

MANITOBA PUBLIC UTILITIES BOARD

Re: MANITOBA HYDRO

NEEDS FOR AND ALTERNATIVES TO
REVIEW OF MANITOBA HYDRO'S
PREFERRED DEVELOPMENT PLAN

Regis Gosselin - Chairperson

Marilyn Kapitany - Board Member

Larry Soldier - Board Member

Richard Bel - Board Member

Hugh Grant - Board Member

HELD AT:

Public Utilities Board

400, 330 Portage Avenue

Winnipeg, Manitoba

April 30, 2014

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1 --- Upon commencing at 9:04 a.m.

- THE CHAIRPERSON: Good morning, I
- 4 believe that we are ready to begin today's proceedings,
- 5 so I think we can turn the microphone -- do you have
- 6 any documents we have to acknowledge or...
- 7 MS. ODETTE FERNANDES: No, we don't,
- 8 but Manitoba Hydro did receive a request from Mr.
- 9 Hombach regarding some of the plans that are still
- 10 coming, the financial analysis. So I will turn the mic
- 11 over to Mr. Wojczynski so he can speak to those.
- MR. ED WOJCZYNSKI: Yes. We provided
- 13 the economics of Plan 4 yesterday. And -- and then for
- 14 the financials, we are targeting still this Friday to
- 15 have Plan 2 DSM Level 2. We expect we will have it
- 16 first thing Friday morning at -- for nine o'clock,
- 17 unless in their final checking they find any problems,
- 18 but there's no reason for them to think they will right
- 19 now.
- 20 And then they have done a lot of work
- 21 the three (3) pipeline plans; that was 1, 5, and 14.
- 22 And -- and also on Plans 4 and 6 with DSM Level 2, they
- 23 are in the middle of checking those and finishing some
- 24 of the work on those and expect to have those next week
- 25 as discussed.

9373 And as indicated earlier, Plan 12, that 1 wouldn't be available until after -- after next week. 3 THE CHAIRPERSON: Thank you for that. I don't believe there's any other business to address, so I'll turn the microphone over to you, Mr. Williams. 6 MR. BYRON WILLIAMS: And before I get to the exhibit and introducing the witness, if the Board has any updates during the day in terms of whether we're planning to have the DSM -- the Hydro DSM panel come back tomorrow afternoon, it would be helpful 10 to know. We just have to plan on whether we're going 11 to sleep tonight or not. So it would be -- if we could 13 get some advice from the Board at sometime during the 14 day, it would be helpful. 15 I have one (1) exhibit that I'd like to introduce, which is Dr. Higgin -- his Power Point, and 16 17 I would suggest it be marked as CAC Exhibit 76. 18 MR. KURT SIMONSEN: Thank you, Mr. 19 Williams. 20 --- EXHIBIT NO. CAC-76: Dr. Higgin's PowerPoint 21 22 23 MR. BYRON WILLIAMS: And then I would

24 ask that Mr. Simonsen allow Dr. Higgin to swear or to

25 affirm.

9374 CAC POLICY PANEL: 2 3 ROGER HIGGIN, Sworn (Qual.) QUALIFICATION OF WITNESS: 6 MR. BYRON WILLIAMS: Good morning, members of the panel. Dr. Higgin, you are the author 7 of "Policy Observations Related to the Cost Benefit of the Preferred Plan, " the NFAT review? 10 DR. ROGER HIGGIN: Yes, I am. 11 MR. BYRON WILLIAMS: It was prepared 12 under your direction and control? 13 DR. ROGER HIGGIN: That's correct. 14 MR. BYRON WILLIAMS: And apart from the 15 errata filed with regard to your evidence, is it 16 accurate to the best of your knowledge and ability? 17 DR. ROGER HIGGIN: Yes, it is. 18 MR. BYRON WILLIAMS: Dr. Higgin, in 19 preparing your evidence, you relied upon your expertise in the assessment of energy policy and energy strategy, 21 including your experience in the review of capital and 22 integrated resource plans? 23 DR. ROGER HIGGIN: Yes, that's correct. 24 MR. BYRON WILLIAMS: You also relied upon your expertise in the assessment of rate and bill

- 1 impacts, including your experience in balancing the
- 2 interests of ratepayers and utilities?
- 3 DR. ROGER HIGGIN: Yes, that's really
- 4 my regulatory experience.
- 5 MR. BYRON WILLIAMS: And Dr. Higgin,
- 6 could you indi -- indicate the nature of your retainer?
- 7 DR. ROGER HIGGIN: Yes. My retainer is
- 8 rather unusual. I've been asked by CAC through Byron's
- 9 PILC to provide advice on the NFAT business case and
- 10 all of the related evidence updates and the taking into
- 11 account, basically, MH, Man -- Manitoba Hydro's,
- 12 evidence, updates, and so on, and at least looking at,
- 13 at an executive level, the -- the experts retained by
- 14 the Board, and also, very importantly, the experts
- 15 retained by CAC, from whom you've heard this week.
- 16 So I've -- those are my -- my main
- 17 inputs, I'll call it, to my overview, analysis, and
- 18 assessments. Those are the main inputs.
- 19 MR. BYRON WILLIAMS: Okay. And you
- 20 were retained to provide observations to the client,
- 21 and you're here in turn to share those observations
- 22 with the Board?
- DR. ROGER HIGGIN: Yes. It's rather
- 24 unusual that my role was to provide advice,
- 25 observations to the client, and to share those with --

- 1 with the Board, and -- and that continues to be my role
- 2 up to an end of the hearing, including up to the final
- 3 argument stage, and so on.
- 4 So I will continue to provide advice.
- 5 As updates, as were just mentioned, come in, I will
- 6 look at them and provide advice and as how they relate
- 7 to -- the two (2) key things I'm looking are the -- the
- 8 energy policy and the strategy that relates to the
- 9 development of a resource plan.
- 10 MR. BYRON WILLIAMS: Okay, thank --
- DR. ROGER HIGGIN: And that's basically
- 12 the two (2) elements.
- 13 MR. BYRON WILLIAMS: Thank you. You
- 14 hold a BSc in fuel science and combustion engineering?
- DR. ROGER HIGGIN: Yes, I do, from the
- 16 -- England, the University of Leeds, and I am also a
- 17 professional engineer, yes.
- 18 MR. BYRON WILLIAMS: You also hold a
- 19 PhD in fuel science and applied chemistry?
- 20 DR. ROGER HIGGIN: Yes, that's right,
- 21 again, from the University of Leeds, going way back to
- 22 1965, yes.
- 23 MR. BYRON WILLIAMS: And you do --
- 24 subsequently, you obtained a master's degree in
- 25 business administration from the University of Toronto

- 1 in the 1980s?
- DR. ROGER HIGGIN: Yes. I had the
- 3 opportunity from the Ontario Government to join the
- 4 Rotman business school, the executive program, and I
- 5 did graduate from there with -- on the dean's list in
- 6 1986, as you say, quite a way.
- 7 MR. BYRON WILLIAMS: You and I were
- 8 students at the same time, Doctor --
- 9 DR. ROGER HIGGIN: So I go back a lot
- 10 of years.
- 11 MR. BYRON WILLIAMS: On the subject of
- 12 renewable energy, you made numerous presentations
- 13 during the 1970s on subjects such as solar heating,
- 14 wind power, and biomass?
- DR. ROGER HIGGIN: Yes, that's correct.
- 16 I -- I joined the Ministry of Energy Ontario in 1974.
- 17 My initial role was to be a specialist advisor on
- 18 renewables. That was my initial role, and so I used to
- 19 spend a lot of time analyzing and assessing renewables,
- 20 their position, with a view to whether they were close
- 21 to market, et cetera, and so on, and when the -- when
- 22 they might be so. And I made presentations to a number
- 23 of, for example, the Solar Energy Society of Canada,
- 24 and those type of presentations during that time.
- 25 MR. BYRON WILLIAMS: And between 1980

- 1 and 1984, you were the executive coordinator of the
- 2 Alternative and Renewable Energy Group for the Province
- 3 of Ontario?
- 4 DR. ROGER HIGGIN: Yes, within the
- 5 ministry there -- there was a small group that used to
- 6 do, as we said, mostly the policy review, the technical
- 7 analysis of renewables. And so that was the initial
- 8 role that I had with -- with the ministry.
- 9 MR. BYRON WILLIAMS: And from 1984
- 10 through 1988, you served as assistant deputy minister,
- 11 Programs and Technology Div -- Division for the depart
- 12 -- Province of Ontario?
- DR. ROGER HIGGIN: That's right. I was
- 14 ADM, and my division was Conservation and Renewable
- 15 Energy. And we ran a \$60 million program on
- 16 conservation and renewable energy with eighty-seven
- 17 (87) staff. That basically was one of the pioneering
- 18 programs in Canada for conservation and renewable
- 19 energy. We were -- worked in cooperation with the
- 20 federal government.
- 21 And what happened, basically -- and then
- 22 I -- I went to other things, but basically, it was all
- 23 based on a -- an oil price that was going to drop to
- 24 fifty dollars (\$50) US per gallon. And therefore, all
- 25 of these technologies would be viable or, if you now

- 1 call it grid parity, reached grid parity. But in fact,
- 2 that didn't happen. And so basically the government
- 3 decided to wind up most of it except for the -- the
- 4 conservation programs. And they then were put out to
- 5 other parties such as, in those days, Ontario Hydro to
- 6 take a lead in and so on.
- 7 So the ministry went back to more of a
- 8 policy, rather than a program delivery, agency. And
- 9 that's when I left there and joined the Ontario Energy
- 10 Board.
- MR. BYRON WILLIAMS: And you served for
- 12 the first time on the Ontario Energy Board between 1988
- 13 and 1991?
- 14 DR. ROGER HIGGIN: That's right. If
- 15 any of you know from history of regulators in Canada,
- 16 my boss was Robert Macaulay, and he had quite a
- 17 reputation as a regulator. And that was my first stint
- 18 in -- in -- at the Ontario Energy Board. And then I --
- 19 I guess I deci -- I was --
- 20 MR. BYRON WILLIAMS: I'm going to stop
- 21 you there.
- DR. ROGER HIGGIN: Okay.
- 23 MR. BYRON WILLIAMS: In that role you
- 24 had, occasion to chair public hearings related to its
- 25 electric and gas utilities, including Ontario Hydro?

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- 1 DR. ROGER HIGGIN: Yes, I did three
- 2 (3), I believe, Ontario Hydro reviews. The key about
- 3 those reviews, as opposed to what we would call real
- 4 regulation, was they were rather like the mandate was
- 5 to review Hydro's plans and rights capital and
- 6 otherwise, and then write a report to the government.
- 7 And then the government would decide how to act on --
- 8 on that report. Those were the -- the old days of
- 9 Ontario Hydro.
- 10 It's very interesting, a very small
- 11 anecdote, we would then be invited to go to Hydro to --
- 12 and they would tell us in the boardroom what they were
- 13 and weren't going to do with the recommendations that
- 14 we had put in our report.
- 15 MR. BYRON WILLIAMS: And in -- in that
- 16 analysis, Dr. Higgin, your advice would involve
- 17 consideration of the balancing of ratepayer and utility
- 18 interest?
- DR. ROGER HIGGIN: Oh, yes. That was
- 20 really fundamental. And that included the -- the
- 21 capital plan and also the cost allocation rate design,
- 22 the usual components that you would look at as a
- 23 regulator. But it was in the extraordinary, I'll call
- 24 it, term of reference that we were working in.
- MR. BYRON WILLIAMS: Okay.

- 1 DR. ROGER HIGGIN: Whereas for the gas,
- 2 we were regulating.
- 3 MR. BYRON WILLIAMS: During that time
- 4 you were also a co-presenter to the annual meeting of
- 5 the Ontario Natural Gas Association on integrated
- 6 resource planning?
- 7 DR. ROGER HIGGIN: Yes, I think
- 8 probably that was after I left the board and I went and
- 9 headed -- headed up the Gas Technology Canada, which
- 10 was an offset of the -- the Canadian Gas Association,
- 11 CGA, which ran a small research program on gas
- 12 technologies.
- 13 And also because of conferences and
- 14 other things, I had a background and they -- they were
- 15 very interested in IRP, as it was called then; and so I
- 16 had some background and experience, academic mostly, on
- 17 IRP. And so that's what I did.
- 18 MR. BYRON WILLIAMS: You also presented
- 19 to the Canadian Association of Members of Public
- 20 Utilities Tribunals, or CAMPUT --
- DR. ROGER HIGGIN: Yes.
- 22 MR. BYRON WILLIAMS: -- on the subject
- 23 of non-utility generation in Ontario?
- DR. ROGER HIGGIN: Yes, that's correct.
- 25 I -- I was asked to -- to do that when I was with the

- 1 Board and basically, as you say, made a -- made a
- 2 presentation. I think I made a couple of other ones
- 3 later. But anyway, that was part of the CAMPUT -- the
- 4 old CAMPUT framework, where basically people were
- 5 invited outside and inside the regulator group to make
- 6 presentations and participate in the -- in the annual
- 7 conferences.
- 8 MR. BYRON WILLIAMS: And --
- 9 DR. ROGER HIGGIN: I think it's
- 10 something you're all familiar with.
- 11 MR. BYRON WILLIAMS: Indeed. You also
- 12 presented on the subject of the regulation of Crown-
- 13 owned electric utilities in Ontario to CAMPUT.
- 14 DR. ROGER HIGGIN: Ah, yes. That was a
- 15 very interesting one. I think -- think my -- my
- 16 direction was probably appreciated by some of the
- 17 electrical group within there. But basically I
- 18 suggested, if you want, that they become and operate
- 19 like and be regulated like an investor-owned utility.
- 20 That was the basic fundamental recommendation that I
- 21 made in that.
- 22 And I think it took till 1998. The
- 23 government then looked at how to deal with Hydro and
- 24 restructure things, and that's when Ontario
- 25 restructured the electricity activity, which included

- 1 going to that model of -- or -- of investor-owned or
- 2 proxy for an investor-owned utility, and setting rates
- 3 and so on similar to the investor-owned gas utilities
- 4 in Ontario.
- 5 MR. BYRON WILLIAMS: In -- and just --
- 6 we're going to go back to '91 for a moment, because in
- 7 that year you served as chairman of the Energy Task --
- 8 Task Force as part of the Ontario Roundtable of
- 9 Environment and Economy?
- 10 DR. ROGER HIGGIN: Yes, that's correct.
- 11 It's kind of interesting. I was working at the moment
- 12 with the ministry at that particular point, and
- 13 basically I left the ministry to go to the City of
- 14 Toronto as deputy commissioner of public works there.
- And then as I exited the door, Mrs.
- 16 Grier, who was the minister of Environment and Energy
- 17 for the NDP government, which had just come in, in
- 18 Ontario, asked me to come -- come back and basically
- 19 chair this little task force, which had I think seven
- 20 (7) members and a budget to do some outside consulting.
- 21 And to look at the -- the future outlook and direction
- 22 for energy policy in -- in Ontario, and give them
- 23 advice for the new government.
- 24 So I -- I shared -- chaired that task
- 25 force for -- for Mrs. Grier, yes.

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- 1 MR. BYRON WILLIAMS: And -- and you
- 2 mentioned that ultimately you went to the City of
- 3 Toronto. And while you were there, you played a role
- 4 as the senior coordinator of the team reviewing the
- 5 Demand Supply Plan for the Province of Ontario?
- 6 DR. ROGER HIGGIN: Yes. City of
- 7 Toronto is one of the many Intervenors in the original
- 8 Demand Supply Plan in 1990, I believe, as you said.
- 9 And so our team had a number of consultants and was --
- 10 also had a council, and I was to coordinate all of the
- 11 input from the team.
- 12 And the city's main interests were in
- 13 the areas of security of supply to the city, and also
- 14 in the areas of conservation, and particularly in the
- 15 area as it relates to utility facilities and related to
- 16 electrical CDM, we would call it, as opposed to
- 17 conservation. So I was part of that team.
- 18 As we will hear in a minute, I have a
- 19 habit to move around sometimes, or used to. And
- 20 basically the DSP, Hydro brought in a whole new
- 21 evidence and then the government decided to -- to call
- 22 it off for a variety of reasons, one of which was, I
- 23 believe, the costs were being projected to be very,
- 24 very high, given the number of Intervenors and so on.
- 25 So in essence the DSP never happened.

- 1 And the main other driver was, of
- 2 course, there was a pro -- new projection that the load
- 3 growth in Ontario was going to be much less than was
- 4 projected, and therefore there was no real need for new
- 5 generation and other resources. So that was the --
- 6 that was the other major driver.
- 7 MR. BYRON WILLIAMS: Dr. Higgin, just
- 8 to clarify, when you use the acronym 'DSP', I take it
- 9 you're referring to the demand supply plan.
- 10 DR. ROGER HIGGIN: And if I misstoke --
- 11 misspoke myself, it's exactly, the demand supply plan
- 12 which Ontario Hydro was -- was tasked to bring forward.
- MR. BYRON WILLIAMS: Okay. And --
- DR. ROGER HIGGIN: In fact, my
- 15 colleague, Mr. Harper, behind me was -- was part of the
- 16 Hydro team.
- 17 MR. BYRON WILLIAMS: He was on the
- 18 other side?
- 19 DR. ROGER HIGGIN: He was on the other
- 20 side, yeah. In fact he was in the other side in the
- 21 old Hydro reviews as well.
- MR. BYRON WILLIAMS: And are you on the
- 23 same side now, Dr. Higgin, or are you not sure?
- 24 DR. ROGER HIGGIN: Most of the time.
- MR. BYRON WILLIAMS: Sometimes I

- 1 wonder.
- DR. ROGER HIGGIN: Yeah.
- 3 MR. BYRON WILLIAMS: After a number of
- 4 years as a senior official both with the City of
- 5 Toronto and private sector firms, you rejoined the
- 6 Ontario Energy Board and served as a board member from
- 7 1996 through 2000.
- 8 Is that correct?
- 9 DR. ROGER HIGGIN: Yeah, that's
- 10 correct. And I retired in 2000 due to health issues.
- 11 And once I got a little more healthy, I became a
- 12 consultant on regulatory matters.
- 13 MR. BYRON WILLIAMS: Just sticking with
- 14 the OEB, or Ontario Energy Board, for a moment, you
- 15 were involved in numerous facility and rate
- 16 proceedings, sir?
- DR. ROGER HIGGIN: Oh, yes. If you
- 18 look at my resume, there's an awful lot on -- of them
- 19 on there. I -- I don't have a count, but believe
- 20 there's an awful lot. So as -- as a busy regulator for
- 21 five (5) years in that particular slot, basically I
- 22 think you would all know that you -- you kept very
- 23 busy. And it was a very active time in Ontario,
- 24 particularly because the electricity sector had been
- 25 deregulated. And the OEB was given the mandate to

- 1 start doing reviews of rates and so on for the
- 2 electricity sector. So it was a very, very busy time
- 3 for -- for us in Ontario.
- 4 MR. BYRON WILLIAMS: And as you
- 5 mentioned, since 2000 you have served as a consultant
- 6 on electricity and energy regulatory proceedings in
- 7 British Columbia, Alberta, Manitoba, Ontario, and
- 8 Ouebec?
- 9 DR. ROGER HIGGIN: Yes, that's --
- 10 that's correct.
- MR. BYRON WILLIAMS: And you've
- 12 provided expert testimony or evidence betwee -- before
- 13 the Manitoba Public Utilities Board, the Le Regie de
- 14 L'Energie Que -- Quebec, the Joint Panel of the
- 15 Manitoba Public PUB and Clean Environment Commission
- 16 into the proposed Wuskwatim project, and the Alberta
- 17 Energy and Utilities Board?
- 18 DR. ROGER HIGGIN: Yes, that's correct.
- 19 I'd just say that in my consulting career I usually
- 20 provide more of the advice to the clients, and it's on
- 21 occasions where that is insufficient that I will be
- 22 asked to prepare testimony and testify. So it's not a
- 23 routine thing. I'm not like many of the consultants
- 24 that -- that go around the -- the testimony circuit. I
- 25 only do it on very rare occasions and where it's

- 1 required.
- MR. BYRON WILLIAMS: Okay. And in
- 3 terms of the number of natural gas and electricity
- 4 proceedings that you've provided advice on, would it be
- 5 fair to say that many of them involve the review of
- 6 rates and the balancing of ratepayer and utility
- 7 interests?
- 8 DR. ROGER HIGGIN: That's correct.
- 9 MR. BYRON WILLIAMS: And am I correct
- 10 in suggesting that in the midpart of the last decade,
- 11 on behalf of the Vulnerable Energies -- Energy
- 12 Consumers Coalition of Ontario, you took part in a -- a
- 13 -- what started out as the Ont -- Ontario Power
- 14 Authority review of its 2007 resource plan?
- DR. ROGER HIGGIN: Yes, that's correct.
- 16 I was one of the team that VECC had used, including my
- 17 colleague, Mr. Harper. And -- and so I was given
- 18 certain areas of the file to look at and provide -- go
- 19 to all the -- the briefing meetings and then provide
- 20 advice. But as -- again, that particular review did
- 21 not proceed for a number of reasons, which perhaps are
- 22 less obvious then they were in the first place, the
- 23 first review by Hydro in -- back in the 1990s, yes.
- 24 MR. BYRON WILLIAMS: And also just
- 25 going back to the Wuskwatim proceeding before the Joint

- 1 Panel of the Public Utilities Board and Clean
- 2 Environment Commission.
- 3 You provided advice on such matters as
- 4 hydro alternatives, such as non-utility generation,
- 5 wind power, and DSM?
- 6 DR. ROGER HIGGIN: Yes, that's correct.
- 7 Mr. Harper was with me as the -- the other major
- 8 consultant, and he looked at more of the economic nuts
- 9 and bolts of the whole thing. I was asked to looked at
- 10 those areas. I think there's -- you're going to expand
- 11 into another area as well.
- 12 MR. BYRON WILLIAMS: As well, you
- 13 looked at the business partnership arrangement in that
- 14 hearing?
- 15 DR. ROGER HIGGIN: I was asked to take
- 16 a look at that and make comments and provide advice to
- 17 both the client, and also we did testify and provide
- 18 that advice to -- to the review -- Joint Review panel.
- 19 MR. BYRON WILLIAMS: Okay. And just
- 20 finally, in terms of your clients as a con -- as a
- 21 consultant, would it be fair to say that apart from the
- 22 Vulnerable Energy Consumers Coalition and obviously CAC
- 23 (Manitoba), they have included the Energy Probe
- 24 Research Foundation, the City of Calgary, Option
- 25 Consommateurs Quebec, and the former Manitoba Society

- 1 of Seniors?
- DR. ROGER HIGGIN: That's correct.
- 3 Just to note that my consulting career has been to
- 4 assist public interests entities as opposed to being a
- 5 consultant that has a variety of clients, including
- 6 utilities and so on. So I've been totally and
- 7 absolutely focussed on public interest clients, that's
- 8 all I do. That's all I want to do. And so that's my
- 9 particular little thing that I -- I enjoy working with
- 10 public interest groups.
- 11 MR. BYRON WILLIAMS: Mr. Chair, members
- 12 of the panel, I would ask that Dr. Higgin be qualified
- 13 as an expert in energy policy and energy strategy,
- 14 which includes his experience in the review of supply
- 15 pla -- of capital plans and integrated resource plans.
- 16 And I -- what I should've said, sir, is
- 17 in the -- Mr. Chair, I misspoke. He's -- that he be
- 18 qualified as an expert in the assessment of energy
- 19 policy and energy strategy, including the review of
- 20 capital and integrated resource plans, and also
- 21 qualified as expert in the assessment of rate and bill
- 22 impacts, including the balancing of the interests of
- 23 ratepayers and utilities.

24

25 (BRIEF PAUSE)

- 1 THE CHAIRPERSON: I'll call upon the
- 2 Intervenors to provide their -- their feedback and
- 3 questions. Me. Hacault, s'il vous plait.
- 4 MR. ANTOINE HACAULT: Oui, M.
- 5 President. Good morning, Dr. Higgins (sic). In your
- 6 CV, listed under "Energy Prog Research Foundation, 2012
- 7 to present," you show on behalf of SPA, Inc., doing
- 8 work related to Hydro-Quebec -- and then it's, for the
- 9 reporter -- capital 'I', capital 'R', capital 'M', from
- 10 2014 to 2019.
- 11 Could you explain what that's about?
- DR. ROGER HIGGIN: Yes, SPA, Inc., is
- 13 my consulting company, just to position that. That's
- 14 what that means. The client in that case -- I have to
- 15 pull it up -- I believe that if it's Hyd -- Hydro-
- 16 Quebec it would be...
- 17 Yes, the client, which in this case was
- 18 Option Consommateurs, was -- was my client, okay.
- MR. ANTOINE HACAULT: And what type of
- 20 review did you do with respect to Quebec-Hydro? It
- 21 wasn't obvious --
- DR. ROGER HIGGIN: Okay.
- 23 MR. ANTOINE HACAULT: -- from other
- 24 parts of your CV, sir.
- DR. ROGER HIGGIN: The -- the Quebec-

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- 1 Hydro my -- was a very limited assignment. It was to
- 2 assist Option Consommateurs's analyst with two (2) --
- 3 two (2) items. One (1) was introduction of what we
- 4 call a earnings sharing mechanism.
- 5 And probably the panel will remember
- 6 'earning sharing' means in an incentive plan, which is
- 7 where Hydro-Quebec is going, there is sometimes a
- 8 provision that says if the utility earns so much above
- 9 or below its allowed return -- now this is regulation
- 10 based on the model of an investor-owned utility, where
- 11 equity is basically one of the components in the
- 12 capital structure -- then there is a mechanism that
- 13 they share that with the ratepayers. That's in
- 14 essence, reducing the rates going forward. They can
- 15 sometimes give a rebate, but setting the rates.
- 16 So that was my first assign -- part of
- 17 the assignment. I can go into more -- more detail.
- 18 I'm very familiar with ESMs, as we call them. And they
- 19 needed somebody that was familiar with ESMs to give
- 20 them advice and input. But I didn't testify. I just
- 21 provided reviews and input to their analyst, who
- 22 provided testimony on behalf of Option Consommateurs.
- The other component was to comment on
- 24 the evidence that Hydro bring -- brought forward on the
- 25 matter of capital structure and the thickness of the

- 1 equity of -- that was being proposed. They were --
- 2 they were proposing to change the capital structure.
- 3 And along with that, because of the -- the concepts
- 4 being risk and the equity risk premium, they were
- 5 looking for a higher return on equity.
- And so my input to this was to share
- 7 with them the experiences we've had in Ontario. But
- 8 just to be very clear, they hired Laurence Booth as an
- 9 expert to, I'll call it, offset or provide a different
- 10 view to Concentric Advisors from Boston who had been
- 11 hired by -- by Hydro-Quebec. So my -- I had nothing to
- 12 do with that. I was just bringing the experience we
- 13 had on how ESMs should be structured, how they worked
- 14 and so on. And, in fact, one of the -- one of the
- 15 experts that was hired by Hydro-Quebec was from
- 16 Concentric, and one of his topics was ESM.
- 17 So that -- that's -- I'm sorry, I can go
- 18 on a long time, if that happens.
- 19 MR. ANTOINE HACAULT: Thank you. That
- 20 helps me better understand your role in those
- 21 proceedings, or behind those proceedings.
- 22 Sir, were you involved at all in the
- 23 major review that was done of energy in Quebec, leading
- 24 to a report late in February which commented, amongst
- 25 other things, about the impact of, I'm going to call

- 1 it, the merchant plants building for export on
- 2 ratepayers?
- 3 DR. ROGER HIGGIN: I'm only very --
- 4 because I -- I sort of monitor the -- the network.
- 5 But, no, I had no involvement at all in that
- 6 proceeding. So as I said, I -- because I have clients
- 7 in Quebec, I monitor what's going on in terms of the
- 8 applications on the -- on the Regie site and -- and
- 9 just sort of keep a note.
- 10 MR. ANTOINE HACAULT: It's a fairly
- 11 lengthy report au Francais. Have -- are you able to
- 12 read French reports, sir?
- DR. ROGER HIGGIN: I can read them.
- 14 But to put me on the stand, I can't -- couldn't say
- 15 more than a few words: bonjour, et cetera. Sorry. But
- 16 I can -- I can read. But when I am trying to provide
- 17 expert advice to my client, I do ask for translations.
- 18 And often in Quebec, IGUA, or the Quebec version, takes
- 19 a lead in actually doing the translations to English
- 20 for those proceedings.
- 21 MR. ANTOINE HACAULT: Have you actually
- 22 read that February report, February 2014?
- DR. ROGER HIGGIN: No, I have no
- 24 familiarity and I have not read it. Thank you.
- MR. ANTOINE HACAULT: Those are all of

- 1 my questions, Mr. Chair. I, on behalf of MIPUG, have
- 2 no objections to the qualification of Dr. Higgins (sic)
- 3 for the two (2) areas that were identified by Mr.
- 4 Williams.
- 5 THE CHAIRPERSON: Merci, Me. Hacault.
- 6 Dr. Higgin, just a -- a question. I was reading the La
- 7 -- La Presse last night, and I noticed that Hydro-
- 8 Quebec is 75 percent owned by the province. I was
- 9 wondering who owns the other 25 percent.
- 10 Do you -- do you know?
- DR. ROGER HIGGIN: For Hydro-Quebec,
- 12 no, I -- I don't remember who was --
- 13 THE CHAIRPERSON: I was quite surprised
- 14 by that, and I -- I expect -- I thought the Province of
- 15 Quebec --
- DR. ROGER HIGGIN: Yeah. I -- I would
- 17 have said that it was totally owned by -- by the
- 18 province. However, as I said, the -- the Regie and the
- 19 government have decided to regulate it more like a --
- 20 an investor-owned utility. I -- I use the word -- we
- 21 call them quasi-investor utilities as opposed to Crown
- 22 corps. You know -- you know what I'm talking about.
- 23 THE CHAIRPERSON: Thank you for that.
- DR. ROGER HIGGIN: Thank you.
- THE CHAIRPERSON: Professor Miller, I'm

- 1 sorry, I -- I overlooked you, I'm sorry. Go ahead.
- DR. PETER MILLER: Thank you. You --
- 3 you were asked to be qualified, Dr. Higgins (sic), as
- 4 an expert in balancing the interests of the utility and
- 5 ratepayers. We have a somewhat different criterion in
- 6 this proceeding.
- 7 Does the proposed plan provide the
- 8 highest level of overall socioeconomic benefit to
- 9 Manitobans, and is it the preferable long-term
- 10 electricity development option for Manitoba when
- 11 compared to the alternatives?
- 12 And I'm wondering if you've had any
- 13 experience at looking at that wider perspective, not
- 14 just the utility and the ratepayers?
- 15 DR. ROGER HIGGIN: Yes. The -- the
- 16 answer would -- in the short term would be that a
- 17 component, or an element of the review is to consider
- 18 the ratepayer aspects of the proposal. So that's a --
- 19 that's a key component. I think I -- I have a chart in
- 20 my evidence that shows that's one of the several
- 21 components. Therefore, I -- I would say that my
- 22 background and experience is applicable to that.
- 23 Secondly, on the particular area of
- 24 ratepayer issues related to the Plan, I did some of my
- 25 own direct work, which is in -- in my report and

- 1 appendices, looking at the issue of affordability,
- 2 rates, and bill impacts.
- 3 So I -- I believe it is an essential
- 4 component of the review, and that is to look at: What
- 5 are the impacts on rates, what are the impacts on
- 6 consumers of various types, and including my client's
- 7 group, which is residential, but also including
- 8 industrial, and so on. So I think it's a -- a key
- 9 thing to look at it, and if you look at the evidence,
- 10 it's in there in the evidence in a number of ways,
- 11 perhaps not totally drawn out, but it's there.
- 12 DR. PETER MILLER: Thank you. I -- I
- 13 would certainly agree those are complements of the
- 14 overall socioeconomic well-being, but not the totality.
- Would you agree with that?
- DR. ROGER HIGGIN: Totally, yes.
- DR. PETER MILLER: Thank you. I --
- 18 Green Action Centre would accept your expert
- 19 qualifications in the areas stated.
- DR. ROGER HIGGIN: Thank you.
- THE CHAIRPERSON: Thank you, Dr.
- 22 Miller.
- Mr. Orle, please?
- MR. GEORGE ORLE: Thank you, Mr. Chair.
- 25 Just one (1) question.

9398 1 Among the -- the groups of ratepayers that -- that you reviewed as part of your -- or that -that were at part of the reviews that you did, did that 3 include First Nations communities residing on -- on reserves? 6 DR. ROGER HIGGIN: The answer is no, not specifically. I took a -- a broad approach to 7 focussing on residential consumers, of which they are part, but I did not focus specifically. If you read in 10 my report, there were a couple of comments about distinguishing the fact that they're -- they are 11 distinct and have other considerations to be -- rather 12 13 than that -- what we would call a regular ratepayer, 14 but I did not spend any time looking at those 15 considerations. 16 MR. GEORGE ORLE: Okay. But in your -your past, and the -- the qualifications that have been 17 18 held out as -- as different groups that you've been 19 involved and in different regulatory groups that you've been involved in, the ratepayers that have been 21 reviewed in those proceedings have included First 22 Nations communities? 23 DR. ROGER HIGGIN: Very much so.

no objection to the qualification of Dr. Higgin as an

MR. GEORGE ORLE: Thank you. MKO has

- 1 expert.
- THE CHAIRPERSON: Thank you, Mr. Orle.
- 3 And on behalf of the Manitoba Metis
- 4 Federation, Ms. Saunders, please.
- 5 MS. JESSICA SAUNDERS: Yes. Good
- 6 morning, Dr. Higgin.
- 7 DR. ROGER HIGGIN: Good morning.
- 8 MS. JESSICA SAUNDERS: The Manitoba
- 9 Metis Federation has no objections to the
- 10 qualifications of the expert as presented. Thank you.
- 11 THE CHAIRPERSON: Thank you, Ms.
- 12 Saunders. And, Me. Monnin, on behalf of the
- 13 independent consultants?
- 14 MR. CHRISTIAN MONNIN: Merci, M.
- 15 President. We have no objections with the
- 16 qualifications.
- 17 THE CHAIRPERSON: Merci, Me. Monnin.
- 18 Ms. Fernandes, on behalf of Manitoba
- 19 Hydro, please.
- 20 MS. ODETTE FERNANDES: Thank you, Mr.
- 21 Chairman. Manitoba Hydro has no objection.
- 22 THE CHAIRPERSON: Thank you for that.
- 23 MR. BYRON WILLIAMS: Mr. Chair, if I
- 24 might ask one (1) question of re-direct, which might
- 25 assist Dr. Miller, with the Board's permission?

