Re:

MANITOBA HYDRO

GENERAL RATE APPLICATION

2012/13 AND 2013/14

Before Board Panel:

Regis Gosselin	- Board Chairman
Raymond Lafond	- Board Member
Larry Soldier	- Board Member

HELD AT:

Public Utilities Board 400, 330 Portage Avenue Winnipeg, Manitoba December 12, 2012 Pages 420 to 686

APPEARANCES 1 2 Bob Peters)Board Counsel 3 4 Patti Ramage)Manitoba Hydro 5 Odette Fernandes) 6 7 Byron Williams)CAC (Manitoba) 8 9 William Gange) GAC 10 Peter Miller (np)) 11 12 Antoine Hacault)MIPUG 13 14 Michael Anderson (np))MKO 15 16 Denise Pambrun (np))City of Winnipeg 17 18 19 20 21 22 23 24 25

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1 2 LIST OF UNDERTAKINGS 3 No. Description Page No. 4 Manitoba Hydro to provide an 1 5 estimate of the total cost per kilowatt hour for Pointe du Bois 6 485 7 2 Manitoba Hydro to compare the 8 price of natural gas to the peak 9 and the off-peak price of 10 electricity for each day for the 11 last year 608 12 3 Manitoba Hydro to identify the 13 approximate capital contributions 14 that are asked for when doing a 15 development, using a Winnipeg 16 631 development as an example 17 Manitoba Hydro to provide an 4 18 analysis of the number of days where 19 the peak load is above 3,500 653 20 megawatts 21 22 23 24 25

1 2 --- Upon commencing at 9:07 a.m. 3 4 THE CHAIRPERSON: Good morning, 5 everyone. I believe we are ready to commence today's 6 proceedings. I wonder if we have any business to attend to before we start? 7 8 MS. PATTI RAMAGE: Yes, thank you, Mr. 9 Chairman, and good morning Board members. Manitoba 10 Hydro has a number of documents to be assigned exhibit 11 numbers. We left these housekeeping matters to this 12 morning although they were distributed on Monday, or 13 actually even Friday electronically. 14 The first document we'd like to see 15 assigned an exhibit number would be Manitoba Hydro's 16 rebuttal evidence. And we've spoken with Mr. Singh 17 this morning and confirmed that will be Exhibit 8, 18 Manitoba Hydro Exhibit 8. 19 20 --- EXHIBIT NO. MH-8: Manitoba Hydro's rebuttal 21 evidence 22 23 MS. PATTI RAMAGE: We also passed out 24 this morning a single page, and it is page 20 of 62 of 25 Manitoba Hydro's rebuttal evidence. What we are -- Mr.

Singh, have you passed that out? Thank you. 1 2 The Figure 6 on page 20 that was included in the rebuttal evidence that was posted 3 initially on Friday with incorrect figures. So that 4 5 has been corrected online and we have passed out a 6 revised page 20, and are suggesting it simply be inserted into your rebuttal evidence, the other page 20 7 8 removed. To help the parties we can arrange for a 9 stapler and three-hole punch to be brought out at the break so that that's just one (1) complete document. 10 11 The next document on the list is IFF12, 12 which was distributed on Friday, December 7th. We're 13 suggesting that be identified as Exhibit 9. 14 15 --- EXHIBIT NO. MH-9: IFF12 document 16 17 MS. PATTI RAMAGE: And if everyone has 18 that now we also distributed the capital expenditure 19 forecast on Friday. That should be assigned Exhibit 20 number 10. 21 22 --- EXHIBIT NO. MH-10: Capital expenditure 23 forecast 24 MS. PATTI RAMAGE: And if we all have 25

427 that, the external power resource plan, again 1 distributed Friday, December 7th, will be Exhibit 11. 2 3 4 --- EXHIBIT NO. MH-11: External power resource 5 plan 6 7 8 MS. PATTI RAMAGE: By email Manitoba 9 Hydro also circulated CVs of its panel members. Those would be Scott Thomson, Vince Warden, David Cormie, 10 Darren Rainkie, Terry Miles, Robin Wiens, Lois Morrison 11 12 and Wayne Wittmeier. And as a package we're suggesting 13 that those CVs be marked as Exhibit 12. 14 15 --- EXHIBIT NO. MH-12: CVs of panel members 16 17 MS. PATTI RAMAGE: Next on our list of 18 to-dos is the Affidavit of Service. This won't be a 19 document distributed to all parties but it has been 20 provided to the Board and is available if -- if parties 21 wish to inspect it. Mr. Hollis has confirmed that that 22 will be assigned Exhibit 13. 23 24 --- EXHIBIT NO. MH-13: Affidavit of Service 25

MS. PATTI RAMAGE: There is also an 1 affidavit of publication and service, and it is dated 2 November 29th, 2012. It's the -- deals with the 3 publication of the reminder notice in major and rural 4 5 newspapers. That will be assigned Exhibit 14. 6 --- EXHIBIT NO. MH-14: Affidavit of Publication 7 and Service 8 9 10 MS. PATTI RAMAGE: So that deals with 11 Manitoba Hydro's exhibits. The -- well, there is one 12 (1) other. It's been distributed this morning. Mr. 13 Warden, as part of his direct evidence, will be -- will 14 be providing the Board with a presentation and that 15 presentation should be marked as Exhibit 15. That --16 that was circulated this morning. 17 18 --- EXHIBIT NO. MH-15: Presentation by Mr. Warden 19 20 MS. PATTI RAMAGE: So now if everyone 21 is caught up on that, a couple of other housekeeping matters. On Monday Mr. Peters distributed the PUB book 22 23 of documents, Volumes I and II. And I don't believe 24 those were assigned exhibit numbers. 25 MR. BOB PETERS: Not yet.

1 MS. PATTI RAMAGE: Do -- do you want to 2 do them now, Mr. Peters? That was, I guess, the 3 question.

4 MR. BOB PETERS: Certainly. Mr. 5 Chairman, I haven't provided to the Board, as of this 6 time, some documents that I expect to use in questions of -- of this panel, but I have prepared books of 7 documents. And I would propose that they be marked as 8 9 PUB Exhibit 14, and I will distribute them this morning 10 to the Board before I commence my questions of the 11 witnesses.

12 I did provide them to the parties 13 electronically, and I did provide paper copies as well 14 to Manitoba Hydro, at least a limited number of them. 15 And I provided other parties with paper copies. So the Board will receive theirs this 16 17 morning. And it will be -- if we could, we'll mark them 18 as Exhibit 14. I will indicate that they will be 19 numbered sequentially, both with tabs and they will 20 also have page numbers that are sequential. So 21 whenever I refer to PUB Exhibit 14, it will be the PUB 22 counsel's book of documents, and the tab and page

23 numbers will be -- will follow. So only one (1)

24 exhibit number is needed no matter how many books of

25 documents there physically are. So thank you, and

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thank Ms. Ramage for reminding me. 1 2 3 --- EXHIBIT NO. PUB-14: PUB book of documents 4 5 MS. PATTI RAMAGE: And the one other 6 document -- and I leave this to Mr. Williams -- we --7 that was distributed on Monday was the CAC outline of his submission. And I -- it wasn't clear whether Mr. 8 9 Williams wanted that entered as an exhibit, but I 10 thought we could deal with that as a housekeeping 11 matter this morning. 12 MR. BYRON WILLIAMS: I thank Ms. Ramage 13 for that. And, Mr. Chair, that -- that's really at the 14 discretion of the -- of the panel. Certainly if the 15 panel wishes it to be marked in -- as an exhibit, it 16 would probably be CAC-5. Mr. Singh, is that right? CAC-4, I apologize. 17 18 THE CHAIRPERSON: Let's do that then. 19 Let's mark it as Exhibit 4. 20 --- EXHIBIT NO. CAC/MH-4: Outline of CAC (Manitoba)'s 21 22 presentation 23 24 MS. PATTI RAMAGE: This might be a good 25 time to have the witnesses sworn, Mr. Chair.

1 THE CHAIRPERSON: Okay, please. 2 MANITOBA HYDRO PANEL 2 - REVENUE REQUIREMENT: 3 VINCE WARDEN, Resumed 4 5 DAVID CORMIE, Resumed 6 DARREN RAINKIE, Sworn 7 TERRY MILES, Sworn 8 LOIS MORRISON, Sworn 9 10 MS. PATTI RAMAGE: Thank you. Now before we proceed with our direct, I thought -- we have 11 12 -- this is our second panel, our revenue requirement 13 panel. We have a number of new faces and a new back-14 row member. So I thought I might just quickly run 15 through and -- and some of these are new faces to, not 16 only our -- our new panel, but all in the room. 17 The -- Mr. Warden spoke on Monday. 18 Seated next to him is Darren Rainkie, our corporate 19 controller. Next to Mr. Rainkie is Mr. Cormie, who we 20 also met Monday. Next to Mr. Cormie is Terry Miles, 21 who is the manager of Resource Planning and Market 22 Analysis at Manitoba Hydro. And to my far right is Ms. 23 Lois Morrison, who is division manager of Consumer 24 Marketing and Sales. 25 Our back-row support people generally

are supporting the person directly in front of them. 1 So to my far right is Mr. Louis Kessler. He is the 2 manager of market -- of the Market Forecast Department. 3 Ms. Joanne Flynn is division manager of Power Planning. 4 5 She was also here on Monday. Mr. Kevin Gawne is the 6 manager of Energy Operations and Planning. Next to Mr. 7 Gone is Ms. Kristen Perrault, who's the -- our regulatory financial analysis in the Corporate 8 9 Controllers Division. And then we have Ms. Liz Carriere, who is the manager of financial -- of the 10 11 Financial Planning Department.

