10 Hydro's response in pages 75 and 76 of Manitoba
11 Hydro's rebuttal.

12 MR. GREG BARNLUND: Could we see those
13 on the screen, please for a moment.

14 MR. WILLIAM GANGE: Yes. So, the
15 rebuttal page 75.

16 (BRIEF PAUSE)

17

18 MR. GREG BARNLUND: We would need
19 transmission or distribution staff, I believe, to
20 speak to these questions. Can we continue down the
21 page for a second here. Yes.

22 So that would not necessarily be Mr.
23 Miles, it would be potentially staff from our
24 transmission and/or distribution area, sir.

25 MS. ODETTE FERNANDES: I think those

1 individuals were part of the revenue requirement
2 panel. But I will check availability and see if --

3 MR. WILLIAM GANGE: Thanks -- thank
4 you, Ms. Fernandes. If -- if you could check to see
5 if Mr. Miles would be able to answer. I just have a
6 couple of questions with respect to the criticisms
7 that are made of Mr. Chernick's assessment of -- of
8 the marginal cost calculations.

9 MS. ODETTE FERNANDES: I will do that.

10 MR. WILLIAM GANGE: Thank you.

11

12 (BRIEF PAUSE)

13

14 MR. WILLIAM GANGE: I think, Mr.
15 Chair, that those are -- that -- that given Mr.
16 Barnlund's information to me that -- that Mr. Miles
17 may be the better person to answer those questions,
18 the -- the remaining questions that are part of my
19 rate design questions would be better asked of Mr.
20 Miles and -- and that would -- those -- those
21 questions were all that I had with respect to the rate
22 design panel.

23 MR. CHAIRPERSON: Okay. I'll ask the
24 Panel if they have any questions? Mr. Barnlund, can
25 you do me a favour -- Kristen, if you could put GAC-

1 15-31 up or page 31 of 15.

2 There's a series of directives here.
3 Board requires Manitoba Hydro to file preliminary
4 reports and status updates on -- then it lists a
5 number of things. Mr. Gange highlighted a number of
6 them in yellow, but there are others.

7 MR. WILLIAM GANGE: Yes.

8 THE CHAIRPERSON: To your knowledge
9 did Manitoba Hydro respond to any of these directives?

10 MR. GREG BARNLUND: If I just see more
11 of the page -- oh, sorry I've got it right here.

12 MR. CHAIRPERSON: Yes.

13 MR. GREG BARNLUND: Just give me a
14 second please.

15

16 (BRIEF PAUSE)

17

18 MR. GREG BARNLUND: So I think that
19 we've -- we've probably made progress on a number of
20 these matters. The second bullet on the list, the
21 general service, small general service, medium class
22 consolidation and I think that we have -- we are
23 fairly complete in terms of that. The only
24 distinction between those two (2) classes and the
25 distinction of the basic monthly charge. Everything

1 else has been harmonized between those two (2)
2 classes.

3 Demand energy re-balancing, okay.

4 MR. CHAIRPERSON: I mean, this is an
5 Order of five (5) years ago.

6 MR. GREG BARNLUND: Yes.

7 MR. CHAIRPERSON: And I -- I will
8 express my concern on -- I'm looking at Orders I
9 haven't seen before where it -- it appears on the face
10 that there's a blatant disregard for Board Orders.
11 And I know that we have the president of Manitoba
12 Hydro who I take it, -- you know, as his -- sworn
13 testimony but I -- I'm -- I'm a little shocked that
14 there seems to be Order upon Order where Manitoba
15 Hydro decided not to follow the directives.

16 So I -- I don't know if you can comment
17 on if there was a decision not to follow directives or
18 what the pattern was, but to -- to appear before this
19 Board year after year and have the Board say year
20 after year, you didn't do this you didn't do that --

21 MR. GREG BARNLUND: Right.

22 THE CHAIRPERSON: -- I find to be
23 alarming.

24 MR. GREG BARNLUND: No. I -- I agree.
25 And I think that, like, there are number of these

1 items that had been followed up on. I don't have the
2 specifics available to me right at this point in time,
3 but -- but, you know, there are some directives that -
4 - that have had a -- that have not been completed as
5 of this point in time, that's -- that's correct, sir.

6 MR. CHAIRPERSON: Okay. We'll --
7 we'll adjourn for -- I don't know how long this is
8 going to take us. I'd say give us twenty (20) minutes
9 and we'll come back on Mr. Gange's proposal. Thank
10 you.