9400 1 THE CHAIRPERSON: Absolutely. 2 MR. BYRON WILLIAMS: Dr. Higgin, in -in terms of the criteria at the OEB, would -- would 3 your mandate also have included looking at the public interest? 6 DR. ROGER HIGGIN: I think that every regulator, that's a fundamental component of what we 7 do, or did, and continue to -- for other people. It's -- it's fundamental. If you look at the chart that's in my -- my evidence, what is the top piece of the 10 11 elements in that? It is the public interest. 12 MR. BYRON WILLIAMS: Okay. Thank you. 13 THE CHAIRPERSON: Mr. Peters, did you 14 have any questions of Dr. Higgin? 15 MR. BOB PETERS: No questions. Thank 16 you. 17 THE CHAIRPERSON: So the panel agrees 18 that we will accept Dr. Higgin as an expert witness for 19 the areas outlined by Mr. Williams. So welcome, Dr. Higgin, to these proceedings. 21 DR. ROGER HIGGIN: Thank you very much, 22 sir. 23 24 EXAMINATION-IN-CHIEF BY MR. BYRON WILLIAMS: 25 MR. BYRON WILLIAMS: And just for the

9401 panel's information, Dr. Higgin is much more technologically adept than I, but we are going to ask Diana to -- to work the slides for him. He's going to work off is PowerPoint and -- and notes off his own version. So if I seem like I'm interrupting a bit more than usual, it'll just be to make sure that we're on 7 the -- the same page. 8 9 (BRIEF PAUSE) 10 11 DR. ROGER HIGGIN: Thank you. I will proceed with my presentation. And perhaps after the 13 introduction slide, maybe we'll just look at what I'm trying to cover here. And again, I have a few 14 15 introductory remarks, and that relates to what I was 16 asked to do and why I'm here. 17 Basically, I was asked to do something 18 different that has perhaps only been asked to do once 19 or twice past, but really is quite unique. And that is to provide strategic and policy advice and observations 21 -- you -- you'll get fed up of me using that word, 22 because it goes with advice, observations -- on the 23 NFAT business case to my client, PILC and CAC 24 (Manitoba), and to provide a summary of those 25 observations to the PUB review panel as a report.

- 1 so basically that's a rather unusual role, for me
- 2 anyway, in -- in my consulting experience.
- 3 The caveats are important to note. And
- 4 that is that my client may, given many of the other
- 5 inputs that they are getting, can choose to ignore,
- 6 reject, or modify my advice and observations. And
- 7 obviously, that applies to you without talking.
- 8 Anyway, at this point I -- where are we
- 9 in that advice, in -- in the overall progress of the
- 10 case and so on? And perhaps I should summarize it this
- 11 way. There's been a lot of changes since I made my
- 12 original observations and so on.
- 13 What I'm trying to do today is to pick
- 14 those up and say, Well, how do they affect my original
- 15 observations, and so on, from a policy and energy
- 16 strategy point of view? And that's the purpose of the
- 17 thing. But even that, since my -- since, as you know,
- 18 the scope of all of the elements and so on of this
- 19 review are so huge. I -- I have focussed on three (3)
- 20 particular areas for this presentation. And I'll go
- 21 through those now.
- 22 The first three (3) -- these areas are:
- 23 affordability, and that's in the context of the
- 24 currently short-listed pathways for the Preferred
- 25 Development Plan or a version of that, such as we could

- 1 talk about Keeyask plus 750 megawatts, plus gas.
- 2 That's Plan 5. Or similar other plans, such as Plan 4.
- 3 So we're looking at -- within the -- that new context
- 4 of short-listed as opposed to the original concept --
- 5 con -- framework.
- 6 Secondly, I've asked to look at the DSM
- 7 impacts and my observations about that, and
- 8 particularly as based on the MH 2014 SmartPow -- Power
- 9 Program and the related integrated resource planning
- 10 that -- how that fits into IRP, into the integrated
- 11 resource planning framework that should underpin the
- 12 Resource Plan. So that's a key component, how do you -
- 13 how the two (2) fit together.
- 14 And in there I mention a couple of times
- 15 just some of the newer resources that have been talked
- 16 about -- I'll use the word 'talked about' here -- such
- 17 as solar, PV, that's the centralized, I think, was the
- 18 term used. I -- I use grid connected PV as opposed to
- 19 microfit. We use the term in Ontario. That means the
- 20 small systems under 10 kilowatts that are often used
- 21 just to reduce the electricity bill of a per -- of a
- 22 house or an -- an industry and sometimes feeds some of
- 23 that power back into the grid. As opposed -- that --
- 24 so that's a couple of questions there, some comments.
- 25 And finally, in my original observations

- 1 I tried to address the question of process and outcomes
- 2 and so on from the NFAT review. And that was in the
- 3 context of the terms of reference. So I felt perhaps
- 4 it was a good time to say, Where are we right now and
- 5 are my observations still valid, or -- or should they
- 6 change? So that's basically the final component.
- 7 Okay. I'm too -- too close now. Sorry.
- 8 Okay. So could I have the -- the next slide, please,
- 9 which is the slide number 3? That's the demand and
- 10 load forecast.
- MR. BYRON WILLIAMS: And -- and, Dr.
- 12 Higgin, could I stop you here for a second?
- 13 When we see the term 'observations'
- 14 here, are you referring to some of your original
- 15 observations or your updated observations?
- DR. ROGER HIGGIN: All right. I've
- 17 tried to identify in here those too. These are the
- 18 original observations which I've tried to summarize
- 19 from my original report. Okay. These are things that
- 20 I identified as things that needed to be looked at
- 21 more, were -- I won't say areas that perhaps there was
- 22 an insufficient evidence and so on. So the -- they're
- 23 not criticisms; they're just observations of things
- 24 that were perhaps a little bit needed looking at
- 25 further.

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slide 4?

9405 So in -- in the original forecast, I --I summarize here. We don't need to spend time on it. My take -- my summary is not -- is based on the evidence which is MH's evidence. It's -- it's also the evidence of the Board's experts, and importantly the 6 CAC. And basically, there were some concerns 7 here that I identified in -- in advice to my client about the -- the actual one point six (1.6) growth projection, about whether price elasticity have been 10 taken into account and how, and then the question of, 11 how is fuel switching being done? And I don't want to 13 spend much time on that, because Mr. Chernick will 14 spend a lot of time on that tomorrow, but basically, 15 fuel switching, and then DSM. 16 We were dealing with the 2013 Power Plan and we were dealing with what I call one point plan or 17 a projection, or an increase of that of one point five 18 19 (1.5) times. So that's -- that's where we were. 20 So this, then, is dealing with now as we 21 are in this proceeding, and this deals with -- on slide 22 4, if we can look at that? 23 MR. BYRON WILLIAMS: So when you say, 24 "This deals with where" -- "now," you're referring to

- 1 DR. ROGER HIGGIN: Correct, slide 4.
- 2 Thank you. And first of all, these are the MH
- 3 potential updates that have been discussed by Mr.
- 4 Wojczynski in his -- I hope we've got your name here
- 5 correct, Ed. I call him Ed. And then, you know,
- 6 beyond that -- okay.
- 7 Anyway, this is from Ed's update, and
- 8 basically at the top, and these are some of the
- 9 potential updates to -- to the load forecast which may
- 10 be included, I use that word 'may', in 2014, so that's
- 11 what I've done. I've just listed these out and say,
- 12 Oh, well, these do respond in a significant way to some
- 13 of those observations that I had. And we could go
- 14 through them, but I think you can read them.
- There -- some of them are positive,
- 16 obviously, the new pipeline load wasn't expected, and
- 17 some of them negative, meaning that it's been -- that
- 18 it they may produce a load reduction, and those are
- 19 listed as well. And the important one to just mention
- 20 here before we get to DSM is fuel switching.
- 21 There's been some change in the approach
- 22 to -- to fuel switching, which Manitoba Hydro -- and
- 23 that was an area that I was quite concerned that people
- 24 in gas supplied areas were basically using electricity
- 25 for purposes that -- when they could have been using

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- 1 gas and -- and they choose a -- an integrated gas and
- 2 electric utility, so they have even more chance, unlike
- 3 Ontario, to influence -- I'll call that word influence
- 4 those choices and so on, so that was a concern.
- 5 And they now have put in a -- a change
- 6 to their load forecast based on hopefully addressing in
- 7 more -- more depth the issue of fuel switching.
- 8 Okay, so then the next other one (1)
- 9 update which we all know has the -- is the new 2014
- 10 Power Smart Plan. These are some summary when I read
- 11 it about -- I -- I sort of said, Well, how does this
- 12 relate to the -- to the original 2013? And these are
- 13 some of my observations, to use my word again, as to
- 14 what it shows.
- 15 And basically, then there is the
- 16 supplemental report that's -- I -- I think exhibit is
- 17 listed here, and these are just at a high level,
- 18 because I only looked at the executive summary, to be
- 19 honest. It's not a very long report, nut these are
- 20 some of the things that I -- I pulled out of that --
- 21 that report.
- 22 And so from -- from that, I can say,
- 23 Well, Manitoba Hydro has addressed the -- the concerns
- 24 to a -- to a -- a significant degree, and I would say
- 25 this, that the main thing that's now changed is the

- 1 Level 2 DSM as provided by Manitoba Hydro, and the
- 2 projections and everything that goes with that. That's
- 3 the -- that's the major change.
- 4 And so how much are the gigawatt hours
- 5 and megawatt peaks going to actually lower consumption?
- 6 There's estimates here, but of course, those are
- 7 targets. The next thing is how much will it reduce the
- 8 bills for ratepayers? There's a number of
- 9 considerations related to that, and MH did provide, I
- 10 believe, an exhibit that -- that -- which I read and
- 11 looked at that gave some estimates on -- of that.
- 12 And so basically then, that's MH, and
- 13 then we go to my client, okay? And the -- my client
- 14 has retained Philippe Dunsky to provide advice,
- 15 evidence, and so on. Basically, you heard his
- 16 presentation. I've read it in great detail, and I have
- 17 a few comments, not on the -- not on that, but
- 18 basically, On where do we go from here, given this new
- 19 developments, which is: a) Manitoba Hydro and the new
- 20 plan and, b) comments from a significant expert on DSM
- 21 related to that plan? Okay, so where do we go? So I'd
- 22 like to just say a few words about that in a minute.
- 23 MR. BYRON WILLIAMS: And, Dr. Higgin,
- 24 just before you do, so are you personally familiar with
- 25 Mr. Dunsky?

- DR. ROGER HIGGIN: Yes, I am. We ran
- 2 each -- to -- into each other in 2006 in Manitoba,
- 3 basically, but I -- I had previously run into him --
- 4 anyway. In a nutshell, I was testifying in here in
- 5 Manitoba on the gas side, suggesting that they needed
- 6 to do things, well, more things, with respect to low-
- 7 incoming pro -- low-income programming, and I was
- 8 addressing at a high level as a regulatory perspective
- 9 on that and what the implications of that were, how do
- 10 you do that, and so on.
- 11 So I did that, and I believe, because
- 12 Mr. Dunsky told me this, that Manitoba Hydro, in terms
- 13 of trying to deal -- when the Board issued its report,
- 14 they -- they approached him and he, who I'd already
- 15 known, was hired by them to provide advice on that, so
- 16 we go back there.
- 17 And I run into Mr. Dunsky a couple of
- 18 times in other proceedings as well, so we know one
- 19 another very well. And -- and at large point we -- at
- 20 a high level, we're very pro-DSM, conservation, fuel
- 21 switching, and so on. You know, there's questions of -
- 22 always of degree, but we're -- we're sort of on the
- 23 page -- same page when it comes to that.
- 24 MR. BYRON WILLIAMS: Okay. And -- and
- 25 can you indicate, if you recall, how, if at all -- are

- 1 you aware of how Mr. Dunsky came to the attention of
- 2 CAC (Manitoba)?
- 3 DR. ROGER HIGGIN: Yes. I believe I
- 4 was asked by you to recommend a consultant on DSM, and
- 5 I had no hesitation to recommend Philippe. So I -- I
- 6 just thought a couple of points that my be helpful
- 7 here, and I'll call them 'observations'.
- 8 First of all, one of the key questions
- 9 is -- everybody faces, especially when there's a big
- 10 increase proposed for DSM: Is DSM going to be a
- 11 reliable resource that can be relied on to provide
- 12 kilowatt hours at a lower cost importantly -- of new
- 13 generation, either gas or hydro?
- 14 There's several factors that go into
- 15 considering that question. The current Power Smart
- 16 Programs have participation rates that some, including
- 17 Mr. Dunsky, have some concerns about as being less than
- 18 optimum. So participation rates is a -- is a key
- 19 factor, and one I'll visit in -- again in a minute.
- 20 So if DSM is to become a -- a key
- 21 resource as part of the Preferred Development Plan or a
- 22 version of the plan, then there are a number of other
- 23 collateral issues that need to be addressed by Manitoba
- 24 Hydro, and these include the accessibility of the
- 25 programs, the univas -- versality of those, which comes

- 1 back to including First Nations, and so it's
- 2 universality, available everywhere across the province
- 3 at the same basis, who are the target groups, and what
- 4 do you do about I call -- what I call vulnerable energy
- 5 consumers, which are often, but not necessarily, the
- 6 same as low-income families?
- 7 So those are some of the considerations
- 8 that need to be taken into account when you go from an
- 9 overall Level 2 -- and in -- in the 2014 plus plan,
- 10 there is some evidence and so on, on those issues, but
- 11 it's very critical. I think that there's got to be a
- 12 comprehensive review of the 2014 plan by, I would
- 13 suggest, this -- this tribunal. After this is over,
- 14 that's still an outstanding and important thing that
- 15 needs to be done.
- 16 And that's the point at which you can
- 17 assess the questions of degree between Level 2 or the
- 18 things Mr. Dunsky's saying we can do more. He's
- 19 concerned about a falloff after 2018. And all of those
- 20 factors that I've read need to be considered and
- 21 addressed so that there is an approved 2014 plus DSM
- 22 plan that you think can be relied on to meet its
- 23 targets as part of the overall plan going forward in --
- 24 in Manitoba. So that -- that's really where I -- I end
- 25 up.

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- 1 Now on this slide, I just wanted to
- 2 mention one (1) thing. That is there's some questions
- 3 about costs. What are the costs of the new DSM
- 4 program? And I -- I saw estimates anywhere around two
- 5 (2) to three (3) cents. You know, what are we talking
- 6 about, costs? Well, it depends on your perspective.
- 7 You're talking -- I believe this is the utility cost.
- 8 For people who know a bit about DSM, there's at least
- 9 five (5) costs or tests that are looked at from an
- 10 economic cost benefit. There's five (5) of them. And
- 11 basically the one that's being talked about most is the
- 12 utility cost. And this is understandable that the
- 13 utility will talk about the utility cost, obviously.
- 14 But there are other tests that need to
- 15 be considered when looking at the program design, the
- 16 impacts, and so on. For example, the participant cost
- 17 test: What are the cost of the program to the
- 18 participants? Then the much maligned RIM test. What
- 19 are the impacts on rates, and so on.
- 20 So those are some of the things that
- 21 need to be reviewed and considered within the framework
- 22 of the proposed 2014 plus plan. And that's basically
- 23 where I would leave things, except with a concluding
- 24 remark because -- and it says:
- 25 "The key is that MH Resource

9413 Development Plan should consider 1 2 economic DSM." However, you may want to address what 3 you mean, 'economic'. We can go into that if you want. And the impact of this will affect the need date for new generation, number 1, and provide an assessment of the economics of advancing new generation. It's --7 it's a component you have to look at when you're looking at advancing new generation. As is the case, 10 as you're tasked to look at in terms of looking at the economic opportunities from advancing -- advancing 11 12 generation. So it's a factor, because in essence 13 you've got a resource that starting to meet the growth and load -- that is, DSM -- the domestic load. 14 15 That then says, well, the -- the new 16 resources, if we're going to build them, initially 17 won't be needed to meet that load. And therefore, if 18 we decide to advance them then, perhaps, that's a 19 different way we should look at things, at least in the advancement period. So we'll come back a bit to that 20 21 in -- in the -- a little later. The one --22 MS. MARILYN KAPITANY: Can I just 23 interrupt you for one (1) minute? 24 DR. ROGER HIGGIN: Sure, no problem. 25 MS. MARILYN KAPITANY: In terms of

- 1 looking at DSM plans, have you had the opportunity to
- 2 work in jurisdictions or advise in areas where DSM
- 3 plans have been put in place and then have looked at
- 4 how they would continue on in the long term? How they
- 5 would go from what their original measures might've
- 6 been in the original programs in place, and then built
- 7 on those, as some measures would become exhausted, that
- 8 others would come into the plan to keep DSM going on an
- 9 upward trend or at least flat, like, for a long period
- 10 of time?
- DR. ROGER HIGGIN: Yes; the answer is
- 12 yes. There are usually long-term DSM potential studies
- 13 done which set out the trajectory -- we'll call it the
- 14 trajectory -- going forward. And then what happens is
- 15 plans are developed, and they can be anywhere -- I've
- 16 seen them as short as one (1) year, or longer, where
- 17 the -- the actual implementation is done through those
- 18 plans. Now, in -- my recent experience has been in
- 19 Ontario with both the electric CDM plans and looking at
- 20 them from the utility spect -- perspective, and rates.
- I am not a practitioner in the
- 22 development of DSM plans and so on. However, I have
- 23 been, in Quebec, tasked a couple of times to look at
- 24 what's going on with some of the plans in Quebec and
- 25 what do we do about it. My focus was specifically:

- 1 Why aren't they reaching the low-income people? Why
- 2 aren't they participating? What's going on? And what
- 3 can we do about it? And so that was the particular
- 4 thing that I looked at, was more of a detail of the
- 5 programs.
- 6 But on the other hand, I think the issue
- 7 is, like everything else, DSM is affected by so many --
- 8 DSM achievement -- kilowatt hours, megawatt hours -- is
- 9 affected by a number of external factors that the
- 10 utility can't control, such as a 2009 recession. And
- 11 therefore, the targets are just that.
- Now, in Ontario the other thing that --
- 13 why we go into great detail on gas DSM plans is that
- 14 the utility gets a very nice, big incentive based on
- 15 how much TRC, total resource cost or social cost, they
- 16 get through the plan. And the -- that's a shareholder
- 17 incentive. So you can imagine there's a lot of time
- 18 spent by ratepayers looking at their claims, a very
- 19 important word, for kilowatt hours, gigawatt hours, in
- 20 those plans.
- 21 And so I don't know whether that's
- 22 totally answered your question, but I -- I'm very
- 23 familiar with those aspects. But again, it's at a -- a
- 24 regulator's kind of level, as opposed to being a -- a
- 25 DSM practitioner.

9416 THE CHAIRPERSON: Well, let's talk 1 about the Quebec experience since you're familiar with it. What's going on in Quebec in relation to DSM? 3 They've got a plan. What's happening with respect to the targets they've set, and -- and why isn't it happening? I guess -- I'm assuming from your comments 7 that -- you suggested that they're not hitting their targets. And I'd -- I'd like to know why, what's 9 10 going on? 11 DR. ROGER HIGGIN: First of all, I have 12 to put this into a historic perspective. I haven't 13 been retained recently to look at that plan. 14 period, I think it's in my -- my CV when I did that, 15 that would be approximately, I'm going to say, about 16 seven (7) years ago. And they were having problems and I was asked to deal with -- with -- to -- to look at 17 18 the plan and so on. So at that time --19 CONTINUED BY MR. BYRON WILLIAMS: 20 21 MR. BYRON WILLIAMS: Dr. Higgin, could 22 I interrupt? And just -- and just to make sure, you're 23 looking in Quebec, was that the low-income plans? 24 DR. ROGER HIGGIN: My particular focus,

I think I said that before, was on whether the low-

- 1 income programs were working, were not working, and
- 2 what was wrong with it. And so I did go through and
- 3 look at that and there were a number of factors
- 4 affecting participation rates. And they rela -- they
- 5 related to some very tangible things: that they weren't
- 6 promoting and pushing the plans. They were sitting
- 7 there and waiting for people to come in the door, not
- 8 promoting the plans, pushing the plans. That was one
- 9 of the things.
- 10 The fact is eligibility criteria were
- 11 terrible. They didn't have, like we have in Ontario
- 12 now for low income, LICO, Low Income Cut Off, plus 135
- 13 percent. So it -- it broadens the base so that they
- 14 basically are eligible if the family is not LICO, but
- 15 at 135 percent of LICO. And that's been adopted by the
- 16 OPA as well, the Ontario Power Authority, who looks
- 17 after the electric CDM -- SM -- DSM in -- in Ontario.
- 18 I don't know whether that -- that helps you. There's a
- 19 huge number of factors that affect par -- participation
- 20 rates and --
- 21 THE CHAIRPERSON: Well, we try to
- 22 understand, you know, your -- the very first comment
- 23 you made was that these are estimates, and -- but those
- 24 are targets. Let me -- let me repeat that, because
- 25 just -- my comment.

DR. ROGER HIGGIN: Yes, targets.

- THE CHAIRPERSON: But you didn't
- 3 indicate they are targets, and I -- and I -- I inferred
- 4 from that that you're suggesting that it's one thing to
- 5 set a target. It's quite another thing to deliver on
- 6 the target. And I -- I guess --
- 7 DR. ROGER HIGGIN: Absolutely correct.
- 8 THE CHAIRPERSON: We're trying to get
- 9 at that. We're trying to understand.
- DR. ROGER HIGGIN: Because the -- the
- 11 programs to meet those targets have to be designed,
- 12 developed, number 1, and when you do that, and I'm
- 13 doing this right now, excuse me, with low -- low-income
- 14 programming for Union Gas. So I'll use that a current
- 15 example.
- 16 The first thing that they're looking at
- 17 is they want to extend their DSM programs to what we
- 18 would call high rises. We -- we call them multi-family
- 19 residential buildings. That's not a component. A lot
- 20 of low-income people in Ontario live in those
- 21 buildings.
- So as part of that, we're doing a lot of
- 23 analysis and work, and I'm part of their little task
- 24 force. And they are saying, We need to estimate on how
- 25 we are going to do the participation rates? What will

- 1 we actually get, and at what cost in terms, in this
- 2 case, of -- of M-cubes of gas savings.
- 3 So similar concepts here have to be
- 4 applied, and it's a very, very difficult job to
- 5 estimate and project the participation rates and
- 6 programs. If you're wrong about it, you may not meet
- 7 your targets. That's basically a practical thing.
- 8 Again, you're stra -- I'm straying a bit
- 9 more away from my expertise into that of Mr. Dunsky,
- 10 and I think he has a lot more experience in
- 11 jurisdictions in terms of, How do you design programs
- 12 to get part -- maximum participation rates?
- THE CHAIRPERSON: No, we wouldn't you
- 14 to -- to do that. We're trying to understand though --
- DR. ROGER HIGGIN: Yes.
- 16 THE CHAIRPERSON: -- from a -- from a
- 17 sta -- from a writ -- from a -- the best way to
- 18 describe it would be from a strategic perspective.
- 19 DR. ROGER HIGGIN: Yes.
- THE CHAIRPERSON: I mean, you obviously
- 21 have exposure there, and we're trying to understand
- 22 it's one thing to set a target for DSM. We're trying
- 23 to get at whether or not it can be delivered upon.
- DR. ROGER HIGGIN: Right.
- 25 THE CHAIRPERSON: And -- and what are

- 1 the constraints that would -- would cause -- and we'd
- 2 try to address that very problem you just described,
- 3 which is, you know, it's one thing to say DSM can
- 4 deliver on savings, but what happens if it is not
- 5 there?
- 6 DR. ROGER HIGGIN: Well, let's go to
- 7 Ontario and let's talk about briefly -- hopefully this
- 8 will help. The Ontario Power Authority was taxed by
- 9 the government to meet certain CDM, conservation and
- 10 demand management, which includes a -- a number of
- 11 overlapping areas that go with the Manitoba Hydro,
- 12 including demand reduction and so on. Demand reduction
- 13 is a particular set of programs and so on in that
- 14 megawatt peak reduction.
- So anyway -- so there are two (2) sets
- 16 of targets been developed and given to OPA. They
- 17 consulted on it. One is so many gigawatt hours, and
- 18 the other is megawatts. And so then OPA was asked to
- 19 look at the utilities from how many people, what their
- 20 loads are, and so on, and then that -- those set of
- 21 macroprovincial targets were given to the utilities as
- 22 individual utility's targets. For example, Hydro One,
- 23 which is the largest utility in Ontario, was given
- 24 certain targets.
- The OPA, going along with those targets,

9421 developed programs, which the utilities can access in order to reach their utility targets, and the OPA's is tax -- tasked with moni -- monitoring the progress towards those targets, reporting, and making corrections just to get there. So that -- that's a -a regime in which there is a kind of a, I'll call it, 7 CDM or DSM boss that's there watching and tasked to make it happen. Okay. 9 CONTINUED BY MR. BYRON WILLIAMS: 10 11 MR. BYRON WILLIAMS: And Dr. Higgin, 12 and that's the thrust of some of your recommendations--13 DR. ROGER HIGGIN: Yes. 14 MR. BYRON WILLIAMS: -- going forward, 15 is that there needs to be, I'll suggest to you, additional oversight from the regulator to ensure that 16 17 these targets are achieved? 18 DR. ROGER HIGGIN: Yes, the -- the role 19 of the Ontario Energy Board as the regulator is primarily simply to ensure that in meeting the targets, 21 the collateral issues around costs, rates, and so on 22 are dealt with properly. That -- that's their role. 23 But the OPA is the conservation or DSM boss in terms of everything. And, very important, the 24 money for it doesn't come from the rates if it's the

9422 OPA programs, it comes from what we call the global uplift, so there's a certain amount of money that's in rates to achieve those programs. It's not from the individual utility rates, only if they, as they're encouraged to, add supplementary programs, then those, the costs are done in rates. 7 THE CHAIRPERSON: So -- so there -- so there's -- it's -- it's in rates though? I mean it --9 DR. ROGER HIGGIN: Yes, it's --10 THE CHAIRPERSON: -- from the previous 11 12 DR. ROGER HIGGIN: It's on the -- it's on the bill. 13 14 THE CHAIRPERSON: On the bill, okay. 15 DR. ROGER HIGGIN: Yes. THE CHAIRPERSON: There's a line that 16 17 says this is the... 18 MR. RICHARD BEL: The -- the targets 19 are mandated targets? 20 DR. ROGER HIGGIN: Yes --21 MR. RICHARD BEL: Okay. 22 DR. ROGER HIGGIN: -- for the OPA, and 23 they're mandated for the utilities. 24 MR. RICHARD BEL: We heard from Mr. Dunsky that those utilities, in -- in his experience,

- 1 that were mandated for DSM savings, seem to achieve
- 2 them in most cases, and that the lowest achievement was
- 3 80 percent of the target. So it would seem then, in
- 4 terms of a capacity forecast, in Mr. Dunsky's
- 5 experience, there was some certainty.
- And I'm just -- I'm wondering, in -- in
- 7 Canada, have we seen that in -- in any other
- 8 jurisdiction?
- 9 DR. ROGER HIGGIN: Right. I think I
- 10 have to put this into two (2) related responses, and
- 11 that is you should distinguish quite clearly what we
- 12 will call Crown corporations. And, in essence, the OPA
- 13 is a Crown corporation. It's -- it's an instrument of
- 14 the -- the government, okay, from utilities that are
- 15 investor-owned, okay?
- 16 There's the two (2) different sets of
- 17 circumstances, and the incentive, and this is the key,
- 18 for those two (2) is different than -- okay. So if
- 19 you're an investor-owned utility, you may not want to
- 20 be pushing DSM too much unless you have -- want to
- 21 avoid certain incremental costs that will make your
- 22 rates uncompetitive, because for every kilowatt hour
- 23 you lose, then basically, that's revenue that you've
- 24 lost, okay?
- 25 If you're an investor-owned utility,

- 1 like Ontario, the two (2) gas utilities I think I
- 2 cited, they get a shareholder incentive to go out and
- 3 do it, and basically, they do very well. In fact, they
- 4 exceed the -- the amount -- the target every year.
- 5 We've tried to keep them back. So the incentive goes
- 6 to the shareholder is better and increased, so they --
- 7 they're motivated to do that.
- 8 So Crown corporations like Quebec-Hydro,
- 9 Manitoba Hydro, what is the incentive? You can't be
- 10 looking at them from an incentive point of view, more
- 11 that you can say mandate is really -- perhaps if you
- 12 want to be dead sure, mandate it, and that is a
- 13 government usually, a government versus a Crown corp,
- 14 role to mend -- mandate that that's going to happen,
- 15 the OPA model, where --
- 16 THE CHAIRPERSON: I'm sorry, I just --
- 17 I don't know how -- can you explain how the gas company
- 18 is incented to apply DSM?
- 19 DR. ROGER HIGGIN: Okay. The way it's
- 20 done, it's called -- they -- they add up all of the --
- 21 so they have targets, and they have a score card. And
- 22 the score card says, If you meet 100 percent of your
- 23 annual target -- now we're going back to an annual
- 24 target and it's reset. They say, 100 percent, then you
- 25 get this much incentive. If you get 125 percent, you

- 1 get a bigger incentive, and it's not just proportional.
- 2 They get even bigger proportionally per -- per million
- 3 TRCs, they get a bigger incentive.
- 4 And that's all done after an audit.
- 5 They bring in auditors, DSM auditors. And then
- 6 basically they have a committee of ratepayers that
- 7 looks at the repor -- audit and says 'yes' or 'no' with
- 8 respect to, You're right in terms of the claim --
- 9 claims you've made on savings. And then they get the
- 10 incentive. So that's the gas utility model for --
- 11 again, it only works for a investor-owned utility.
- 12 MS. MARILYN KAPITANY: Is the incentive
- 13 in the form of bonuses to senior managers, or where
- 14 does that incentive go within the utility?
- DR. ROGER HIGGIN: It goes to the
- 16 shareholder as an increase in its -- their return on
- 17 equity above the allowed regulated return. But there's
- 18 -- there's a lag, because there's a year -- usually a
- 19 year between when the program was delivered and the
- 20 results, unaudited, happen. And then there's year in
- 21 which the audit is done. And so they get it a year
- 22 later. So that's how -- how it works.
- 23 So that's for an investor-owned utility.
- 24 It doesn't work, that incentive obviously, you know,
- 25 for a -- for a Crown corporation. So how to motivate

- 1 Crown corporations, if you want me to answer that, if
- 2 you want to be dead sure, it's the mandatory approach,
- 3 like OPA in Ontario.
- 4 THE CHAIRPERSON: So -- so let's talk
- 5 about the Crown-owned utilities and their success in
- 6 achieving the mandated targets in Ontario.
- 7 DR. ROGER HIGGIN: Yes.
- 8 THE CHAIRPERSON: Are you familiar with
- 9 --
- DR. ROGER HIGGIN: Okay. I am -- I
- 11 look at the reports and basically -- overall they're
- 12 exceeding the target. There are places obviously
- 13 within the -- the utility structure that, for various
- 14 reasons, they're behind. They may catch up, and so on.
- So within the time frame for the target,
- 16 and -- and maybe -- I -- I think it's -- goes from 2012
- 17 to 2016. That's my feeling. Right now they're on
- 18 target with that. And again, the OPA is tasked with
- 19 making changes to make sure those targets are going to
- 20 be meet -- met. Those changes are programmatic, et
- 21 cetera, et cetera.
- THE CHAIRPERSON: Now Mr. Dunsky,
- 23 beyond some of the things we've been talking about,
- 24 incenting and so on, he also suggested that DSM in
- 25 certain jurisdictions, because of the innovation

9427 that'll be expected to occur, are projecting flat load growth and, in fact, declining load demand over time --3 DR. ROGER HIGGIN: Yes. THE CHAIRPERSON: -- as a result of Now, looking to the Manitoba situation, you're suggesting that DSM could deliver relatively load flat 7 growth -- flat load growth over the next while. Now --8 DR. ROGER HIGGIN: Right. 9 THE CHAIRPERSON: That's one thing, but 10 then saying that, You should expect as a Board to be 11 able to have a flat load demand curve for the future 12 beyond 2030, I -- I take it you -- have you looked at that? 13 14 DR. ROGER HIGGIN: I'm aware of his --15 I -- I've read his slide deck just a couple of days 16 ago, whenever it was filed. And basically there is some jurisdictions where that's -- has or is being 17 18 achieved; Vermont and other places. And in others --19 that, in the first place, was never the target; and secondly, if it was a target, it's -- it's not been 21 achieved. In other places, like Ontario, there's been 22 a target, which is not flat load growth, is being 23 achieved. 24 So the answer is a very difficult one, 25 because it's a fundamental thing of so many variables

- 1 as to whether or not that particular target, and the
- 2 one you cited, as opposed to Manitoba Hydro's proposed
- 3 target, is, quote, "achievable." That -- that's the
- 4 question. And that -- that gap, if you look at the
- 5 chart there, is the question for debate. It's an area
- 6 for debate.
- 7 And whether or not different incentives
- 8 could push Manitoba Hydro from Level 2 to that without,
- 9 again, keeping costs in mind, because cost is very
- 10 important. You can't just go from Level 2 to Level 3.
- 11 Manitoba Hydro's demonstrated that, that it's not,
- 12 quote, "economic DSM."
- So basically there are some
- 14 considerations. But without increasing the cost, yes,
- 15 in some jurisdictions they have been able to go
- 16 further. And Mr. Dunsky is the expert in those
- 17 jurisdictions. I have two (2) or three (3), which I've
- 18 cited that I'm familiar with, but the rest I have no
- 19 familiarity with.
- 20 MR. RICHARD BEL: The metric -- the
- 21 metric for the Ontario target, is -- is that utility
- 22 cost metric or the total resource cost metric? Because
- 23 Mr. Dunsky seemed to make a big point about using the
- 24 proper metric when you're looking at trying to defer
- 25 capacity.