12 I can advise the Board that I -- Mr. 13 Peters and I exchanged some emails yesterday. We're 14 hoping to reduce the number of our back-row support and 15 witnesses as we proceed and get an idea of where the --16 where the cross-examinations are going. And Mr. Peters 17 was fair, cooperative in assisting us, but we thought 18 we should all be here as we start out. And we may see 19 people come and go as the Hearing proceeds. 20 I think we're going to begin this

21 morning. Mr. Warden has, as part of his direct,
22 prepared a presentation for the Board. That has been
23 marked as Exhibit 15. And he is going to provide the
24 Board with an overview of Manitoba Hydro's Application
25 and an update on -- on various aspects of the

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Application. Mr. Warden...? 1 2 PRESENTATION BY MANITOBA HYDRO PANEL 2: 3 MR. VINCE WARDEN: Yes. Good morning, 4 5 Mr. Chairman, members of the Board, and ladies and gentlemen. My name is Vince Warden. I'm the VP, 6 7 Finance Administration, and CFO for Manitoba Hydro. I have appeared before this Board on numerous occasions 8 9 in the past, but I can say with some certainty, this 10 will be my last appearance. 11 Although I have appeared many times 12 before, I can also say that no application of Manitoba 13 Hydro is more important than the one you have before 14 you today. The rate increases being sought in this Application are not insignificant by historical 15 16 standards. In Manitoba Hydro's view, however, the 17 requested rate increases are absolutely necessary to 18 maintain that optimum balance that we spoke about on 19 Monday, that balance between fiscal responsibility and 20 -- and customer sensitivity. 21 I've stated previously that Manitoba 22 Hydro is in the strongest financial position in its 23 history. This continues to be the case, with the debt-24 equity ratio at the target level and with retained 25 earnings at an all-time high.

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1 There are, however, some difficult financial challenges confronting us, with a precipitous 2 drop in export revenues and the higher cost being 3 incurred to maintain an aging infrastructure. This is 4 5 evidenced in Manitoba Hydro's recently issued quarterly 6 report for the six (6) months ended September the 30th, 2012. 7 8 As indicated in that report, Manitoba 9 Hydro incurred a net loss on consolidated operations of \$43 million compared to net income of 13 million for 10 11 the same period in previous year. While 25 million of 12 the current-year loss is attributable to gas 13 operations, the six (6) month loss of 18 million in the 14 electricity sector is especially troublesome in a year 15 in which above-average water flows are being 16 experienced. 17 Compared to the previous year, the loss 18 of 18 million in the electricity sector is a turnaround 19 of 55 million, from the 37 million profit realized for the same six (6) month period last year. 20 21

There are a number of factors 22 contributing to this, including higher system 23 maintenance and repair costs, the incremental costs 24 associated with placing Wuskwatim Generating service --25 Station in service, higher pension and employee-related

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expenses, and accounting changes that better reflect 1 current costs of operations. 2 3 Going forward, we will be experiencing even greater pressures on the cost side of the 4 5 equation. We've been talking about the looming, aging 6 infrastructure issue for a number of years, but there's 7 no denying that it is finally upon us. A recent Conference Board of Canada 8 9 report estimates the need for over 300 billion of 10 infrastructure investments by electrical utilities over the next twenty (20) years. And Manitoba Hydro is 11 certainly not isolated from this. 12 13 Historically, the reliability 14 performance of Manitoba Hydro's system has been 15 excellent and among the leading utilities in Canada. 16 More recently, however, the reliability performance of our system has begun to degrade, and asset condition is 17 18 a major contributing factor. 19 Mr. Chairman, as part of my opening 20 comments, I thought it might be helpful to the Board to 21 provide you with an overview of Manitoba Hydro's 22 current position, including some comments on key risk 23 and issues. 24 This document, as Ms. Ramage has 25 indicated, has been distributed as Exhibit number 15,

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which I will briefly review. The -- on page 2 of the 1 document that was distributed is a summary. I will 2 talk a -- a little bit about what Manitoba Hydro is, 3 where we're positioned today, provide a financial 4 5 update, review our General Rate Application, prov --6 provide some comparisons to other utilities. 7 Ms. Morrison, in her direct, will talk about the energy conservation programs that are 8 9 currently underway and the progress we're making. We'll have a -- a brief discussion on risk management. 10 11 Mr. Rainkie will talk about IFRS in his direct 12 presentation, and Mr. Cormie will talk about current 13 water conditions in his direct testimony. 14 Very briefly, on slide number 3, the 15 corporate profile on March 31st, 2012, we have 16 approximately \$2 billion in annual revenues. Our 17 assets are 14 billion. We have five hundred and forty-18 three thousand (543,000) electricity customers and two 19 hundred and sixty-eight (268,000) natural gas 20 customers. This makes us -- or makes Manitoba Hydro 21 one of the largest integrated in natural gas utilities 22 in Canada. We have exports to over thirty (30) 23 wholesale customers in both Canada and the USA. 24 We do have the lowest electricity rate 25 structure in North America. As at March 31st we were

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ranked number 1 in customer satisfaction by the 1 Canadian Electrical Association. We're actually tied 2 for number 1 with SaskPower and -- and Newfoundland. 3 We have sixty-three hundred (6,300) 4 5 employees at March 31st. We -- for the third 6 consecutive year we've been recognized as a top one 7 hundred (100) employer in Canada. A leader in Aboriginal employment with 16.4 percent of our tot --8 9 total labour force today is Aboriginal. And 42.4 percent of our Northern workforce is Aboriginal. We 10 are a leader in energy conservation, which we'll be 11 12 speaking -- Ms. Morrison will be -- be speaking more of 13 in her direct testimony. 14 Slide number 4 does provide just a 15 snapshot or an overview of Manitoba Hydro's system, 16 showing the percentage of energy supplied from our 17 various river systems over the past year. So the total 18 -- total energy supply in 2011/'12 was 33,249 gigawatt 19 hours, which is about $2 \ 1/2$ percent lower than the previous year, but still above -- above average. 20 21 With the addition of Wuskwatim 22 Generating Station during the year, or this -- just 23 coming on-stream we'll have fifteen (15) hydraulic generation stations on the system, a coal plant at 24 25 Brandon, which is used in emergency situations only, a

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combustion turbine at Brandon, and four (4) diesel 1 2 electric sites. 3 Inter -- interconnection capability is -- to the east and to the west is 150 megawatts into 4 Saskatchewan, 200 megawatts capability into Ontario, 5 6 the largest by far capability though is at our 7 neighbours to the south with 2,175 megawatt capability -- transfer capability. 8 9 To provide a financial update then on 10 page 6, we structured this -- this page showing the results over the past four (4) years, so starting in 11 12 2009. And some comments have been made by some 13 Intervenors that Manitoba Hydro has done a poor job of 14 forecasting. 15 But looking at the actual results over 16 the past four (4) years, I don't know that anyone would 17 have forecasted a drop of 41.7 percent in extraprovincial revenues over that four (4) year 18 19 period, or a 54.3 percent drop in the cost of natural 20 gas to supply to the Manitoba market. 21 So the changes that have been occurring 22 in the -- in the energy market over -- over that period 23 of time has been -- have been described by many people 24 as "game changers". So Manitoba Hydro does not 25 apologize in any way for forecasts that we prepared in

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439 2009 being diff -- different -- substantially different 1 from what they are in 2012. And I think this is 2 evidence -- evidence of why that situation has 3 4 occurred. 5 The rate that we were getting -- and --6 and you can see the extraprovincial sales has gone from 7 623 million in 2009 to 363 million last year. And -and the 632 million was not the peak. We actually 8 9 peaked -- export sales were in 2006, when we achieved 10 \$827 million in revenue in that year. So a substantial decline in export sales. 11 12 And I've -- I've also indicated across -13 - at the very bottom of this page hydraulic generation, because our export sales can be very much influenced by 14 15 water flow conditions. And you can see though that over that four (4) year period, hydraulic generation 16 17 has been relatively flat. That is, we've experienced 18 good water flow conditions over -- over that four (4) 19 year period, and none of that drop -- or very little of 20 that drop that we're seeing in extraprovincial revenues 21 is -- is due to water conditions. 22 More so it is -- it is due to the change 23 in the price -- return we're getting on the export 24 market. In 2009 -- 2008/'09 fiscal year we were 25 getting forty-seven dollars (\$47) per megawatt hour for

our opportunity sales. Those are the non-firm sales. 1 In 2011/'12 that number is twenty-three dollars (\$23). 2 So it's gone from forty-seven dollars (\$47) in 2008/'09 3 to twenty-three dollars (\$23) in 2011/'12, and that's a 4 5 major contributing factor to the drop in 6 extraprovincial revenues. 7 Operating and administrative expenses have gone up 10 percent over that four (4) year period. 8 9 And I will be speaking more to operating and 10 administrative expenses a little bit later in the 11 presentation. 12 If we can turn to the next -- oh, I 13 should have mentioned if the Board has any questions as 14 I proceed, I'd be pleased to answer those questions at 15 any time. So please -- please interrupt me. 16 If we turn to page 7, this is the -- our consolidated financial results for the six (6) months 17 18 ended September the 30th. So this is what was in the 19 recently issued quarterly report. So you can see, as I 20 mentioned earlier, a loss of \$43 million for that six 21 (6) month period compared -- compared to 13 million in 22 the previous year -- same six (6) months in the 23 previous year. The -- on the next page, on page 8, 24 this is the electricity statement for that same six (6) 25 month period. And as I indicated earlier, we lost \$18

1 million compared to \$37 million the previous six (6)
2 months.

3 On page 9, probably -- probably the most important slide of the deck, I suppose, is this one 4 5 that shows what -- summarizes a couple of important points I want to make here, actually. Maybe I'll start 6 with the net income at the bottom. It shows that we 7 have -- are -- according to our financial forecast just 8 9 released on Friday, net income is projected at 53 million for the -- for the first test year, and 60 10 11 million for the second test year.

12 However, there -- that does include what 13 is referred to as non-controlling interest. And I've 14 highlighted that issue because the non-controlling 15 interest is income from our partner, Aboriginal partner 16 at Wuskwatim, Nelson Hou -- or, NCN is our -- the 17 partner we have at Nelson House that, according to --18 to the development agreement, the project development 19 agreement we have with NCN, we share as a partner -- we 20 -- as partners we share in the revenues and costs of --21 of Wuskwatim proportional to the -- our equity 22 ownership, so NCN has 33 percent ownership in Wuskwatim 23 generating station. 24 At the time the agreement was negotiated 25 with NCN, going back to 2006 -- and as indicated on my

first slide, the world has changed dramatically since that period in time. Whereas we were projecting income from Wuskwatim, Wuskwatim is now contributing to costs on our income statement because of the -- because of the drop -- primarily because of the drop in export revenues.

7 That means that instead of sharing in a -- in a profit on Wuskwatim, NCN is contributing 8 9 towards a loss. So the \$14 million that is showing here is non-controlling interest in 2012, and 24 10 11 million in '13/'14 is NCN's contribution towards the 12 loss at Wuskwatim. That is not going to happen. I can 13 tell you right now that that is not -- we are not going 14 to receive that 14 million, we are not going to receive 15 that 24 million to -- the agreement is in the process 16 of being renegotiated because of the conditions we're 17 experiencing now with export revenues.