11

12 --- Upon recessing at 2:09 p.m.

13 --- Upon resuming at 2:32 p.m.

14

15 THE CHAIRPERSON: The Panel's met.
16 Mr. Gange put forward a proposal that Professor Miller
17 would enter into a discussion with Mr. Barnlund on the
18 issue of the bill affordability. We've reviewed the
19 materials that have been put forward, and talked --
20 the Panel has met, and we've decided that we're not
21 prepared to proceed in this manner at this time.

22 There are number of reasons. While
23 this is an innovative approach, or proposes an
24 innovative approach, effectively it would change the
25 way that the Board would be looking at evidence or

1 receiving evidence. In reviewing the material, we
2 believe that it would be more appropriate for Mr.
3 Miller to testify to these matters.

4 We're concerned on the fairness side
5 that, in fact, we would be -- have GAC revisiting
6 issues that were not put before Manitoba Hydro in the
7 -- in the normal course, and in fact, much of the
8 material appears to be more of final submission and
9 argument.

10 So for those reasons, we're not
11 prepared to proceed in the manner. We invite Mr.
12 Gange, if you wish to cross-examine using this as the
13 basis of your cross-examination, we'd -- we'd welcome
14 that.

15 MR. WILLIAM GANGE: Mr. Chair, can I
16 just have clarification? Given the comment that --
17 that the more appropriate thing would be for Mr. -- or
18 for -- for Professor Miller to testify, we are
19 scheduled to -- to have Mr. Chernick testify next
20 week, and -- and would it be acceptable to the Board
21 that Mr. Miller -- or that Professor Miller give a --
22 his -- his presentation at that time?

23 THE CHAIRPERSON: Well, I'll ask
24 Manitoba Hydro for their position on it.

25 I mean, the problem I have, Mr. Gange,

1 is that they're -- I don't understand why that wasn't
2 put forward just in the normal course that Professor
3 Miller would have testified on bill affordability and
4 pro -- either submitted this or submitted a paper.

5 MR. WILLIAM GANGE: The reason that we
6 didn't is that -- is that the traditional manner that
7 -- that we have participated has been simply through
8 the expert testimony of -- of the -- the particular
9 expert that we've had, which would either be Mr.
10 Chernick or -- or Mr. Colton, but it -- it -- given
11 that this is a -- a little bit -- well, it's not a
12 little bit; it's a significantly different situation
13 in that we have had the Bill Affordability Working
14 Group, and Mr. -- or Mr. Barnlund was part of that.
15 Professor Miller was part of it. And so -- so that
16 Professor Miller did submit his response to the bill
17 affordability report, which is part of the process.
18 And it -- it did not occur to me that the appropriate
19 approach would be to have Professor Miller testify.

20 But given where we're at, I would -- if
21 -- if we could have -- use an hour of our time next
22 week to have Professor Miller give his presentation as
23 part of his involvement in the Bill Affordability
24 Working Group, that would be satisfactory to us.

25 THE CHAIRPERSON: Ms. Fernandes...?

1 The -- would it -- just before -- before -- I don't
2 want to, sorry, interrupt -- keep -- keep
3 interrupting, but is this it, or is he going to put
4 something else in?

5 Because the problem is Manitoba Hydro
6 is now in a position that they've got to get prepared
7 for something that they don't know what it's going to
8 be.

9

10 (BRIEF PAUSE)

11

12 MR. WILLIAM GANGE: The -- the
13 material that we've put forward as Exhibit 16 is
14 primarily a review of the -- of -- of the process that
15 took place in the bill affordability workshops. And -
16 - and so this would be the foundation of what Dr.
17 Miller would talk about.

18 THE CHAIRPERSON: Okay. Okay. When
19 you say its "foundation," this whole process is -- had
20 been -- has been established to try and avoid
21 surprises and ambushes. This -- this was a surprise.
22 Before Manitoba Hydro responds, we'd like to know
23 whether, if we allow him to testify, it's this, or is
24 there going to be different material that is not
25 contained in this?

1 (BRIEF PAUSE)

2

3 MR. WILLIAM GANGE: It would be this.
4 It -- it would be this, and -- and Manitoba Hydro does
5 have Dr. Miller's response to the --

6 THE CHAIRPERSON: Okay.

7 MR. WILLIAM GANGE: -- to -- to the
8 bill affordability report.

9 THE CHAIRPERSON: So -- so it will be
10 restricted to those items?

11 MR. WILLIAM GANGE: Yes, that's
12 correct.

13 THE CHAIRPERSON: Okay. Ms.
14 Fernandes, do you want five (5) minutes --

15 MS. ODETTE FERNANDES: Yes, please.

16 THE CHAIRPERSON: -- or ten (10)
17 minutes?

18 MS. ODETTE FERNANDES: Thank you.

19 THE CHAIRPERSON: Okay. We'll --
20 we'll come back in ten (10) minutes.

21

22 --- Upon recessing at 2:39 p.m.