- 1 DR. ROGER HIGGIN: Yeah. As far --
- 2 from my reading with the Ontario Power Authority Plan,
- 3 they use all of the parameters: the TRC, SCT, et
- 4 cetera, et cetera. And one of those there will be in
- 5 the plan what they expect to be the utility cost. And
- 6 so as to what you're transferring to rates and how the
- 7 amount on the bill for customers, I -- I have not
- 8 explored which of those they've used.
- 9 Have they used the utility cost test in
- 10 developing that as far as the amount of money that has
- 11 to be collected, or have they used something else? I
- 12 have not explored in detail the designs of that program
- 13 in those sense. Maybe Mr. Dunsky has, but I have not,
- 14 sorry.
- 15 MR. BYRON WILLIAMS: Board Member Bel,
- 16 if it's the wish -- or to the panel, if it's the wish,
- 17 certainly CAC could undertake to explore the metric
- 18 used by the Ontario Power Authority in the design and
- 19 assessment of demand-side management programming in
- 20 Ontario, if that's of interest?
- MR. RICHARD BEL: Yes.
- MR. BYRON WILLIAMS: And I'm making the
- 23 undertaking on -- on behalf of CAC (Manitoba). I'm not
- 24 sure if it will be the able Mr. Higgin, the able Mr.
- 25 Harper, who might even know the answer --

9430 1 DR. ROGER HIGGIN: Thank you. 2 MR. BYRON WILLIAMS: -- or the able Mr. Dunsky, but we'll -- we'll make sure we provide the 3 information and also give you the source of who it comes from, if that is satisfactory to the Board? 6 7 (BRIEF PAUSE) 9 MR. BYRON WILLIAMS: Mr. Chair, this is 10 at -- for the Board. I think Mr. Harper has more 11 information. This evidence today was -- is Dr. Higgin's evidence. We brought Mr. Harper, because he's 13 pretty much memorized the file. And he's here as a 14 resource to Dr. Higgin. If on this specific fact we're 15 -- we're prepared to provide him to assist. It wasn't 16 his intention to speak to the evidence of Mr. -- Dr. Higgin. 17 18 So that's -- I leave that to you if 19 you'd like to hear from him or not? 20 THE CHAIRPERSON: Yes. 21 MR. WILLIAM HARPER: Okay. Excuse me, 22 actually, the reason why I -- I thought it might be 23 useful for me to say something is because the -- the 24 government and th OPA had one (1) set of targets which basically are ending in 2014. The provincial

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- 1 government, people here may be aware, just issued a new
- 2 sort of long-term energy strategy last year. They are
- 3 -- and have -- are basically establishing now a new set
- 4 of tar -- targets going forward.
- 5 And as part of that new set of targets
- 6 are -- the OPA is working with utilities and basically,
- 7 to some extent, redefining some of their metrics. So I
- 8 -- I wanted to sort of say that there -- there was a
- 9 set of metrics that was used to design the -- you know,
- 10 to look at the -- for the programs that have been in
- 11 place. I think the -- and the ground is maybe changing
- 12 a little bit in terms, and hasn't really been, I think,
- 13 been finalized in terms of the types of metrics that
- 14 will be used to assess -- precisely assess programs
- 15 going forward in the future.
- 16 I know there was a directive issued to
- 17 the OPA by the ministry, probably within the last two
- 18 (2) months. They are now working through the process
- 19 of exactly how they're going to implement that, and
- 20 exactly what tests that are going to be used.
- 21 So I -- I just want to -- there -- there
- 22 to be a caution in terms of perhaps some certainty
- 23 about what was used in the past, perhaps some unce --
- 24 uncertainty as to what exactly the tests are going to
- 25 be in the -- in -- in the future, and I didn't want

- 1 people to be taking undertakings where -- where maybe
- 2 it was a little uncertain as to what -- as to, you
- 3 know, maybe unable to precisely respond the -- the way
- 4 you're expecting them to.
- 5 MR. BYRON WILLIAMS: And just to -- oh,
- 6 do you have anything you want to add, Dr. Higgin, or
- 7 I'll -- like, in terms of the undertaking, we -- if the
- 8 Board is -- we could provide the statu -- the status
- 9 quo undertaking and then the directive, at least,
- 10 indicating from the ministry to the OPA, if that would
- 11 be of assistance.
- 12 THE CHAIRPERSON: I think that would be
- 13 useful, both -- both. I -- I suppose there's probably
- 14 a -- a policy proposal or there's probably a policy
- 15 document.
- 16 MR. WILLIAM HARPER: Yes, there --
- 17 there is a written directive fro -- from the minister
- 18 to the OPA saying, as -- as, you know, Go out and do,
- 19 if -- if I can put it that way.
- 20 THE CHAIRPERSON: But it would also
- 21 encompass proposed measures?
- MR. WILLIAM HARPER: Well -- well, no,
- 23 it -- it talks about --
- DR. ROGER HIGGIN: Targets.
- 25 MR. WILLIAM HARPER: -- it talks about,

- 1 to some extent, targets and the types of tests, but it
- 2 -- it -- I mean, it doesn't go into the formula of the
- 3 tests, and I think tha -- that's what some of the sort
- 4 of -- you know, to the more detailed discussions are
- 5 going now in terms of exactly -- exactly how -- exactly
- 6 how are those tests going to be defined and calculated
- 7 sort of thing.
- 8 THE CHAIRPERSON: If that infor --
- 9 information is readily -- readily available, I -- yes,
- 10 I would -- I would -- you know, we would probably want
- 11 to take a look at it.
- MR. BYRON WILLIAMS: Okay. And I'll --
- 13 oh --
- 14 MS. MARILYN KAPITANY: Mr. Harper,
- 15 what's the length of the Ontario long-term energy
- 16 strategy?
- MR. WILLIAM HARPER: Well, it's --
- 18 actually the documents propo -- it's a bit awkward,
- 19 because it's posted on the ministry website, and it's
- 20 posted in sections so that there isn't one (1)
- 21 document. You -- you know, you can click on one (1)
- 22 link and you get one (1) chapter. You click on the
- 23 next link and you get the next chapter. So -- and --
- 24 and I haven't added all the -- add -- added all the
- 25 links up. You know, it's maybe a couple of hundred

9434 pages. I -- but I'd be guessing at -- at that point. 2 MS. MARILYN KAPITANY: It's just interesting to know, like, how far out can we read --3 4 MR. WILLIAM HARPER: Oh, oh, oh, oh. You mean length in terms of time going out? 6 MS. MARILYN KAPITANY: Yes --7 MR. WILLIAM HARPER: I'm not -- I -- I I thought you meant length in terms of apologize. 9 pages. 10 MS. MARILYN KAPITANY: I should have said the term of the strategy, sorry. 11 12 DR. ROGER HIGGIN: I think I can help 13 you a little bit. If -- if you look at -- at this 14 reference, which is Mr. Dunsky's slide deck, and I 15 think -- have -- have I got it right, that's CAC-50 --62 -- CAC-62, Mr. Dunsky's slide deck. And if you look at slide 50 of that deck, you will see the projection 17

19 in there -- there it is -- the -- the DSM, but that's

of the supply mix going out to about 2033, and it shows

- 20 based on, as Mr. Harper said, a projection going
- 21 forward.

- 22 If you do the same program targets and
- 23 so on level, as in the history, then that's what it
- 24 will look like, or we have to check. It could be that
- 25 that is reflecting the new direction, the directive to

- 1 OPA. We'll have to check on -- on how that basis is
- 2 being done.
- 3 MS. MARILYN KAPITANY: That would be
- 4 helpful, just because the term that we're looking at
- 5 these things over is -- is quite important to what
- 6 we're talking about here.
- 7 So you -- this Ontario planned supply
- 8 mix that we see up on the screen, we don't know if
- 9 that's necessarily from the long-term energy strategy
- 10 that you referenced?
- 11 DR. ROGER HIGGIN: I believe the two
- 12 (2) are supposed to be linked, yes. There -- there's a
- 13 difference between what we call the supply mix and then
- 14 the overall plan, which is -- Mr. Harper was talking
- 15 about.
- MR. BYRON WILLIAMS: And if I --
- DR. ROGER HIGGIN: But we still will do
- 18 the undertaking.
- 19 MR. BYRON WILLIAMS: Yeah, and just for
- 20 the reporter, because it's an evolving undertaking, and
- 21 the -- the panel will chastise me if I get it wrong, I
- 22 -- I hope. But what I am -- what -- my understanding
- 23 is that the CAC collective will, first of all, provide
- 24 the existing status quo metric employed by the OPA,
- 25 number 1.

9436 Number 2, they will provide the 1 directive from the ministry to the OPA in -- in terms of the going forward plan. 3 Number 3, in response to Board member 4 Kapitany's question, they will -- in -- in -- provide an explanation of whether slide 51 -- slide 50, excu -excuse me, from -- from Mr. Dunsky's presentation is 7 linked to the supply plan for Ontario, and this doesn't need to be part of the undertaking, but with an understanding that Board member Kapitany's question is, 10 11 How far out are they going, if that's satisfactory to 12 the Board? 13 14 --- UNDERTAKING NO. 130: CAC to provide the existing 15 status quo metric employed by the OPA, the directive 16 17 from the ministry to the 18 OPA in terms of the going 19 forward plan, and in 20 response to Board member 21 Kapitany's question, they 22 will provide an explanation 23 of whether slide 50 from 24 Mr. Dunsky's presentation 25 is linked to the supply

9437 1 plan for Ontario 2 3 MR. BYRON WILLIAMS: Okay. And please feel free to keep asking questions. When we're done with the questions, I'm going to suggest that Dr. Higgin get a -- a break. 7 MR. RICHARD BEL: Last question from Is there any other jurisdiction besides Ontario that is pursuing an aggressive DSM-mandated policy? 10 DR. ROGER HIGGIN: Honestly, I don't 11 know. Quebec, I wouldn't know whether it's mandated, 12 or rather like Manitoba Hydro, it has made a proposal 13 for the programs, and I believe it's the latter. So at 14 this point, I couldn't answer that, but we -- if you 15 want us to do a bit of research, is Ontario unique with 16 a mandated DSM boss to -- to look after it, we -- we 17 would be willing to make a response to that -- either 18 part of that, or as another undertaking. 19 MR. RICHARD BEL: I maybe misspoke. I understood that in Quebec, they're in a situation of 21 excess capacity. So why would they be pursuing DSM? 22 DR. ROGER HIGGIN: Why would they? 23 Well, it's a good thing to do, from a other perspective, of social and other factors. Greenhouse 24 gases, do we need to list all of the reasons why DSM is

9438 good? But that -- those are the reasons. But you are -- you -- underlying your question is, Are they really 3 MR. RICHARD BEL: Yes. 5 DR. ROGER HIGGIN: -- pursuing DSM? think the chair had the same thought. The -- that's 7 the big question. 8 MR. RICHARD BEL: Thank you. 9 MR. BYRON WILLIAMS: And just so I'm 10 clear, I'm not volunteering to do another undertaking. Okay, so the question I've heard, and I just -- if --11 12 if I could ask Board member Bel or the panel, are we 13 looking at Crowns, or are we looking at jurisdictions? 14 I -- it just would be helpful to understand. 15 MR. RICHARD BEL: We're looking at Canada and Crowns, and those jurisdictions served by 17 the Crowns. 18 MR. BYRON WILLIAMS: Okay. And with 19 regard to Canada, including jurisdictions served by Crowns, we're examining whether the Ontario and the 21 defined mandate for the OPA is unique, or whether there 22 are other examples within the Canadian context? 23 MR. RICHARD BEL: Right. 24 MR. BYRON WILLIAMS: And you're not 25 looking for an American context?

9439 MR. RICHARD BEL: I -- I think we have 1 eviden -- I -- I believe we have evidence on it, but if you can offer something, sure. All right. The more 3 information, the better, on this issue. 5 THE CHAIRPERSON: I would suggest that we -- we take a break right now, if you don't mind, and collect our thoughts, and then we'll -- we'll come back 7 in about ten (10) minutes. 9 10 --- Upon recessing at 10:41 a.m. 11 --- Upon resuming at 10:58 a.m. 12 13 THE CHAIRPERSON: Okay. Dr. Higgin, I 14 just wanted to clarify a couple points. At the very 15 bottom of the slide, domestic need being pushed back, 16 that's okay. 17 Funding of DSM rates, that reference is 18 in relation to what? 19 DR. ROGER HIGGIN: That's a reference to the fact that that issue or that matter has -- has 21 still to be addressed. And that is dealing primarily -22 - because in rates we're talking about the utility cost 23 has to be examined as to what that cost is going to be 24 to the utility, the budgets are going to be. The -- in 25 looking at budgets, you don't just look at the budget.

- 1 You look at, we'll call it, a little bit of a parameter
- 2 which we use in -- in many jurisdictions, and that is
- 3 how many kilowatt hours, or if you want to use TRC or
- 4 SCT, you get for a dollar.
- 5 You know, that -- that's -- all of that
- 6 -- and that's not only specific to the port --
- 7 portfolio -- the program, you have to screen every
- 8 measure at some level for those considerations, as
- 9 well, to make sure -- and then the final one, which of
- 10 course is participation rates for each program. Each
- 11 program has its own particular characteristics. It's
- 12 driven towards a particular group. And it then, if you
- 13 like, has almost sub-targets related to that group, in
- 14 terms of kilowatt hours and so on, costs and so on.
- 15 So those things all have to be put in.
- 16 That's standard stuff. Manitoba Hydro has got it in
- 17 their Plan, or at least I'm sure it's available in all
- 18 of the appendices, working papers, and everything else
- 19 that go with the Plan. But it needs to be pulled out,
- 20 looked at, and say, Is it -- is this economic DSM?
- 21 That's -- that's the question. I hope that answers the
- 22 question. Thank you.
- 23 So I'd like to go back now to -- go
- 24 forward, sorry, to slide -- I have very little to say
- 25 on -- on this. This is slide 5. And these were my two

- 1 (2) main observations. The first one is a matter that
- 2 you very much heard about all through the proceeding,
- 3 and that is the -- the forecast. And by that I mean
- 4 the export price is critical to the economics of the
- 5 plans. We don't need to go there, because it's not an
- 6 area that my client has got most of the information.
- 7 It's your own experts and the CAC that -- that are
- 8 doing that.
- 9 The bottom one is simply to make a
- 10 comment that basically when you're looking at that,
- 11 here is a particular, we'll call it, consideration that
- 12 is the government policy. And the government policy
- 13 that's set out here is a quote from the Clean Energy
- 14 Strategy, and what the objective is of the export
- 15 contracts. And that is to pay down the cost of the
- 16 projects while helping sustain Manitoba Hydro's --
- 17 Manitoba, sorry -- Manitoba Hydro's low rates for
- 18 decades in the future. That -- that's an important
- 19 consideration.

- 20 So let's go to what updates. I have
- 21 nothing to add new with respect to the export price and
- 22 so on. One of CAC's --
- 24 CONTINUED BY MR. BYRON WILLIAMS:
- MR. BYRON WILLIAMS: Diana, can we move

- 1 to slide 6? Oh, you're -- we're there. Sorry.
- DR. ROGER HIGGIN: One of CAC's
- 3 experts, Dr. -- Dr. Gotham, has given you some comments
- 4 and -- and observations on that, and I have nothing to
- 5 add to his -- his observations.
- 6 What I note here, for reasons that --
- 7 that are clear, that I noticed the press release and
- 8 the attachments that talked about the power sales with
- 9 WPS and the implication of that, and it flows into the
- 10 NFAT, the larger intertie, and also has an impact on
- 11 pathways plans with smaller interties.
- I know that you and others are looking
- 13 for those economic and financial updates to several
- 14 plans that have a 750 intertie, and also plans that do
- 15 not, like Plans 2 and 4.
- 16 So basically that's all I know, that
- 17 it's a -- a -- I advised my client this is a major
- 18 change to the original business plan and so on, this --
- 19 this component of it and the need for the seventy-five
- 20 (75) -- the seven-fifty (750). And I'm sure you and
- 21 many others better than me will be considering its
- 22 implications.
- 23 So the next area -- this is from my
- 24 original one (1) and I have very little to add
- 25 personally to -- on this slide. And I just made a few

- 1 notes that when I looked, from my experience, at the --
- 2 the framework for sustainability, that there were these
- 3 particular touch points. And secondly that the plan,
- 4 in my view, should be assessed in an integrated
- 5 resource planning framework.
- 6 MR. BYRON WILLIAMS: Actually, I think,
- 7 Dr. Higgin, you might have moved past your capital --
- B DR. ROGER HIGGIN: Oh, I -- I'm sorry.
- 9 I -- I should have said slide 8.
- 10 MR. BYRON WILLIAMS: But I -- I'm not
- 11 sure you addressed slide 7.
- DR. ROGER HIGGIN: Okay. I missed it.
- 13 So I apologize. Can we go back? A very quick update.
- 14 The capital costs, remembering that when I -- my
- 15 observations were somebody needs to have the authority
- 16 to oversee those capital costs and to make
- 17 recommendations and so on to the government. In other
- 18 jurisdictions, the regulator has that authority to do
- 19 that, and he can actually approve or not approve those
- 20 capital plans.
- 21 That's not the case here, but I still
- 22 think that some oversight is required and I looked to
- 23 the recommendation. It would be that the PUB be gra --
- 24 given that oversight to look at the capital for the --
- 25 the plan. And assuming that the plan may include a

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9444 Keeyask as being the next development, that would be obviously the focus of that review. Thank you. And --3 THE CHAIRPERSON: So that -- I just want to make an observation that the -- one (1) of the recommendations that the Wuskwatim panel made to the government as part of its review is the combined 7 CAC/PUB panel --8 DR. ROGER HIGGIN: 9 THE CHAIRPERSON: -- that looked at the 10 Wuskwatim project made that -- did a similar recommendation to the government. In other words, that 11 12 -- that the PUB be given the authority to review the --13 to review the evolution of the cap -- of the capital 14 projects. 15 And I guess the observation I have is --16 is assuming that the PUB gets this authority, it 17 doesn't change the fact that costs will incr -- you --18 you know, costs keep increasing. Once you -- once you 19 get it -- once you get to -- to the -- there -- there is a point where there's no return. 21 I mean, you're -- you're down a slope 22 and you have to pay the bills as -- as they come due, 23 and no amount of inquiring will change the reality that

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costs are increasing. And so I guess I have some

difficulty with the -- the ability of this review

- 1 process to alter the -- the reality of the cost
- 2 evolution of the -- of the project.
- 3 DR. ROGER HIGGIN: No, I think you're
- 4 quite correct. The -- the trajectory of the project is
- 5 going to happen however it happens as to cost. One of
- 6 the, perhaps, things that needs to be considered is how
- 7 -- what do you do about that? Do you say, We just pay
- 8 the bills regardless. People are hurt. Or do you do
- 9 something else, as I am talking about in my
- 10 presentation now -- talk to it in a minute. You look
- 11 at some sort of mitigation with respect to that.
- 12 And that's, I think, an important thing
- 13 to consider, that you people, in my view -- sorry --
- 14 the Board is -- is probably in a role to influence
- 15 that, even if the money doesn't come directly out of
- 16 Manitoba Hydro, but from the government. Then you are
- 17 in a position to advise on what mitigation, if any, is
- 18 needed, if an, and what sort of mitigation may be
- 19 appropriate.
- 20 And so that's what I would suggest. I
- 21 put those two (2) pieces together. I -- I agree. I
- 22 think we did recommend in our closing argument that you
- 23 would be given that oversight for Wuskwatim. And I'm
- 24 still saying that would be appropriate in this case,
- 25 and for the reason I just said. Thank you.

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- 1 So what I'd like to do now is to move to
- 2 a graphic and then just say a few points about the
- 3 graphic on slide number 9. This is one of Manitoba
- 4 Hydro's graphics. And I believe when -- I -- I read
- 5 when it was introduced and the -- the slide pack and
- 6 the -- and the transcript -- that this is intended to
- 7 depict Manitoba Hydro's IRP process.
- 8 And the comments I would have is that --
- 9 primarily is that -- and I've expressed this to my
- 10 client -- that the business case didn't appear to me to
- 11 have used this type of IRP process. And we can debate
- 12 whether or not and whether the -- in the backroom
- 13 Manitoba Hydro had done all of that again. I mean,
- 14 they have and they file -- the resource plans.
- 15 And maybe they use this to look at the
- 16 resource plans, in terms of looking at resources,
- 17 looking at LUCs and so on, for each of those and
- 18 putting them together. I'm not suggesting that there
- 19 isn't a process, but I'm just saying in the context of
- 20 this, I didn't find it in there.
- 21 The other thing, perhaps, to -- to
- 22 mention is the elements that are in here I think are
- 23 generally appropriate, and maybe it's a graphic issue,
- 24 but the -- the thing that's missing here is what we
- 25 call a portfolio approach. And that is where between

- 1 the different resources you create a level of
- 2 portfolios which are a mix -- key word -- like
- 3 Ontario's mix of DSM that -- and -- and you test them
- 4 out as scenarios.
- 5 So that's another thing that I would say
- 6 -- my observation would be. That would be an
- 7 enhancement going forward, is to use a portfolio
- 8 approach to IRP, and so on. And that's -- so that's
- 9 the -- the one (1) thing that comes out of -- that's
- 10 why I'm presenting this is as --
- MR. BYRON WILLIAMS: Dr. Higgin --
- 12 sorry, Cheryl -- if I could just keep you on this page
- 13 for a second. Just to help us understand what you mean
- 14 by a portfolio approach. At the bottom of the -- the
- 15 Hydro funnel -- and recognizing you're -- you're not
- 16 sure this is what they actually did for the business
- 17 case, but you see, I'll to suggest you, one potential
- 18 portfolio of a DSM plan mixed with gas and Hydro.
- 19 Do you see that?
- DR. ROGER HIGGIN: Yes.
- 21 MR. BYRON WILLIAMS: And under a
- 22 portfolio approach, would you expect to see other
- 23 portfolios coming out of that funnel to be compared
- 24 against each other, perhaps with different generation
- 25 sources and, perhaps, with different levels of energy -

- 1 demand-side management?
- DR. ROGER HIGGIN: So what we have here
- 3 are the -- so the inputs -- the resource inputs in the
- 4 top of the funnel, and then we have the output -- put
- 5 the coffeepot underneath, and we have basically the
- 6 plans, okay.
- 7 What -- what we -- what I'm saying is in
- 8 between there develop scenarios, very important, which
- 9 are a mix of these, looking at the economics and other
- 10 externalities -- particularly externalities have to be
- 11 considered -- and -- and examine those from your
- 12 planning criteria. And then out come plans that are,
- 13 quote, "optimal." That -- that's just a simple extra
- 14 step in there. Think of it of being there's another
- 15 little -- little filter or something in -- in between
- 16 the basket and the coffee cup.
- 17 MR. BYRON WILLIAMS: And in the little
- 18 filter between the basket and the coffee cup, Dr.
- 19 Higgin, you would assume that in some of the portfolios
- 20 they would have different levels of anticipated DSM.
- 21 Would that be fair?
- DR. ROGER HIGGIN: That would be one of
- 23 them, and all of them would include externalities is --
- 24 that we've talked about the obvious ones like carbon,
- 25 but it'll also include all of the other sustainability

- 1 externalities, as well. There should be -- I think I
- 2 was here when Dr. Gibson talked about some of those as
- 3 part of his presentation. So basically that's what I
- 4 would simply say. Thank you.
- 5 MR. BYRON WILLIAMS: Oh. Okay. And
- 6 just the last thing before we leave this slide, I think
- 7 you used an acronym in your testimony, something like
- 8 'LUCS'. Would I -- assumed you were using the letters
- 9 L-U-C --
- DR. ROGER HIGGIN: Yes.
- 11 MR. BYRON WILLIAMS: -- 'S'. Could you
- 12 explain what that means, sir?
- 13 DR. ROGER HIGGIN: Levelized unit
- 14 costs. That's the standard normal tool used to screen
- 15 resources on short and long term, usually employed with
- 16 discounted cash flow analysis, NPV, and so on. So that
- 17 -- that's basically what I was talking about.
- 18 MR. BYRON WILLIAMS: Okay. And I
- 19 apologize for interrupting. Please proceed.
- 20 DR. ROGER HIGGIN: It's okay. So I'm
- 21 coming now to the next slide, which is slide 10, and
- 22 basically, this is regarding the affordability of the
- 23 Preferred Plan, that's the title, but of course, in my
- 24 -- my monikerism, a preferred plan means 'a' preferred
- 25 plan, not 'the' preferred plan.

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- 1 So we've -- I went through this at some
- 2 -- some detail, and it's the only area that I actually
- 3 did a bit of extra work myself, to -- to look at some
- 4 of these, and I guess this slide deals with some of my
- 5 observations and summarizes some of my work that I did
- 6 on this, so I know that others have commented and
- 7 provided some information, and specifically for CAC,
- 8 Dr. Simpson and Mr. Harvey, and while I referenced some
- 9 of their sources, I did my own analysis from a
- 10 different -- probably a very simple framework in
- 11 looking at that.
- 12 This particular chart, this graphic is
- 13 taken from my pre-filed evidence, and it tries to
- 14 depict the impact on vulnerable consumers. Now, the
- 15 first question is, What is the vulnerable consumer?
- 16 Well, there are so many definitions. My definition,
- 17 and here is the keys on page 28 of my pre-filed report,
- 18 it's a -- a group of customers that are usually
- 19 families with an income that meets 125 percent of
- 20 Statistics Canada after-tax LICO.
- 21 That's how I defined income. I also
- 22 defined own their own dwelling. That's another part of
- 23 a vulnerable one that I looked at, and there are six
- 24 hundred (600) and -- one hundred and sixty-seven (167)
- 25 residential customers, and out of that -- that group of

- 1 residential, according to questions I put to Manitoba
- 2 Hydro, and -- and I list those in my evidence, but just
- 3 if you want the references that I asked and I used,
- 4 that would be CAC/MH I-189b. Just to repeat that,
- 5 CAC/MH I-189b, was the source.
- And based on that, I went through an
- 7 analysis of what would be bill impacts. Right now, my
- 8 propensity is not talking about rate increases.
- 9 They're -- it's a very general measure, and I'd like to
- 10 look at bill impacts, on bill impacts on different
- 11 classes, or groups of customers.
- 12 And within the classes, customers that
- 13 have low consumption, moderate/high consumption,
- 14 because customers that may have affordability issues
- 15 and so on. So I -- I tend to look at it as less than
- 16 its rates -- rate increases. I look at bill impacts.
- 17 I think bill impacts are the key. Manitoba Hydro
- 18 provided some information. I can't remember, maybe Ed
- 19 can help us, on the impacts on -- of bill impacts.
- 20 Okay. So that's what I do. I do it
- 21 routinely for all of clients, cases, and so on. It's
- 22 not something I just conjured up for here. I do it --
- 23 so I had a look, and I looked at these and I said,
- 24 Well, those are pretty high compared to the historic.
- 25 I looked at the historic. In the last five (5) years,

- 1 it's averaged on average around 3 percent on the bill
- 2 impacts. They've been around 3 percent for
- 3 residential. That's the number that I came out, and
- 4 it's in my evidence. I -- if I've used wrong sources
- 5 and so on, but anyway, I -- I have a basis for this --
- 6 this characterization.
- 7 And then I did a simple analysis of the
- 8 change for the vulnerable group, the -- let's go back
- 9 to them, the sixty-three thousand (63,000) that have
- 10 low income, 125 percent of LICO are electric heat
- 11 customers, okay? Those -- and -- and hot water, and
- 12 that's the group. And that graphic says, Well, my take
- 13 on that, they're facing 46 percent increase in bills
- 14 over the next ten (10) years, and I thought, That's
- 15 pretty high.
- 16 MR. BYRON WILLIAMS: Dr. Higgin, would
- 17 I -- do you mind if I just moved you to Appendix B of
- 18 your evidence for --
- 19 DR. ROGER HIGGIN: I don't have a copy.
- 20 Can --
- 21 MR. BYRON WILLIAMS: We're going to put
- 22 it up on the screen.
- DR. ROGER HIGGIN: Right. Okay --
- 24 MR. BYRON WILLIAMS: That's page 55 for
- 25 a second. Just so the Board can be familiar where you

- 1 -- where your inputs were. Is this the calculation you
- 2 performed?
- 3 DR. ROGER HIGGIN: These are the inputs
- 4 -- yeah, these are the inputs that I used, and there is
- 5 a -- there is -- on the LICO issue, I relied on Mr.
- 6 Stevens, and his -- his evidence and his analysis using
- 7 Stats Can and so on. As you know, he looked at -- at
- 8 that with different families, different locations,
- 9 habitudes, and they rural, et cetera?
- 10 So mine is very clear is Winnipeg, and
- 11 it is basically a -- a family, as I say here, with an
- 12 income of 125 percent. So those -- those assumptions,
- 13 it's one (1) look at it. I didn't have a lot of time to
- 14 spend a lot of time, but I thought I need to have some
- 15 understanding when I make any observations about what
- 16 it looks like, and this is what my analysis did, and so
- 17 that's -- that's the source.
- 18 MR. BYRON WILLIAMS: Okay. Thank you.
- 19 DR. ROGER HIGGIN: Finally, I would
- 20 just comment that this analysis is very, very similar
- 21 to what was presented by the ratepayer panel where they
- 22 started at a thousand dollars (\$1,000) and -- and
- 23 showed it going up into the future. It was a longer
- 24 term frame, but it's the same escalators, because it's
- 25 driven right off of Manitoba Hydro's projected rates,

- 1 which is in that exhibit that I talked about.
- So we've all used -- we've both used the
- 3 same Manitoba Hydro projections, i.e., the monthly
- 4 charge plus the fixed -- fixed charge, plus the
- 5 volumetric charge, and we -- we've come up with very
- 6 similar results. So that -- that's the source.
- 7 So I say, and this is the conclusion,
- 8 that -- that I -- I don't believe these are generally
- 9 acceptable, and then I would come -- wow.
- 10 As a regulator, I'm very familiar with
- 11 what is felt to be, I'll call it, unjust excessive
- 12 increases in rates. I'm -- I'm very used to that.
- 13 And the Ontario Energy Board has a --
- 14 has a -- a criterion which is not explicit. They --
- 15 they get concerned if it's more than 10 percent a year
- 16 on the bill, so this is way below that. Okay, though
- 17 that's one, but we're not looking at that. We're
- 18 looking at sustained increases over a long period, and
- 19 particularly now, this is the key, in the period where
- 20 Keeyask or generation is advanced. Okay?
- Now, once it's advanced, once it's in
- 22 service, then the revenue from that will obviously
- 23 offset the rates. They will have an -- an impact on
- 24 the rates. That's been taken into account. So
- 25 therefore, I'm still concerned, and I think that's the

- 1 word, with these -- these increases, so that's why I
- 2 went to the next step. I said, Well, should something
- 3 be done? And we'll come back to that in a minute.
- The other issue was simply here as I
- 5 say, The benefits that are coming out of any
- 6 development, and this was based on the Preferred Plan,
- 7 but you can look at it because it's only the first ten
- 8 (10) years, it's really the same as the other plans,
- 9 because it's only dealing with the first ten (10)
- 10 years. And that is Keeyask plus 750 and so on.
- 11 So anyway, that's where I went. And the
- 12 other thing is the intergenerational equity, and that
- 13 increases if you are advancing generation which is
- 14 going to be needed by the next generation. That genera
- 15 -- that increases rather than -- it's being built now.
- 16 In three (3) or four (4) years, you need it to meet
- 17 your current customers' needs. That's totally
- 18 different. So there's some intergenerational -- it
- 19 changes a little bit the perspectives on
- 20 intergenerational...
- 21 So that is that comment. Well, what to
- 22 do about it? And I -- here, I propose that there are a
- 23 number of ways to do about -- something about it. One
- 24 of them is simply to say, No, it's okay. We were 3
- 25 percent in the last two (2) years. That's been the

- 1 bill increases. Four percent, four point two-five
- 2 (4.25) or whatever, is okay. That's one -- one way to
- 3 go. And there's no question that that's -- that's
- 4 appropriate.
- 5 The other one is to say, Well, we're
- 6 concerned about it. Yes, go ahead.
- 7 DR. HUGH GRANT: I take your point
- 8 entirely. I would just have a couple comments. One is
- 9 focussing on the rate of change and one is on the
- 10 absolute level.
- DR. ROGER HIGGIN: Yes.
- 12 DR. HUGH GRANT: And so these are still
- 13 -- right now, we have fairly low rates; not necessarily
- 14 bills, given our cold climate, but some fairly low
- 15 rates.
- 16 The other point I -- I was going to make
- 17 and -- because I was scolded by Mr. Rainkie about this,
- 18 and I think correctly, we continually talk about
- 19 intergenerational equity, about the present generation
- 20 and the next one.
- 21 But there's also a reason for saying,
- 22 What about the present generation and the past one? So
- 23 I've certainly benefited. My generation has clearly
- 24 benefited from past investments that have yielded very
- 25 low rates. And there is an argument to pay it forward

- 1 a bit, potentially, isn't there?
- DR. ROGER HIGGIN: Yeah, yeah. Oh,
- 3 absolutely. I wouldn't disagree. The issue I'm trying
- 4 to -- perhaps didn't -- is not Limestone, Wuskwatim.
- 5 It's not those. It's the issue of when you advance
- 6 generation, specifically advance it ten (10) years or
- 7 so, that, I think, is -- is why it heightens the
- 8 concern, if I could put it -- that -- that's I'm --
- 9 we're concerned about, okay.
- 10 It makes it -- not worse, but you should
- 11 be more concerned about it when -- when you're
- 12 advancing generation ten (10) years. That -- that's
- 13 the point. I'm not going to the -- to use the, quote,
- 14 "merchant plant issue" yet, but that certainly is one
- 15 way to look at the advancement. You're, in essence,
- 16 building a merchant plant.
- 17 And then ten (10) years from now the
- 18 ratepayers will get -- should get the depreciated value
- 19 of that plant be available, assuming the contracts have
- 20 expired, for their purposes. And so there's -- there's
- 21 another consideration there in terms of the
- 22 advancement. It's -- putting those together is perhaps
- 23 the key. I hope that's helpful. Thank you.
- 24 So I have some examples on one of the
- 25 issues that -- to be very -- I -- I read the

- 1 transcript, Dr. Grant, and I read the exchange with Mr.
- 2 Stevens and so on. So I did put together an example.
- 3 But perhaps, if it becomes relevant in your questions,
- 4 I will use the example I've put. But I -- I won't
- 5 float it out now because I don't think that's my
- 6 purpose to be here. It's to give you my observations.
- 7 And so I won't do that.
- 8 So the main conclusion is that within
- 9 the question of rates, you can't just look at rates.
- 10 You have to look at bills. You have to look at
- 11 vulnerable consumers. There's a number of
- 12 considerations that you have to bring together before
- 13 you can make a decision where the mitigation is
- 14 required and, if so, what mitigation.
- Now, I've listed here on the bottom of
- 16 this slide my mitigation options that I've -- there are
- 17 many others. I've looked at, and it's in the evidence,
- 18 the Clean Energy Benefit for Ontario. The CEB was,
- 19 amongst other things, put in place policy-wise because
- 20 Ontario is getting rid of coal and we're moving to
- 21 clean, renewable energy. That's what it's called the
- 22 Clean Energy Benefit.
- 23 Unfortunately, the -- when we went away
- 24 from coal and we went to renewables, there was a boost
- 25 in rates. So that's what it was about. It was a -- a

- 1 specific direct -- I'm going to use that word --
- 2 direct, I mean, a rebate on rates direct for a select
- 3 group: 3,000 kilowatt hour residential customers and so
- 4 on.
- 5 I'm sure you're familiar with the -- the
- 6 Ontario CEB today. They're making changes to that, are
- 7 proposed in the budget. So read the budget in Ontario
- 8 and they're making changes to that. If you want, ask -
- 9 ask me questions and I'll tell you my knowledge about
- 10 it. But anyway, so that's the first one.
- 11 The other one is that it's important to
- 12 put in the mitigation aggressive DSM programs, because
- 13 they can and will reduce ratepayers' bills. But -- and
- 14 there's always a but -- it does that for participants
- 15 in the programs not the non-participants. So that
- 16 comes back to the question of participation in the
- 17 rates -- in -- in DSM programs. You have to get to
- 18 high levels of participation. Otherwise a lot of
- 19 people are facing the bills which may now include a --
- 20 a little extra money to be collected for the DSM
- 21 programs and they're not getting the benefit. So tha -
- 22 that's another factor here that needs to be
- 23 considered. It's not always a simple answer.
- 24 Then we come to MH. And I read the
- 25 evidence. And MH has made a couple of proposals.