18 It's a big issue for us, but it's one 19 that the Board should be aware of, that the net -- that 20 the -- really the focus we should be -- as far as these 21 proceedings are concerned, the focus of net income for 22 '12/'13 is 39 million, and for '13/'14 is 36 million. 23 At the time we were preparing our 24 financial forecast we really had no alternative but to 25 prepare in accordance with the development agreement we

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1 have with NCN. We did that, though, being fully aware 2 that neg -- negotiations were under way. We -- those 3 enga -- negotiations are continuing as we speak, have 4 not concluded an agreement, but I can tell you with 5 absolute assurance that that income from non-6 controlling interest will not be received.

7 So we are looking then at net income in '12/'13 of 39 million if -- if we get approval from 8 9 this Board of the 80 million that is being requested 10 with this rate application. And similarly, in '13/'14, 11 36 million net income if we receive approval for the 12 119 million of additional revenue, or at least, 13 application we have before this Board. In the 14 circumstance that any or all of that is not approved, 15 of course that will go right to the bottom line and we 16 will incur losses of some magnitude in each of those 17 years.

18 So just going over those increases then, 19 the -- the 35 million, 1 percent rollback is -includes 23 million accumulated to the end of 2012/'13, 20 21 plus an additional 12 million for this current fiscal 22 year, '12 -- or, for the '12/'13 fiscal year. And a 23 further 12 million in the subsequent '13/'14 fiscal 24 year. The 25 million referenced in -- effective April 25 the 1st 12 -- 2002 (sic) is -- is what we have interim

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444 approval for from this Board; likewise, with the 2 1/2 1 percent, September the 1st, 2012, we have interim 2 approval. Then we are seeking additional approval of 3 3.5 percent which will generate revenues of 48 million 4 5 in thir -- in the '13/'14 fiscal year. 6 It also assumes that we will achieve the export -- extraprovincial revenues that are forecast 7 8 for '12/'13. And as Mr. Cormie will indi -- inform you 9 of in his testimony there are some issues associated with that as well. 10 11 Okay. So we'll turn to the next page 12 then. This is an excerpt from our Integrated Financial It does show the net income of the 53 13 Forecast. 14 million we previously spoke of, the 60 million in 15 '13/'14, 50 million in -- in '14/'15, and taking it 16 right out to 2021/'22, 52 million in that year. 17 However, deducting the non-controlling 18 interest that I previously referenced, we would have to 19 reduce '12/'13 by 14 million, '13 -- the fiscal year 20 2013/'14 by 24 million, and the fiscal year '14/'15 by 21 \$21 million. Adding that up for the entire ten (10) 22 year period that's covered on this page, up to 23 2021/'22, the non-controlling interest totals \$108 24 million. 25 Page 11 does indicate what our financial

targets are: debt-equity, interest coverage, capital 1 coverage. These are targets -- the financial targets 2 Manitoba Hydro has been tracking for a number of years 3 and striving to obtain the 75:25, which we -- we have 4 achieved and we are actually currently -- current 5 6 results as -- as at the end of October 2012, we are 7 exactly at 75:25 for -- for the debt-equity ratio. 8 Interest coverage we have a target of one point two-zero (1.20). We're currently sitting, at 9 10 the end of October, at one point zero (1.0). Capital coverage, also one point two-zero (1.20), we are 11 12 currently at one point one (1.1). The ratios are -- financial ratios are 13 14 shown graphically on the next three (3) pages, so the 15 equity ratio, as you can see from this chart during the 16 period of major capital construction does take a significant decline, a dip into the te -- it bottoms 17 18 out at 10 percent, 10 percent equity in 2022 and then 19 begins to increase gradually. 20 This is a very important chart that we 21 review with our credit rating agencies, and they --22 they certainly appreciate the fact that when we're 23 incurring the amount of debt that we will be with our 24 Capital Construction Program, the equity ratio is going 25 to be affected in a -- in a negative way.

What they take comfort in though is the 1 recovery, the recovery that we see towards the end of 2 the forecast after -- after -- especially after 3 Conawapa generating station comes into service the --4 5 the revenues realized, or projected to be realized from 6 the Conawapa generating station contribute to recovery in the equity ratio. And we do, by the end of the 7 forecast period, by the end of this twenty (20) year 8 9 period, we do get back to the 75:25 target ratio. 10 Interest coverage on -- on page 13 does 11 show that for the next twelve (12) years we will not 12 meet the interest coverage target of one point two-zero 13 (1.20). And this is -- this is of -- of significant 14 concern actually. And there are -- there are at least 15 one (1) -- three (3) years where it's very close to one point zero (1.0) and dips below one point zero (1.0) in 16 17 -- in one (1) of those years. 18 So we're hopeful going forward we'll be 19 able to manage this such that we can keep that ratio at 20 least above one (1) for that -- during that period of 21 major construction. 22 The capital coverage ratio, this is --23 they're measuring the amount of funds we have generated 24 internally to fund our -- our base capital, not 25 including our major generation and transmission target

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1 there is one point two-zero (1.20).

2 We do achieve that for the majority of the forecast period, although, during the early years 3 of the forecast we -- we do not -- we do not achieve 4 5 that target. Comparing to other -- just very briefly, to other hydraulic utilities in Canada, Manitoba Hydro, 6 the -- the interest coverage ratio, as you can see, at 7 the end of March 2012 was significantly below the other 8 9 utilities in Canada. Hydro Quebec sitting at one point nine-nine (1.99), BC Hydro one point nine-one (1.91), 10 11 New Brunswick at one point five-nine (1.59).

12 Equity, we're -- we're reasonably good 13 there with our equity, so our 75:25 target, I think, is 14 appropriate. The -- it shows twenty-six (26) here at 15 the end of March 2012. Since that time, it has now 16 moved to 75:25, compared to 31 percent at Hydro Quebec; 17 20 percent, BC Hydro; and 9 percent for New Brunswick. 18 Retained earnings throughout the 19 forecast period are forecast to remain relatively flat. 20 We won't be adding -- because, of course, due to our 21 low -- very low projected net income, retained earnings 22 will remain pretty much where they are after the charge 23 against retained earnings for IFRS that occurs in 2014. 24 Very briefly on page 17 is our Power 25 Resource Plan showing the major generation and

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1 transmission that will be coming into service over the 2 next approximately twelve (12) years. A little bit 3 further, actually, we've got Pointe du Bois rebuild on 4 here that goes out further, but for the most part, this 5 is in the next twelve (12) years.

6 So Wuskwatim is now fully in service. 7 The last of three (3) units was placed in service in October at a cost of 1.8 billion. That includes the 8 9 transmission facilities associated with the generating station. Bipole 3 estimate is 3.3 billion. We have 10 Conawapa coming -- scheduled -- or, sorry, Keeyask 11 scheduled coming in to service in 2019/'20 at a cost of 12 13 6.2 billion. Conawapa, 1,485 megawatts, 10.2 billion. And additional transmission from the North, that's AC 14 15 transmission, and -- yeah. The spillway replacement, '14/'15 for 560 million. And the eventual rebuild of 16 17 Pointe du Bois powerhouse going out to 2030.

18 So page 18 of the presentation refers to 19 our -- shows a graphical presentation of our operating 20 and administrative expenses. And except for accounting changes and pension cost increases, we have OM&A -- our 21 22 OM&A -- operating, maintenance, and administration --23 is projected to increase at 2 percent per year. So 24 that's all we have built into this forecast is 2 25 percent per year.

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There is a risk that won't be 1 attainable, mainly because of our infrastructure issue 2 that we've -- Mr. Thomson discussed in his 3 presentation. And we'll -- I'm sure we'll be talking 4 5 more about in this proceeding. 6 THE CHAIRPERSON: Can I ask a question, 7 Mr. Warden? 8 MR. VINCE WARDEN: Yes. 9 THE CHAIRPERSON: On the -- with 10 respect to the comment of 2 percent per year, I'm just noting that there is -- there are some significant 11 12 increases that appear between years. Are you looking 13 at 2 percent per year from 2008 to 2022? Is that where 14 that 2 percent comes from? 15 MR. VINCE WARDEN: No, sorry. The 16 actual -- I was referring to the forecast only. 17 THE CHAIRPERSON: Oh, I see. 18 MR. VINCE WARDEN: What -- what we have 19 built into our forecast other than accounting changes 20 and -- and pension cost increases --21 THE CHAIRPERSON: Oh, I see. Okay. 22 MR VINCE WARDEN: -- and IFRS. IFRS 23 causes the step change that we see. But no, the 24 historical -- I actually will review the stor --25 historical on the next page. Yes. And Mr. Rainkie

just reminded me, there's provision for -- for Keeyask 1 coming into service in 2019, which will also contribute 2 to an increase over and above the 2 percent that we 3 have in the forecast. 4 5 So just a little bit more on operating 6 and administrative costs on slide 19. You can see here 7 we have, starting in 2000 -- the actual for 2009/'10, '10/'11, and '11/'12. 8 9 So the -- the in -- you can see 4.28 percent increase in 2009/'10. That increase was mainly 10 -- or, at least -- not mainly, but at least partly due 11 12 to the strike that was appear -- experienced by 13 Manitoba Hydro, the IBEW strike that was experienced by 14 Manitoba Hydro in that year, which added approximately 15 \$6 million of costs in -- in that year. 16 2011/'12 though, the percent increase in fac -- as a matter of fact, we had a decrease in 17 18 2010/'11 of 0.8 percent, a decrease in our OM&A 19 expenses after adjusting for accounting changes, which 20 we'll speak a little bit more of. Likewise, in 21 2011/'12 a very modest increase of .63 percent year-22 over-year increase in OM&A after adjusting for 23 accounting changes. We are projecting for the next two 24 (2) fiscal years increases of 1.62 and 1.93 percent 25 after adjusting for accounting changes again.