23 --- Upon resuming at 2:55 p.m.

24

25 THE CHAIRPERSON: Ms. Fernandez...?

1 MS. ODETTE FERNANDES: Thank you, Mr.
2 Chairman. At the outset, I'd just like to say that
3 you've commented on improvements to the process that
4 we can include in future GRAs and from Manitoba
5 Hydro's perspective, it views this as an improvement
6 to the process in terms of having Intervenors putting
7 up witnesses to advocate and to put forward their
8 position.

9 But, from Manitoba Hydro's perspective
10 that's for a future hearing, not for this one. We're
11 worried about the precedent that it would set at this
12 stage. We're passed the discovery portion; we're at
13 the oral hearing.

14 The PUB has developed its process where
15 -- which includes prefiled evidence where parties are
16 provided an opportunity to ask Information Requests to
17 clarify conclusions in reports so that there is
18 fairness to all parties involved. And in Manitoba
19 Hydro's perspective while I think we've indicated
20 previously that we have concerns with new documents
21 whether they're put in books of documents, this is
22 more egregious than that we've seen in the past. And
23 as -- Mr. Chairman, you indicated this appears to be
24 argument. There is no report from Mr. Miller before
25 the PUB. There's been no CV filed with his

1 qualifications so we can assess those as well. And
2 that's all done in the normal course of evidence
3 stage.

4 This is being done on the fly. And for
5 some of these documents that are in Mr. Miller's
6 presentation, we don't know what position is being
7 taken. There are some graphs in here, but we don't
8 know what his ultimate conclusion is, and at this
9 stage of the process we don't have an opportunity to
10 do that.

11 So, while this may be an improvement
12 for future hearings, we would submit that it would not
13 be for this hearing.

14 THE CHAIRPERSON: Mr. Gange, any
15 further comments?

16 MR. WILLIAM GANGE: My only comment
17 would be that -- that I think that virtually every one
18 (1) of these documents is -- is in front of you right
19 now. So that, for instance, I look at page 8 of --
20 which is a -- a definition of energy poverty from
21 Prairie Research Associates; that's before you. Page
22 9 is before you. Page 10 is before you.

23 Then -- then the -- the questions that
24 Professor Miller wanted to be able to have a
25 discussion with Mr. Barnlund are set out in -- in --

1 in terms of -- of this material. But this isn't new
2 material that's being introduced through the back
3 door. It's all material that's before you, and it's
4 just -- all that's being requested is an ability to
5 put forward GAC's position with respect to these
6 various issues that arise out of the documents that
7 are before the Board right now.

8 MS. ODETTE FERNANDES: And that is our
9 concern, Mr. Chair. It's now at this late stage that
10 we are going to be receiving GAC's position on those
11 issues.

12 THE CHAIRPERSON: Okay, we're -- we're
13 not going to make a ruling right now. We're going to
14 need to consider it over -- overnight.

15 So, Mr. Gange, I don't know how you
16 want to proceed. If you want to step down and wait
17 for the ruling or if you want to --

18 MR. WILLIAM GANGE: That would be my
19 preference.

20 THE CHAIRPERSON: Okay.

21 MR. WILLIAM GANGE: Mr. Chair, and I
22 apologize that -- that this comes as a -- as -- it --
23 it -- it wasn't intended to be -- it wasn't intended
24 to take anybody by surprise but -- so I apologize that
25 -- that it has come out that way; that -- that -- that

1 -- I should've raised that issue before Christmas.

2 So, I apologize for that. But I think
3 that the best way of doing it would be to wait for
4 your decision and tomorrow morning if -- if -- if you
5 rule that Professor Miller -- well, I'll -- let me
6 just end it at that.

7 THE CHAIRPERSON: Okay. If that's the
8 case, is there any other matter before us now? Ms.
9 Fernandes...?

10 MS. ODETTE FERNANDES: Yes, just after
11 the lunch hour, we provided some further responses to
12 undertakings so we just -- we'll have those marked as
13 exhibits.