- 1 There are what I would call indirect -- you mean, you -
- 2 the utility does things that will smooth the rates.
- 3 The -- the most simple one, and I'll give you the
- 4 current one that's in -- before others, and I'm in the
- 5 case in Ontario.
- 6 Ontario Hydro distribution has put
- 7 forward a five (5) year multi-year revenue requirement
- 8 plan which has at the front, in year 1, which starts in
- 9 2015, a huge bump in the revenue requirement and,
- 10 therefore, in rates. To be very specific, a 13 percent
- 11 increase in rates. In subsequent years, the revenue
- 12 requirement doesn't grow so fast. It's driven by the
- 13 rate base in that case of that utility. The rate base
- 14 is the assets that are in service.
- 15 And so they are now going to have it --
- 16 lower ones in the subsequent years and they're going to
- 17 smooth that through a deferral account. And that
- 18 mechanism is being proposed. A deferral account means
- 19 that you defer some of the -- the revenue that you
- 20 would collect in rates. You don't collect it, and you
- 21 put it in the deferral account and use that to smooth -
- 22 smooth the rates.
- Now, that mechanism is not something
- 24 that would work within this environment, and I just
- 25 wanted to mention that as being as option.

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- 1 The one that I read from Manitoba Hydro
- 2 is that they are proposing -- this is from the
- 3 transcript. I think I've given the reference there
- 4 that I'm using, just to be clear, 2773/2776. I don't
- 5 know if you want to look at that. But anyway, I think
- 6 the main thing is under this option Manitoba Hydro
- 7 agrees to smooth the rate bill increases to a certain
- 8 level by measures such as rate smoothing and basically
- 9 extending the time for reaching financial targets and
- 10 the debt -- letting the debt-equity ratio change from
- 11 its optimal 75:25. Also probably there's some concern
- 12 -- more concerns, but the revenue about the interest
- 13 coverage ratio which should be one point two (1.2) and
- 14 letting that go.
- 15 The -- the -- so that's the thing, and
- 16 maybe that will all work. I call that a very indirect
- 17 way of trying to smooth to some other -- some
- 18 reasonable level. And I think they're proposal is --
- 19 they seem to have a 4 percent number in there as being
- 20 what they'd like to -- to get to, you know. That --
- 21 that's my interpretation from reading the transcript
- 22 and so on.
- 23 And so what I'm saying is while there's
- 24 some considerations there basically, whether or not
- 25 there are enough flexibility, is there enough

- 1 flexibility to do that, especially in the case of the
- 2 other one, that if capital costs for the Development
- 3 Plan increase and so on. Those are some of the
- 4 considerations.
- 5 That's why amongst -- I did offer the
- 6 other, we'll call it, direct options, which is, just to
- 7 repeat, the idea of a -- some sort of a Clean Energy
- 8 Ben -- Benefit plus DSM. Now, I was asked by MIPUG,
- 9 Well, the problem with a Clean Energy Ben -- Benefit of
- 10 like Ontario is you're targeting one (1) set of
- 11 customers. You're basically saying, Well, these are
- 12 the ones that are being hurt the most and therefore
- 13 we're going to target the -- the benefit to those.
- 14 And when are we going to talk about --
- 15 what about the poor industrial people and so on? And
- 16 therefore, why don't you have a benefit that is more
- 17 universal, whatever that is, whether it's government --
- 18 it's a government one, but it's applied broad -- more
- 19 broadly. I didn't look at that. And that's certainly
- 20 not something I'm suggesting shouldn't be considered
- 21 and so on if you're starting to look at mitigation.
- The problem is as a regulator there's
- 23 not much that you, a regulator, can do to deal with the
- 24 direct mitigation unless there's a source of funds to
- 25 make it happen outside. There has to be -- and that,

- 1 unfortunately, comes out of the government. And then
- 2 you get into the issues around, Well, there's the
- 3 taxpayers and the ratepayers and many, many
- 4 considerations.
- 5 For whatever reason, the Ontario
- 6 government chose the route, maybe it was political, to
- 7 provide the benefit, okay. That's -- that's a direct
- 8 mitigation measure. So I've talked, I think, enough on
- 9 this issue. I have some of those observations and --
- 10 and things in my evidence. And I did it mainly for the
- 11 client, but I hope it will be of some interest to -- to
- 12 you.
- 13 THE CHAIRPERSON: Dr. Higgin, do you
- 14 know what kind of dollars we're talking about in terms
- 15 of individual household or ...?
- DR. ROGER HIGGIN: Yes, I made an
- 17 example. And maybe we could turn up my pre-filed
- 18 evidence. There's an appendix there. And...
- 19
- 20 (BRIEF PAUSE)
- 21
- 22 DR. ROGER HIGGIN: The -- the Clean
- 23 Energy Benefit, and that's page 54. And I provided you
- 24 the -- an example based on Ontario. And this
- 25 particular example was based on either, for residential

- 1 customers that qualify, a 10 percent or 5 percent. And
- 2 then I did a very rough estimate of how much it might
- 3 cost. I make a note here that I only dealt with
- 4 customers that are grid connected, in this case, but I
- 5 -- my own belief is that it has to be universal in that
- 6 sense, that it should include off-grid customers as
- 7 well. So that's another important thing.
- But anyway, this is the example I used.
- 9 Now, you may have some -- some questions there. And
- 10 then if you look down the page, you just come back to
- 11 the fact that that's where I talked about the historic
- 12 bill increases. That -- that was my source for that
- 13 piece of information.
- 14 Anyway, coming back to the Clean Energy
- 15 Ben - Benefit, that's the -- that's the proposal.

- 17 CONTINUED BY MR. BYRON WILLIAMS:
- 18 MR. BYRON WILLIAMS: And just a couple
- 19 of questions of clarification. You referenced an
- 20 Information Request from MIPUG.
- 21 And I'm assuming you meant the Manitoba
- 22 Industrial Power Users Group?
- DR. ROGER HIGGIN: Yes, I'm sorry.
- 24 Yes.
- MR. BYRON WILLIAMS: You do not need to

- 1 apologize, sir.
- 2 Secondly, in terms of non-grid con --
- 3 connected customers, would I be correct in assuming
- 4 that you are referring to individuals and -- and
- 5 communities that are served by diesel generation in --
- 6 in remote parts of the province?
- 7 DR. ROGER HIGGIN: Yes, I think that --
- 8 that they should be included in any proposals that --
- 9 that are put forward. They should not be left out
- 10 simply because they're not grid connected.
- 11 Now many communities are grid connected,
- 12 so, I mean, obviously they are included. The group that
- 13 I analyzed here was just from Manitoba Hydro's
- 14 residential customer base. The costs relate to that
- 15 residential customer base. Okay? The numbers are
- 16 shown in -- in there as to what I did.
- 17 So anyway, could I say I felt it was
- 18 important to -- I -- I can't talk about mitigation. I
- 19 can't talk about a Clean Energy Benefit direct, unless
- 20 I do something that at least gives me and my client a
- 21 feel for what -- what it going to look like and what it
- 22 would cost.
- 23 And that -- that's the example, and I
- 24 could have given time scenarios, I could -- there are
- 25 many ways I could have done this, but I'd had neither

- 1 the time or any -- or budget, frankly, to -- to do
- 2 more, and so that's what I did. I hope that's helpful.
- 3 MR. BYRON WILLIAMS: Thank you, and I
- 4 think we'll be turning to page 11?
- 5 DR. ROGER HIGGIN: Yes, if we could.
- 6 So I think -- subject to -- to questions, I just have
- 7 one (1) or two (2) concluding points, very -- very
- 8 summary points and I -- then -- then we'll move onto
- 9 another area.
- Just to keep -- any -- any type of
- 11 mitigation has to be considered from a customer
- 12 perspective as to, Is it going to deal with the problem
- 13 that the customer is having as a result of the
- 14 Development Plan, because if it isn't, then you have a
- 15 whole bunch of other issues around freeloaders and so
- 16 on, which you have to concern about.
- 17 But -- but anyway, so that's -- that's
- 18 one (1) point, and I think that the other thing is,
- 19 it's very difficult for a tribunal to do that type of
- 20 mitigation. It's -- I would say it's impossible, but I
- 21 think it is nearly impossible, except for the example I
- 22 gave you on Hydro One distribution, where there's an
- 23 account set up, you -- you know, and you smooth it over
- 24 a longer period. That -- that's certainly a
- 25 regulator's way to do it, to -- to make -- to do

- 1 mitigation.
- 2 But assuming that's not available, then
- 3 you have to look outside for the government, like the
- 4 Ontario government, the Clean Energy Benefit, to
- 5 provide whatever funds are necessary to make that
- 6 mitigation happen, and that's the conclusion of that
- 7 section.
- I hope that's helpful. If you have any
- 9 questions? I'm going to move to the next slide, if
- 10 that's okay?
- 11 MR. BYRON WILLIAMS: And the next slide
- 12 is slide 12, just for the transcript.
- DR. ROGER HIGGIN: What is the -- what
- 14 this one is, is a -- a reaction to the updates that
- 15 Manitoba Hydro provided. The first time I looked at
- 16 them, that's the reference, it was put when Panel 2
- 17 came forward and basically said, Things are changed
- 18 because of the contracts and other factors, and these
- 19 are now what we think are the key decision points.
- 20 And so I -- I said, Oh, yeah, well, the
- 21 ground has shifted. That was the first one, and then
- 22 the other one was, Well, do we have the information to
- 23 answer these questions? At the moment the answer is
- 24 certainly no. You and others have asked for
- 25 information that will help answer these questions.

- 1 So that's all I can say is that right
- 2 now, a great deal of uncertainty has been introduced,
- 3 and the question is what to do with that uncertainty.
- 4 And my -- my approach to this as a strategic approach
- 5 is to say, Okay. How does this affect the way in which
- 6 we should proceed in this NFAT review with the
- 7 information that we hope that's being provided. So
- 8 that's it. It's just a purely, I'll call it, a
- 9 snapshot. It's that this thing leapt out. Here it is.
- 10 What are its implications? That's what I -- I wanted
- 11 to do that, because I'm -- where I'm going soon will be
- 12 to talk a bit about those implications, okay?
- 13 So if we could move on to the next
- 14 slide, please? This is a chart that I originally put
- 15 together in the evidence, and it's titled, "A summary
- 16 of CAC Consultants." And the reason for using that is
- 17 the evidence that supports this is largely, but not
- 18 totally, from CAC consultants.
- 19 So these are the -- I drew out from
- 20 their reports and so on strategic policy observations.
- 21 I did include, and as I said at the outset, looking at
- 22 the expert reports for the -- for the Board, and you'll
- 23 see some mention of some of those in here.
- So I did not go back and say, well, the
- 25 original chart, it's in -- it's in the evidence if we

- 1 want to look at that. It's page -- we'll give you the
- 2 page reference here.
- 3 MR. BYRON WILLIAMS: Mr. Williams is a
- 4 little slow today.
- 5 DR. ROGER HIGGIN: That's all right.
- 6 MR. BYRON WILLIAMS: So Diana is -- is
- 7 not though.
- B DR. ROGER HIGGIN: Right. It appears -
- 9 actually, the -- the front of my -- it's summarized
- 10 at the front, just after the executive summary on page
- 11 4. That's the original one, the same structure, sub-
- 12 issues, observations, considerations.
- And now what I've done in this chart, if
- 14 we could then go back to this chart that -- that we're
- 15 talking about on the slide, is I've made, we'll call
- 16 them updated or made additional observations, which
- 17 I've tried to summarize in very simple form.
- I've talked about many of these, but
- 19 basically, these are -- we'll call them my updated
- 20 evidence, and perhaps the one that leaps out to -- to
- 21 everybody will be at the bottom -- as always, in the
- 22 bottom, and that is I believe there is no need as need
- 23 is defined meeting domestic load, but I do believe
- 24 there is an opportunity, and that my concern right now,
- 25 where we are in this time frame, do we have enough

- 1 information regarding that opportunity? And we'll come
- 2 to that in a minute.
- 3 MR. BYRON WILLIAMS: Dr. Higgin, if I
- 4 could just stop you for a second.
- 5 Am I correct in suggesting that some of
- 6 your updated notes are -- are captured in the -- the
- 7 red ink that appears on this slide?
- DR. ROGER HIGGIN: That's correct.
- 9 MR. BYRON WILLIAMS: Okay.
- 10 DR. ROGER HIGGIN: These -- what these
- 11 are, my updated observations in red -- in the red ink
- 12 compared to the base chart, and I haven't covered all
- 13 of these. I've covered some of them, for example, but
- 14 there they are.
- MR. BYRON WILLIAMS: Could I stop --
- 16 DR. ROGER HIGGIN: And this is advice
- 17 to my client when considering the case, as well, to
- 18 address these issues.
- 19 MR. BYRON WILLIAMS: And I apologize
- 20 for interrupting. I see at the top that -- and you'll
- 21 accept, subject to check, that in your -- the original
- 22 chart that appeared in your evidence, you had the
- 23 summary of the strategic policy observations, and in
- 24 brackets, the word 'preliminary'?
- DR. ROGER HIGGIN: Correct.

9471 MR. BYRON WILLIAMS: And here we see the word 'current'? 3 DR. ROGER HIGGIN: Yes. MR. BYRON WILLIAMS: I do not see the word 'final'? 6 DR. ROGER HIGGIN: The reason for that 7 was preliminary was because I knew that a lot of new evidence was going to come in which would have a -- an influence on my take or may analysis of this strategy policy, that it was going to come in. And so I $\operatorname{\mathsf{--}}$ I 10 knew that the ground was shift, the -- the yardsticks 11 12 would move, so on and so forth. So that's why it was 13 preliminary. 14 This simply says, Well, as I went 15 through, things have moved. This is the current look 16 at it. So, for example, if we pick a -- the load 17 forecast, then what's happened right now for current, 18 because many of those other considerations are going to be in the 2014 -- there's a whole set being in the 2014 load forecast, what's in the current is -- and that 21 includes DSM, DSM is now on the table. It's appeared, 22 it's here with us, and what does that do? 23 In my view, whether you believe the need 24 date was moved to 2027, or whether it's moved to 25 further back, as some people may suggest, there is now

- 1 no question that we're looking at an advance of
- 2 generation by seven (7) to eight (8) years. So -- so
- 3 that would be an example, just -- just to show my
- 4 strategic view on things.
- 5 MR. BYRON WILLIAMS: Thank you.
- DR. ROGER HIGGIN: Okay. Rather than
- 7 go through this, if there are questions, then I'm happy
- 8 to spend more time on that, but if we -- I think we
- 9 need to move to, perhaps, to the last area, if -- if
- 10 that's okay.
- Now, to make the bridge to where --
- 12 which is, How does this affect the whole NFAT review,
- 13 the timing, and so on -- that's the bridge. I just
- 14 drew out a few, I'll call them planks for the bridge.
- 15 They're uncreased -- increased uncertainties from a
- 16 strategic point of view.
- 17 The domestic need issue is now seem to
- 18 be saying, Well, we can -- we'll pursue DSM Level 2,
- 19 and that's going to get us load reductions that we need
- 20 in the short term. The load forecast is likely to be,
- 21 when it's actually published, lower than was projected,
- 22 average 1.6 percent with DSM, it might -- we know it's
- 23 going to go down -- one point four (1.4), one point two
- 24 (1.2), you know.
- 25 Will it go flat, as the Chair -- Chair

- 1 suggested? That's an issue that needs to be
- 2 considered. That's all I'm saying. It's a strategic
- 3 issue. It looks like the gods have intercept -- yeah,
- 4 okay, they've gone.
- 5 Finally, then -- then export
- 6 opportunities -- you're taking out those strategic
- 7 considerations. I believe it puts more emphasis on the
- 8 need that the export price is more critical, because
- 9 you're advancing generation for export purposes. I
- 10 don't have the answers to that, because we don't have
- 11 the data, okay?
- 12 We have that of Dr. Gotham and his take
- 13 on -- which has been accessible to me on his take and
- 14 his comments, which you've read about that issue,
- 15 about things such as carbon pricing, such as
- 16 congestion, and his comments that he likes, he thinks
- 17 reasonable is the Brattle forecast, which is the one
- 18 he's had.
- 19 But that's all I have, all right? And
- 20 so basically, I don't have enough information to -- to
- 21 come -- I'm just saying it's a strategic issue that's
- 22 more -- more critical when you're advancing generation,
- 23 given the -- the -- especially now, the contracts have
- 24 been put forward and they're ready to be approved.
- 25 And then I put the other thing is that

- 1 they -- you, I think, need to revisit the
- 2 affordability. It's even more critical to look at
- 3 that, and as I said earlier, the intergenerinal --
- 4 rational issues related to the fact that you're
- 5 advancing generation, and you're doing that as an
- 6 economic opportunity for the Province of Manitoba.
- 7 That's the key, and under that scenario.
- 8 So -- and I comment that I don't have
- 9 enough information, really, at this point to make any -
- 10 any more comments, observations at this point.
- 11 So can we move forward to the -- to the
- 12 final bit, and this deals my original observations,
- 13 which are in my report, and I thought about it, my
- 14 observations were that I still believe that phasing of
- 15 the review for a whole bunch of reasons, which are in
- 16 the report, should be considered, and so that would be
- 17 in my original one, a report that addresses the overall
- 18 merits and concerns of the Preferred Plan, and I -- and
- 19 so that's -- was in -- this is from my original report.
- 20 I don't want to spend a lot of time going through that,
- 21 but I'm happy to answer any questions.
- Then there would be a phase 2 that would
- 23 proceed, in this case, in parallel with the development
- 24 of Keeyask and the other key short-term elements of the
- 25 Preferred Plan, which, of course, would include DSM.

- 1 And then to do the next phase, I push
- 2 hard towards an integrated resource planning framework.
- 3 My counsel -- it's so bad it's upset my cou -- counsel.
- 4 He's having some sort of fit, and maybe I should wait
- 5 for him. I -- I'm sorry to be -- did I really do that
- 6 to you? I'm sorry.
- 7 MR. BYRON WILLIAMS: I -- Dr. Higgin,
- 8 it had nothing to do with you. I'm sorry.
- 9 DR. ROGER HIGGIN: Okay. I thought it
- 10 was something I'd said. Okay. So anyway, that -- that
- 11 in the original one was that there would be an updated
- 12 plan, we'll call it a -- a business case that would
- 13 address the longer term, would include more -- a
- 14 framework of integrated resource planning, and it would
- 15 bring in more on externalities, socioeconomic
- 16 considerations, and so on. So that was the original --
- 17 original one.
- 18 So what do I think now, currently, is --
- 19 is the word? Could I move to the next slide, please?
- 20 MR. BYRON WILLIAMS: And that's slide
- 21 16.
- DR. ROGER HIGGIN: Sixteen (16). So in
- 23 a -- say, Well, let me go back and have a look at this
- 24 and see what, at the current situation, that perhaps
- 25 there are three (3) options. One is to proceed with

- 1 economic DSM as a no-build until the domestic need
- 2 date. So I -- that's one strategic option.
- 3 The other one is to proceed with
- 4 economic DSM, and MH come back with an updated phase 1,
- 5 if you like, on the infor -- export opportunities, all
- 6 of the impacts, and so on of that. That's another
- 7 option.
- 8 And the third would be going back to
- 9 nearly what I had in the first, proceed with economic
- 10 DSM and Keeyask and the seventy-five (75) -- the 750
- 11 intertie, but with conditions.
- So those were the three (3), and I'm a -
- 13 I could have spent a lot of time and I didn't have
- 14 the time, so I went back and said, Well, what guides me
- 15 on these issues? And I went back and I looked at the
- 16 terms of reference, and we'll come to that in a minute.
- 17 And so my rationale for where I'm headed strategically
- 18 is based on the terms of reference.
- 19 So that says, and I've broken into two
- 20 (2) simple frame -- two (2) simple things, which are
- 21 interrelated. It is meeting the domestic need and
- 22 oppor -- export opportunities. It doesn't say, "or."
- 23 It says, "and." So let's look at that next on this
- 24 slide 17, and this is an extract from the letter of
- 25 reference.

- 1 And, just as I said, it has these two
- 2 (2) important components. They're interrelated, and
- 3 there are tradeoffs and so on, but it's asking the
- 4 review and the outcomes of the NFAT to comment on
- 5 meeting the domestic demand and taking advantage of
- 6 export opportunities. They explicitly say it includes
- 7 Keeyask and that, thus being part of the plan, which
- 8 was then the question. That's not consistent with the
- 9 idea of phasing into a Keeyask now and then come back
- 10 later.
- 11 But nonetheless, I said, Well, okay. If
- 12 I was today asked by my client, What does all this mean
- 13 and where -- where would you recommend we consent? We
- 14 come to the bottom line, and that's the slide 18. So I
- 15 would tell my client, I think because of the terms of
- 16 reference, the path should be DSM for domestic need,
- 17 and Keeyask for export opportunity with the intertie,
- 18 with certain conditions to be met in the 2015 period.
- 19 And why are those conditions there?
- 20 They're there to protect ratepayers and other
- 21 stakeholders. They are a DSM program which should be
- 22 Level 2 or higher, capital cost reporting, because as
- 23 the Chair said, it's not only reporting, but it's also
- 24 perhaps what to do if capital costs start to get out of
- 25 control. That's perhaps the -- the main consideration.

- 1 And thirdly, I still believe that --
- 2 that unless the -- the numbers change dramatically,
- 3 some form of rate mitigation strategy needs to be
- 4 brought forward, whether it's the direct Clean Energy
- 5 Benefit, whether it is the indirect, the debt-equity
- 6 ratio, interest coverage financial, smoothing, that's
- 7 what's to be determined.
- 8 The process I'm recommending to my
- 9 client to consider was -- that's -- that's who I'm
- 10 talking to here. I'm give -- sharing with you my
- 11 advice to the client, and she is there -- may reject it
- 12 all, throw it out and say, You're -- you're wrong,
- 13 basically, and she may come forward and say, No.
- Nonetheless, that's my strategic advice.
- 15 To the annual review conditions 1 and 2 would be, You
- 16 guys would keep an eye on the DSM program, meeting
- 17 targets, what the costs are, and so on. You would also
- 18 have the capital cost reporting requirement, and more
- 19 importantly, what to do. What is it -- what can be
- 20 done if the costs get out of line, that's probably in
- 21 part mitigation.
- 22 And the -- then the other component
- 23 that's on the table that has to be provided, and I
- 24 think it influences perhaps the next phase more than
- 25 this phase, is the cumulative effects study that the

- 1 CAC has recommended. And my bottom one is a -- an
- 2 updated business plan case should be filed prior to the
- 3 Keeyask date, including in that, if -- if required,
- 4 appropriate rate mitigation -- rate impact mitigation
- 5 proposals.
- 6 So that's -- now, I'll call it -- that's
- 7 the new Phase I. Phase II is still a post-Keeyask plan
- 8 that's based on the updated business case, looks
- 9 forward of where we go next, and so that -- that's what
- 10 I would tell my client as the things are today in the
- 11 information that I've been given. That's what I would
- 12 -- that's my advice. That's my observation.
- So there we are. I'm sharing it with
- 14 you. I think that's appropriate, but don't expect when
- 15 the arguments come in that the client is going to say
- 16 that, please, and she probably won't. Anyway, thank
- 17 you very much. That's all I have to say. I hope I've
- 18 been helpful, and run almost to lunch. Thank you.
- 19 THE CHAIRPERSON: It's probably an
- 20 appropriate time to -- to break for lunch, so I would
- 21 suggest that -- Mr. Williams, please, before --
- 22 MR. BYRON WILLIAMS: Just -- my client
- 23 has asked me to say this. Dr. Higgin is, of course,
- 24 available for cross-examination, but our client did
- 25 want to indicate there has been a fair bit of, in the

- 1 public domain, criticism of the Public Utilities Board
- 2 process, and our client is -- is well aware of that.
- 3 As we come towards the end of our
- 4 client's presentations, they do want to indicate their
- 5 appreciation for the process, and the robust support
- 6 that CAC has been able to bring forward. So we just
- 7 wanted to express our appreciation, both to the PUB,
- 8 but to the wider planning process, which you will
- 9 certainly hear, and have heard from us, has many flaws,
- 10 but it's a process that our client did want to make a
- 11 strong point that the opportunity for public
- 12 participation is -- is highly valued.
- 13 THE CHAIRPERSON: Okay. Thank you for
- 14 that -- for that comment. And, you know, I -- I
- 15 understood completely the message that this is your
- 16 point of view and your recommendation to your client,
- 17 and -- and we're not going to accept this as the CAC's
- 18 position, so -- but with that, we may have some
- 19 questions after lunch, but my intention is to keep
- 20 things moving so that we get Intervenors -- give
- 21 Intervenors an opportunity to -- to ask their questions
- 22 as well, so thank you. Have a good lunch.
- 23 I'm -- I'm looking for advice here. We
- 24 could go as short as half an hour, three-quarters
- 25 (3/4s) of an hour? We have plenty of things to do, so

- 1 we could go three-quarters (3/4s) of an hour today.
- MR. BOB PETERS: Mr. Chairman, I had
- 3 just a very informal canvassing of the room in terms of
- 4 the time, but I'm not expecting the questions for Dr.
- 5 Higgin to be lengthy by any party this afternoon, and
- 6 if the panel has other business matters they're
- 7 discussing over lunch, I would suggest one o'clock
- 8 would be appropriate.
- 9 THE CHAIRPERSON: I agree, one o'clock.
- 10 Thank you.
- 11
- 12 --- Upon recessing at 12:03 p.m.
- 13 --- Upon commencing at 1:05 p.m.
- 14
- 15 THE CHAIRPERSON: Good afternoon. I
- 16 believe that we're ready to resume the proceedings.
- 17 Mr. Peters, please.
- MR. BOB PETERS: Yes, thank you, Mr.
- 19 Chairman. This morning I think Mr. Williams grabbed
- 20 the microphone first thing and asked if he could be
- 21 updated during the currency of the day as to whether
- 22 Manitoba Hydro's load forecast and DSM panel would be
- 23 recalled on tomorrow, Thursday, afternoon.
- 24 And we've now received confirmation that
- 25 Manitoba Hydro's witnesses will be available tomorrow

- 1 afternoon, and they will be available to answer
- 2 questions of the Intervenors, as well as the Board and
- 3 Board counsel. They will follow after the close of
- 4 evidence of the GAC witnesses that are on tomorrow.
- 5 So I hope that helps, Mr. Williams.
- 6 Stay away from the hockey games tonight while he's
- 7 working.
- MR. BYRON WILLIAMS: I am so
- 9 instructed.
- 10 THE CHAIRPERSON: Okay. I will call
- 11 upon the interveners. I will start with Me. Hacault,
- 12 s'il vous plait.
- 13
- 14 CROSS-EXAMINATION BY MR. ANTOINE HACAULT:
- MR. ANTOINE HACAULT: Merci, M.
- 16 President. Good afternoon, Dr. Higgins (sic). I
- 17 represent Manitoba Power Industrial Users Group. I
- 18 think I presented myself to you off the record.
- 19 A couple issues that I'll be covering.
- 20 The first one is, sir, it'll take it in little bites,
- 21 but I take it you agree that there is a difference
- 22 between ratepayers and taxpayers in the Province of
- 23 Manitoba?
- DR. ROGER HIGGIN: Yes, in any
- 25 province, any jurisdiction, that's the case.

- 1 MR. ANTOINE HACAULT: So then this
- 2 proceeding, although the numbers do change, the
- 3 clients I represent, represent approximately 17 percent
- 4 of Hydro's domestic revenues. And that's ten (10)
- 5 companies.
- 6 They wouldn't necessarily have the same
- 7 interests as taxpayers, correct?
- 8 DR. ROGER HIGGIN: In -- in what topic
- 9 are you talking about?
- 10 MR. ANTOINE HACAULT: In related -- for
- 11 example, rates.
- DR. ROGER HIGGIN: Oh, in rates, that
- 13 context. They, as taxpayers, they would have the same
- 14 interest in rates. The rates are set to be just and
- 15 reasonable for all customers.
- 16 MR. ANTOINE HACAULT: But if, for
- 17 example --
- 18 DR. ROGER HIGGIN: I don't -- I don't
- 19 think I'm answering your question so try --
- 20 MR. ANTOINE HACAULT: Let's -- let's
- 21 break it down in a little bit detail. If Hydro seeks
- 22 to attain a 75:25 debt-equity ratio and it's additional
- 23 debt and the Preferred Development Plan is in the order
- 24 of \$16 billion to \$20 billion, if they represent 17
- 25 percent of the revenues that are going to make it such

9484 that that debt-equity ratio is realized, as individual companies they may bear a higher proportion of shouldering -- that responsibility than other non-3 intensive energy users, correct? 5 DR. ROGER HIGGIN: You're assuming that the industrial customers that have a high load either, not per capita, but as a portion of GDP or whatever, 7 they are taking a lot of the load. And I think the issue I'm trying to struggle with is are you asking me to distinguish an industrial customer from a 10 11 residential customer? Or are you asking me to comment 12 on the difference between industrial customers as 13 taxpayers and... 14 MR. ANTOINE HACAULT: I was taking it 15 in small bites --16 DR. ROGER HIGGIN: Okay.