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1 So the average increase in our operating, maintenance, and administrative expenses 2 over that period of time was 1.68 percent, compared to 3 CPI over that same period of time of one point eight-4 5 two (1.82). So we're below CPI, despite the fact that 6 we are a growing organization, in terms of numbers of 7 customers. We add in the order of five thousand 8 9 (5,000) customers per year to our system. And of course there are additional costs associated with that. 10 We've been managing this infrastructure issue during 11 12 this period of time, as well, at increases under the --13 overall, they're under the rate of inflation. 14 The -- I -- I included on page 20 a 15 summary of the accounting changes. And I -- I do want 16 to be clear that these accounting changes are not IFRS They are, however, IFF -- IFRS related. 17 changes. So 18 as a result of util -- all utilities in Canada 19 considering going the IFR -- IFRS route and some, as 20 Mr. Thomson indicated, have gone to US GAAP; but as a result of -- of that movement toward IFRS, all 21 22 utilities in Canada have been looking at their 23 capitalization policies. 24 So Manitoba Hydro is definitely not 25 alone in this. We've been looking at how we capitalize

costs, and how compliant they would be in an IFRS 1 environment. This -- this very close look, though, 2 that all utilities in Canada have been doing at their 3 4 operating and administrative -- or, their 5 administrative costs has led to the auditors, as well. 6 The aud -- our auditors are taking a very close look at 7 this. 8 The change that we have made -- have made in -- in each of the years '09/'10, '10/'11, and 9 10 '11/'12, are not only supported by -- by our external auditors; they're also -- almost -- almost demanded by 11 12 our external auditors, because they've always been of 13 the view that we've been at -- at the extreme edge, in 14 terms of what we were doing with our capitalization 15 policies. 16 And just to give you an example, when we put a new office building, or a district office 17 18 building into service, we capitalize it during -- of 19 course, during the period of construction. We -- we 20 charge that to capital depreciated over the life of 21 that facility. 22 What we also do -- have done at Manitoba 23 Hydro, however, is we've taken the interest and 24 depreciation on that building and charged a 25 proportional part of that back to capital. So not only

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do -- do we charge the original facility to capital, 1 but when we depreciate we charge a portion of that back 2 to capital again, because we do use that facility 3 partly -- not only for operations, but also for 4 5 capital. 6 We're probably the only utility in 7 Canada that ever did that. Now we can support that from a theoretical basis, but it's definitely not 8 9 allowed under IFRS. And definitely when the auditors 10 start looking at that, they came to the conclusion that they could no long support that as -- as a methodology. 11 12 So the changes that we're implementing 13 here are certainly with a view towards IFRS, but are driven more so by -- by Canadian GAAP, what we're doing 14 15 in -- in -- according to Canadian accounting standards. 16 We'll be definitely talking more about this in -during the proceeding, but I -- I did want to bring 17 18 this to your attention and summarize those accounting 19 changes for the Board. 20 The next chart is -- is just a pictorial 21 of our --22 MR. RAYMOND LAFOND: Sorry, before we 23 go to the next chart --24 MR. VINCE WARDEN: Sure. Sure. 25 MR. RAYMOND LAFOND: -- I need to

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1 understand very carefully what you're indicating. When
2 you're talking of a percentage increase, you say after
3 accounting for accounting changes. Do you really mean
4 after or before?

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5 MR. VINCE WARDEN: Well, if we -- if we 6 turn back to page 19, so if you look at -- at 2011, for 7 example, we started off with 403 million. That's the amount that we -- you can see in the annual report of 8 Manitoba Hydro. We're taking out subsidiaries because 9 10 they're not germane to this -- to this proceeding. And this is our -- mainly our Manitoba Hydro International. 11 12 We're also deducting accounting changes. So we come 13 down to \$366 million compared to three hundred and 14 sixty-six (366) -- three eleven (311) in the previous 15 years. So the .8 percent decrease is -- is after 16 making those adjustments. 17 18 (BRIEF PAUSE) 19 20 MR. VINCE WARDEN: So on page 21 it --21 it does show this one, I think quite dramatically. The 22 -- the vast majority, 77 percent of our operating, maintenance, and administrative costs are made up of 23 24 wages, salaries, and benefits. The other components

25 relative to the overall cost of Manitoba Hydro are --

are relatively -- relatively small. 1 2 On page 22 it does show the numbers of employees. And I've broken this down by bargaining 3 unit, because it does serve to show where those 4 5 employees are at Manitoba Hydro. And as you can see from this chart, 6 7 thirty-one hundred (3,100) of our sixty-three hundred (6,300) employees are in the IBEW bargaining unit. So 8 9 these are the people that are out on -- in the field, keeping -- keeping the lights on. These are -- that's 10 11 thirty-one hundred (3,100) employees at Manitoba Hydro. 12 The CEPU at the bottom of that page, two 13 hundred and fifty (250) employees, those are the gas -primarily all of our -- our gas employees, the people 14 15 that are dedicated to the natural gas system, the field 16 employees. The office people in -- in CUPE, twelve hundred (1,200) employees, those are the admin and 17 18 technical staff, so the engineering technician staff, 19 administrative support staff at -- at Hydro. 20 The bargaining unit, the group we refer 21 to as AMHSSE, the Association of Manitoba Hydro Staff 22 and Supervisory Employees, eight hundred (800), those 23 are the people that essentially are -- are in the 24 supervis -- supervisory ranks. 25 We have approximately five hundred (500)

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engineers. So that's the Manitoba Hydro Professional 1 Engineers Association, five hundred (500). 2 3 And the corporate exempt, four hundred and fifty (450), are -- include professional 4 5 accountants, close to -- close to two hundred (200), 6 about a hundred and eighty (180), I believe, 7 professional accountants at Manitoba Hydro, including all -- all management and executive staff are included 8 9 in that category, plus people in HR that deal with confidential in -- information that are not in a 10 bargaining unit. So actually, the vast majority of the 11 12 people in our human resources division are also in the 13 corporate exempt category. 14 Just to show how -- and I did speak --15 speak earlier about the -- the graph -- or the -- on 16 the -- on the left-hand side of this page is where we currently are at September 2012. So we do have 16.4 17 18 percent of our total workforce is Aboriginal. And just 19 to show the progress we've made over -- since the year 20 2000, back in 2000 we only had 7.4 percent of the 21 workforce was Aboriginal. And it was largely a maledominated workforce back in 2000. And since that time, 22 23 the male workforce, as a proportion of the total, has 24 shrunk significantly; still the maj -- major portion, 25 but much lower than it was back in 2000.

Cost-constraint measures that have been 1 2 in place for a number of years are travel, travel restrictions. So if we look at that one specifically, 3 back in 2008/'09, we -- we spent 31.6 million on 4 5 travel. We do -- you know, travel is a very big cost 6 component -- or, cost at Manitoba Hydro. Although, in 7 relative terms, as indicated in the previous slide, it's -- it's travel -- motor vehicles makes up about 8 8 percent of our total costs; but nevertheless, 9 significant. 10 11 So in 2008/'09 our travel costs were 12 31.6 million. As a result -- partly as a result of the 13 travel restrictions that are -- have been in place since that time, travel has actually declined to 31.3 14 15 million. So it stayed flat over those four (4) -- that 16 four (4) year period. And Mr. Thomson referred to this in his opening remarks, that all travel that's out of 17 18 country is -- goes directly to his office for approval. 19 There are -- I must say there are pros 20 and cons to those kinds of restrictions. An example of 21 this would be CAMPUT. Manitoba Hydro for the past 22 three (3) years has not allowed and not sent anybody to 23 CAMPUT for those -- for the past three (3) years 24 because of our travel restrictions. 25 So, is that good? Well, you know, at

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1 those kinds of organ -- those kinds of conferences,
2 people do interact with their peers, they do -- they do
3 perhaps pick up ideas that can be used in the business.
4 So we can restrict travel, but there are -- there are
5 consequences. And I guess we just have to -- have to
6 recognize that.

7 The hiring -- hiring and overtime 8 restrictions that have been in place have -- have been 9 difficult -- very difficult to achieve. EFTs have 10 increases overall over the -- over the past four (4) --11 that same four (4) year period that I was referring to 12 with our travel costs, our -- our salary -- wage and 13 salary costs have gone up about 5 percent per year.

14 A number of different reasons for this, 15 but even as we speak we are having difficultly keeping 16 up with the amount of work that is out there. And 17 we're -- there's a huge expansion in Western Manitoba 18 in the oil field -- fields, for example, where they --19 they're absolutely -- we just can't get the labour to -20 - we can't get the people to -- to do the necessary 21 work in the western part of the province. 22 And we've had to go to contract labour.

23 We had to hire contractors, which -- we're having 24 difficulty with our bargaining unit. The bargaining 25 unit is -- is actually taking us to arbitration over

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that, taking us to the Labour Board because we're 1 contracting out their work. 2 3 So, you know, we -- we -- we're 4 compressed, definitely, in terms of the cost -- on the 5 cost side of the equation. But we're also very much under pressure on the -- on the work that needs to be 6 7 done. 8 Leveraging technology is another 9 reference on this slide. We have -- we have been doing a num -- number of different things on the technology 10 11 front. Probably the best example of that is our Mobile 12 Workforce Management Program that is now being 13 implemented. We -- and this allows crews to be 14 dispatched from any location in the province. So 15 rather than crews having to come into a central work 16 location at which they get their work orders for the 17 day, they are now dispatched in their vehicles directly 18 to the work location. We're forecasting savings in the 19 order of \$2 1/2 million per year with -- with that new 20 system. 21 Reductions and community sponsors --22 sponsorships and donations. We have, in fact, cut that 23 back to the absolutely minimum savings of about \$3 24 million per year and certainly are getting reactions 25 from the communities that we have historically

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1 contributed to over the years.

Just to then on the -- on -- if we go turn to page 26, this summarizes the General Rate Application. This is a different sequence than Mr. Peters reviewed in his opening remarks, but it is essentially the same.

7 It is in chronological order, starting with the -- the rate -- what we've referred to at 8 9 Manitoba Hydro as a rate rollback associated with 2010 rates. So that's the 35 million that I referred to 10 earlier in 2012/'13, plus a further 12 million in -- in 11 12 '13/'14. We're seeking final approval of the 2 percent 13 rate increase effective -- that was implemented April the 1st, 2012. This results in revenue of 25 million 14 15 in 2012/'13 and 26 million in 2013/'14.