14 The first one is a response to
15 Undertaking Number 16 and the response was provided by
16 Prairie Research Associates and that would be marked
17 as Exhibit Number 95.

18

19 --- EXHIBIT NO. MH-95: Response to Undertaking
20 Number 16 and the response
21 was provided by Prairie
22 Research Associates

23

24 MS. ODETTE FERNANDES: And then we
25 have a response to Manitoba Hydro Undertaking Number

1 20, which is Exhibit Number 96.

2

3 --- EXHIBIT NO. MH-96: Response to Manitoba Hydro
4 Undertaking Number 20.

5

6 MS. ODETTE FERNANDES: And following
7 that we have a response to Manitoba Hydro Undertaking
8 Number 29, which is Exhibit Number 97.

9

10 --- EXHIBIT NO. MH-97: Response to Manitoba Hydro
11 Undertaking Number 29.

12

13 MS. ODETTE FERNANDES: And finally, we
14 have -- Prairie Research Associates has provided their
15 response to Undertakings 21, 22 and 23, so we would
16 have that marked as Exhibit Number 98.

17

18 --- EXHIBIT NO. MH-98: Prairie Research
19 Associates has provided
20 their response to
21 Undertakings 21, 22 and 23

22

23 MS. ODETTE FERNANDES: And those are
24 the exhibits for today. And, Mr. Chairman, just I
25 guess a couple of breaks ago -- I'm trying to recall

1 the timing -- you had -- there was a discussion on
2 GAC-15, page 31 and the Board directives listed on
3 that page.

4 THE CHAIRPERSON: Correct.

5 MS. ODETTE FERNANDES: What we thought
6 we would do because -- our understanding is that there
7 might have been some discussion back and forth with
8 the PUB at the time and what we thought we would do,
9 subject to this Panel's approval, is that we would go
10 back through this list and then undertake to go back
11 and look and then provide the Board with any status
12 updates or anything that occurred with respect to each
13 one (1) of these directives.

14 THE CHAIRPERSON: Okay. I would
15 indicate, Ms. Fernandes, my -- my comments were not
16 only in relation to this, but were in relation to a
17 number of the points in the earlier Orders is well.
18 So, if...

19 MS. ODETTE FERNANDES: We'll attempt
20 to go back as far as we can then.

21 THE CHAIRPERSON: Sure, that's fine.
22 I appreciate that.

23 Any other matters, if not, we'll
24 adjourn until nine o'clock tomorrow morning. Oh,
25 sorry, Mr. Hacault...?

1 MR. ANTOINE HACAULT: This is just a
2 question of clarification, and perhaps Ms. Fernandes
3 has some additional information. I've been having
4 discussions with Manitoba Hydro with respect to the
5 previous request on the document that Mr. Peters
6 started talking about this morning. It was the
7 levelized cost document and there was supposed to be a
8 twenty (20) year number that was going to be looked at
9 and a response that was going to be provided.

10 You may recall, based on the
11 questioning this morning, that the number that has
12 been provided to this Board and all involved was a
13 thirty (30) year levelized cost and we had requested a
14 twenty (20) year number.

15 It's my understanding there's a
16 response that's going to be made. The response will
17 be available to the Public Utilities Board and I'm
18 just not sure on the timing of that and whether I'll
19 be able to get that before I start cross-examining
20 tomorrow morning.

21 MS. ODETTE FERNANDES: I've inquired
22 of Mr. Miles but I haven't heard back yet. Part of
23 the issue with that -- the response to that
24 undertaking is that it will contain some CSI. So
25 we've had discussions with Mr. Hacault and with Mr.

1 Williams and we've indicated on the public record, we
2 will indicate directionally but the numbers themselves
3 will be redacted and provided to the Board unredacted
4 but the public version will have redacted numbers in
5 them.

6 THE CHAIRPERSON: Okay, we'll deal
7 with them as they are provided to Mr. Hacault and Mr.
8 Williams.

9 Sorry, Ms. McKay...?

10 BOARD MEMBER MCKAY: Thank you. Just
11 for the record, I think the Board Orders from 1996
12 were referenced as 19 -- being nineteen (19) years
13 old. They're, in fact, twenty-two (22) years old. I
14 just wanted to put that on the record. Thank you.

15 THE CHAIRPERSON: Thank you. Anyways,
16 we will adjourn until nine o'clock tomorrow morning.

17

18 (PANEL RETIRES)

19

20 --- Upon Adjourning at 3:05 p.m.

21

22 Certified Correct,

23

24 _____

25 Cheryl Lavigne, Ms.