- 17 MR. ANTOINE HACAULT: -- first it was --
- DR. ROGER HIGGIN: Which one --
- 19 MR. ANTOINE HACAULT: -- industrial
- 20 customers.
- 21 DR. ROGER HIGGIN: I'm trying -- I want
- 22 to -- I'd like to be helpful, I just want to...
- 23 MR. ANTOINE HACAULT: So the first was
- 24 focussing on industrial customers that -- that may not
- 25 necessarily match up as ratepayers for high -- high

- 1 energy usage companies that their interests match up
- 2 and are identical to those same industrials, but from a
- 3 taxpayer perspective.
- DR. ROGER HIGGIN: Yes, I think I would
- 5 agree with your premise, yes.
- 6 MR. ANTOINE HACAULT: And that would
- 7 also -- I would suggest be true for certain residential
- 8 customers that you've talked about. Some of the lower
- 9 income, if they're not on social assistance, may pay
- 10 very little or no taxes.
- But say, for example, if that lower-
- 12 income family is all electricity for gas and heat they
- 13 may bear a different share of impact as ratepayers as
- 14 compared to taxpayers, correct?
- DR. ROGER HIGGIN: Yes. There's also
- 16 the question, I think, that within a particular
- 17 ratepayer class, whether that be residential or
- 18 industrial, then there is -- there is diversity amongst
- 19 them in -- in many respects, including paying taxes and
- 20 so on. The purpose of rate making is to try to put
- 21 them into a class where they have similar can --
- 22 similar, sorry, characteristics.
- 23 And that's one of the -- when the costs
- 24 are allocated, then they're put in together in a class
- 25 that has similar characteristics. That's an approach

- 1 to rate making. I don't see how -- whether the level
- 2 of taxes they pay from a rate-making point of view has
- 3 any -- any impact, and the same with the residential
- 4 customers.
- 5 If you're looking at -- if you're asking
- 6 about the subsidy that it comes from taxpayers, for
- 7 example if it was a government subsidy like the -- the
- 8 Ontario Clean Energy Benefit, then I think we're in a
- 9 different -- different regime where you have to look at
- 10 those aspects of it. Somebody's -- the -- the
- 11 government is paying the money, but the money comes
- 12 from the taxpayers, and some -- others are getting more
- 13 benefit and they're not paying the same taxes.
- Is that -- have I got it right?
- MR. ANTOINE HACAULT: Well, I think
- 16 you're hitting it as when this panel is going to be
- 17 considering the interests of ratepayers --
- DR. ROGER HIGGIN: Right.
- 19 MR. ANTOINE HACAULT: -- and the
- 20 interests of taxpayers. I was suggesting to you, and I
- 21 started with that preface --
- DR. ROGER HIGGIN: Yes.
- 23 MR. ANTOINE HACAULT: -- that in fact
- 24 they are -- they are not necessarily identical.
- DR. ROGER HIGGIN: Yeah, I -- and I've

- 1 agreed with you in -- in that it's two (2) pockets.
- 2 You know, it's your left pocket or your right pock --
- 3 pocket. If you're a customer of Hydro, your left
- 4 pocket is your Hydro bill, and the right pocket is your
- 5 tax bill.
- 6 MR. ANTOINE HACAULT: And, sir, with
- 7 respect to the equity that would be built up in
- 8 Manitoba Hydro --
- 9 DR. ROGER HIGGIN: Yes.
- 10 MR. ANTOINE HACAULT: -- it's a Crown
- 11 corporation owned by the province and then indirectly
- 12 through all the Manitoba ratepayers. So that 25
- 13 percent, you don't split it up according to who
- 14 contributed to it as a ratepayer.
- 15 Is that correct?
- DR. ROGER HIGGIN: That's correct.
- 17 MR. ANTOINE HACAULT: And if somebody
- 18 moves from this province and over twenty (20) years
- 19 paid into the equity, he can't say, Well, I paid twenty
- 20 (20) years into Manitoba Hydro equity; I'd like to have
- 21 that back before -- when I leave the province.
- DR. ROGER HIGGIN: No. In fact what
- 23 happens is he has to pay his electric bill arrears
- 24 before he leaves. It's -- it's -- correct.
- 25 MR. ANTOINE HACAULT: And I would

- 1 suggest the same would be true if a mine opened and
- 2 they were open for twenty (20) or thirty (30) years to
- 3 mine ore, and then it -- for some reason, the resource
- 4 became more scarce or more expensive to process, that
- 5 company, who, if it's one of the Manitoba Power
- 6 Industrial Users Group companies, can't go to Manitoba
- 7 Hydro and say, Well, listen, I just paid a billion
- 8 dollars into your equity; I'd like to have it back,
- 9 please.
- 10 DR. ROGER HIGGIN: Correct. I think
- 11 when you start talking about intergenerational activity
- 12 -- equity, I think this is the thing -- there is the
- 13 old -- there is the one that, yes, but they benefited
- 14 from Limestone and from Wuskwatim. Well, here the
- 15 rates would have been higher if it hadn't been for
- 16 that. So it's fair then that they should pay something
- 17 towards the next generation of generation so that
- 18 Manitobans can avoid that.
- 19 However, that is a judgment of policy
- 20 that needs to be something that's considered when
- 21 you're looking at that, and that's only one element,
- 22 which is intergenerational equity of a development
- 23 plan. If customers leave having paid rates, they don't
- 24 get the benefits for the long term because hopefully
- 25 the Development Plan has a seventy-eight (78) year

9489 horizon, correct. 2 MR. ANTOINE HACAULT: And at page 29 of 3 your report, line 823... 4 DR. ROGER HIGGIN: Yes, I have that. 5 Thank you. 6 MR. ANTOINE HACAULT: And I'll read 7 into the record. You state your observation that: "The finding is that impact on 8 Manitoba Hydro ratepayers in the 9 10 short term, 2015-2025, is not 11 acceptable [and then you continue], 12 particularly for vulnerable consumers." 13 14 When you said, "on Manitoba ratepayers," 15 did that include all ratepayers: residential, commercial, and industrial? 16 17 DR. ROGER HIGGIN: If I'm here as here 18 talking about the three point nine-four (3.94), which 19 was the original number, then you're -- you are totally correct. I would apply that -- that it's not 21 acceptable based on two (2) factors. One is the 22 historic pattern of rate increases, and the other one is relative to the cost of electricity -- and this may 24 be one of the key you're looking to -- as a component or -- either, in one case, vulnerable consumers,

- 1 household income. And that's been discussed. Or in
- 2 the case of industries, as -- as an input to providing
- 3 their goods and services.
- 4 MR. ANTOINE HACAULT: Now, sir, you
- 5 weren't asked to give any observations on what impact
- 6 these rates which you consider not acceptable over the
- 7 short term might have on the generation of jobs in
- 8 industries? You didn't consider that, or did you --
- 9 DR. ROGER HIGGIN: No, I -- I didn't
- 10 consider what I will call the added cost benefits of
- 11 affordable electricity. I did not do that either, even
- 12 for the vulnerable group. And I hadn't, as I said too
- 13 in my IR responses, I didn't do any analysis as to
- 14 whether the proposed rate increases were worse or not
- 15 for industries from looking at a number of factors:
- 16 competitiveness, et cetera. All of the things that
- 17 would go into an analysis of what does this mean for
- 18 the industrial sector. And the answer is that was not
- 19 part of my mandate. I did not do it.
- 20 I recognize and would accept that that -
- 21 that is valid and is -- is something that should be
- 22 done and considered. You don't just consider one (1)
- 23 set of ratepayers. You should consider across the
- 24 board the ratepayers.
- MR. ANTOINE HACAULT: Thank you. I'd

- 1 like to move to slide 16 of your presentation and the
- 2 focus of the discussion I'd like to have with you, sir,
- 3 is the whole how do we approach the uncertainty, the
- 4 risk. And on slide 16 you make some observations. And
- 5 after that, I'll turn -- after I've had a discussion on
- 6 that slide I'll turn to your last slide of 18.
- 7 DR. ROGER HIGGIN: So maybe we -- these
- 8 are the -- the observations --
- 9 MR. ANTOINE HACAULT: Yes.
- 10 DR. ROGER HIGGIN: -- like the flow,
- 11 right.
- MR. ANTOINE HACAULT: So I take it you
- 13 thought that there were three (3) options that you
- 14 would be considering in giving advice to your client in
- 15 a Phase 1 analysis.
- Is -- is that correct?
- DR. ROGER HIGGIN: Yes. Because the --
- 18 the context I was working in was my original Phase 1
- 19 analysis, which was proceed with Keeyask. At that
- 20 point, there was no -- there was no definition on the
- 21 intertie and that was pretty well it. Of course,
- 22 things have changed. So the answer is yes, totally.
- 23 MR. ANTOINE HACAULT: Now, you just
- 24 finished that last thing, but things have changed, and
- 25 I'd like to look at your number 2 listed on this page,

9492 slide 16. 2 DR. ROGER HIGGIN: Yes. 3 MR. ANTOINE HACAULT: Which indicates: "Proceed with economic DSM, and 5 Manitoba Hydro return with updated 6 information on export opportunities." I'd like to understand that a bit 7 better. 9 To date we have a 250 megawatt deal 10 signed with Minnesota Power, correct? 11 DR. ROGER HIGGIN: To date. Yeah, 12 today, yes. MR. ANTOINE HACAULT: Yeah. And we 13 14 also have a 308 megawatt deal signed with Wisconsin 15 Power Service, correct? 16 DR. ROGER HIGGIN: Yes, the one that 17 was recently been asked, yes. 18 MR. ANTOINE HACAULT: What updated 19 information do you need on export opportunities? It's my understanding that those two (2) contracts basically take up most of what Keeyask might offer. 21 22 DR. ROGER HIGGIN: Correct. It's not 23 just the export opportunity, and perhaps this is not 24 well said, is on what are the costs and benefits

associated with pursuing those export opportunities.

- 1 Perhaps that -- that's what I was -- that was my
- 2 context to look at that.
- 3 MR. ANTOINE HACAULT: I'll try to
- 4 understand that a bit better again, because Hydro does
- 5 economic analysis with those contracts included under
- 6 various scenarios, one (1) under Plan 14, which
- 7 includes Conawapa, and some under, I think I Plan 5,
- 8 which excludes Conawapa, and some other plans which
- 9 exclude Conawapa, but still have that deal --
- DR. ROGER HIGGIN: M-hm.
- 11 MR. ANTOINE HACAULT: -- or those two
- 12 (2) deals.
- 13 What better information do you think the
- 14 Board needs on export opportunities? I'm having a
- 15 little bit of trouble understanding.
- DR. ROGER HIGGIN: Yes.
- 17 THE CHAIRPERSON: Perhaps I can help
- 18 you, I -- I'm -- I'm -- take it what you mean here is
- 19 the net benefits stemming from those contracts.
- 20 DR. ROGER HIGGIN: That's correct.
- 21 THE CHAIRPERSON: That's what you're --
- 22 is that what you're talking of, you know --
- DR. ROGER HIGGIN: Exactly.
- 24 THE CHAIRPERSON: -- revenues versus
- 25 costs?

9494 1 DR. ROGER HIGGIN: That was the -- my focus. I was just going to respond --3 THE CHAIRPERSON: Okay. DR. ROGER HIGGIN: -- but that is the focus. And if you move from the original plan, which is basically build Keeyask, let's just talk about the initial stages of that, with or without a two fifty 7 (250) or seven fifty (750), then all I'm saying is that 9 you're advancing that generation for, we'll say ten (10) years or more, and therefore, you should look at 10 what are the impacts of that with respect to, we'll 11 12 call the multi-component analysis that goes with --13 with that, as well as looking at the things you are 14 mentioning, making sure the reasonable economic and 15 financial projections have been put forward for the 16 short-listed now. Short-listed pathways and plans, so 17 I see both as being required. 18 19 CONTINUED BY MR. ANTOINE HACAULT: 20 MR. ANTOINE HACAULT: And if we -- if 21 the Board has that, either through the CSI sessions or 22 -- and in combination with the public sessions, there's 23 nothing else that you feel would be required --24 DR. ROGER HIGGIN: Well, the piecing -the -- the big piece that was missing in my overall

- 1 analysis, and I think I acknowledged this, I didn't
- 2 have a mandate time or anything to talk about what --
- 3 what you can call either externalities that -- that are
- 4 associated with that, advancing that, and -- and I -- I
- 5 -- so my only caution is to say I didn't look at those
- 6 things.
- 7 And that would include actual effects on
- 8 the -- on the Nelson River system and all of those
- 9 factors which related to advancing Keeyask, and I had
- 10 nothing -- so my response is purely looking at the
- 11 economic and financial. So that's the only other
- 12 thing.
- MR. ANTOINE HACAULT: Okay. Thank you.
- 14 If we could move to slide 18?
- DR. ROGER HIGGIN: Yeah. Sorry.
- 16 MR. ANTOINE HACAULT: I'll let you get
- 17 a drink of water to clear your throat up, sir.
- DR. ROGER HIGGIN: Thank you.
- 19 MR. ANTOINE HACAULT: You dissect this
- 20 process in two (2) phases, correct?
- DR. ROGER HIGGIN: Correct.
- MR. ANTOINE HACAULT: And I don't see
- 23 Conawapa anywhere in the first phase.
- 24 DR. ROGER HIGGIN: Correct.
- MR. ANTOINE HACAULT: Why is that?

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9496 DR. ROGER HIGGIN: Correct. All of the 1 evaluations and so on that I've seen say, a) it's not needed for domestic. There is no contracts, no other 3 purpose for maintaining two twenty-five (225), two thirty (230). That's all. Simple as that. There has to be work done that says either we have a domestic need or we have an -- another export opportunity that 7 this will incrementally, if we pay all the extra money, benefit Manitoba on top of Keeyask. 10 The question then is should money be 11 spent to maintain, I'll call it quotes of readiness, 12 should something like that happen, maintain Con --13 Conawapa development at some level? I think that's perfectly -- it's -- it's not in here. 14 It's part of 15 Phase 2, and what would come forward in Phase 2. 16 MR. ANTOINE HACAULT: And if you had 17 advice to give to your client, and you anticipated my 18 next question was, Should we even bother continue 19 protecting Conawapa? 20 DR. ROGER HIGGIN: I -- I -- the 21 limited sources of input that I'm getting on that, it's 22 a question that I would -- for me, I'm getting some 23 advice that seems to say, no, there's no case, shall we 24 say, for Conawapa, and others are saying, Well -- well, 25 under certain circum -- circumstances, we might need

- 1 more generation or we will go to gas.
- If that happens, then it depends whether
- 3 you need that for domestic needs after Keeyask, because
- 4 -- I'm going to say if Keeyask contracts are finished
- 5 or part of the capacity's available, that's one, you
- 6 could then follow -- and that's my Keeyask -- I think
- 7 this is Plan -- Plan 5, Keeyask plus 250 plus Gas
- 8 later.
- 9 MR. ANTOINE HACAULT: Perhaps my
- 10 question wasn't clear. If you had to give advice to
- 11 your client, because you're saying you're giving inputs
- 12 to your client, not to the Board --
- DR. ROGER HIGGIN: Right.
- 14 MR. ANTOINE HACAULT: -- today, and I
- 15 asked you the question, and that's what I tried to ask
- 16 last time --
- DR. ROGER HIGGIN: Yes, I know.
- 18 MR. ANTOINE HACAULT: -- perhaps not
- 19 clear enough.
- 20 DR. ROGER HIGGIN: No, no, you're very
- 21 clear.
- MR. ANTOINE HACAULT: Do I even spend
- 23 today on Conawapa --
- 24 DR. ROGER HIGGIN: Well, if you want --
- 25 want the short answer -- sorry. Short answer, I don't

- 1 know, the short answer. I -- I haven't thought about -
- 2 enough about Phase 2 except to say I -- I'm a bit
- 3 more clear on Phase 1 and how -- what should go down,
- 4 and that there needs to be a new updated business case
- 5 for Phase 2 that would look at all of the options
- 6 again, would include Conawapa, obviously, and it would
- 7 include Gas, et cetera, all of the other resources.
- 8 So to answer the question whether we
- 9 should protect Conawapa, I -- at this point, if my
- 10 client asked me, yes or no, I'd say protect it.
- MR. ANTOINE HACAULT: And --
- DR. ROGER HIGGIN: And I'm not looking
- 13 at the Nelson River impacts and so on, but all of
- 14 those, like, those things. That's what I would say.
- 15 MR. ANTOINE HACAULT: Just from an
- 16 economic and financial perspective --
- DR. ROGER HIGGIN: Yes.
- 18 MR. ANTOINE HACAULT: -- you would say
- 19 protect it. Now I'm going to try and push you a bit
- 20 further on this.
- 21 At what level do we protect it, because
- 22 there's different levels? It can be --
- DR. ROGER HIGGIN: Well --
- 24 MR. ANTOINE HACAULT: -- very nominal
- 25 protection, or it can be a protection which gives you

- 1 flexibility to embark on construction, you know, on --
- 2 within certain time parameters.
- 3 DR. ROGER HIGGIN: Well, as -- to go
- 4 back to my initial take on this, there has to be a
- 5 reason to build. Equally well, there has to be a
- 6 reason to protect it. To protect it, you need to have
- 7 some future benefit for Manitoba that you think it may
- 8 be lost if you don't protect it.
- And so that tends to be, say, Where am
- 10 I? I think I'm at a low level, this particular point,
- 11 based on the information I have.
- MR. ANTOINE HACAULT: Okay. Thank you.
- 13 That's helpful. Oh, the other thing I want to clarify
- 14 is that am I correct in understanding your view that it
- 15 would be appropriate to actually have an independent
- 16 panel conduct a review of whether or not Conawapa is
- 17 needed in the future?
- Or did I incorrectly understand that,
- 19 and it would be appropriate to leave that to the
- 20 Utility to decide when to proceed with that project?
- 21 DR. ROGER HIGGIN: In either case,
- 22 Phase 1 or up to date, that is key. The words 'public
- 23 review' that are on this slide are fundamental to the
- 24 recommendation. So, yes, a public review.
- MR. ANTOINE HACAULT: So a public

- 1 review prior to making a commitment to Conawapa?
- DR. ROGER HIGGIN: Definitely as part
- 3 of Phase 2. If it was a component of that then that
- 4 would be, in essence, a new NFAT. So we -- so we take
- 5 away that and just say it would be a new NFAT. In my
- 6 original slide, I tried to keep the two (2) things
- 7 together, Phase 1 and Phase 2, in a single NFAT, right?
- 8 That -- that was -- that was my original one. So it
- 9 was go away and then do some more work on Phase 2. Go
- 10 away and do -- get Keeyask under way and so on. Now, I
- 11 see it as a separate NFAT.
- MR. ANTOINE HACAULT: Okay. Let me try
- 13 to understand that statement a bit better, sir. You'll
- 14 agree with me, firstly, that any of these projections
- 15 into the future are uncertain?
- DR. ROGER HIGGIN: Correct.
- 17 MR. ANTOINE HACAULT: And that there
- 18 are -- if we sit here and I'm asking questions and four
- 19 (4) years from now in a new NFAT, there will continue
- 20 to be uncertainty?
- DR. ROGER HIGGIN: Very much.
- MR. ANTOINE HACAULT: Now, am I to take
- 23 it that some elements of that uncertainty might be
- 24 eliminated, such as additional signed contracts for
- 25 dependable power?

25

PUB re NFAT 04-30-2014 9501 1 Is that your point, sir, as to why it's 2 DR. ROGER HIGGIN: Certainly that --3 that would be one driver for bringing forward a case, a business case, to proceed with the next generation. My business case could be, however, not only gener -- new generation. It could include gas, include a whole 7 bunch of other resources. But, yes, if that's a component, that business case has to come forward and make that case. We haven't seen a business case, I 10 believe, at this point for Conawapa. 11 12 MR. ANTOINE HACAULT: And, sir, I'm 13 trying to be fair to you. I'll try to pick both sides, too. As -- as another item that might -- we might know 14 15 a little bit more about is the whole discussion that we've had this morning with the panel on DSM, and is it a reliable load reduction. Manitoba Hydro has decided 17 18 to invest quite a bit more into DSM, which some of the 19 experts have welcomed. 20 Would another reason to have another 21 NFAT be to see what's happening to the load as a result 22 of DSM programs? 23 DR. ROGER HIGGIN: Implicit in my -- in

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my Phase 1 recommendations here, it implies -- when you

say, "DSM program," we're not looking at -- at just the

- 1 implementation of the -- the program within this
- 2 immediate 2014 plan on, 2015, 2016. We're also going
- 3 to look at what the savings are in gigawatt hours and -
- 4 and megawatt hours and how do they project -- how do
- 5 they stack up against the original targets and projec -
- 6 projections? So that's implicit here, that you would
- 7 have to look at least at that aspect.
- 8 The load forecast, as I understand it in
- 9 any event is updated every time the GRA happens and so
- 10 on. And therefore there would be another set of
- 11 information as well from that source. But, yes, it's
- 12 implicit to look at what impact DSM has on the load
- 13 front, what is fuel switching.
- 14 There's another key element happen --
- 15 and all the other factors that -- that Ed had on his
- 16 slide about looking at the 2014 load forecast and going
- 17 forward. All of those things would have to be looked
- 18 at together with the -- the impacts and successes of --
- 19 of Level 2 DSM.
- 20 MR. ANTOINE HACAULT: Okay. Thank you,
- 21 sir. Continuing along the theme of uncertainty and
- 22 whether or not -- sorry, you seemed to...
- DR. ROGER HIGGIN: I was just
- 24 distracted. I'm sorry, there was a bit of a --
- MR. ANTOINE HACAULT: We'll just wait.

9503 DR. ROGER HIGGIN: Yeah. 1 On your -you look over your right shoulder and you'll see there's a little distraction. I'm sorry. 3 4 MR. ANTOINE HACAULT: We'll just wait 5 for a bit. 6 DR. ROGER HIGGIN: Thank you, sorry. 7 (BRIEF PAUSE) 9 10 MR. ANTOINE HACAULT: In your presentation, sir, you indicated that these were your 11 12 current observations and not your final observations, correct? 13 14 DR. ROGER HIGGIN: That is correct. 15 MR. ANTOINE HACAULT: And you, as I understood it, premised that on the basis that we were awaiting further financial information from Manitoba 17 18 Hydro, both from an economic analysis and financial 19 analysis perspective, correct? 20 DR. ROGER HIGGIN: Correct. And now 21 perhaps we have another new little -- new -- new input 22 coming because I don't know, but the DSM panel might 23 come up and may have some -- some interesting and 24 useful things to say about -- about DSM Level 2, et 25 cetera. So those inputs, I mean, it's like you need to

- 1 get the -- the latest information before the clock --
- 2 before the stock market closes at five o'clock. You
- 3 know, basically that's it.
- 4 MR. ANTOINE HACAULT: Now, let me just
- 5 try to understand that a bit better. If the
- 6 government, in its wisdom, and I'm -- it's just a
- 7 hypothetical -- the government in its wisdom had had
- 8 this NFAT six (6) months ago and had requested a report
- 9 in September or October of last fall -- so you with me
- 10 so far?
- 11 DR. ROGER HIGGIN: Yes.
- 12 MR. ANTOINE HACAULT: The most current
- 13 information we would have had would have been in the
- 14 filing which Manitoba Hydro did, unamended by all these
- 15 new pieces of information.
- 16 DR. ROGER HIGGIN: In the business
- 17 case, yes.
- 18 MR. ANTOINE HACAULT: The business
- 19 case. That would have been the best information,
- 20 correct?
- 21 How do we deal with the uncertainty
- 22 which clearly exists?
- DR. ROGER HIGGIN: Yes.
- 24 MR. ANTOINE HACAULT: Over a four (4)
- 25 to six (6) month period, we've seen the business case

- 1 from an economic perspective go from about \$1.7 billion
- 2 to somewhere around 100 million, or maybe less,
- 3 depending on what scenarios we look at. What's the
- 4 answer? I mean, we don't even seem to be able to
- 5 predict with good information within a six (6) month
- 6 time frame.
- 7 How do we, as ratepayers and as a PUB,
- 8 approach a problem when we can see that six (6) months
- 9 can make that much difference?
- DR. ROGER HIGGIN: It's the planner's
- 11 dilemma. You always have insufficient information,
- 12 number 1. Number 2, infor -- new information is coming
- 13 all the time and the last forecast plan, whatever, is
- 14 then out of date. The question I think is: Is it
- 15 material?
- 16 You've -- you've identified to me that
- 17 there's been quite material changes if you look, for
- 18 example, at the -- the NPV for each of the plans, or
- 19 even if you just take that to what is now the short-
- 20 listed plans. But there were some unknowns, other than
- 21 those things that were in the business case. The
- 22 negotiations, particularly, on the WPS contract, the
- 23 intertie, all of those things were still ongoing. So
- 24 those were pretty large additional uncertainties.
- 25 Those have been reduced. Whether you like the result -

- 1 and that is there's the contracts and now we have to
- 2 have, according to Hydro, a 75 -- 750 megawatt thing --
- 3 that's another question.
- But basically, that's the type of thing.
- 5 So the question I think is: In an ideal world, plans
- 6 are -- like -- like the Resource Plan of Hydro, are
- 7 updated frequently to catch all of that new
- 8 information. But when you're making a -- a massive
- 9 decision that's going to influence things for seventy-
- 10 eight (78) years, the lifetime of a new hydro dam, then
- 11 those are the very, very difficult questions and things
- 12 to do.
- And so there are, I guess, methods, and
- 14 Hydro's applying those, to try to deal with those
- 15 uncertainties to the maximum.
- 16 MR. ANTOINE HACAULT: And when you say
- 17 Hydro has chosen some methods, one of the methods it's
- 18 chosen, sir, is to pick a low parameter and a high
- 19 parameter with respect to what it considers to be the
- 20 three (3) most important variables?
- 21 DR. ROGER HIGGIN: Correct. They've
- 22 used three (3) of the main variables they think have
- 23 the most economic financial impacts, yes.
- 24 MR. ANTOINE HACAULT: So if we're
- 25 proceeding along, is it fair to expect that the

- 1 reference case --
- DR. ROGER HIGGIN: Yes.
- 3 MR. ANTOINE HACAULT: -- is going to
- 4 vary somewhere hopefully within, I'm going to call it,
- 5 that cone of high and low.
- DR. ROGER HIGGIN: Right.
- 7 MR. ANTOINE HACAULT: Is that a fair
- 8 way to look at the problem and see how robust the plans
- 9 are if we hit in that low area and if we hit the high
- 10 area?
- DR. ROGER HIGGIN: I think also you
- 12 have to bring in a risk analysis into the picture when
- 13 you're -- when you're making those assessments. I
- 14 haven't done any detailed analysis, but with some other
- 15 plans I think that's another component, not only
- 16 taking, Here is the low, medium, high, or in this case,
- 17 med -- reference, but also all the risk analysis that
- 18 goes into what happens to those directionally and if
- 19 you -- to the maximum, you can estimate those -- those
- 20 changes.
- So -- but I don't think there's any
- 22 other planning thing. You can use other tools for some
- 23 of those elements. For example, use Monte Carlo
- 24 methods if those -- linear programming. And these are
- 25 sometimes used in planning processes like this.

- 1 However, I think right -- right now in most Canadian
- 2 jurisdictions, it's the way you've just described it.
- 3 The -- come up with the high, low, and medium
- 4 estimates, maybe apply risk analysis to those, see what
- 5 the -- develop scenarios, and then give it your best
- 6 shot when you've got all that.
- 7 Assuming you're not able -- you're not
- 8 able to redo it again in two (2) years' time, because
- 9 the -- the decision has to be made.
- 10 MR. ANTOINE HACAULT: So your advice to
- 11 your client would be, with respect to the risk
- 12 tolerance issue and whether it's high interest costs,
- 13 high capital costs, or low export prices, it doesn't
- 14 necessarily mean the high and lows are -- have the same
- 15 impact?
- DR. ROGER HIGGIN: Correct.
- 17 MR. ANTOINE HACAULT: What's your
- 18 advice on the risk tolerance if we're advancing?
- 19 Because you did make that distinction.
- DR. ROGER HIGGIN: Yes.
- 21 MR. ANTOINE HACAULT: If we're
- 22 advancing generation as opposed to deciding what
- 23 alternatives are required for our domestic needs,
- 24 what's your advice on -- do we approach the problem
- 25 differently if we're advancing for non-domestic needs?

- 1 DR. ROGER HIGGIN: In general terms,
- 2 based on other plans, you don't approach it any
- 3 differently, but you may want to look at maybe more --
- 4 more -- even more scenarios, particularly as to the
- 5 risk profiles, the S-curves associated with those. And
- 6 then it comes to a question of tolerance. That's
- 7 perhaps the -- the fundamental thing. Do we have the -
- 8 the tolerance or robustness in the analysis that we
- 9 can still proceed without a disaster?
- 10 And that's perhaps the only way you can
- 11 do. But perhaps because it's being advanced, what I'm
- 12 saying is not only that may be a factor, but also
- 13 there's perhaps a way you should consider somehow the
- 14 distributional aspects as well.
- MR. ANTOINE HACAULT: Okay. So we've
- 16 heard some evidence, sir, with respect to in other
- 17 provinces -- I believe it was Newfoundland, if my
- 18 recollection is correct -- that the -- it's built in
- 19 part for export, and the government is kind of
- 20 insulating the ratepayer from the downside risk that
- 21 those export opportunities, if we can call them that,
- 22 or export risks, some people might look at it.
- 23 Is that what you're talking about, sir?
- 24 Is that a policy decision that would be open to -- to
- 25 make as to who bears the risk if the province wants to

- 1 proceed with export opportunities?
- 2 DR. ROGER HIGGIN: In this
- 3 jurisdiction, I wouldn't say that was an option that
- 4 would be considered. There are other jurisdictions
- 5 where it has been done, where they create a hydro
- 6 export corporation. And basically, it provides all of
- 7 the power, both the domestic and -- and the exports
- 8 from that corporation, by purchasing power or running -
- 9 running the generation assets.
- There are many, many models within the
- 11 electric industry. I don't see those -- those are so
- 12 fundamental shifts of government policy, direction, and
- 13 so on that I don't see them being on the table or even
- 14 in the range to be considered here.
- MR. ANTOINE HACAULT: So that -- that's
- 16 your assessment. Thank you, sir. The last question or
- 17 ques -- two (2) or three (3) questions, sir, relate to
- 18 your mitigation strategy.
- 19 DR. ROGER HIGGIN: Yeah, m-hm.
- 20 MR. ANTOINE HACAULT: There has been
- 21 some evidence that -- with respect to the guarantee
- 22 fee.
- DR. ROGER HIGGIN: M-hm.
- 24 MR. ANTOINE HACAULT: It used to be
- 25 charged at a rate of .5 of a percent instead of 1

- 1 percent, which might make a difference on the economics
- 2 and financials of particular plans.
- Is that the type of concept that you're
- 4 talking about, sir, where there's some flexibility that
- 5 has been previously shown and some changes in
- 6 government policy as to how much it charges that could
- 7 be used to make some plans look better?
- DR. ROGER HIGGIN: Yes. If we -- we
- 9 look at the government account and what are the -- the
- 10 inputs going to that government account -- and I think
- 11 we have to look at it in two (2) time -- time frames.
- 12 There's a time frame which is during the development
- 13 phase if -- if the new generation goes, where the
- 14 ratepayers are still paying those extra costs but there
- 15 is no additional government revenue from -- very
- 16 little, except from the capital taxes, the water
- 17 rentals. So they are, more or less, what they are at
- 18 the -- currently.
- 19 And then, as you say, if there are other
- 20 mechanisms, and I honestly don't know how much would be
- 21 available from changing the debt guarantee fee, what
- 22 that has with respect to the -- the consideration of
- 23 the borrowing, the huge amount of borrowing that's
- 24 being done and the bondholders now and future, that's a
- 25 certain consideration that would have to be thought

- 1 about and something that -- advice from rating agencies
- 2 and others would have to be obtained before considering
- 3 that.
- But that's a government policy issue.
- 5 It's -- certainly, if I was to distill it down, I only
- 6 see the one (1) mitigation external -- that's the --
- 7 that's the direct -- is from the government account in
- 8 some way. And then there's time issue because we just
- 9 discussed that. Once the revenues from export start
- 10 appearing, we can then at least see -- we can use some
- 11 of those to mitigate. And so it's that interim period.
- The revenues go into, anyway, Manitoba
- 13 Hydro. And they should have an effect. It's quite
- 14 clear from the Clean Energy Strategy. That's pointed
- 15 to quite clearly in that, to maintain the rates low or
- 16 reasonably. And that's also part of the Affordable
- 17 Energy Act, as well.
- 18 So basically, come back to try and
- 19 finish this. I only see really the major place to find
- 20 the kind of money I was talking about is a government
- 21 account.
- MR. ANTOINE HACAULT: Thank you.
- 23 Capital tax is another one where the government used to
- 24 not charge any capital tax and put capital tax -- that
- 25 would be a policy decision that would be available to

- 1 the government to -- to make plans look better?
- DR. ROGER HIGGIN: They could defer.
- 3 That is a rate issue. I mean, the -- the rate they
- 4 collected at now, but then they could say, Well, later
- 5 on we will -- we will increase the rate. Or they could
- 6 simply defer capital taxes on the new generation.
- 7 MR. ANTOINE HACAULT: And the last one
- 8 that would take away impacts from -- I shouldn't say
- 9 it's the only one, but the only one I want to deal with
- 10 unless you want to raise other ones is the Manitoba
- 11 Hydro Electric Board could change its policy on debt
- 12 equity back to what it to be to protect for two (2)
- 13 years of flood. And that would not be a 75:25 debt-
- 14 equity ratio, but a lot lower rate a -- rate -- rate
- 15 for debt-equity ratio.
- 16 That would be another way to smooth out
- 17 the rates and not require this huge investment into,
- 18 I'll call it, equity portion of the dams?
- 19 DR. ROGER HIGGIN: I've not looked at
- 20 that in -- in any -- any way at all. What I -- I'm
- 21 aware of is the new information that's been provided by
- 22 Manitoba Hydro about what would happen if we were to
- 23 relax -- I'll call that word -- the -- the debt-equity
- 24 ratio and the one point two (1.2) ICR coverage. Could
- 25 that be used to smooth the rate increases? That --

- 1 that's the only thing that I -- where the other one
- 2 I've not considered, looked at, or anything. Thank
- 3 you.
- 4 MR. ANTOINE HACAULT: Yes, thank you
- 5 very much, Dr. Higgins, for trying to answer my
- 6 questions to the best of your ability. Those are all
- 7 my questions, members of the panel.
- DR. ROGER HIGGIN: Thank you.
- 9 THE CHAIRPERSON: Merci, Me. Hacault.
- 10 Now, we've spoken about rate mitigo -- mitigation
- 11 strategies at the provincial level. And I know you are
- 12 familiar with the ones that exist in -- and the -- the
- 13 one program you mentioned is the one in Ontario.
- 14 Are you familiar with other strategies?
- DR. ROGER HIGGIN: No, in -- in this
- 16 case I -- I am aware of others have happened. But I --
- 17 that's the only one in the time frame that I -- I took
- 18 a look at as a potential model as being. But I believe
- 19 there are other jurisdictions. If you like, we could
- 20 look. But the only one that -- and that I -- the one
- 21 that I've used in my evidence is the Clean Energy
- 22 Benefit in Ontario, right? That's the only one.
- 23 THE CHAIRPERSON: Could you give us a
- 24 sense of how much work would be involved in determining
- 25 other provincial rate mitigation strategies that might

- 1 be available?
- DR. ROGER HIGGIN: Well, we're talking
- 3 -- are you now, Mr. Chair, talking about what I call my
- 4 terminology, the direct. That is, outside of the --
- 5 the normal rate making. It's a government -- call it a
- 6 government subsidy or funds from outside to mitigate.
- 7 Whether -- whether this was said, is that the -- that
- 8 the frame --
- 9 THE CHAIRPERSON: That's exactly what
- 10 I'm --
- 11 DR. ROGER HIGGIN: -- that's --
- 12 Canadian. Are you --
- 13 THE CHAIRPERSON: That's exactly what
- 14 I'm thinking of.
- DR. ROGER HIGGIN: Right. I would say
- 16 it's not a -- a study that will be -- we would be able
- 17 to do tomorrow. But within a week or so, I think we
- 18 could give you at least some direction on -- on that.
- 19 When we looked at the -- the other jurisdictions, the
- 20 only other question is are you looking both for
- 21 historic or current -- or current or both? Historic
- 22 and...
- 23 THE CHAIRPERSON: Well, I think that it
- 24 would be useful to -- to have a -- as complete a list
- 25 as possible if that -- if that can be done.