16 We're seeking final approval of the 2.5 percent as indi -- indicated in item number C; final 17 18 approval of the 2.5 percent increase effective 19 September the 1st, 2012; approval of the 3.5 percent 20 effective April the 1st, 2013; confirmation of our SE -21 - SEP, the surplus energy program, and the CRP, 22 curtailable rate program, orders; and final approval of 23 the 6.5 percent diesel rate increase effective 24 September the 1st, 2012. And this will result in 25 additional revenue of 0.2 million in 2012/'13 and 0.3

million in -- in '13/'14. 1 2 The next few slides are just a summary of -- of what the rate structure is. I won't --3 probably won't go over these in any detail but they're 4 5 there for your reference. So that's on page 27, 28, 6 and 29. Rate comparisons are provided to other 7 utilities, as indicated on slide 30. 8 Thirty-one (31), Manitoba Hydro still 9 enjoys the distinction of being the lowest-cost jurisdiction in North America. So the next lowest cost 10 -- next lowest, compared to Manitoba Hydro, is Idaho, 11 12 at six point two-four (6.24) cents per kilowatt hour. 13 And these are the ten (10) lowest. 14 So if -- if you look at the markets that 15 we're selling into in the US and Minnesota and -- and 16 North Dakota, in that jurisdiction, they aren't on this chart, but they're just -- they're slightly -- their 17 18 average rates are slightly above the rates that are 19 indicated here. 20 We aren't, however -- if you turn --21 turn to page 32, we aren't the lowest at all levels of 22 consumption. So for 1,000 kilowatt hours per month, 23 which is the typical usage for a residential customer in Manitoba, you'll see that in -- in Montreal they are 24 25 -- are currently lower than -- than Man -- in -- in

1 Winnipeg today.

2	The next slide, 33, I do have to
3	apologize. There is an error on this slide for both
4	Montreal and Vancouver. If I can just maybe get you to
5	pencil in the correct numbers there. The for
6	Montreal for 2,000 kilowatt hours per month and we
7	used 2,000 kilowatt hours per month because this is a
8	typical electric heat customer. For 2,000 kilowatt
9	hours per month in Montreal is a hundred and forty-
10	three dollars (\$143) per month, and in Vancouver, BC,
11	it's it's one-ninety-five (195) instead of the two-
12	seventeen (217) that's indicated there. All the rest
13	of the values are correct.
14	I've also included a couple of slides
15	just show showing the comparatives for different
16	levels of general service usage at 10,000 kilowatt
17	hours per month, and then a much larger customer at 12
18	million kilowatt hours per month. So in both of those
19	examples, Manitoba Hydro is the is the lowest
20	lowest of all jurisdictions.
21	Slide 36 summarizes the rate changes
22	that we have had over the past number of years includ -
23	- back to 2006, including the proposed rate increase of
24	3.5 percent for 2013. So it shows over that period of
25	time, since 2006, the cumulative rate increases in

463 Manitoba have been 24.2 percent. Hydro Quebec is lower 1 at 14.3 percent over that same period, as is New 2 Brunswick at twenty three point seven (23.7). But 3 other jurisdictions are considerably higher. 4 5 Despite the fact that we -- Hydro Quebec 6 and New Brunswick have been lower over that period of time, the current rate index, using Manitoba Hydro as 7 one hundred (100), you can see that the rates are still 8 higher in those jurisdictions than they are on average 9 than -- than in Manitoba. 10 11 I'm going to skip over the energy 12 conservation programs. Ms. Morrison will be speaking 13 to those in her direct presentation. 14 So if we go to risk management then, on 15 page forty -- page 42, these are part of the -- the 16 excerpt from the risk management report we prepare 17 annually at Manitoba Hydro. And these are what we 18 refer to as our immediate and emerging risks. 19 Domestic rate increases, of course, 20 importance of -- of getting the rate increases that 21 we're seeking is just of paramount importance to us. 22 The major capital expansion program, of course, is a --23 is a risk in terms of getting the regulatory approvals 24 on time to meet our commitments and to ensure that we 25 can build those projects within the -- within the

estimates that have been developed. Firming up the 1 export contracts that are associated with that major 2 development plan is also a major issue for us. 3 4 Export market prices that I referred to 5 earlier, the very low export market prices, are 6 affecting our finances in a very significant way and will continue to do so as long as they remain as low as 7 The whole shale gas phenomena and what --8 they are. 9 how that's going to affect the future is still somewhat 10 But as we proceed, it looks like shale -uncertain. the low gas prices are going to be with us for a very 11 12 long time. 13 The aging infrastructure issue is -- is 14 a very important one for us. And as is the last item 15 on this list, the attraction and retention of skilled 16 workforce. This is a -- is one that's going to be more 17 and more relevant to -- to Manitoba Hydro as we -- as 18 the aging -- not only the aging infrastructure, but 19 also the aging workforce enters retirement. 20 We do have to attra -- be able to attract skilled workers to Manitoba Hydro. 21 We are 22 having some difficulty with workers, technical workers, 23 being attracted to neighbours in the -- in the West, especially into Saskatchewan and Alberta, where the 24 25 salaries are quite a bit higher than they are in

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Manitoba. So retaining skilled workers is a big issue 1 2 for us. 3 I did refer earlier to the Aboriginal workforce. And I do believe that that's where we have 4 5 to put our emphasis. And there's a very large untapped 6 -- largely untapped workforce there that we -- we absolutely have to take advantage of. And train -- it 7 means spending a lot of the money on training, but 8 9 there is definitely a payback for that over the long-10 term. 11 The high consequent -- consequence risks 12 that are identified on page 43 are similar to what 13 we've identified in -- in previous years. 14 Infrastructure, of course, the loss of -- of Dorsey or 15 the DC line from Northern Manitoba is -- would be a huge loss for us and is the major risk. And it -- the 16 17 -- would definitely exceed \$2 billion depending on how -- on the severity of that loss. But it does, I think, 18 19 point to the urgency for us to be building an 20 alternative route for that power from the north. And indicated earlier than 2011/'12, 80 21 22 percent of the power was delivered over the DC 23 transmission line to southern Manitoba. We desperately need that Bipole 3 transmission line, which, of course, 24 25 is the subject of another proceeding.

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1 Drought. With the drop in export market prices the cost of drought has gone down accordingly at 2 1.6 billion. Loss of that export market though is 3 still in -- in around 30 percent of our total revenue. 4 5 And a 1 percent change in interest rate over the next 6 ten (10) years will amount to about \$700 million. The -- I think the final slide is --7 that I will review at this time is on page 45. This is 8 9 IFRS, and Mr. Rainkie will be speaking more to this. 10 But it does show the impact on -- the major impact of IFRS implementation is on retained earnings, as far as 11 12 -- on the electricity side of our business it'll be a 13 charge against retained earnings of \$257 million. 14 The net income impact of \$5 million is 15 relatively -- relatively insignificant though. And 16 that will be insignificant going forward, as well, as 17 far as the impact on net income. So the major impact, 18 retained earnings, one (1) time hit on retained 19 earnings. And because our retained earnings are 20 currently in -- at the two -- 2.5 billion level we can withstand that. 21 22 Other jurisdictions -- for example, BC 23 Hydro -- have a much more difficult problem than we do 24 with their deferral accounts in the billions of 25 dollars, which is -- has presented a more serious

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problem to them. So the problem of IFRS is not 1 2 significant to Manitoba Hydro. 3 Mr. Cormie will be reviewing the situation with our current water conditions in his 4 5 direct testimony. And thank you very much for your 6 patience, Mr. Chair, members of the Board. That 7 concludes my presentation. THE CHAIRPERSON: I have some 8 9 questions. And I guess it's probably an opportune time to ask them, if you don't mind. 10 I'm quess I'm 11 struggling with cost comparisons and -- from the various jurisdictions, and -- and I'm seeing all kinds 12 of different numbers. 13 14 And particularly what I'd like to refer 15 to is something that came out yesterday from the 16 province that talks about a Deloitte Louche -- Deloitte 17 Touche study that compares rates for electricity. And 18 -- and this is in relation to the affordability 19 legislation. In other words, the government has come 20 out comparing rates for electricity, natural gas, 21 automobile insurance, and so on. 22 And so I'm looking at this particular 23 table, and it's showing Manitoba as having higher rates 24 than Quebec. And which is -- which I'm having a tough 25 time reconciling to the information that's in here,

particularly the reference to -- in page 3 as have --1 us having the lowest rates in North America, and 2 various other graphs that show Manitoba as having lower 3 rates than are available in Ouebec. 4 5 So I wonder -- you know, it's not -- you 6 probably haven't seen this information and so I wonder 7 if -- you know, let's -- let's defer the response of that until you've had a chance to respond back to --8 9 MR. VINCE WARDEN: Mr. Chair, I don't -10 - I don't mind speaking to this now. I have seen this. And I would -- I would compare this though. 11 12 If you look at the narrative that's 13 under the chart it does refer to electricity 14 utilization of 11,000 kilowatt hours for the year. So 15 that's very close to the average of 1,000 kilowatt 16 hours per month that is referenced on page 32 of the 17 information I just provided to you. 18 And as you can see on that page, on page 19 32, Quebec is in fact lower than Man -- than Winnipeg. 20 So Montreal is lower than Winnipeq. And that is --21 that's consistent with what -- what we're seeing on 22 this chart prepared by Deloitte Touche. 23 THE CHAIRPERSON: So what I should be 24 looking at basically is the information regarding rates 25 that are contained in the graphs as opposed to

statements that we're the lowest and so on. So, okay, 1 2 that's --3 MR. VINCE WARDEN: Oh, we -- we are the There's no doubt about that. We are the 4 lowest. 5 lowest overall. If I can just refer you to -- well, 6 let's look at page 36. This is -- this shows the current rates index. 7 8 So compared to Hydro Quebec, if we look 9 at -- if we take it -- the -- the package of rates, 10 that's for all -- all consumers, that's not only residential, but also all their larger commercial 11 12 industrial customers, the average rate is higher in 13 Quebec than it is in Manitoba by 10 percent. So it's -- the average rates are 10 percent higher in Quebec 14 15 than in Manitoba. 16 But that doesn't mean they're -- they're higher for all classifications. So the residential 17 18 classification is the exception. 19 THE CHAIRPERSON: Following up on that 20 question, I -- I quess you -- you have referred to the -- the fact that there are some different costs in BC 21 22 Hydro that are not -- that BC Hydro will have to 23 address. And Quebec, I know, is talking about mothballing a nuclear plant, which will have a big 24 25 impact on their financial results.