9516 1 DR. ROGER HIGGIN: M-hm. 2 MR. BYRON WILLIAMS: Could I just --3 DR. ROGER HIGGIN: My counsel's telling me, Don't make any commitments until I talk to you, 5 sir. 6 MR. BYRON WILLIAMS: If we could just 7 put Dr. Higgin off mic and myself as well and we'll huddle with --9 DR. ROGER HIGGIN: He's cutting me off. 10 MR. BYRON WILLIAMS: No, no. We'll -we'll huddle with Mr. Harper and then I'll check on all 11 12 their bills today. Just --13 THE CHAIRPERSON: Well, before we make 14 a formal undertaking, why don't we -- you -- we leave 15 that until after the break and you'll have an 16 opportunity to consult your -- your advisors. In the 17 meantime, we'll -- we'll continue with the process. So 18 with that, I -- I would call upon Mr. Gange on behalf 19 of the Green Action Centre, please. 20 MR. WILLIAM GANGE: Mr. Chair, because 21 I was away all morning in court -- not very happily, I 22 might add, but would I -- could I have five (5) minutes with Professor Millers before I -- I commence my cross-24 examination? 25 THE CHAIRPERSON: Yes, you can.

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 1
                   MR. WILLIAM GANGE: Thank you, sir.
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   --- Upon recessing at 1:55 p.m.
 3
    --- Upon resuming at 2:05 p.m.
 5
 6
                   THE CHAIRPERSON: I believe that we're
 7
    in position to resume the proceedings. Mr. Williams,
   please.
 9
                   MR. BYRON WILLIAMS:
10
    checking with part of our research department, Ms.
   Menzies and Ms. Gange. In terms of in -- inquiring
11
12
    into whether -- an undertaking to inquire into whether
13
   there are other examples of whether direct mitigation,
   as defined by Dr. Higgin, has been undertaken in
14
15
   Canadian jurisdictions, we -- we will agree to do that.
16
                   What I'm -- I'm suggesting is that we do
    a preliminary literature review after five (5) hours
17
18
   and if -- that might be enough and that we may say
   there's none or -- or there are -- are some examples.
   If we think we'll need to do anything more then that,
21
   we would report back afterwards.
22
                   THE CHAIRPERSON: I think that would be
23
   wonderful. Could you frame that as an undertaking?
24
                   MR. BYRON WILLIAMS: CAC (Manitoba)
   will undertake to review whether there are other
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9518 examples, apart from Ontario, in which there has been direct mitigation from government, from the government account as defined by Dr. Higgin up to a maximum of 3 five (5) hours to. And in the event that CAC (Manitoba) determines that additional research is required, it would report back before doing any further 7 research. THE CHAIRPERSON: Thank you for that. 9 10 --- UNDERTAKING NO. 131: CAC to review whether there 11 are other examples, apart 12 from Ontario, in which 13 there has been direct 14 mitigation from government, 15 from the government account 16 as defined by Dr. Higgin up 17 to a maximum of five (5) 18 hours to 19 20 THE CHAIRPERSON: Mr. Gange...? 21 22 CROSS-EXAMINATION BY MR. WILLIAM GANGE: 23 MR. WILLIAM GANGE: Thank you, Mr. 24 Chair. Dr. Higgins (sic), hello, my name is Bill 25 Gange. I am counsel to the Green Action Centre.

- I have a few questions for you. And in
- 2 your presentation you've -- you've talked about
- 3 advancing Keeyask or -- and -- and so making
- 4 considerations of advancing Keeyask, in terms of
- 5 domestic need, or looking at Keeyask as a merchant
- 6 plant.
- 7 Are -- are there different
- 8 considerations that go into that analysis, and if so,
- 9 sir, what would they be?
- 10 DR. ROGER HIGGIN: First of all, at
- 11 this point in time I'm not saying that Keeyask, based
- 12 on the information, is required to meet the domestic
- 13 need up until 2027 or beyond. So that's -- but that --
- 14 that's correct.
- But if you're asking me if that wasn't
- 16 the case and Keeyask, as originally filed, was to be in
- 17 service in 2019 and meeting by 2020 -- making a --
- 18 meeting the domestic load early in -- in the '20s, then
- 19 that would be a different scenario. But that's not
- 20 what we have. I understand that it's being advanced to
- 21 meet the WPS and the American -- American contracts
- 22 primarily. Correct?
- 23 Is that -- so you want me to try to --
- 24 how do I frame this to help you with this answer?
- 25 That's the question.

9520 MR. WILLIAM GANGE: The -- the -- what 1 I'm -- what I'm interested in is -- is knowing whether, in your analysis, it makes a difference in -- in terms 3 of -- of building Keeyask from the perspective of using it solely as -- as a merchant plant. 6 DR. ROGER HIGGIN: Yes, okay. What is 7 the difference? It is in the more subtle aspects of the analysis related to the costs and benefits and how those should be apportioned. It still has an overall 10 NPV for that particular scenario with a high, low, medium risks, and so on. The question is mostly the 11 12 distributional aspect. 13 MR. WILLIAM GANGE: Okay. Thank you. 14 15 (BRIEF PAUSE) 16 17 MR. WILLIAM GANGE: Okay. Thank you 18 for that, sir. In terms of the material that has been 19 filed, and your analysis of -- of the required needs and -- and the potential required needs, is there -- or 21 would there be an advantage in separating the -- the 22 expected in-service date of Keeyask and Conawapa, 23 making that -- that -- the -- the difference between 24 those two (2) in-service dates greater in order for a better analysis of the need for Conawapa?

9521 DR. ROBERT GIBSON: Which -- which plan 1 are we trying to look at? Are you saying, If we have a plan such as -- I was just looking at this, the K19/C25/750 with or without WPS? That's one plan. 5 MR. WILLIAM GANGE: Yeah, that -- so -so that's the scenario, sir. You -- you've got --6 7 DR. ROGER HIGGIN: Okay. MR. WILLIAM GANGE: -- you've got a --9 a six (6) year difference in --10 DR. ROGER HIGGIN: Yes. 11 MR. WILLIAM GANGE: -- in that. 12 DR. ROGER HIGGIN: So maintaining and -13 - see, with -- it doesn't matter if it was '25, but with a mid -- mid-'20s date. Is that what you're 14 15 saying? 16 MR. WILLIAM GANGE: Yes. 17 DR. ROGER HIGGIN: Yes. And the 18 difference in terms of what you're asking me to comment 19 on is a --20 MR. WILLIAM GANGE: The -- the --21 rather than -- than the Conawapa being a twenty-five 22 (25) year -- 2025, extending that backwards so that it 23 was, say, 2030. 24 Would -- would there be an advantage from a policy perspective in looking at that scenario?

- DR. ROGER HIGGIN: I'm just trying to
- 2 look at that from the perspective. I think we have to
- 3 answer it, because if we start diverting away from
- 4 certain plans, and then we're going to create another -
- 5 more scenarios, then this gets everything very
- 6 complicated, because -- so I think I'd rather try to
- 7 answer the question, say, on Plan 12 and say, What
- 8 happens at some point in the future between now and --
- 9 and '25, or the date where we have to commit Conawapa?
- 10 We keep it -- we keep -- we protect it. What would
- 11 happen at that point?
- 12 You have to -- because of the lead
- 13 times, you will have to protect Conawapa any '25. So
- 14 basically, what you do -- can you stop the -- stop the
- 15 development if that happens?
- I honestly don't know the answer. I
- 17 have not looked at that where -- all the plans have had
- 18 a later date for Conawapa, other than '25 in Plan 10 --
- 19 in Plan 12, so I haven't -- I haven't looked at that.
- 20 I'm sorry.
- 21 Is that -- I would like to help, but I
- 22 don't know if there's anything else that I can -- but I
- 23 don't think my -- from what I took to my colleague, I
- 24 don't see a scenario -- in essence, you're asking --
- 25 creating a scenario which is K19/Conawapa31-32/750 when

- 1 we assume maybe 750 is needed up front, and do we have
- 2 WPS or do we have other contracts?
- That's a scenario that I haven't seen, I
- 4 haven't thought about, that's all.
- 5 MR. WILLIAM GANGE: Fair enough, sir.
- 6 If you haven't thought about it, then -- and -- and
- 7 that -- that's fair enough.
- B DR. ROGER HIGGIN: All right.
- 9 MR. WILLIAM GANGE: Thank you. You
- 10 made the comment that Crowns must be mandated, whereas
- 11 private companies -- private utilities can be
- 12 incentivized.
- 13 Is that correct?
- 14 DR. ROGER HIGGIN: You're now referring
- 15 to demand-side management?
- 16 MR. WILLIAM GANGE: Yes, that's
- 17 correct, sir.
- 18 DR. ROGER HIGGIN: In -- that has been
- 19 my -- my experience about what works best. To use the
- 20 word 'must' would -- would be more than I would go. I
- 21 think they are responsive to incentives if you're a
- 22 Crown -- if you are investor owned, particularly if
- 23 those incentives directly have -- go to the
- 24 shareholder. If you are a -- a Crown, then sometimes
- 25 it's clear that -- that mandating is the -- is the most

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- 1 likely approach that will -- will achieve the objective
- 2 of an aggressive DSM program.
- 3 MR. WILLIAM GANGE: I believe that you
- 4 also mentioned that the Ontario Crowns are -- are
- 5 achieving better results than their mandate?
- DR. ROGER HIGGIN: If we look at the --
- 7 the recent -- the OPA programs, the reports I've seen -
- 8 just I -- I don't, you know, excuse me, I do not
- 9 follow this on a day-to-day. I sort of surf on some of
- 10 -- particular areas or if I get emails, however, it
- 11 seemed to me that on a high level, the plan was doing
- 12 pretty close to target.
- 13 There were some utilities that had
- 14 exceeded, and some within the eighty (80) -- so utility
- 15 spectrum in Ontario and others that were -- were well
- 16 above their targets. So overall, it seemed to be that
- 17 the -- that they were on -- on target.
- 18 MR. WILLIAM GANGE: And you -- you may
- 19 have -- you may have said -- well, you mentioned that
- 20 you don't -- you don't study this in particular, but do
- 21 -- do you have any thoughts around why it is that some
- 22 of the utilities actually do better than the mandated
- 23 numbers?
- 24 DR. ROGER HIGGIN: I think there are
- 25 many factors that go into that. Even though the

- 1 targets are set, for example, on the number of
- 2 customers being one of the main inputs, that's a
- 3 logical thing, or the load, which is another thing.
- 4 The targets are set. The -- there are a number of --
- 5 of other factors that necessarily aren't included in
- 6 setting those targets, for example, geographic
- 7 distribution, demographics and -- and no on -- and so
- 8 on, that tend to affect things like the costs of
- 9 delivering the programs, and also affect participation
- 10 rates.
- 11 Participation rates are a fundamental
- 12 variable that is very difficult. Even with the same
- 13 program delivered, as OPA's programs are across eighty-
- 14 six (86) utilities, participation rates are different
- 15 across those utilities for the same programs with --
- 16 and then you -- those include those considerations of
- 17 demographics, including income, geogra -- geography,
- 18 where people live, and so on, yes.
- 19 MR. WILLIAM GANGE: And I understand
- 20 that, sir, that there may well be those kinds of
- 21 extrinsic factors, but I was kind of wondering if -- if
- 22 you have an ability to say, what intrinsic factors are
- 23 there within those utilities that, from your
- 24 perspective, lead them to outdo the mandate?
- DR. ROGER HIGGIN: Okay. I -- I

- 1 cannot, within that context, tell you that answer. I
- 2 can't answer that question. I have experience in other
- 3 areas where what are, I'll call them, the critical
- 4 success factors that go into DSM programs in general,
- 5 and whether those are -- are present is a factor.
- 6 And this goes to -- back to, for
- 7 example, promotion of the programs, the access,
- 8 usability, easy access. The other one could be
- 9 universality issues across areas that are different --
- 10 how can we put -- different mix of residential
- 11 programs, different building types, for example,
- 12 vintage. Vintage of buildings would be one variable
- 13 that is variable amongst them, so old houses versus all
- 14 new houses, bigger houses, small houses.
- Even though it's the same program, there
- 16 are different participation rates, and there are
- 17 different amounts of energy and savings that you can
- 18 realize, so there's a whole bunch of variables.
- 19 So I think you have to bring it back to,
- 20 the fact is, that as long as the programs are good and
- 21 they are well promoted, and leaving aside those intr --
- 22 those extra factors, then you will have a range -- a
- 23 range of success, if you like, or -- or meeting the
- 24 targets and it should be fairly narrow if the program
- 25 is well designed -- designed. It should be rela --

- 1 relatively narrow, you know, a band with, say, plus or
- 2 minus 10, 20 percent each side of the target.
- And I haven't done that analysis, but
- 4 that would be something that would -- you would judge
- 5 as OPA, I will call it DSM boss, and see whether or not
- 6 people are doing good or bad, and then as the -- the
- 7 boss, you would hopefully go and talk to them and see
- 8 what they can do to try and get up to the target,
- 9 because I think that's another element here in having,
- 10 quotes, "the DSM boss," OPA. I don't know if that
- 11 helps.
- MR. WILLIAM GANGE: Thank -- thank you,
- 13 sir. That -- that does help. I'm -- I'm going to move
- 14 on to another issue, and that is affordability for
- 15 vulnerable customers. You mentioned the Ontario Clean
- 16 Energy Benefit.
- DR. ROGER HIGGIN: Yes.
- 18 MR. WILLIAM GANGE: Correct, sir? Is
- 19 that benefit available to all, or is it available to
- 20 vulnerable customers only?
- 21 DR. ROGER HIGGIN: It is all -- the
- 22 Clean Energy Benefit in Ontario is only avail -- is
- 23 available to all residential customers with a
- 24 consumption of 3,000 kilowatts or less. That's -- is
- 25 that correct? Yes, sorry, kilowatt hours. I meant

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25

take a -- to act on that.

9528 kilowatt hours as opposed to -- so that's -- that's it. There is -- if you look to the Ontario 2 budget today, which is being tabled, there's some 3 proposals that are made in that budget to remove that program when it expires at the end of 2015. 6 And -- but at the same time, for those -- for a residential sector to -- to also remove the debt charge from the bill. So there -- there's a -there's a debt retirement charge on the Ontario bill, and that it will be removed. That's the proposal of 10 11 the current lib -- liberal government to sort of 12 compensate them. By taking away the benefit, we're 13 taking away also the -- the debt retirement charge, but 14 only, again, for the residential sector. It stays --15 the -- the debt retirement charge stays for the 16 industrial customers, the larger customers. 17 Lastly, they're saying -- they're asking 18 -- they're going to ask the OEB to quarterback 19 developing a replacement program for low-income customers. There is no details on that at -- at this 20 21 point, but that would be because removing the debt 22 retirement charge does not fully compensate for the 23 Clean Energy Benefit, and so there's still a gap. And

therefore, they're asking the OEB, in this proposal, to

- 2 budget day. It's a minority government. We don't know
- 3 whether it will get the support of the NDP, which is
- 4 required to go forward with this, and therefore, these
- 5 changes are -- are proposed.
- 6 If -- if every -- anybody's interested
- 7 in that, I am -- based on press releases and so on, I
- 8 have a short note that I -- I could table with these
- 9 changes to -- subject to the caveat that was what was
- 10 happening four (4) days ago, and it -- it may differ
- 11 from what is actually announced in -- in the budget.
- 12 So if that would be helpful, I -- I can
- 13 put that note on the -- on -- on the record.
- 14 THE CHAIRPERSON: Yes, that would be
- 15 useful.
- 16 DR. ROGER HIGGIN: Okay. So I have an
- 17 undertaking to do that. Thank you.
- 18 MR. BYRON WILLIAMS: And my hands are
- 19 getting a little sore here. It's all good. We will --
- 20 we are -- Dr. Higgin is undertaking to table a briefing
- 21 note prepared with regard to the -- regards to proposed
- 22 changes to the Clean Ener -- Energy Benefit.
- 23 And I'm going to modify the undertaking
- 24 very slightly and say that he will review the budget
- 25 and just ensure that it's current. If -- if he -- if

9530 he's going to do all that -- if -- if he's going to make us do the undertaking, he can read the budget. 3 DR. ROGER HIGGIN: That means we will be tomorrow. 5 --- UNDERTAKING NO. 132: CAC to table a note with 6 7 regards to proposed changes to the Clean Energy Benefit 9 and review the budget to 10 ensure it is current 11 12 CONTINUED BY MR. WILLIAM GANGE: 13 MR. WILLIAM GANGE: Thank you, Mr. Higgins (sic). But -- but with the current Ontario 14 15 Clean Energy Benefit, when you -- when you said it's 16 for three thousand (3,000) for -- for homes with 3,000 kilowatt hours, did you say, "or less"? 17 18 DR. ROGER HIGGIN: Or less. 19 MR. WILLIAM GANGE: So if -- if a -- if a home uses more than that, Byron, do you want to...? 21 MR. BYRON WILLIAMS: I might -- hold --22 Roger, hold on. Mr. Harper might have a fact... 23 MR. WILLIAM HARPER: I -- I believe if 24 -- if a home uses more, they get the benefit for up --25 up to -- for up to that up -- for up -- for up to that

- 1 level of consumption.
- 2 MR. WILLIAM GANGE: I -- I see. Okay.
- 3 So -- so there's -- it's not that you --
- 4 MR. WILLIAM HARPER: For up to that
- 5 level of consumption, but not for covering the portion
- 6 of their bill that's for consumption over and above
- 7 that.
- 8 MR. WILLIAM GANGE: Thank you, Mr.
- 9 Harper. That -- that clarifies that.
- 10 THE CHAIRPERSON: Just to clarify,
- 11 though, it applies to everybody, then?
- DR. ROGER HIGGIN: It applies to all
- 13 residential customers regardless of income, domicile or
- 14 any -- anything else, as long as they have -- and it's
- 15 paid up to 3,000 kilowatt hours, correct. All right?
- 16 And now that -- just to be clear, this
- 17 is Phase 2 of the -- of the benefit. It started off in
- 18 2011, with more people being eligible and higher
- 19 consumption and included what we would call small
- 20 commercial establishments with higher loads.
- 21 But that was modified in 2012, and this
- 22 is very clearly a money issue, you know, basically that
- 23 -- that you have to do something to avoid this, because
- 24 the other thing in the budget, I expect, every -- the
- 25 press -- press says that instead of being 13 billion

- 1 deficit, the Ontario deficit is going to be forecast at
- 2 15 plus billion, and therefore, you're going to have a
- 3 -- have a fiscal problem to try and deal with.

- 5 CONTINUED BY MR. WILLIAM GANGE:
- 6 MR. WILLIAM GANGE: Thank you, Dr.
- 7 Higgins. The -- you also, near the end of your
- 8 evidence, made a comment that we haven't seen a
- 9 business case yet for Conawapa.
- 10 Do you recall making that statement,
- 11 sir?
- 12 DR. ROGER HIGGIN: Yeah, I think what
- 13 I'm perhaps saying is that the current base -- business
- 14 case talks about Conawapa, but the focus, in my view,
- 15 is still towards the early years, simply because as you
- 16 go further forward to, we'll call -- we'll use your
- 17 number C25, then the uncertainties increase, et cetera,
- 18 et cetera.
- 19 And basically, the plan that's coming
- 20 forward also is meant for unidentified, at this point,
- 21 exports and -- and a number of factors. So that's what
- 22 I would say are pieces that are missing in the current
- 23 -- current plan. I think that Hydro itself has
- 24 acknowledged this. I've seen testimony that says
- 25 basically, We acknowledge that we will need to deal

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- 1 with the -- the business case for Conawapa once we have
- 2 more information on -- on many of the things.
- 3 That could be, in their case of view, an
- 4 update, or -- or it could be significant, depending on
- 5 what happens. So that's what I'm saying. Now if we
- 6 say we're going to maintain Conawapa, but we're going
- 7 to deal with my, quotes, "Phase 1," only, then that
- 8 becomes something that is a tangible and doable thing
- 9 to bring back that business plan in two (2) or three
- 10 (3) years' time. That -- that's all -- that's what I'm
- 11 saying.
- 12 MR. WILLIAM GANGE: And are you saying
- 13 that you're satisfied with the business case that's
- 14 been presented for Keeyask?
- DR. ROGER HIGGIN: That's a very
- 16 interesting question. I -- I would say I shouldn't be
- 17 recommending proceeding with Keeyask. When I was asked
- 18 to do my bottom line with conditions, if I didn't think
- 19 the business case was at least adequate, so basically,
- 20 that's the case.
- 21 MR. WILLIAM GANGE: Thank you. And
- 22 when you're saying that that business case is adequate,
- 23 is that taking into account the flat load scenario that
- 24 is being presented? Not -- not by Hydro, but -- but by
- 25 my client and CAC?

- 1 DR. ROGER HIGGIN: The business case
- 2 for Conawapa is now to meet export opportunity. That -
- 3 that is what I'm saying. It's being advanced and
- 4 will eventually meet domestic load, of course. So it's
- 5 the advancement that is what I'm talking about when I
- 6 say the business case.
- 7 The contracts are there. This Pathway
- 8 4, the intertie, those type of, I'll call them,
- 9 prerequisites. The economics, I think MIPUG asked me -
- 10 it's -- it's considerably less from an NPV, but it's
- 11 still positive.
- 12 MR. WILLIAM GANGE: And sir, I -- I
- 13 just want to make sure that -- that I heard you right
- 14 and that you spoke it right, because we had -- my
- 15 question had -- had moved to the business case for
- 16 Keeyask, and in that last answer, you -- you used
- 17 Conawapa.
- 18 So my question had been, Assuming a flat
- 19 load scenario with respect to Keeyask, when you say
- 20 that the business case for Keeyask has been made out,
- 21 is -- are -- was your answer in reference to
- 22 Keeyask?
- 23 DR. ROGER HIGGIN: Yes, as being
- 24 advanced to meet export opportunities.
- MR. WILLIAM GANGE: Yes, thank you.

- 1 And I think --
- 2 DR. ROGER HIGGIN: That -- that --
- 3 that's really what I was -- that's the context. That's
- 4 the whole thing that I'm saying to my client. I -- I
- 5 think there's a case there for that, and basically,
- 6 there are others who will disagree that if the load's
- 7 flat, you don't need it for the -- for the domestic
- 8 load, and then you shouldn't bother pursuing the export
- 9 opportunity.
- 10 My reading of the terms of reference, it
- 11 asked Hydro to look at both -- both components of the -
- 12 so Hydro asked the PUB to -- sorry, to look at both.
- If you were to put in 'or', and that's
- 14 perhaps the question, that would be a very different
- 15 question.
- 16 MR. WILLIAM GANGE: Okay. Well, put in
- 17 the word 'or', and perhaps you could answer that if you
- 18 -- if you could, sir.
- 19 MR. BYRON WILLIAMS: And -- and just --
- 20 MR. WILLIAM GANGE: I'll -- I'll take
- 21 you up on your -- on your -- your request.
- MR. BYRON WILLIAMS: And -- and just
- 23 one (1) second before Dr. Higgin does, and I -- I have
- 24 no objection to him taking you up on the request. Just
- 25 -- one of your previous questions was premised on a

9536 flat load for Keeyask, and I don't see evidence in the record that would allow Dr. Higgin to -- to answer that in terms of we have the -- what we are -- we would 3 consider the flawed Scenario 3 analysis, and -- and we have the -- the Scenario 2 analysis, but we don't have a -- a Dunsky-like flat DSM in -- in our view. So that would -- that would be just my objection to that 7 premise to the question. 9 CONTINUED BY MR. WILLIAM GANGE: 10 11 MR. WILLIAM GANGE: And, Mr. Williams, 12 I was just -- I was really trying to ask Dr. Higgin, 13 assuming the Dunsky scenario of a flat load, not -- not 14 the evidence that's been presented by Manitoba Hydro. 15 That's -- that was what I was trying to -- to put to 16 him. 17 Well, I -- I will DR. ROGER HIGGIN: 18 comment on that. The change in load under the --19 regarding Keeyask is that it changes the number of years advancement that -- that is available --21 required. Whether or not a -- a flat -- flat load, and 22 the Chairman asked me this, is something that I would 23 advocate. 24 I haven't done the analysis. I said, 25 basically, Let's start with Level 2, and now there's a

- 1 concern about Level 2 that you're aware of that Mr.
- 2 Dunsky's made about sustained savings after 2018, but
- 3 nonetheless, start with Level 2.
- 4 Can you go further? I said, That's one
- 5 of the main issues when you look at that -- that
- 6 component of the -- the load forecast and DSM that is
- 7 making a call, a judgment, about -- about that, because
- 8 it's -- it has major impacts on the question of how you
- 9 treat advancement of -- of Keeyask, the number of years
- 10 that it's going to be advanced, and so on.
- 11 That, I think, is -- if that's helpful,
- 12 I can try again, but that -- if that helps.
- MR. WILLIAM GANGE: That's helpful. Do
- 14 -- do you want to make any other comments about the
- 15 'or' question?
- DR. ROGER HIGGIN: Which is, sorry,
- 17 the...?
- 18 MR. WILLIAM GANGE: When -- when --
- 19 DR. ROGER HIGGIN: 'Or'? I haven't --
- 20 I haven't analyzed that, except because, as I said,
- 21 when looked at my original phasing issue, I -- I said
- 22 to myself, Let's see what's going to guide me to look
- 23 at the question of which way I would recommend to my
- 24 client, and I came to the conclusion that the terms of
- 25 reference didn't say, "and," they said, "or," and that

9538 -- my -- my advice to the client was, for that reason, I am recommending my proposed pathway to be considered. 3 As I said, you weren't here, sir, so I better say it to you again, my client may very well throw that one out on its ear, and I'm certainly not speaking for her and definitely not for the panel. 7 MR. WILLIAM GANGE: Thank you, Mr. Chair. Those are my questions. Thanks very much. 9 THE CHAIRPERSON: Thank you. Mr. Orle, 10 any questions on behalf of MKO? 11 MR. GEORGE ORLE: Yes, I do, Mr. Chair. 12 Thank you. 13 CROSS-EXAMINATION BY MR. GEORGE ORLE: 14 15 MR. GEORGE ORLE: Sir, my name is George Orle. I represent MKO. I believe you 16 understand that that's a -- an organization of First 17 18 Nations in Manitoba, Northern Manitoba? 19 DR. ROGER HIGGIN: Yes, sir, I do. 20 MR. GEORGE ORLE: Okay. I'd like to 21 refer to, first of all, to your main report. That's 22 CAC Exhibit number 27, and if I could have page 27 of 23 that brought up, please? And if you'd go down to the bottom of the page for the footnote? 24 25 DR. ROGER HIGGIN: M-hm.

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9539 MR. GEORGE ORLE: 1 In your slide show you -- you refer to vulnerable consumers, and then you refer back to your report for the definition of that, 3 and I see the definition is in footnote number 42. 5 Where did you get that definition from, 6 sir? 7 DR. ROGER HIGGIN: It was developed by me based on several factors. They are as follows. Income, and I used LICO, low income, and I used, to be clear, not the Ontario number which defines, for 10 example, for programs and so on, one thirty-five (135). 11 12 Mr. Stevens had an imp -- appendix, 13 which provided, and I think I provided some information on that, the income levels in Manitoba in certain 14 15 rural, urban, and other settings, and I chose the --16 the one that has for Winnipeg, okay? 17 The -- though -- so income was that 18 times 125 percent of LICO, so that's -- that was the 19 first component. You could say, to some degree, it would be characteristic of a lower -- low or lower 21 income customer, okay? 22 The next thing that I -- I looked at and 23 said, Well, who pays most for their electricity in this 24 -- this group of residential customers? And then -- so 25 I looked at and I've listed the -- the references in

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- 1 the appendix, not here, as being customers that -- so
- 2 out of the hundred and sixty-seven thousand (167,000)
- 3 residential customers, sixty-seven thousand (67,000) of
- 4 those have both electric heat and hot water, so they
- 5 are the ones that are consuming most of the residential
- 6 electricity.
- 7 So that was the second characteristic.
- 8 So that's my definition from my analysis, saying, Well
- 9 -- and the reasons for it are there's a combination
- 10 there of two (2) things. One is low -- a lower income
- 11 and the other is high, or high end consumption of
- 12 electricity.
- So those are the people that I said
- 14 would be more vulnerable to -- to rate, or in this
- 15 case, bill increases. And that's why I chose them.
- 16 MR. GEORGE ORLE: Okay. If you go up
- 17 to line 779 on that same page, you talk about
- 18 vulnerable consumers' impact. And in that area you
- 19 include cost of power as a percentage of income for
- 20 seniors and low-income Manitobans. So that you use a
- 21 very general phrase of 'seniors'. And I -- I would
- 22 think that what you meant is seniors on low fixed
- 23 incomes.
- 24 DR. ROGER HIGGIN: That is totally
- 25 correct. However, this was the sort of initial

- 1 screening of -- of affordability, defi -- defining it,
- 2 but what was used was the more -- more defined, more
- 3 constrained that I -- that I just outlined to you.
- 4 But, yes, you are correct --
- 5 MR. GEORGE ORLE: Okay.
- 6 DR. ROGER HIGGIN: -- in that respect.
- 7 MR. GEORGE ORLE: And -- and I think
- 8 that your -- your definition of 'vulnerable consumers'
- 9 would in fact include anyone that was on a fixed income
- 10 that was at a low level?
- DR. ROGER HIGGIN: Yes, perhaps the --
- 12 the only difference there would be the question of the
- 13 level of consumption. A family of one (1) to seven
- 14 (7), yes, that's the one. A family of seven (7), you
- 15 have higher consumption, obviously. So that would be
- 16 perhaps the only one. Therefore, their bill may very
- 17 well be lower, because there's only one (1) person
- 18 living in the house --
- MR. GEORGE ORLE: Okay.
- 20 DR. ROGER HIGGIN: -- or two (2) if --
- 21 we hope, man and wife, kids gone, and that would be bas
- 22 -- basically one of the factors.
- 23 MR. GEORGE ORLE: All right. If I
- 24 could now refer you to slide 10 of your presentation.
- 25 And under observations, you indicate that the impact on

- 1 Manitoba Hydro ratepayers' bills in the short term,
- 2 2015 to 2025, is not acceptable. And you stop with a
- 3 semicolon and then you qualify, "particularly for
- 4 vulnerable consumers."
- 5 I read that as being your opinion that
- 6 the rates -- the increase in the rates is not
- 7 acceptable in general for all ratepayers and then in
- 8 particular for vulnerable consumers.
- 9 Am -- am I reading that correctly,
- 10 or...?
- DR. ROGER HIGGIN: Yes, you are.
- 12 MR. GEORGE ORLE: Okay. And in terms
- 13 of the -- the fact that you -- you feel it's not
- 14 acceptable, I'd just like to go over the reasons again
- 15 why you find the rate increases to be not acceptable.
- 16 And I believe you -- you had two (2)
- 17 reasons, one being that the past rate increases were at
- 18 a limited amount?
- 19 DR. ROGER HIGGIN: I wouldn't call it
- 20 limited; 3 percent is --
- MR. GEORGE ORLE: Okay.
- DR. ROGER HIGGIN: -- reasonable, yeah.
- 23 Yes.
- 24 MR. GEORGE ORLE: Yes. And I believe
- 25 the second reason was the intergenerational aspect of

- 1 the -- of the increases?
- DR. ROGER HIGGIN: No, I would say that
- 3 was a factor. The -- the other factor was sustained
- 4 and that -- rather than a one (1) year blip or a short-
- 5 term blip, sustained long-term increases.
- 6 MR. GEORGE ORLE: Right. And the fact
- 7 that there had been lower rate increases in the past
- 8 doesn't mean that we, as consumers or as ratepayers,
- 9 have a right to think that we're always going to be
- 10 paying the same amount for electricity?
- DR. ROGER HIGGIN: Absolutely not, no.
- 12 MR. GEORGE ORLE: It's more of a factor
- 13 that, as consumers, we budget for what we are going to
- 14 do and we budget it based upon what we feel might be
- 15 our income and our income level?
- 16 DR. ROGER HIGGIN: Right. We -- we
- 17 look at last year's -- if you're a budgeting person,
- 18 you look at last year and you say, Okay, well, it's
- 19 going to be the same, or we'll add 2 percent. We'll
- 20 add 4 percent for this component. One of the issues
- 21 with electricity that for some households it's a
- 22 relatively -- in Manitoba compared to Ontario, it's
- 23 relatively a small component of -- of an average
- 24 family.
- 25 That brings us back to some questions

- 1 about people who are not the average family, with a --
- 2 an income of a hundred thousand, you know.
- MR. GEORGE ORLE: There's not too many
- 4 people that can guarantee that they are going to have a
- 5 raise in their income for the next twenty (20) years of
- 6 2 percent above the -- the cost of living.
- 7 DR. ROGER HIGGIN: I would say that's
- 8 quite likely, and there's also the question whether
- 9 they are all going to be employed for twenty (20) years
- 10 either.
- MR. GEORGE ORLE: And with people on
- 12 fixed incomes or incomes that are fixed by government,
- 13 whatever level --
- DR. ROGER HIGGIN: Yes.
- 15 MR. GEORGE ORLE: -- there's also more
- 16 of a reason to feel that there'll be cutbacks as
- 17 opposed to quaranteed increases of 2 percent for the
- 18 next twenty (20) years.
- 19 DR. ROGER HIGGIN: History, from just
- 20 my general knowledge, is that, yes, we'll call it,
- 21 assistance programs do not, unlike government pensions,
- 22 be indexed to 2 percent. They tend to be going up at
- 23 lower -- at a lower rate.
- MR. GEORGE ORLE: Okay.
- DR. ROGER HIGGIN: On the assistance

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- 1 programs. So if their other income is not in -- not
- 2 keeping up with inflation, then, yes, that would be the
- 3 issue of a scenario where these people will gradually
- 4 fall into the vulnerable class, I would suggest to you.
- 5 MR. GEORGE ORLE: Okay. I'd like now
- 6 to move a little further down that -- the same page and
- 7 -- and deal with mitigation options. And you set out
- 8 that there's a series of mitigation options, some of
- 9 them dealing with Manitoba Hydro's ability to deal with
- 10 them.
- 11 And I believe you deal with that with
- 12 the rate of smoothing of the 3.95 percent?
- DR. ROGER HIGGIN: I'm interpreting,
- 14 that seemed to be, quote, "a desirable target" for
- 15 Manitoba Hydro to look at as a -- on -- just under 4
- 16 percent, thereabouts. And there is a bit of history
- 17 around that as well. So that was why the three point
- 18 nine-five (3.95) was the original average long-term
- 19 increase due to the Preferred Plan. But there's a -- a
- 20 bit of history around other tar -- periods where
- 21 Manitoba Hydro seems to have been looking at somewhere
- 22 around a -- a 4 percent. So the two (2) tend to come
- 23 together as a number which is something to -- at least
- 24 to look at.
- MR. GEORGE ORLE: That's what I was

- 1 getting at, sir. I -- I understood the evidence to be
- 2 that the smoothing would be to deal with the increases
- 3 that might be over and above 3.9 percent that have been
- 4 predicted.
- 5 DR. ROGER HIGGIN: Certainly that's
- 6 Manitoba Hydro's, and that's why, as I said here, there
- 7 may be limitations to what can be done with respect to
- 8 that, in terms of debt-equity ratio, in -- interest
- 9 coverage, and so on, depending on the number of years
- 10 and so on. There may be limitations with respect to
- 11 that.
- MR. GEORGE ORLE: Okay.
- DR. ROGER HIGGIN: I haven't done the
- 14 analysis. I just know there's been a few filings
- 15 recently that show some scenarios what would happen if
- 16 you did relax the DE and if you did relax the one point
- 17 two (1.2). There's been some of that provided.
- 18 Whether or not those are viable things, I haven't read
- 19 the testimony of Manitoba Hydro to say, Oh, those are
- 20 wonderful things that we can do easily and we don't
- 21 have a problem. You know? I don't know.
- MR. GEORGE ORLE: Okay. And one of the
- 23 other ones that you talked about, in terms of
- 24 mitigation of rates, was a -- a change in the debt-
- 25 equity ratio over a period of time?