1 I guess what I'm wondering is, given that Manitoba Hydro is projecting significant cost 2 increases over a considerable number of years, what 3 will that do to the relationships that we're seeing in 4 5 this particular table in terms of costs? 6 You know, I -- I'm trying to -- I'm 7 trying to understand how Manitoba Hydro is going to 8 maintain its position and costs relative to other 9 jurisdictions so that we can continue to say that we have the lowest rates in -- in Canada? 10 11 MR. VINCE WARDEN: Well, we -- we don't 12 know for sure. We -- we of course are in communication 13 with our neighbouring util -- or other utilities in --14 in Canada on a -- on an almost daily basis, but they 15 don't divulge their plans to us as to what their next 16 rate increase is going to be until it's publicly 17 announced. 18 So, you're -- you're right, there --19 there's the -- the situation in Quebec with the nuclear facility. We do expect, just looking at what's 20 21 happening in those jurisdictions that their rate 22 increases will be, if not on par with ours, even 23 higher. 24 So we do believe going forward that we 25 will maintain that -- that status that we have today of

the lowest provider. You know, we're taking advantage 1 of -- of embedded costs that are very significantly 2 lower than other jurisdictions because of some of the 3 decisions that were made back in the mid-'60s to build 4 5 the Nelson River. 6 There was a lot of risk associated with that at that time, probably even more so than what 7 we're facing today with the development of new 8 9 generation. But because those decisions were made, 10 we're reaping the benefits of that. We've reaped the benefits of that for many years. I firmly believe that 11 12 we will continue to do so in the future. 13 THE CHAIRPERSON: Now, turning to page 14 -- this is the page related to the capital projects 15 that are being forecasted on page 17. And this is a 16 question that I've been meaning to ask for some time, 17 and -- and it relates to my reading of -- of events 18 transpiring south of the border. And specifically in -19 - you know, there's a -- there's a wind synergy study 20 going on in MISO dealing with Manitoba Hydro's planned 21 projects and, you know, they're talking about some 22 significant transmission projects down south of the 23 border. 24 And I guess the question I'm asking is I 25 know that there's a cost attribution that's part of the

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MISO formulas, you know, attribute costs to the people 1 who will benefit from the transmission. I quess the 2 question I have is: If -- if those developments south 3 of the border were to occur, is Manitoba Hydro expected 4 5 to pick up some of those costs? 6 MR. VINCE WARDEN: I think the -- the best person to speak to that is Mr. Cormie, so I'll 7 turn that question over to him. 8 The -- the 9 MR. DAVID CORMIE: 10 transmission build that's occurring in the United States in Minnesota and North Dakota to bring renewable 11 12 resources to eastern markets is -- is ongoing. Those 13 transmission costs can be regionalized through the 14 multi-value project process that MISO has -- has in 15 place. 16 Manitoba Hydro's interconnection 17 potentially could qualify for some of that regional 18 cost sharing. However, the -- there's -- there's -- we 19 would have to wait for several years before we would 20 find out whether that project could be -- could 21 qualify. Manitoba Hydro can't wait to find out whether 22 those transmission assets would qualify. And so we've 23 proceeding -- we're proceeding with -- with the project 24 in the United States as a participant-funded project. 25 It will be paid by the utilities who -- who are

1 building the project.

2 The wind synergy study is to demonstrate to the -- to the MISO and to the transmission owners in 3 the United States that it will provide regional 4 benefits and will be good for all -- all the regions. 5 6 And -- and it creates a favourable regulatory and political climate for, essentially, a private 7 transmission line to be built across -- in Minnesota. 8 9 THE CHAIRPERSON: Now, then, in 10 relation to looking at the risks, and I guess one of the -- one of the things that's coming out from the 11 12 United States is -- been growing attention to 13 cybersecurity. And I notice that it's not mentioned as 14 an emerging risk by Hydro. Now, I -- it's not to say 15 that Hydro isn't paying attention to that. 16 Could you -- could somebody address that 17 particularly, what, if anything, is going on in that 18 area? 19 MR. VINCE WARDEN: Absolutely. We do 20 pay attention to that. We do -- and I believe it's 21 either filed or to be filed -- a corporate risk-22 management report that's prepared annually by Manitoba 23 And we identify something like fifty-eight (58) Hydro. 24 categories of risks in that report. So this is just an 25 excerpt from that report that we've identified as

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immediate and -- and emerging. 1 But certainly, cybersecurity is one 2 that's been on our radar for many years, and it's part 3 of that -- part of that report. 4 5 MR. RAYMOND LAFOND: My first question 6 in -- is in terms of the non-controlling interest, which has a significant impact on your income, how is 7 that treated in your integrated financial forecast 8 9 2012? 10 Yes, the 2012 MR. VINCE WARDEN: 11 financial forecast is -- has been prepared strictly in 12 accordance with the development agreement that was 13 negotiated back in 2006. So that -- the forecast 14 reflects what would happen under the cost-15 sharing/revenue-sharing agreement that was negotiated with the First Nation. 16 17 We recognized when we put that forecast 18 together we had a dilemma, because we knew that what 19 had happened in the export market, that there was no 20 possible way that that was going to transpire as -- as 21 -- as it was originally negotiated. That would provide 22 no return to the First Nation. In fact, it would be a burden on the First Nation, which was not consistent 23 24 with the spirit and intent under which that agreement 25 was negotiated.

Nevertheless, because we were under 1 2 negotiations with the First Nation, it was -- we determined that our only option was to prepare it based 3 on the agreement that we had officially approved. 4 5 We're very close to getting another 6 agreement negotiated. We -- I -- I am certain, as I 7 indicated earlier, that it will be very different. It will be quite different from what we currently have, 8 9 such that the First Nation will not be contributing towards the losses being incurred on Wuskwatim in their 10 early years. And it is only the early years of 11 12 Wuskwatim where we are projecting losses. 13 If we -- and we look at a plant like 14 Wuskwatim is going to last for approximately a hundred 15 (100) years, so the first ten (10) are going to be 16 difficult. The first ten (10) are going to be difficult for us. But beyond that, Wuskwatim will 17 18 generate significant revenues. 19 MR. RAYMOND LAFOND: Can -- can -- can 20 you, therefore, expand on this? Because when I look at 21 your IFF12, page 23, or the first page under tab --IFF12, I -- I identified the figures , non-controlling 22 23 interest, fourteen (14) and twenty-four (24) you 24 alluded to earlier in your presentation. But that goes 25 down to three (3) or four (4) and then minus three (3).

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476 And then in the following years, it becomes a fairly 1 large negative number. 2 3 So -- like, I -- I need to understand --MR. VINCE WARDEN: 4 Yes. 5 MR. RAYMOND LAFOND: -- why this 6 happens. 7 MR. VINCE WARDEN: Yes, and I think that's consistent with what I -- what I just said. 8 The 9 first ten (10) years are going to be difficult. So this shows the First Nation contributing towards our 10 net income. So they're adding to the -- the net income 11 that we would otherwise have achieved for the -- that 12 13 first ten (10) years of the forecast, up until 2021. 14 In 2022 it turns around, and Wuskwatim 15 starts earning a profit, which is a return to the First Nation. So it's a deduction from our net income in 16 17 those years. 18 MR. RAYMOND LAFOND: Okay. So the 19 typical --20 MR. VINCE WARDEN: So the total -- the 21 total revenue from Wuskwatim is included in -- if you look at the revenue side of -- of the same statement on 22 23 page 23 that you were referring to, the total number 24 from Wuskwatim is included in there. Then what we do 25 is we take out the portion that's attributable to the

477 First Nation, their 33 percent comes out at -- as it --1 as an adjustment to net income under the non-2 controlling interest line. 3 MR. RAYMOND LAFOND: So the difficult 4 5 first ten (10) years are for the partner, not for the 6 Manitoba Hydro, because it -- it reverses after ten 7 (10) years? 8 MR. VINCE WARDEN: Well, they're 9 especially difficult for the partner, for the First Nation, because they just don't have the resources to 10 11 contribute to that order of magnitude. They're 12 difficult for Manitoba Hydro as well. But the formula 13 though that's developed for purposes of deriving 14 revenue is the export market. 15 So for the revenue-sharing formula 16 that's in the agreement is export market be -- it's 17 because of the low export market that -- the low prices 18 on the export market that we're seeing this -- what --19 these results. In fact though, Wuskwatim is being used 20 to serve the integrated system and, therefore, the 21 export market. If you look at the impact on Manitoba 22 Hydro in isolation, the -- we're not going to see the 23 same impact because we're, in fact, using Wuskwatim to 24 serve the Manitoba load. 25 MR. RAYMOND LAFOND: То --

1 MR. VINCE WARDEN: To serve the Manitoba load. 2 3 MR. RAYMOND LAFOND: Okay, thank you. 4 My second question is -- or, comment is: The whole 5 issue of recovery at the end of the forecast -- like, it looks very nice at the end of the forecast, that 6 twenty (20) year period, all of a sudden there's a 7 billion-dollar surplus by Manitoba Hydro. But that's a 8 9 very long time period, especially when, in this day and 10 age, new technologies can come about and, you know, 11 dams or stations have been amortized over a hundred or 12 more years. 13 How -- how do you factor this in? 14 MR. VINCE WARDEN: Well, there are --15 you're absolutely right, there are new -- new 16 technologies on the horizon, solar power being one, 17 wind power. But any of the new technologies, first of 18 all, that are -- they're considered to be clean --19 solar and wind -- the costs are significantly --20 significantly higher than what can be generated even by 21 the new -- new facilities we're putting in. 22 So our cost per kilowatt hour for new 23 generation for Conawapa, Keeyask is going to be in the order of nine (9) cents per kilowatt hour. But if you 24 25 look at the cost of wind, solar especially, is -- if