9547 DR. ROGER HIGGIN: Yeah, that's in 1 essence the same one I just -- just referred to. 3 MR. GEORGE ORLE: Yeah. And that -that's also a Manitoba Hydro initiative. That -that's not something that the consumer or the -- or the -- or anyone else is going to be able to control? 7 DR. ROGER HIGGIN: Certainly not the consumer. I think that there are some other people that need to be involved in -- in a strategy like that. It would be including the Board. It would have to be 10 11 able to consider that from the financial aspects of the Utility and whether the government would be willing to 13 do that with respect to the overall financial 14 requirements of the province. And the impact, if any, 15 on debt ratings. All of those factors are in play 16 here. 17 MR. GEORGE ORLE: The third mitigation 18 option that you -- you dealt with in your testimony was

- 19 DSM programs?
- DR. ROGER HIGGIN: Yes.
- 21 MR. GEORGE ORLE: And in your slide you
- 22 -- you qualify that again with -- with a word, and you
- 23 use 'aggressive' DSM programs.
- 24 DR. ROGER HIGGIN: Correct. That's
- 25 relative to the history.

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9548 MR. GEORGE ORLE: I'm not sure whether 1 you had an opportunity to review the evidence we received from Mr. Dunsky, but in his evidence he talked 3 about some of the difficulties in preparing or having DSM programs that are geared towards First Nations communities? 6 7 DR. ROGER HIGGIN: To be honest, I skimmed through his slide deck but I did not pick that up and did not -- I'm not really in a position to answer. I know from my own experience of -- in 10 Ontario, and including the utilities there that have 11 12 First Nations communities, the increased difficulties 13 of developing and implementing DSM programs in those communities. So from my own experience, but I didn't 14 15 pick that particularly up in Mr. Dun -- Dunsky's slide deck. 16 17 But your own MR. GEORGE ORLE: 18 experience is -- is similar to what I'm telling you 19 here, you --20 DR. ROGER HIGGIN: Yes. 21 MR. GEORGE ORLE: -- you said? Okay. 22 DR. ROGER HIGGIN: There's a whole set 23 of additional barriers to implementing DSM programs in 24 those communities. 25 MR. GEORGE ORLE:

Okay.

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DR. ROGER HIGGIN: And they come to

- 2 language, communications, income, condition of the
- 3 housing stock, et cetera, et cetera. There are a whole
- 4 bunch of additional barriers that need to be addressed.
- 5 I -- in a standard residential DSM program, just to
- 6 illustrate that, one of the conditions that has to be
- 7 there is that there are no substantial structural or
- 8 other integrity issues with the house before you start
- 9 to do the retrofits, whether it be basement insulation,
- 10 attic insulation, whatever. If that's there, then
- 11 you're off the list. You're done.
- 12 The gas utilities, we've -- we've fought
- 13 with them over that and they now have instituted in
- 14 their programs for residential an up to one thousand
- 15 dollar (\$1,000) health and safety ben -- installation
- 16 cost that can be in -- to get people over to the
- 17 threshold where they would become eligible for the
- 18 program.
- MR. GEORGE ORLE: Okay.
- DR. ROGER HIGGIN: So --
- 21 MR. GEORGE ORLE: And -- sorry, sir.
- 22 And I think you would say it's fairly common knowledge
- 23 throughout Canada that the housing stock on First
- 24 Nations reserves is either poor, substandard, or -- or
- 25 not of the same quality as you would find in Southern

- 1 communities.
- DR. ROGER HIGGIN: That's correct, sir.
- 3 DR. HUGH GRANT: Before you leave this
- 4 slide, could I ask --
- 5 DR. ROGER HIGGIN: Sure.
- DR. HUGH GRANT: You're on safe ground
- 7 here, because a CAC consultant testified yesterday that
- 8 all consumers are irrational, so I just --
- 9 DR. ROGER HIGGIN: I didn't hear him.
- 10 I've had --
- DR. HUGH GRANT: I just want to go back
- 12 to this rate of change in a rate versus the absolute
- 13 rate. So if you were in Ontario -- if Ontario were to
- 14 freeze their rates for ten (10) years so that at the
- 15 end of ten (10) years they'd be at about what these
- 16 Manitoba rates projected forward would look like, would
- 17 you describe that as unacceptable?
- DR. ROGER HIGGIN: Absolutely not.
- 19 DR. HUGH GRANT: So it's more the --
- 20 it's the fact that we're used to the low prices, and so
- 21 the fact -- it's the rate of increase that we focus on
- 22 more than the absolute?
- 23 DR. ROGER HIGGIN: I would add one more
- 24 factor, and that's called the affordable energy or ORA
- 25 in Manitoba. Isn't that an objective of the

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- 1 government, to maintain those lower rates more to be
- 2 the most competitive in -- in Canada? So there is that
- 3 additional factor here.
- I mentioned that -- if you want to read
- 5 my little take on this, it's in the appendix to my
- 6 report. And the gap actually, in my analysis from
- 7 responses from Hydro, actually does close a bit to
- 8 Quebec. You're still the leader in low prices, but it
- 9 closes a bit.
- DR. HUGH GRANT: Okay. You've got me
- 11 there. I didn't read your appendix, so. But I will
- 12 say that another CAC consultant said we should price
- 13 energy at the appropriate rate and not --
- 14 DR. ROGER HIGGIN: Well, there's been a
- 15 long time -- I've -- I've been a practitioner if you
- 16 like on the rate side and so on of DSM. And there's
- 17 always been the group that says, Raise the prices and
- 18 then conservation will happen.
- 19 DR. HUGH GRANT: Can I get one (1) more
- 20 point in? And when say this I'm only doing this
- 21 because I know you were completely sincere, but
- 22 sometimes, you know, other people aren't. And do think
- 23 it's --
- DR. ROGER HIGGIN: Sorry.
- DR. HUGH GRANT: -- but that I'm

- 1 doubting your views at all. But it is always curious
- 2 how the middle class discovers the poor when it's in a
- 3 sort of opportunistic way. And so is it possible that,
- 4 oh, the Consumers' Association of Canada, for example,
- 5 would argue that, Oh, no, don't touch my rates, it's
- 6 okay for me -- I'm just doing it for the poor people,
- 7 so the vulnerable group, so.
- 8 Is -- have you heard that sort of
- 9 argument before?
- 10 DR. ROGER HIGGIN: Well, yes, because
- 11 those groups are represented in other places by others
- 12 than CAC. But CAC -- and my understanding is --
- 13 because I went to the gas here in 2006 for CAC and said
- 14 to your Board, Guys, you've got to do more about low-
- 15 income programs. Go and find the testimony. It's in
- 16 my -- it's in my resume.
- 17 So the answer is I'm a pusher for trying
- 18 to get to remove this disparity, not only on rates, but
- 19 also in accessibility and being able to benefit from --
- 20 from DSM programs. And that leads to a whole category
- 21 of low-income programs.
- 22 Manitoba Hydro has acted on that in the
- 23 last how ever many years. They've developed an
- 24 impressive, in -- in Canadian standards, low-income
- 25 programs. But still nothing's perfect, but they have

- 1 done a good job. I don't why Mr. Dunsky is criticizing
- 2 them, because he was hired initially to help him dev --
- 3 help them develop them, but anyway.
- DR. HUGH GRANT: Would you agree with
- 5 Dr. Simpson that the best way to address the
- 6 affordability issue is through some other mechanism
- 7 than keeping prices lower than the other ones might be?
- 8 So in other words, some sort of Clean
- 9 Energy Benefit or some other mechanism like that
- 10 outside of the pricing mechanism, per se?
- 11 DR. ROGER HIGGIN: I think it's -- I --
- 12 I think that's an important option to look at. And
- 13 subject to the budget, that seems to be where Ontario's
- 14 going to head. That they're going to say, We're going
- 15 to divide that residential class and we're going to
- 16 focus our assistance to the low-income families. That
- 17 seems to be the way to go.
- There are whole bunch of reasons why
- 19 low-income DSM programming is needed. DSM program can
- 20 help everybody. It depends on whether the people want
- 21 or can participate. The barriers are simply that the
- 22 low-income people have higher barriers to
- 23 participation, and you need to overcome those barriers.
- 24 That -- that's the main thing. I hope that helps.
- 25 Thanks.

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9554
 1
                   THE CHAIRPERSON:
                                     Mr. Orle, please --
 2
                   MR. GEORGE ORLE: Yes.
 3
                                     -- if you don't mind,
                   THE CHAIRPERSON:
    I have a --
 5
                   MR. GEORGE ORLE:
                                     And I --
 6
                   THE CHAIRPERSON: -- few questions
 7
   before you
               change --
 8
                   MR. GEORGE ORLE: -- I wasn't -- sorry.
 9
                   THE CHAIRPERSON: Before you change
10
   slides, I just wanted to ask a question about this
   slide. I can't help thinking, you know, looking at
11
   this slide in particular, you know, to your thesis that
13
   the rate increases are not acceptable.
14
                   You know, looking at the All Gas Plan
15
   versus the -- the other plan, I mean, there's not much
16
   difference there, you know. And if you start from the
17
   premise on which this was originally based, that gas
18
   plants are going to built to meet need -- local need,
19
   domestic need, consumers would've been facing
   significant increases irrespective of a plan that was
21
   chosen.
22
                   DR. ROGER HIGGIN: Yes, that is the
23
   point I -- you -- I believe -- I -- as I say in my
   evidence, I not -- don't feel happy with All Gas being
24
25
   the -- the reference case for bill comparisons.
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- 1 that's -- but having -- taking that aside, what's --
- 2 that's what Ontario -- or, sorry, Manitoba Hydro has
- 3 done. The difference here between, as you -- as we
- 4 say, the Preferred Plan as it was then and All Gas is
- 5 not large. It's 40 percent versus 46 percent, correct.
- 6 THE CHAIRPERSON: I grant you that --
- 7 that most people would prefer to not have rate
- 8 increases, but the -- the harsh reality, if you start
- 9 from the premise that you need to have generation in
- 10 '23/'24, you were facing rate increases irrespective of
- 11 the poli -- option that's selected. And that perhaps
- 12 is something that I think we need the panel to convey
- 13 to people, is that if you start from -- you know, there
- 14 are -- we're facing rate increases at some point
- 15 because domestic load requires that it be supported by
- 16 generation. And...
- 17 DR. ROGER HIGGIN: The -- the only
- 18 caveat there, Mr. Chair, is the fact that what domestic
- 19 load or load level needs to be met by new generation.
- 20 Are there ways in which you can reduce that load by
- 21 measures, such as DSM, fuel switching, and so on, while
- 22 recognizing at the same time there's economic growth.
- 23 There's even load growth amongst the population due to
- 24 population growth and so on.
- So we're talking about, okay, well,

9556 maybe 1.6 percent, we don't -- we'll need generation in -- quite early. But if we can knock it down to one point two (1.2) realistically, then we'll need it later. That -- but other than that, it's only a question of time. And my focus here, as you see, is that first ten (10) -- ten (10) year period related to 7 the plan. 8 I think you heard from the ratepayer panel that that seemed to be the area that they had the most concern about, was the -- was the -- simply 10 because it's so immediate, it's so near, and most 11 ratepayers and customers think about, if not the next 12 13 year, they think about that -- that period, ten (10) --14 ten (10) years from now, so that's why I picked that, 15 so. 16 But I have no disagreement with your scenario, assuming that you have 1.6 percent growth in 17 18 load. That's the issue. 19 CONTINUED BY MR. GEORGE ORLE: 20 21 MR. GEORGE ORLE: Thank you, Mr. Chair. 22 And -- and I won't be leaving this slide yet, Dr. 23 Higgins (si), so --24 DR. ROGER HIGGIN: May I should have only brought one (1). That would have made things

- 1 better for everybody.
- 2 MR. GEORGE ORLE: Well, this one seems
- 3 to cover a lot of the areas that we really need. And I
- 4 -- and I might preface my remarks, Dr. Higgin, with --
- 5 with my -- my clients are not opposed to the Preferred
- 6 Plan. Our -- our questions and our -- our intent here
- 7 is to deal with what the socioeconomic impact will be
- 8 in terms of rates upon my clients and the -- the direct
- 9 impact of rates upon my clients.
- 10 And to the extent that mitigation is a
- 11 matter than can be taken into consideration or -- or
- 12 proposed as part of the acceptability, that -- that is
- 13 where we're directing our questions, okay.
- DR. ROGER HIGGIN: Thank you.
- MR. GEORGE ORLE: Now, when we talked
- 16 about mitigation, also you had a discussion about
- 17 direct mitigation, and -- and you framed that in
- 18 payments out of the government account.
- 19 And in terms of the -- the manner in
- 20 which that is done, and I'd like you to use Ontario as
- 21 an example, is that done by direct payment to
- 22 ratepayers, is it done by a tax deduction to
- 23 ratepayers, or is it an actual deduction off the -- off
- 24 the bill?
- DR. ROGER HIGGIN: It -- it appears on

9558 the customer's bill as a line that says, CEB minus 10 percent. On the bill also there is the debt retur -retirement charge and other things we generally group 3 togo -- gether as the global adjustment. Some people call it the uplift. So basically, that's where it appears on the bill. 7 MR. GEORGE ORLE: Okay. 9 (BRIEF PAUSE) 10 11 MR. GEORGE ORLE: Okay. Members of the panel, I -- I wonder if I might just have five (5) 13 minutes to -- to confer with my colleagues in respect 14 to maybe shortening some of the questions. 15 THE CHAIRPERSON: Absolutely. 16 MR. GEORGE ORLE: Thank you. 17 18 --- Upon recessing at 3:03 p.m. 19 --- Upon resuming at 3:16 p.m. 20 THE CHAIRPERSON: I believe that we're 21 22 ready to resume the proceedings. 23 MR. BYRON WILLIAMS: Mr. Chair, if we -24 - if we right -- if we had one (1) second, there's a -a clarification Dr. Higgin would like to just make.

- 1 THE CHAIRPERSON: Thank you.
- DR. ROGER HIGGIN: Thank you. I just
- 3 wanted to be clear that -- when I was talking about the
- 4 clean energy benefit and 3,000 kilowatt hours, it was
- 5 per month, so therefore it is not just what you would
- 6 consider to be a residential consume -- consumer.
- 7 In Ontario, the average is 800 kilowatt
- 8 hours per month for residential. It does extend into
- 9 some of the -- the multi-families, such as duplexes,
- 10 low rise, and all -- in the -- in the residential, and
- 11 a few small -- or the small businesses.
- 12 So that -- the benefit where -- whereas
- 13 perhaps I was talking about residential, it is a bit
- 14 broader at the moment. It -- it's three thousand
- 15 (3,000) per month up to that level. Okay? Thank you.

- 17 CONTINUED BY MR. GEORGE ORLE:
- 18 MR. GEORGE ORLE: Thank you, Mr. Chair.
- 19 Dr. Higgin, just a follow-up on that, and it was going
- 20 to be my next question anyways, but I think you've
- 21 crystalized it somewhat, and it -- it follow ups on
- 22 part of what Board member Grant was talking about.
- 23 And it -- it seems to me that this clean
- 24 energy benefit is a fairly wide net that's thrown out
- 25 to capture what I would assume is a smaller group than

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9560 you intend to benefit. Why would you be benefiting vulnerable consumers by actively providing scarce funds to those that might not need the benefit, and capping 3 the amount that you might have available for vulnerable consumers? 6 DR. ROGER HIGGIN: Is this -- my -- my 7 proposition was based on the Ontario, but the example I used was the vulnerable consumer and the impact on the -- on those. The quest -- if the question is, Should it be broader, i.e., should it cover all residential 10 11 customers, should it include small commercial --12 multifamily, commercial, the answer is, I didn't look 13 at that simply because I didn't have the database 14 available to me to do a quick calculation. 15 And I was particularly interested in what I would consider a vulnerable -- so I -- I -- for 16 my analysis, I focussed it on vulnerable. To ask the 17 18 question, Should it be broader? Certainly, that is an 19 option that should be considered, and the collateral issue is -- is -- where does the money come from, 20 21 because you're then going to reach more customers, or 22 commensurably, should the benefit be lower? In other 23 words, instead of 10 percent it should be 5 percent. 24 MR. GEORGE ORLE: 25 DR. ROGER HIGGIN: Because you've got a

- 1 budget issue with it.
- 2 MR. GEORGE ORLE: Okay.
- 3 DR. ROGER HIGGIN: Those are some
- 4 collateral considerations.
- 5 MR. GEORGE ORLE: Okay. May I suggest
- 6 one (1) other mitigation, and I'd just like you to
- 7 comment upon it. If there is an identifiable group
- 8 that we would consider as vulnerable, and I'll use my
- 9 clients as an example, the First Nations ratepayers, is
- 10 not another way of mitigating -- setting them up as a
- 11 separate class of ratepayer that would have a specific
- 12 rate applied to them?
- DR. ROGER HIGGIN: Yes, that's
- 14 certainly -- from a rate making perspective, there have
- 15 been special classes created that don't fit the normal
- 16 rate design class criteria, and rates are designed for
- 17 them. The issue there, as all regulators know, is,
- 18 Does that lead immediately to real or perceived, mostly
- 19 real, cross-subsidies from the other rate classes?
- 20 In other words, what -- what costs
- 21 should be allocated to that class, and what revenues,
- 22 and what is the revenue-to-cost ratio for that, whereas
- 23 a rate making perspective you are aiming for a one (1)
- 24 revenue-to-cost ratio. So there's that other
- 25 collateral question once you do that, but, yes, you can

PUB re NFAT 04-30-2014 9562 do it. 2 MR. GEORGE ORLE: Yes, you can. All Those are all the -- the questions that I had, 3 right. and Mr. Chair, rather than channelling Mr. Hacault through me in the questions, I believe that he's going to just ask permission to reopen on one (1) small area, 7 and I'm prepared to give him the balance of my time that's set out in the timetable. 9 THE CHAIRPERSON: Me. Hacault, s'il 10 vous plait. 11 12 RE-CROSS-EXAMINATION BY MR. ANTOINE HACAULT: 13 MR. ANTOINE HACAULT: It's with respect 14 to slide 10 and the statement in -- under the graph 15 that talked about moderate rate increases after the 16 first ten (10) years, and I just wanted to point out to 17 Dr. Higgins (sic) some of the information in Exhibit 18 104-12-4 at pages 13 and 61, and know whether he had 19 considered that particular exhibit in making his comments on moderate rate increases. There's been a --20 21 an exchange between the panel and him on the first ten 22 (10) years. 23 So, sir, in the first slide... 24

(BRIEF PAUSE)

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9563 MR. ANTOINE HACAULT: Sir, this is the 1 Preferred Development Plan, Level 2 DSM, and there are different rate submissions being made by Hydro now, but 3 the rate submission methodology that was used for all the plans is the one shown in this particular evaluation. 7 Were you aware, firstly, if I look at the number 2032, which has been highlighted, that the additional general consumer revenue obtained would increase if we look at 2022 from 572 million to 1.806 10 11 million? 12 DR. ROGER HIGGIN: Yes, I see that, 13 sir. 14 MR. ANTOINE HACAULT: Were you aware of 15 that when you made these comments in your slide, sir? 16 DR. ROGER HIGGIN: No, I was relying on 17 -- on the net on this exhibit. As you see, I did look 18 at, what was -- was it, twelve point one (12.1)? I was 19 relying on testimony from Manitoba Hydro that -- that, in essence, said the -- the same thing, and that is, for the Preferred Plan, that the -- the rate -- rate 21 22 increases would be high in the -- in the earlier years, 23 but would then moderate in the later years. 24 That was what I was relying on --25 MR. ANTOINE HACAULT: Okay.

9564 DR. ROGER HIGGIN: -- is a qualitative 1 rather than a quantitative review of this, or a similar chart. 3 MR. ANTOINE HACAULT: Okay. So let's -4 - if we can just keep that number in mind, sir, and I know it goes down, as you said, after, and I'm not minimizing that. It -- it goes down to \$902 million of 7 additional consumer revenue in 2033. That's the Preferred Development Plan. 10 If we can go to -- I had page 61, the 11 All Gas, Level 2 DSM? So under 2022, we see that in 12 that shorter timeframe, the additional customers' revenue is \$451 million. 13 14 Do you see that, sir? 15 DR. ROGER HIGGIN: I see that. 16 MR. ANTOINE HACAULT: And that was the 17 metric that you used for your slide is comparing the 18 All Gas to the Preferred Development Plan? 19 DR. ROGER HIGGIN: Correct. 20 MR. ANTOINE HACAULT: In making your 21 comments, sir, were you aware that under this 22 methodology, as of 2032, there would be 1.33 billion 23 instead of the one point eight (1.8), so not quite, but 24 pretty close to half a billion dollars' difference --25 DR. ROGER HIGGIN: Yes, I see that.

- 1 MR. ANTOINE HACAULT: -- in that
- 2 particular year, that consumers would have to pay more
- 3 under the Preferred Development Plan under this
- 4 methodology?
- 5 DR. ROGER HIGGIN: Yes, and I think
- 6 that reflected, to a degree, in the -- in the bill
- 7 increases that were presented. The thing, perhaps, to
- 8 note is the two (2) average revenue increases that are
- 9 shown there, the additional general consumers' revenue
- 10 percent increase and underneath that, the cumulative
- 11 numbers.
- 12 So -- and between the two (2) there is a
- 13 difference, as you've said.
- 14 MR. ANTOINE HACAULT: Okay. So if we
- 15 look firstly under 2032, by the time we reach 2032
- 16 under this particular methodology we have a total
- 17 increase of some 82 percent.
- 18 DR. ROGER HIGGIN: That's right.
- 19 MR. ANTOINE HACAULT: And in 2033 it
- 20 goes down to a total of 46 percent?
- DR. ROGER HIGGIN: Right.
- MR. ANTOINE HACAULT: So let's keep
- 23 those numbers in mind. And let's flip back to the
- 24 other slide, please. At the total cumulative increase
- 25 under the Preferred Development Plan under this

9566 methodology, it would be up to a 111.61 percent. 2 DR. ROGER HIGGIN: Yes. 3 MR. ANTOINE HACAULT: Going down not to forty-six (46), but 55 percent in the following year. 5 DR. ROGER HIGGIN: 6 MR. ANTOINE HACAULT: Do you see that? DR. ROGER HIGGIN: T do. MR. ANTOINE HACAULT: Does this information make any difference in your -- your view, 10 sir? 11 DR. ROGER HIGGIN: Okay. I -- I had 12 some difficulty with Manitoba Hydro's use of the All 13 Gas Plan to compare the billing rates and -- and that was on a number of factors which are less -- less --14 but anyway, your point is valid that the differences 15 are -- are diff -- quite different, and perhaps I should have used these numbers. 17 18 The only other thing to note is my time 19 frame, just so we -- we're looking at the same time frame, is the first ten (10) years, and that under the deferred -- Preferred Plan the -- the cumulative is 21 22 45.25 percent. It's very close to my bill increase -there is a difference -- bill increase, because the 24 bill increase is calculated differently. It's from Manitoba Hydro's exhibit what will be the fixed charge

- 1 and the variable charge over the period that we're
- 2 talking about. But the -- the result is -- obviously
- 3 should be similar and consistent, all right?
- 4 So does that...
- 5 MR. ANTOINE HACAULT: I thank you, sir,
- 6 and I thank the panel and all parties present for their
- 7 indulgence. I know I asked the question out of line,
- 8 but I thought it might be useful information, given the
- 9 exchange of questions between the panel and Dr. Higgins
- 10 (sic) on the impact of consumers on general revenue and
- 11 the rate differences. We hadn't looked at that
- 12 information yet.
- THE CHAIRPERSON: Thank you, Me.
- 14 Hacault. Ms. Fernandes, please.

- 16 CROSS-EXAMINATION BY MS. ODETTE FERNANDES:
- 17 MS. ODETTE FERNANDES: Thank you, Mr.
- 18 Chairman. Good afternoon, Dr. Higgin. Based on some
- 19 of the questions that came from the panel, it has
- 20 shortened my cross somewhat, so there's just a few
- 21 areas that I'd like to canvass with you.
- 22 This morning I heard you observe that
- 23 Manitoba Hydro load growth in the forecast is robust
- 24 despite only minor load growth in recent years. And
- 25 you referenced the time period 2007 to 2012.

9568 1 Did I paraphrase that correctly? 2 DR. ROGER HIGGIN: Yes, I -- perhaps we could look at the load forecast slide and that may be -3 - thank you. That's -- yes. 5 MS. ODETTE FERNANDES: Okay. And would you agree with me that this period from 2007 to 2012 7 encompasses the global recession which began in 2008? 8 DR. ROGER HIGGIN: Certainly, yes. 9 MS. ODETTE FERNANDES: And would you 10 agree that the recession would contribute to reduced load growth? 11 12 DR. ROGER HIGGIN: Yes, I would. In 13 fact it's been quite dramatic, yes. 14 MS. ODETTE FERNANDES: And would you 15 also agree that it's reasonable to expect that business 16 cycles will continue with upswings and downswings? 17 DR. ROGER HIGGIN: Yes. 18 MS. ODETTE FERNANDES: And all other 19 things being equal, would you agree that as business cycles continue and the economy recovers, that load 21 growth will increase from what it was during the 22 recession? 23 DR. ROGER HIGGIN: Did you say during -24 - will recover from the time of the recession? Yes. 25 MS. ODETTE FERNANDES: Okay.

- DR. ROGER HIGGIN: Perhaps the only
- 2 other caveat is to say will it resume to grow? Will
- 3 the GDP grow at levels that preceded that recession, or
- 4 will they be at lower levels because there's quite a
- 5 lot of concern as to whether GDP, for example, will
- 6 recover to the levels that occurred before the
- 7 recession.
- 8 MS. ODETTE FERNANDES: Thank you. Now,
- 9 this morning you commented that DSM achievement is
- 10 affected by a number of factors that a utility can't
- 11 control.
- Is that correct examples of those? I
- 13 believe you referenced geographic distribution, income,
- 14 older houses versus new houses, for example?
- 15 DR. ROGER HIGGIN: Those were some
- 16 examples, yes.
- 17 MS. ODETTE FERNANDES: I'm going to ask
- 18 Mr. Wojczynski to hand out a document that I just
- 19 provided you at the break, so I understand that you
- 20 haven't had time to review it in any great detail. But
- 21 my questions will be more general in nature and not the
- 22 specifics related to any of those states referenced in
- 23 there.
- 24 MR. BYRON WILLIAMS: And I can indicate
- 25 that CAC (Manitoba) does not object to the filing of

- 1 the exhibit. And certainly Dr. Higgin will be
- 2 available to comment as he feels able, and that'll be
- 3 up to him.
- 4 MS. ODETTE FERNANDES: Absolutely.
- 5 Thank you.

6

7 (BRIEF PAUSE)

- 9 CONTINUED BY MS. ODETTE FERNANDES:
- 10 MS. ODETTE FERNANDES: Okay, this
- 11 document is entitled, "Energy Efficiency Resource
- 12 Standards: A New Progress Report on State Experience."
- 13 And it's an assessment of how well the different states
- 14 are doing in terms of state targets and savings. And I
- 15 will note that there is a copyright at the bottom from
- 16 the American Council for an Energy Efficient Economy.
- 17 And we do -- did receive consent at about noon today to
- 18 file this page on the record today, so.
- DR. ROGER HIGGIN: M-hm.
- 20 MS. ODETTE FERNANDES: Now, if we turn
- 21 to the second page, which is Appendix D, quantitative
- 22 data on state targets and savings.
- Now, would you agree with me, subject to
- 24 check, that out of the twenty-six (26) states in 2011,
- 25 thirteen (13) states did not meet their targets that

9571 were set? 2 DR. ROGER HIGGIN: Subject to check. 3 MS. ODETTE FERNANDES: And then if we move over to 2012, eleven (11) states didn't meet their 5 targets? 6 DR. ROGER HIGGIN: Subject to check. 7 MS. ODETTE FERNANDES: Now, if I, for example, go down to New York --9 DR. ROGER HIGGIN: Yeah. 10 MS. ODETTE FERNANDES: -- for 2011 the 11 target was 2.7 million megawatt hours, correct? 12 DR. ROGER HIGGIN: Megawatt hours? 13 Yes, m-hm. 14 MS. ODETTE FERNANDES: And then their 15 actual savings for 2011 was 1.8 million megawatt hours? 16 DR. ROGER HIGGIN: Yes. 17 MS. ODETTE FERNANDES: And then if we 18 move over to 2012 targets, you'd agree with me that 19 it's 1.8 --20 DR. ROGER HIGGIN: M-hm. 21 MS. ODETTE FERNANDES: -- megawatt 22 hours, correct? 23 DR. ROGER HIGGIN: Yes. 24 MS. ODETTE FERNANDES: And then the 2012 savings was 1.3 million megawatt hours, correct?

9572 DR. ROGER HIGGIN: Correct. 1 The -- the main thing now just from a overview is that missing information would be why is the '12 -- 2012 target so 3 much lower than the 2011 target. In a DSM program, one would expect the target to be the same or trying to go up, so that -- that would be a question. 7 Is it -- is it on a ramp down? Let's call it that way. Is it a ramp down in New York period because the program's expiring and it's on ramp down? That has a different dynamic than if it was, for 10 example, on a ramp up, where the 2012 target will be 11 higher. I have no information on that. But as a 12 13 qualifier, I would recognize in trying to make any 14 sense out of that particular -- those particular 15 numbers. 16 MS. ODETTE FERNANDES: Yes. And I can tell you we don't have that information either. 17 18 just bringing it back to percentages, for 2011, subject 19 to -- subject to check, would you agree that New York only achieved about 67 percent of the actual savings 21 compared to its target? 22 DR. ROGER HIGGIN: Yes, in 2011. 23 MS. ODETTE FERNANDES: And then in 24 2012, they achieved about 74 percent of their target.

Yes.