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mul -- is multiples of that. So the hydraulic 1 generation is -- is the most competitive form of -- of 2 energy that's non-greenhouse-gas emitting. 3 4 Now, natural gas, of course, is -- we 5 are competing with natural gas, but they're -- natural 6 gas is still a fossil fuel. And we believe in the 7 future there's going to be car -- price -- a premium for carbon that will -- that will benefit hydraulic 8 9 generation even more so in the future. And that's built into the forecast. 10 11 MR. RAYMOND LAFOND: Okay. Maybe --12 you provide us calculations of increased -- increases 13 in OMM (sic) costs after the accounting changes. 14 Could you provide them to us as to what 15 -- as to what they would be before the accounting 16 changes, because that would offer a consistency with 17 the previous years? 18 MR. VINCE WARDEN: I believe Mr. -- Mr. 19 Lafond, one of the charts, in fact, does show -- well, 20 it show -- if you look at page 6, it shows from 2009 to 21 2012. So that's a 10 percent increase over that period 22 of time that is not adjusted -- not adjusted for any --23 any accounting changes, so. 24 MR. RAYMOND LAFOND: Okay. 25 MR. DARREN RAINKIE: Just one (1)

addition to that. In Tab 5 of our Application, we go 1 through each of the revenue and expense line items. 2 Ι think in there we calculated the -- you know, the 3 nominal increase, as well, year over year. So that --4 5 that may assist in reviewing the material. 6 MR. RAYMOND LAFOND: Thank you. Whenever you do all these analyses of -- of projections 7 for the future, generally speaking you have a worst-8 9 case scenario, a best-case scenario, and a most likely. 10 I suppose that would be the most likely 11 scenario, in your mind? 12 MR. VINCE WARDEN: Yes, that's right. 13 And -- and you're absolutely right. We do do scenario 14 -- many scenarios with worst case, best case, and 15 expected. And this is the expected, which is in 16 between. 17 MR. RAYMOND LAFOND: A worst-case 18 scenario for the panel could also be, I quess, very 19 important in terms of understanding the impact of a 20 worst-case scenario over the next ten (10) to twenty 21 (20) years, for instance, because without that you 22 really do not have a good understanding of what the 23 possible downside is in terms of actual results. 24 And I know you've identified risk 25 factors but we don't really have dollar amounts

attached to these, or estimates attached to these. 1 2 MR. VINCE WARDEN: Mr. Lafond, we do on -- on the financial forecast document that you're 3 referring to on page 17, we do refer to refer to --4 5 there is a sensitivity analysis. So if you look at, 6 for example, low export prices. 7 MR. RAYMOND LAFOND: That's on -- okay, thank you. Got it. 8 9 MR. VINCE WARDEN: Page 17. So if you 10 look at -- if -- if we do encounter even lower export prices than we have in the forecast currently there is 11 12 a potential to -- for the forecast revenues to go down 13 another \$420 million over that ten (10) year period. 14 Conversely, if there -- we have the high export price 15 forecast, those revenues will go up a further 425 million. 16 17 18 (BRIEF PAUSE) 19 20 MR. RAYMOND LAFOND: Thank you. I can 21 -- on -- on your future projection in terms of capital 22 costs and -- and projects -- and -- and you may be 23 looking at that later on and I'll wait for then -- for 24 that then, but when I look at, for instance, the -- the 25 amount of production you get out of Keeyask versus

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482 Conawapa, and I'm not sure about Point du Bois, and 1 related to the costs of such projects, it seems to vary 2 a lot in terms of produc -- of -- of the cost per 3 kilowatt hour. 4 5 And -- and will you be getting us these 6 -- these numbers? MR. VINCE WARDEN: I don't believe the 7 cost per kilowatt hour is part of our -- our filing. 8 9 Keeyask and Conawapa, though, under average flow conditions are very similar. As I mentioned earlier, I 10 -- I believe it's eight point nine (8.9) cents per 11 12 kilowatt hour for both Keeyask and Conawapa. 13 MR. RAYMOND LAFOND: That surprises me 14 because the production under Keeyask is less than half 15 of the estimated production under Conawapa but the cost 16 is well over half, like 60 percent. And generally 17 speaking the majority of costs are depreciation and 18 interest. 19 (BRIEF PAUSE) 20 21 22 MR. VINCE WARDEN: Yes, the -- actually 23 I -- I do have a calculation of that which I can certainly provide to you, if you like, but I -- the 24 25 unit cost of Keeyask based on an assumption of 6.2

1 billion capital costs amortized over sixty-seven (67) 2 years -- we've used sixty-seven (67) years as the 3 estimated service life on average of all components. 4 The average energy -- so it really -- not only do you 5 have to look at the capital cost but you have to look 6 at the average energy that you -- you can derive from 7 that facility.

8 So the average energy out of Keeyask is 4,430 gigawatt hours per year. So if you work that 9 10 through it comes out to eight point six (8.6) cents per 11 kilowatt hour. Conawapa, 10.2 billion capital cost. 12 The amount of energy we're getting our of Conawapa on 13 average will be 7,000 gigawatt hours per year at a unit 14 cost of eight point nine (8.9) cents per kilowatt hour. 15 You can compare that to Wuskwatim, for example, 1.8 billion. And that includes transmission 16 17 for Wuskwatim, average energy of 1,515 gigawatt hours 18 aver -- the unit cost is seven point three (7.3) cents 19 per kilowatt hour. 20 And just for further comparison, if 21 you're interested, going back to Limestone, when we 22 installed Limestone at 1.4 billion, the unit cost of

24 two (1.2) cents per kilowatt hour.

23

25 MR. RAYMOND LAFOND: Okay. And what

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Limestone is about one point two (1.2) cents, one point

would Pointe du Bois be once you restore it? I imagine 1 with possibly more capacity or -- for --2 3 MR. VINCE WARDEN: We're not getting a 4 lot more -- a lot more capacity. We -- we really don't 5 have a choice on Pointe du Bois, we have to restore it. 6 And we won't be getting a lot more generation. But I think maybe Mr. Cormie could probably speak more to 7 that. Are -- do you want to speak to that, Dave? 8 9 MR. DAVID CORMIE: The plan for redeveloping the powerhouse assumes today that we would 10 11 just replace what we already have and not to develop 12 any more capacity. However, we will be putting in more 13 modern efficient turbines and capturing the additional 14 efficiencies from that, so there will be a slight 15 increase in -- in the -- in the production from the generating station. 16 17 But the amount of -- the forebay level 18 will be the -- essentially the same and -- and the tail 19 water will be essentially the same. 20 MR. RAYMOND LAFOND: So -- so the -- if 21 -- if I remember correctly from memory the total cost 22 is about \$2 billion. How much would that, you know, in 23 terms of the production, how much would it be in terms of -- per kilo -- kilowatt hour, a cost per kilowatt --24 25 kilowatt hour over there?

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485 1 MR. DAVID CORMIE: We haven't done that calculation yet, Mr. LaFond. 2 3 MR. RAYMOND LAFOND: Will you provide 4 it to us later in -- in -- during the hearings? 5 MR. DAVID CORMIE: Yes, we can estimate 6 that for you. 7 MR. RAYMOND LAFOND: Thank you. 8 9 --- UNDERTAKING NO. 1: Manitoba Hydro to provide 10 an estimate of the total 11 cost per kilowatt hour for 12 Pointe du Bois 13 14 MR. DAVID CORMIE: The -- yes. Mr. 15 LaFond, the -- the difference between the various sites 16 that we've talked about at Keeyask and Conawapa, they pass the same river flow. They're essentially -- one 17 18 (1) is downstream, the other -- the difference is the 19 difference in head. 20 At Conawapa you have a head of about 100 21 feet, that's the drop of water. At -- at Keeyask it's 22 -- it's much less than that, 60 percent of that. And 23 so when you build a bigger dam you're not -- the top 24 isn't any different, it's the bottom that gets bigger, 25 it's like a pyramid, and so the costs of Conawapa are

486 significantly more at Conawapa because you have a -- a 1 taller dam and the foundation conditions there are 2 extremely more difficult than what we have upstream. 3 And so the costs are more in spite of the fact that 4 5 it's producing more energy. The -- the --6 MR. RAYMOND LAFOND: But I'm wondering in terms of the cost per kilow -- kilowatt hour for the 7 output of one (1) versus the other. 8 9 MR. DAVID CORMIE: Yes, and I think Mr. 10 Warden gave you those numbers. 11 MR. RAYMOND LAFOND: My last question 12 is, when you do your forecasts for the future and --13 and considering the IFF12, when I look at the increases 14 you're projecting over the next while -- and 15 essentially I think it's under Tab 1, or IFF12, page 23. 16 17 When I look at your projected general 18 rate increases for electricity and then for gas it is 19 essentially -- well, many times more in terms of 20 electricity than gas. So therefore in your projecting 21 -- projection, are you looking at the possibility of 22 Manitobans switching from electricity to gas, because 23 after ten (10) or twenty (20) years it becomes -- it is already quite a bit more economical to heat, for 24 25 instance, with gas than electricity, but that will

really compound the issue. And have we considered 1 2 that? 3 MR. VINCE WARDEN: Mr. Lafond, I -- I just want to make clear that the increases you're 4 5 seeing here for gas are for distribution only. That 6 does not incl -- include anything for the commodity. So that's only the cost of operating the pipes. 7 So the commodity, who knows? 8 In the 9 future, gas, if it's been as volatile as it has been in 10 the past, it could be many multiples of what it is today. I'm not suggesting it will be, but -- but it's 11 12 unpredictable. And gas prices historically have been 13 very unpredictable and -- and volatile. 14 MR. RAYMOND LAFOND: Thank you. That 15 clarifies, in my mind, the basis of your calculations. 16 Thank you. 17 THE CHAIRPERSON: Just one (1) -- just 18 one (1) more question before we break. 19 MR. LARRY SOLDIER: I understand in 20 your -- one (1) of your risks or challenges is hiring 21 restrictions, and I noticed you expressed some -- a 22 little bit of frustration in the fact that you're not 23 able to hire more people. And I'm just -- I was looking at a project in Thompson, and I was advised 24 25 that I needed about a year's lead time to ensure that I