But, of

DR. ROGER HIGGIN:

- 1 course, if you look at the kilowatt hours, the change
- 2 year over year, it -- that's the other major
- 3 consideration is the fact there's -- that the 2011
- 4 savings were one point seven-nine-three-o-two (1.79302)
- 5 megawatt hours, and then it's gone down again. So
- 6 there's -- it's -- the -- the trajectory of this
- 7 particular set of numbers is very puzzling, and
- 8 something that's very difficult to -- to comment on,
- 9 particularly on that line.
- 10 What would be more -- more informative,
- 11 I believe, would be to take all these numbers and
- 12 either assume that the programs are in -- not in a ramp
- 13 up or -- take out those that are in a ramp up or run
- 14 down mode and then say, Okay, what does the average
- 15 achievement look like for those -- for the -- the for
- 16 balance, or some other analysis, plus some statistical
- 17 analysis in terms of -- and this -- the time frame --
- 18 anyway.
- 19 I don't want to go there, but basically
- 20 I have a great deal of difficulty with the data,
- 21 difficulty with -- with these numbers. If I -- as
- 22 somebody who looks at numbers all the time, they're
- 23 very puzzling in many ways, at least on those we picked
- 24 through.
- Now, let's look at another one where we

9574 think, the leader. Well, California is a leader. would all agree they're a leader, right. But when we even look at California, it's in kind of a slightly 3 down or -- or, if you like, flat mode. It's -- right. They're -- they're one of the leaders in -- in the US. 6 And let's look at Vermont. Well, 7 Vermont, they're another leader, right. Ah, there, look at those guys, right. They're looking good. They're -- now, why is the 2012 target lower than the 2011, I don't know, but otherwise they exceeded. Yeah. 10 11 So the -- I'm just saying it's very difficult for me to 12 -- to comment on -- on the data. 13 And I don't think that -- if you would 14 like to send me, I'll call it, the analysis that is the other thousand pages -- actually sixty-nine (68) of 15 16 them, I'd certainly be willing to take a look at it and 17 -- and then give you some comments via an undertaking, 18 if you like. So I -- I'll leave that with you. Would 19 you like that? 20 21 (BRIEF PAUSE) 22 23 MR. RICHARD BEL: Yes. Board Member 24 Bel.

Okay.

DR. ROGER HIGGIN:

9575 MS. MARILYN KAPITANY: In particular 1 what's happening in Ohio? Ohio is just rockin'. 3 DR. ROGER HIGGIN: Right. So, yeah, I -- I would be happy -- the undertaking -- my counsel will correct it, I'm sure. I would be willing to -- to examine those data. My biggest problem is -- is if I 7 have to go into, as I would normally, into statistical analysis to give you any decent -- decent interpretation, that's going to be quite a bit. It will require me to develop spreadsheets and -- and 10 11 things like that, and that's another kind of level of 12 analysis, not just looking. So I think we need to have a 13 14 clarification, how -- how far I need to go. Is it a 15 quick look, or would you like me to, if it's not in the 16 data, come up with the -- with some statistical analysis to help? 17 18 THE CHAIRPERSON: No, I think we'll 19 just keep it nice and simple for now. Thank you. 20 DR. ROGER HIGGIN: Okay. Thanks. 21 MR. BYRON WILLIAMS: I'm not confident 22 it's -- it's that simple but I'm assuming -- we're 23 going to have to get this study from ACEE but I -- I'm 24 sure that -- that we'll -- I'm hoping that -- I'm --I'm sure -- I expect it's a public document.

9576 So the undertaking will be for Dr. 1 Higgin to review the ACEE report and provide a contextual commentary on the insight that might be 3 gained from Appendix D found at page 69, and we've flagged the interest in states such as New York, California, apparently Ohio is rocking, and -- and Vermont, so. But I -- I think it's not just to cherry 7 pick those. We will try and provide some contextual insight. 10 11 --- UNDERTAKING NO. 133: Dr. Higgin to review the 12 ACEE report and provide a 13 contextual commentary on 14 the insight that might be 15 gained from Appendix D 16 found at page 69 17 18 DR. ROGER HIGGIN: Just one (1) 19 clarification. I think the suggestion I would have is that we need to consider, perhaps -- how can I put 21 this? We'll leave it there, but in coming back to you, 22 we may have some -- some comments that relate to this 23 question of, Are these programs all running in, quotes, 24 "flat mode," or what is driving the targets? Because 25 the targets seem to be jumping up and down, whereas in

- 1 most programs, depending on the length, they often go
- 2 first year, second year, third year down, or it's a
- 3 five (5) year program, such as a two (2) -- you know,
- 4 that's a Manitoba Hydro three (3) year term. So we
- 5 need to, perhaps, comment with a -- or caveat that with
- 6 some question there, if that -- if that's helpful.
- 7 MR. BYRON WILLIAMS: And I think that
- 8 was what was meant by 'contextual'.
- 9 THE CHAIRPERSON: Right. We don't have
- 10 the luxury of doing an exhaustive review of this
- 11 information because of the time that, you know, the
- 12 deadli -- the deadlines we're facing, so a contextual
- 13 examination, I think, would be adequate, given the
- 14 constraints we are dealing with.
- DR. ROGER HIGGIN: Thank you.

- 17 CONTINUED BY MS. ODETTE FERNANDES:
- 18 MS. ODETTE FERNANDES: This took on a
- 19 bigger life than what I anticipated, but just kind of
- 20 bringing it back to my -- my question on this. We did
- 21 do sort of the average, and --
- DR. ROGER HIGGIN: Okay.
- 23 MS. ODETTE FERNANDES: -- the average
- 24 between 2011 and 2012 of the states, it -- it either
- 25 met or exceeded the targets, but having said that, you

- 1 would acknowledge that there is a risk that the actual
- 2 savings can be short of targets, correct?
- 3 DR. ROGER HIGGIN: Oh, absolutely.
- 4 Yeah, that -- that's a fundamental aspect, but then the
- 5 caveat is understanding what created that deficit, and
- 6 what actions can be done within the budgets available
- 7 to -- to fix that.
- 8 It could be anything from promotion of
- 9 the programs, and so on, so the corrective measures
- 10 we'll call them, it -- it is the aspect, m-hm.
- MS. ODETTE FERNANDES: Thank you. Now
- 12 this morning in your oral evidence, you referred to
- 13 Limestone and Wuskwatim.
- 14 Now are you aware that the construction
- 15 of Limestone was advanced two (2) years for exports,
- 16 and in the Wuskwatim NFAT, the construction of
- 17 Wuskwatim was advanced eleven (11) years for exports?
- DR. ROGER HIGGIN: In the sec -- I was
- 19 not in the first place, but I was in second, correct.
- 20 MR. BYRON WILLIAMS: And Ms. Fernandes,
- 21 just on Wuskwatim, in terms of the premise, we will
- 22 certainly -- I think the actual number of years it was
- 23 advanced might be an issue, whether was eight (8) or --
- 24 but certainly, I think Dr. Higgin can accept the
- 25 premise that it was advanced considerable number of

9579 years, and so we'll accept the premise, but I'm just -the number of years I would be more careful with. 3 THE CHAIRPERSON: What -- what was the former -- the former dam -- the advancement date of the former --6 MS. ODETTE FERNANDES: Limestone. 7 THE CHAIRPERSON: Limestone and about how many years? 9 MS. ODETTE FERNANDES: Two (2) years. 10 THE CHAIRPERSON: I'm sorry? 11 MS. ODETTE FERNANDES: Two (2) years, and Mr. Williams, my question was, like, in the filing 13 of the Wuskwatim NFAT, and I do have that with me if 14 you'd like to take a look at it, but... 15 MR. BYRON WILLIAMS: That's fine. We 16 can accept that. 17 18 CONTINUED BY MS. ODETTE FERNANDES: 19 MS. ODETTE FERNANDES: Now if I get chapter 12 of Manitoba Hydro's business case on the 21 screen, please? 22 DR. ROGER HIGGIN: I don't think we 23 have a copy, but if you can put it on the screen? I'm 24 sorry. 25 MS. ODETTE FERNANDES: And I'm looking

9580 at page 10, Table 12.3. 2 DR. ROGER HIGGIN: M-hm. 3 MS. ODETTE FERNANDES: Now if I look at the Keeyask23/Gas Development Plan, the Keeyask inservice date is 2023 under this plan. 6 DR. ROGER HIGGIN: Could you just give me -- sorry, I missed your -- the -- the number of the 7 -- of the plan. 9 MS. ODETTE FERNANDES: Number 2, 10 Keeyask --11 DR. ROGER HIGGIN: Okay, thank you. MS. ODETTE FERNANDES: -- 23/Gas. 12 13 DR. ROGER HIGGIN: Thank you. 14 MS. ODETTE FERNANDES: Now the 15 Preferred Development Plan contemplates an in-service 16 date for Keeyask to be in 2019, correct? 17 DR. ROGER HIGGIN: Correct. 18 19 (BRIEF PAUSE) 20 21 MS. ODETTE FERNANDES: So that's a four 22 (4) year advan -- advancement in the Preferred 23 Development Plan, correct? 24 DR. ROGER HIGGIN: Correct. 25 MS. ODETTE FERNANDES: And if we assume

9581 an in-service date of 2027, that is now an eight (8) year advancement, correct? 3 DR. ROGER HIGGIN: Correct, and that is your current number that I tried to use was 2027 rather than the other numbers that have been floating around, 6 yes. MS. ODETTE FERNANDES: So even in the 7 situation where Keeyask has an in-service date of 2027, the advancement of Keeyask for export sales is not 10 materially different from past advancement, correct? 11 DR. ROGER HIGGIN: Correct. 12 MS. ODETTE FERNANDES: Just one (1) 13 moment, please. 14 15 (BRIEF PAUSE) 16 17 MS. ODETTE FERNANDES: Mr. Chairman, 18 that's all our questions for now, but I did neglect to mark what we filed on the record as an exhibit, and I believe we are at Manitoba Hydro Exhibit number 188. 21 MR. KURT SIMONSEN: That's correct. 22 23 --- EXHIBIT NO. MH-188: Excerpt from ACEE document 24 entitled "Energy Efficiency 25 Resource Standards: A New

9582 1 Progress Report on State 2 Experience." 3 THE CHAIRPERSON: Thank you, Ms. Fernandes. Mr. Peters, please. 6 CROSS-EXAMINATION BY MR. BOB PETERS: 8 MR. BOB PETERS: Thank you. Good afternoon, Mr. Chairman, panel. Good afternoon, Dr. 9 10 Higgin. 11 DR. ROGER HIGGIN: Good afternoon. 12 MR. BOB PETERS: Four (4) areas to talk 13 I, too, want to just start with slide 10, but 14 only -- only briefly. The one (1) point that I don't 15 think was discussed further by Mr. Orle was to deal with the clean energy benefit, and you did talk about 17 that, and I think to demonstrate to the panel, on page 18 57 of your pre-filed evidence --19 DR. ROGER HIGGIN: M-hm. 20 MR. BOB PETERS: -- you prepared and 21 filed Appendix D? 22 DR. ROGER HIGGIN: Yes, that's correct. 23 MR. BOB PETERS: And the purpose of 24 your preparing Appendix D was to demonstrate to the panel perhaps how such a clean energy benefit could be

- 1 simplified for illustrative purposes?
- DR. ROGER HIGGIN: Correct.
- 3 MR. BOB PETERS: And in it, what you
- 4 did was you calculated what would be the monthly impact
- 5 on residential customers at different consumption
- 6 levels.
- 7 That's in Table A?
- 8 DR. ROGER HIGGIN: Correct.
- 9 MR. BOB PETERS: And then in Table B,
- 10 you did an estimate of the rebates either at 5 percent
- 11 or at 10 percent a month, and then adver -- and -- and
- 12 then picked those up over the course of a year?
- DR. ROGER HIGGIN: That's right.
- 14 MR. BOB PETERS: So when the Board
- 15 looks...
- 16 DR. ROGER HIGGIN: That is correct.
- 17 Thank you.
- 18 MR. BOB PETERS: And I understood from
- 19 your evidence, Dr. Higgin, that in Ontario, the rebate
- 20 is simply 10 percent of the -- of the energy charge?
- 21 DR. ROGER HIGGIN: Yes, it's on -- of
- 22 the -- of the -- the bill, the energy charge, yes.
- 23 MR. BOB PETERS: Just the energy
- 24 charge, or does it also apply --
- DR. ROGER HIGGIN: It's the bill, the

- 1 bill.
- MR. BOB PETERS: And it's only 10
- 3 percent of the bill up to that 3,000 kilowatt hour a
- 4 month threshold that you mentioned?
- DR. ROGER HIGGIN: That's right.
- 6 MR. BOB PETERS: And what you've done
- 7 in Appendix D is you've tried to show to the panel what
- 8 the dollar impact would look like in Manitoba if the
- 9 government of Manitoba was inclined to introduce
- 10 something analogous to a clean energy benefit?
- DR. ROGER HIGGIN: That is correct.
- MR. BOB PETERS: And you're showing the
- 13 panel here that all of Manitoba Hydro's fourth -- four
- 14 hundred and fifty-six thousand one hundred and thirty
- 15 (456,130) customers would be eligible?
- 16 DR. ROGER HIGGIN: That's the
- 17 residential, plus all of the others, yes.
- 18 MR. BOB PETERS: And if all Manitoba
- 19 Hydro customers were eligible for the clean energy
- 20 benefit at 5 percent, that would have an approximate
- 21 cost of 27.87 million per year to the government of
- 22 Manitoba?
- DR. ROGER HIGGIN: That's correct. M-
- 24 hm.
- MR. BOB PETERS: And was that -- was

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- 1 that number selected based on increased water rentals
- 2 or increased capital tax, or any other metric?
- 3 DR. ROGER HIGGIN: Not -- not directly.
- 4 Those factors about inflows to -- to the government
- 5 account related partic -- asked -- thinking of the
- 6 multiple analysis, was -- was borne in mind between --
- 7 for example, I didn't look at anything higher than 10
- 8 percent. The -- the numbers were getting very high,
- 9 and I looked at 5 and 10 percent as being within a
- 10 reasonable range, that -- that was all.
- 11 MR. BOB PETERS: Is it your suggestion
- 12 or recommendation to your client, Dr. Higgin, that a
- 13 clean energy benefit be pursued regardless of the
- 14 development plan that may be selected for Manitoba
- 15 Hydro?
- 16 DR. ROGER HIGGIN: I think that depends
- 17 on the bill impacts associated with it. If the bill
- 18 impacts are as projected for the -- for the development
- 19 plan, I would still recommend that. If the -- if the
- 20 plan proposed has lower bill impacts then one would
- 21 have to reassess whether or not those were reasonable.
- 22 And again, it's sustained long-term bill increases over
- 23 the initial period of ten (10) years. That's what
- 24 we're addressing here.
- 25 So the answer is not necessarily. It

- 1 depends on the -- if the bill increases are higher,
- 2 then it's pretty well an answer that says that would be
- 3 my recommendation. If they're lower, then maybe I
- 4 would consider -- recommend a reconsideration.
- 5 What I've seen now, based on the
- 6 increased capital costs and so on, the only direction
- 7 we're going to go is higher. So the bill increases
- 8 will be higher, the rates are going to be higher than
- 9 were projected at the 3.94 percent average.
- 10 MR. BOB PETERS: So I take your answer
- 11 to mean that any rate increases that are sustained for
- 12 over the next ten (10) years at or above three point
- 13 nine-five (3.95), in your view, would justify
- 14 consideration and -- and -- of a clean energy benefit
- 15 credit being given back to customers?
- DR. ROGER HIGGIN: Or other type of
- 17 mitigation. I think my -- my evidence is this is one
- 18 (1) example which is the direct approach to mitigation.
- 19 There are other indirect me -- measures, ways to do
- 20 that smoothing that Hydro has said, and so on. The
- 21 idea is, regardless of the method, is to reduce the --
- 22 the rates below what otherwise would have happened
- 23 during that period. It's a mit -- that's what
- 24 mitigation is about. So to say, Am I recommending a
- 25 CEB is -- is no. The answer -- to say I am recommending

- 1 some form of mitigation, that's different.
- MR. BOB PETERS: I understood that from
- 3 your evidence, but the -- the only mitigation option
- 4 that you've presented that's external involving the
- 5 government account would be the clean energy benefit.
- 6 DR. ROGER HIGGIN: And that is correct.
- 7 That -- and that is only -- the only one (1) I've
- 8 actually presented in evidence today, because new
- 9 evidence has been talked -- given by Manitoba Hydro
- 10 about some other alternatives, which I call the
- 11 indirect approaches. Then I haven't analyzed those,
- 12 number 1. Number 2, they could be a -- a reasonable or
- 13 cons -- option to be considered.
- 14 MR. BOB PETERS: Would those other
- 15 options have to have the end result that the consumer
- 16 impact would be 10 percent less than a 3.95 percent
- 17 increase?
- 18 DR. ROGER HIGGIN: It doesn't have to
- 19 be any particular number. I -- I would say it's like
- 20 this, that if the indirect method could smooth or
- 21 mitigate the rate increases from, let's say, a -- a
- 22 non-mitigated level average rate, I -- I don't like
- 23 rate increases, but we're -- we're using those as
- 24 billing prices, then I would say anything is better
- 25 than nothing.

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years from now.

9588 The issue there is whether or not there 1 is enough flex -- flexibility, financially or otherwise, to -- to do that. So how can I put this? 3 I think that to be significant, we need 4 to be looking at a 5 to 10 percent reductions in -- in bills, and it's a government policy objective, I think, that drives this. And that's in Manitoba, the Clean 7 Energy Strategy and the AURA, the -- the Affordable Utilities Rate Act that -- that are drivers for maintaining the lowest rates in -- in Canada over the 10 11 outlook period. That -- that is another factor here that says the -- the government options have a policy 13 basis to -- to go forward with. 14 The other one, the indirects, don't have 15 a particular policy. They may have implications 16 related to the government, the finances of the province, all of those factors, as well as Manitoba 17 18 Hydro. I haven't analyzed those. I don't know whether 19 it helps to broaden the fact that I think some form of mitigation, one (1) or more of those should be looked 21 at. And I suggested a time frame which to come back

- I'm not saying we're going do it
- 25 tomorrow when we come back. The same time that the

with such a mitigation that's two (2) to three (3)

- 1 ISD, I use that as a number of time, the in-service
- 2 date for Keeyask will be good because then the revenues
- 3 from water rentals and all of those things would start
- 4 to flow. And that would be a good time to bring back
- 5 some sort of mitigation strategy.
- 6 Does that...?
- 7 MR. BOB PETERS: Yes. Thank you, Dr.
- 8 Higgin. That -- let's just stay the 10 percent number
- 9 because it's on your -- on the screen here on your
- 10 slide, I'm sorry, on page 57 of your evidence. But
- 11 sticking -- and it's also the Ontario number, correct?
- DR. ROGER HIGGIN: That's correct.
- 13 MR. BOB PETERS: And did I take from
- 14 your second last answer to me that, you know, you were
- 15 recommending a 5 to 10 percent reduction in the bills
- 16 and that 5 -- that 5 to 10 percent reduction should
- 17 come from a combination of or any of the mitigation
- 18 measures so long as it was at least 5 to 10 percent?
- DR. ROGER HIGGIN: Correct.
- 20 MR. BOB PETERS: And that was 5 to 10
- 21 percent for any customer class or every customer class?
- 22 DR. ROGER HIGGIN: In this -- I have
- 23 not analyzed whether or not any -- any classes except
- 24 residential. There are many other considerations when
- 25 you start looking at industrial and, for example,

- 1 competitiveness considerations and so on.
- 2 So that's why my response to MIPUG.
- 3 Another way to apply it would be -- the available
- 4 funds, would be to, in essence, use reduced quotes, the
- 5 revenue requirement, and that would have an impact like
- 6 -- like revenue from exports would apply across all
- 7 classes; that's another alternative.
- 8 So in case of what I think you're trying
- 9 to explore is, I didn't look at that because my mandate
- 10 and so on was -- was the residential. And particularly
- 11 then within the residential I add the thing.
- 12 Vulnerable consumers are the ones that you need to
- 13 worry about within that class. Those are the people
- 14 that you should worry about.
- MR. BOB PETERS: Well, then let's turn
- 16 to page 55 of your pre-filed evidence, in Appendix B,
- 17 and look at the vulnerable consumer class.
- 18 These criteria that you set forward are
- 19 how you defined a vulnerable consumer, correct?
- DR. ROGER HIGGIN: Correct.
- 21 MR. BOB PETERS: And would I be correct
- 22 in reading this to suggest that 50 percent of Manitoba
- 23 Hydro's all electric customers are vulnerable
- 24 consumers?
- DR. ROGER HIGGIN: Yes.

9591 MR. BOB PETERS: Is it -- and -- and on this particular Appendix B, Dr. Higgin, the vulnerable consumer must own their own dwelling to fit the 3 category that's on this sheet? 5 DR. ROGER HIGGIN: Yes, because it's going to be a reduction on the bill, the question of --7 of landlords, for example, rental accommodation. There -- I think there are other factors that go into dealing with landlords who are, in essence, operating a commercial operation. It's a different -- different 10 11 thing. 12 So that's why I chose own their own. 13 MR. BOB PETERS: Even though some 14 tenants may end up paying their own energy charges. 15 But --16 DR. ROGER HIGGIN: Yes. 17 MR. BOB PETERS: -- for simplicity, you 18 -- you restricted it to owners. 19 DR. ROGER HIGGIN: Yeah, I -- for simplicity, I used the owned homes, yes. 21 MR. BOB PETERS: And underneath the chart that's on page 55 there's an asterisk which I've 22 23 seen a couple of times in your evidence. And it says: 24 "Do not agree new gas generation is required until post-2023." 25

- DR. ROGER HIGGIN: Yeah, what I was
- 2 trying to say -- comment is the only comparison for the
- 3 -- is the All Gas case, but I'm looking at a period
- 4 from 2013 to 2023, and therefore in that period it's a
- 5 bit hypothetical to say, Well, the All Gas case when
- 6 I'm looking at billing impacts but nonetheless that's
- 7 what Manitoba Hydro used, and that's -- so I said,
- 8 Well, that's their -- their base case so I should
- 9 present it, and I did. Okay. Not -- but I had some
- 10 discomfort with it from -- as being a comparator, but
- 11 that was all.
- MR. BOB PETERS: On slide 4 of CAC
- 13 Exhibit 76, you talked about DSM. And I don't want to
- 14 go over that ground again but one (1) theme that came
- 15 up in the questions even most currently from Mr. Gange
- 16 was the mandated aspect of the Crowns and I understand
- 17 there's more undertakings in -- in that respect.
- 18 But the essence of your evidence, as I
- 19 understood it, Dr. Higgin, was when the Crown is --
- 20 utility is mandated they generally get pretty close to
- 21 their targets, and I'll have to take that subject to
- 22 Ms. Fernandes's Exhibit 188, but -- but I'm presuming
- 23 most of these are probably investor owned but -- but
- 24 your experience is with the Crown utilities that are
- 25 mandated, they tend to come close to their targets.

- 1 DR. ROGER HIGGIN: I wouldn't say that.
- 2 I'd say they -- they do better than if they're not
- 3 mandated.
- 4 MR. BOB PETERS: All right. So now
- 5 let's put your hat on when you were on the Ontario
- 6 Energy Board, sir, in either of the two (2) terms you
- 7 served, how did you mandate utilities in Ontario to --
- 8 to achieve a certain level of a program?
- 9 DR. ROGER HIGGIN: When I was on the
- 10 Ontario Energy Board, the only active programs at that
- 11 point were the gas programs. Okay. The OPA programs
- 12 happened later, so -- but then you need to -- so that's
- 13 up to 2000. So after 2000 perhaps, and I'm not
- 14 discounting the question. I'm just simply saying the
- 15 context.
- 16 So after that, I was representing a
- 17 number of Intervenors in -- in the development of the
- 18 CDM programs, and they did still have in the first
- 19 batch of programs two (2) -- two (2) features which
- 20 were an incentive for the utility. Let's -- I think
- 21 I've covered the -- to a degree the gas, but they --
- 22 they did have a potential for lost revenue adjustment
- 23 which was to compensate them for the lost adjustment.
- 24 And they also had shareholder incen -- a small
- 25 shareholder incentive, as well, built into the initial

- 1 electric programs -- electric CDM programs.
- These were generation 1, I'll call it,
- 3 and they were under -- overseen by the Ontario Energy
- 4 Board. And then there was generation 2, and then three
- 5 (3) or four (4) late -- years later, and I'll guess at
- 6 around 2008 the OPA was given the mandate to put in its
- 7 -- put in a comprehensive set of province-wide programs
- 8 without any incentives.
- 9 And, so the Board dropped all of the --
- 10 the incentives from the remaining OEB approved programs
- 11 at that point. So it -- there was a switch where we
- 12 had gas -- gas -- sorry, electric utility programs with
- 13 incentive, and then we started up OPA programs in
- 14 around 2008 but didn't cancel. And then I think it was
- 15 2010 the government said, We're going to go first and
- 16 foremost OPA universal programs for all utilities, and
- 17 then -- but there is the option for utilities to bring
- 18 supplementary programs funded out of their own rates.
- 19 And basically those programs, two (2) or
- 20 three (3) came forward, and they were all judged --
- 21 those two (2) or three (3) as being too much
- 22 overlapping that they would provide competition and
- 23 reduce, actually, the value and take up of the Ontario
- 24 prog -- Ontario Power Authority programs.
- 25 So there wasn't any -- so then that sort

- 1 of turned the switch off on all of the utility owned.
- 2 It's still available to them to do that. And then we
- 3 went to the OPA programs with the new targets, which
- 4 the OEB was involved with and that's where we are.
- 5 We're ending that program, I believe, next year. Am I
- 6 right, Bill, next year?
- 7 End of this year. So I don't know
- 8 whether that's helpful, but there were programs that
- 9 had incentives in -- in them.
- 10 MR. BOB PETERS: Dr. Higgin, it is
- 11 helpful. Are you able -- or are -- are you of any
- 12 understanding as to the relatively recent legislation
- 13 in Manitoba and the provincial government's involvement
- 14 in energy savings initiatives?
- DR. ROGER HIGGIN: No, I'm not.
- 16 MR. BOB PETERS: Maybe I can ask it
- 17 this way: From your experience, sir, if there is to be
- 18 a mandate to achieve a target, is that mandate better
- 19 set by the provincial government, or by the provincial
- 20 regulator?
- 21 DR. ROGER HIGGIN: In Ontario, as we
- 22 said for the Phase -- the OPA programs, it was
- 23 nominally the OEB and in conjunction with the data
- 24 that's there with the OPA. So I don't perceive that --
- 25 that -- how can I put this, the role of the regulator

- 1 is to run and be the big boss for the utility programs.
- 2 And so, therefore, that's -- the rate
- 3 implications, the costing -- cost rate -- cost
- 4 implications, the rate implications, then all of those
- 5 need to be reviewed and considered by -- by the
- 6 tribunal as they are now. But the question I think
- 7 you're asking is: Should the -- should the PUB become
- 8 the OPA?
- 9 Now, there's only one (1) utility,
- 10 right, and it's both gas and electric. And so in --
- 11 there is that potential. And my answer is being a bit
- 12 -- because I hadn't thought about it, as about would it
- 13 be good for the PUB to take on that role for a mandated
- 14 program. It certainly would be one (1) possibility.
- MR. BOB PETERS: The three (3) -- the
- 16 third of my fourth areas for questioning is Appendix C
- 17 of your evidence on page 56 of CAC Exhibit 27.
- 18 And you and Board Member Dr. Grant had a
- 19 -- a chat about the Affordable Utility Rates Act here
- 20 in Manitoba, correct?
- DR. ROGER HIGGIN: Yes.
- MR. BOB PETERS: And under this
- 23 legislation Manitoba wants to have the -- the lowest
- 24 bundle of utility costs when you consider the
- 25 electricity, natural gas, and automobile insurance?

not overall?

9597 1 DR. ROGER HIGGIN: Correct. 2 MR. BOB PETERS: And what you're showing in the chart, I suppose all three (3) of those 3 utilities -- or entities come before this Board. 5 What you're showing the Board, though, in the chart is that Manitoba is the leader and in terms of total, it's leading -- I guess British 7 Columbia and Quebec are the next closest pursuers? 9 DR. ROGER HIGGIN: Correct. 10 MR. BOB PETERS: And your point at the bottom of the page is when you go forward and analyze 11 12 out to 2025, Manitoba is still the leader, although 13 maybe the relative positions of the different utilities 14 is different, but at the end result it's still -- still 15 the leader? 16 DR. ROGER HIGGIN: Correct. 17 MR. BOB PETERS: And in that case, 18 Manitoba Hydro. you can show it goes from eight hundred 19 and forty-four dollars (\$844) in terms of the annual cost that's calculated, to one thousand three hundred 21 and thirty-seven (1,337)? 22 DR. ROGER HIGGIN: That's right. 23 MR. BOB PETERS: And at that point 24 Quebec is -- is the lowest on the electricity side, but

- DR. ROGER HIGGIN: You are correct.
- MR. BOB PETERS: And does that suggest
- 3 then that under the Preferred Development Plan, based
- 4 on the assumptions that went into this table, out to
- 5 2025, Manitoba would still be in compliance with that
- 6 goal of maintaining the lowest cost bundle of rates for
- 7 -- or bills for electricity, natural gas, and
- 8 automobile insurance?
- 9 DR. ROGER HIGGIN: I think the footnote
- 10 is critical to look at on the electricity. The
- 11 response to CAC/MH II-2-134b has short-term projections
- 12 for the other provinces but doesn't go beyond three (3)
- 13 -- three (3) or so years out. It does not go to 2025.
- 14 So basically, what we're in essence
- 15 saying, that after two (2), three (3), or four (4)
- 16 years, then the -- the changes in other jurisdictions
- 17 would be, quote, "at inflation," for this chart. And,
- 18 therefore, the gap, as it's shown here in this one,
- 19 will be likely considerably increased. The gap is not
- 20 correct.
- 21 Perhaps only the concern would be
- 22 Quebec, what's going to happen there. And basically,
- 23 the projections in -- in Quebec are for inflation-based
- 24 rate projections. When I say, Where does that come
- 25 from, it comes from the latest Quebec Hydro. And then

- 1 that's been taken to account in the response.
- 2 Beyond the short-term, the assumption is
- 3 inflation. So, therefore, who knows. All I'm pointing
- 4 out, that -- not that there's a gap to Quebec, but
- 5 maybe Manitoba and Quebec may be close or very similar
- 6 in -- based on this projection.
- 7 MR. BOB PETERS: All right. Thank you.
- 8 I have your point. And then lastly, turning to page 47
- 9 of your pre-filed evidence, I think you actually
- 10 referenced it in your direct evidence to -- to the
- 11 slides earlier, page 47, and it should be line 1,404.
- 12 And underneath that is a pyramid --
- DR. ROGER HIGGIN: Yes, m-hm.
- MR. BOB PETERS: -- or maybe a
- 15 compilation of pyramids.
- DR. ROGER HIGGIN: Yes.
- MR. BOB PETERS: You had referenced
- 18 this in your -- in your initial discussions, I think,
- 19 in answer to one (1) of the panel members. The upshot,
- 20 as I recall in my notes, is that you said that the
- 21 public interest is -- is basically the -- the foremost
- 22 consideration?
- DR. ROGER HIGGIN: Yes. And it's --
- 24 it's part of the pyramid which compo -- these other
- 25 important considerations.

- 1 MR. BOB PETERS: And when we come to
- 2 defining public interest, what recommendations have you
- 3 given your client as to how it should be defined?
- DR. ROGER HIGGIN: Public interest is,
- 5 in essence, taking these -- these blocks, that is,
- 6 ratepayer consideration, socioeconomic development,
- 7 sustain... and environment, and other factors, which
- 8 would be the economy and so on, which aren't on this
- 9 chart, and decide in the public interest which way we
- 10 should go with the proposal, particularly major
- 11 proposal, such as is before the panel. That's what
- 12 this tries to dictate. It's a conceptual, strategic
- 13 policy framework.
- 14 MR. BOB PETERS: So this panel should
- 15 be guided that the decision that they make should be in
- 16 the public interest and the decision they do make
- 17 collectively will be in the public interest because of
- 18 all the evidence they've heard, all the considerations
- 19 or deliberations that they will do?
- DR. ROGER HIGGIN: Absolutely.
- MR. BOB PETERS: Okay.
- DR. ROGER HIGGIN: That's -- that's all
- 23 I'm saying, yes.
- 24 MR. BOB PETERS: All right. I thank
- 25 you for that.

9601 1 And, Mr. Chairman, I want to thank Dr. Higgin and maybe to a much lesser degree Mr. Harper for their answers this afternoon. I appreciated that. 3 Thank you. 5 THE CHAIRPERSON: Thank you, Mr. Peters. Ms. Fernandes, any questions on redirect? 7 MS. ODETTE FERNANDES: Nothing. Thank you, Mr. Chairman. 9 10 (BRIEF PAUSE) 11 12 THE CHAIRPERSON: I guess a question 13 for the panel is the document that was -- the base 14 document for the exhibit that Manitoba Hydro tabled the 15 question is whether or not that might be made available 16 to the panel tonight. 17 Is it possible to get a copy of that 18 document? 19 Okay, that's fine. We got it. We --Board Member Grant found it, and we'll make it 21 available to the rest of the panel. So thank you very 22 much. 23 I'm looking around the room. I don't 24 think there's any business to conduct so with that, I will adjourn the proceedings for today.

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9602
                   And I want to thank Dr. Higgin. Thank
 1
   you very much for your contribution to the work of this
 3 panel and -- and --
                   DR. ROGER HIGGIN: Thank you for
   listening.
 6
                   THE CHAIRPERSON: -- your contribution
   yet to come, and I wish you a safe trip home. And the
   rest of us will likely be here again tomorrow morning
   at nine o'clock, so have a good evening, everyone.
10
  We'll see you again tomorrow.
11
12
                      (WITNESS STANDS DOWN)
13
14 --- Upon adjourning at 4:16 p.m.
15
16
17 Certified Correct,
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   Cheryl Lavigne, Ms.
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