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had hydro service at that location. And I know in 1 Southern Manitoba at times you need six (6) weeks' lead 2 time in order to -- to have service at a -- at one of 3 4 your projects. 5 And I was just wondering if the fact that there's hiring restrictions doesn't permit you to 6 7 respond more quickly to -- to new builds or new construction? And I was also just wondering if that is 8 9 as a result of the hiring restrictions or the lack of -10 - of qualified tradespeople out there? 11 MR. VINCE WARDEN: Well, Mr. Soldier, 12 we are constantly, at Manitoba Hydro, juggling 13 priorities. We -- we send work crews all over the 14 province to -- to meet the highest-priority jobs. But 15 I wouldn't say the hiring restrictions have necessarily impeded customer service. I -- I think that we've 16 17 hired the people we think we need to get the job done. 18 We have to be careful, though. We do --19 there are peaks and valleys, like any other business. There are certain months where we -- we don't 20 have the same peak workload requirement. And we've got 21 22 to make sure we don't staff for the peaks. So we've 23 got to manage that workforce accordingly. And that's 24 why in some areas we are using contract labour, because 25 we know it's a short-term duration. We don't want to

be putting people on the payroll that we're going to 1 have to lay off at some point in the future. 2 3 So I think we're trying to manage those resources as best we can, based on the work loads that 4 5 are out there. I don't think six (6) weeks is unusual 6 to wait for -- for a service. I do find a year, though 7 ___ 8 MR. LARRY SOLDIER: Yeah. 9 MR. VINCE WARDEN: -- that to be 10 unacceptable. And I'd have to look into that specific 11 circumstance. 12 MR. LARRY SOLDIER: And that's all I 13 was -- that's all I was advised. And so I was kind of 14 finding if there was a correlation to the fact do you -15 - you don't have the people -- people that don't want to move to the North as opposed to the South? 16 17 MR. VINCE WARDEN: That is a whole 18 other issue. Attracting/retaining people in the North 19 is -- is a huge issue for us. And that's -- and that's 20 why it's so important to us to train people that are 21 resident in the North to do the jobs in the North. And 22 we're -- we're already, you know, a proportionate 23 workforce at forty-one (41), but we have to go higher. 24 25 (BRIEF PAUSE)

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MR. VINCE WARDEN: Unless Mr. Soldier 1 wants me to look into it specifically, no, I wasn't 2 taking that as an undertaking, but . . . 3 MR. LARRY SOLDIER: 4 No. 5 MR. VINCE WARDEN: No. Okay. 6 THE CHAIRPERSON: I suggest we break now and return in for -- resume -- resume the 7 proceedings at 11:00. 8 9 10 --- Upon recessing at 10:45 a.m. 11 --- Upon resuming at 11:03 a.m. 12 13 THE CHAIRPERSON: The panel has no fur 14 -- no further questions, so I'll turn the mic over to 15 you, Ms. Ramage. 16 EXAMINATION-IN-CHIEF BY MS. PATTI RAMAGE: 17 18 MS. PATTI RAMAGE: Thank you. And I 19 have one (1) further question of Mr. Warden. And that 20 is simply, Mr. Warden, can you confirm that on behalf 21 of the Corporation you adopt the evidence the panel 22 members are going to be providing throughout this 23 Hearing? 24 MR. VINCE WARDEN: Yes, Ms. Ramage. Ι 25 do adopt the evidence. I believe, though, there is one

(1) minor correction to our rebuttal. And this was on 1 page 10 of 63, and it's in reference to the CPI 2 numbers. I believe we had numbers that were 3 represented. We had a problem with point of time 4 5 versus average so to be consistent the -- with our --6 the way we're expressing the future CPI projections, 7 the chart on -- labelled as Figure 2 should be for 2009/'10 actual, 0.4 percent, okay; CPI instead of one 8 point four-zero (1.40). 2010/'11 should be two point 9 10 zero (2.0) CPI instead of three (3) point --11 MR. RAYMOND LAFOND: Can you tell us 12 what you're looking at, please? 13 MR. VINCE WARDEN: I'm sorry. Yes, 14 it's Manitoba Hydro's rebuttal evidence at page 10 of 15 63. And it's -- yes, Figure 2. So the -- I'll just 16 read those numbers again. Instead of the one point four-zero (1.40), three point three-zero (3.30), and 17 18 one point nine-zero (1.90) for the three (3) fiscal 19 years, it should be zero point four (0.4), two point 20 zero (2.0), and two point eight (2.8). 21 22 (BRIEF PAUSE) 23 24 MR. VINCE WARDEN: Thank you. 25 MS. PATTI RAMAGE: Thank you. And I'm

going to now move down the row to Mr. Rainkie. 1 2 Mr. Rainkie, could you please state your name and responsibilities at Manitoba Hydro, including 3 your responsibilities with respect to this filing? 4 5 MR. DARREN RAINKIE: Good morning, Mr. 6 Chairman, members of the Public Utilities Board, and 7 ladies and gentlemen. My name is Darren Rainkie, and I'm the corporate controller at Manitoba Hydro. I'm a 8 9 chartered accountant, chartered business evaluator, and 10 also have a bachelor of commerce honours degree from the University of Manitoba. 11 12 I have testified before the Public 13 Utilities Board of Manitoba on a number of occasions, 14 including the last Manitoba Hydro rate application, and 15 in a number of Centra Gas rate proceedings in -- in the 16 past. 17 I have held my current position at 18 Manitoba Hydro since 2008, and my division is 19 responsible for financial reporting and accounting research, the coordination of operating and capital 20 21 budgets, the provision of management accounting 22 services to our business units, and financial 23 forecasts. 24 Prior to my current position, I held 25 various management and financial positions at Manitoba

Hydro and Centra Gas, as well as Price Waterhouse 1 Chartered Accountants. 2 3 My main responsibilities relative to this filing were the prep -- preparation of materials 4 5 associated with the integrated financial forecast, 6 financial results and forecasts, and the capital expenditure forecasts that were included in Tabs 4 to 6 7 of the original Application, as well as the IFRS status 8 9 update report and the depreciation study. 10 MS. PATTI RAMAGE: Mr. Rainkie, could 11 you please elaborate on the status of IFRS 12 implementation at Manitoba Hydro? 13 MR. DARREN RAINKIE: Certainly. The 14 original filing was based on IFF11-2 which assumed that 15 IFRS would be implemented at Manitoba Hydro in 16 2013/'14, which is the second test year in the 17 Application. 18 On September 19th, 2012, the Accounting 19 Standards Board of Canada announced that it had decided to extend the existing deferral of the mandatory IFRS 20 21 changeover date for rate-regulated entities by an 22 additional year, to January 1st, 2014. Manitoba Hydro 23 will take advantage of the further one (1) year 24 deferral of IFRS and will implement IFRS in its 25 2014/'15 fiscal year. The deferral has been reflected

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1 in IFF12.

25

2 MS. PATTI RAMAGE: And could you update 3 the Board on the current status of rate-regulated 4 accounting under IFRS?

5 MR. DARREN RAINKIE: Yes. The primary 6 reason that the Accounting Standards Board of Canada 7 granted the further deferral was that the International Accounting Standards Board had signalled its support to 8 9 give priority to reviewing the rate-regulated accounting issue and had reinitiated its rate rated --10 rate-regulated activities project. 11

12 At this time, the International 13 Accounting Standards Board is still deliberating how to 14 move forward on the whole rate-regulated issue, and its 15 staff has recently issued a paper that provides a 16 number of options, including issuing an interim 17 standard in late 2003 (sic), that would grandfather 18 existing practices until a final standard could be 19 developed sometime in 2016.

However, while there was potential that an IFRS standard may be developed that would allow for the recognition of rate-regulated accounting, there has been no further accounting guidance issued at this time.

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MS. PATTI RAMAGE: Mr. Rainkie, what

are the implications of the deferral of IFRS on IFF12 1 in the two (2) years in the Rate Application? 2 3 MR. DARREN RAINKIE: As a result of the 4 further one (1) year extension, Manitoba Hydro will 5 defer the adoption of further changes to overhead 6 capitalization practices, implementation of the equal 7 life group depreciation procedure, the removal of net salvage costs from depreciation rates, and the 8 9 derecognition of rate-regulated assets from 2013/'14 in the original Application to 2014/'15 now in IFF12. 10 As 11 a result, there are no IFRS impacts contained in the 12 2012/'13 or '13/'14 test years presented in IFF12. 13 The impact of the deferral on electric operations forecast for 2013/'14 is to increase net 14 15 income by 7 million and to defer a retained earnings writeoff of approximately 268 million. 16 17 MS. PATTI RAMAGE: Mr. Rainkie, could 18 you please explain the changes that Manitoba Hydro has 19 implemented as a result of the recent depreciation study that impact the 2012/'13 and 2013/'14 test years? 20 21 MR. DARREN RAINKIE: Manitoba Hydro 22 recognizes depreciation expense on a straight-line 23 basis over the estimated remaining service lives of its 24 assets based on depreciation studies that are conducted 25 periodically, typically every five (5) years. The last

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1 depreciation study was completed in July 2006, and the 2 resulting depreciation rates were implemented effective 3 April 1st, 2007.

The current depreciation study was 4 5 initiated in 2009 and completed in October of 2011 with 6 the assistance of an external consultant, Gannett Fleming Inc. This depreciation study was different 7 than past studies in that in addition to the updated 8 9 service lives of the assets, it also included an 10 assessment of IFRS-compliant depreciation practices and methodologies, as Manitoba Hydro would eventually be 11 12 transitioning to IFRS.

13 This study also differed from past 14 studies due to the availability of enhanced asset 15 condition assessment information that was not available 16 for the 2005 study. For certain asset classes, this 17 has resulted in less reliance on statistically 18 developed asset lives and more reliance on the enhanced 19 operational information. This is the case with respect 20 to distribution plant, where the increased reliance on 21 operational information has resulted in an extension of 22 the service lives and a corresponding reduction in 23 depreciation expense.

24 With the deferral of IFRS implementation 25 to 2014/'15, the only impacts of the depreciation study

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497 that are contained in the 2012/'13 and 2013/'14 test 1 years relate to changes made to the asset component 2 groupings and updated service life estimates, which 3 were implemented effective April 1st, 2011. 4 5 THE CHAIRPERSON: I'm sorry, I missed 6 the last part. 7 MR. DARREN RAINKIE: April 2011. 8 THE CHAIRPERSON: No, the -- you said 9 asset component grouping, and what was the other one? 10 MR. DARREN RAINKIE: Oh, the asset 11 component groupings and the updated service lives. 12 THE CHAIRPERSON: Okay. 13 MR. DARREN RAINKIE: Those were both 14 implemented effective April 1st, 2011. 15 The impact of these changes in IFF12 is to reduce depreciation expense by approximately 40 16 million in 2012/'13 and approximately 44 million in 17 18 2013/14. 19 20 CONTINUED BY MS. PATTI RAMAGE: 21 MS. PATTI RAMAGE: And can you then 22 outline the depreciation study changes that Manitoba 23 Hydro is proposing to implement commencing 2014/2015? 24 MR. DARREN RAINKIE: Manitoba Hydro is 25 proposing two (2) further changes that result from the

1 depreciation study commencing in 2014/'15.

2 The first change is to move to the equal life groof -- equal life group, or ELG, procedure to 3 4 calculate depreciation rates. Manitoba Hydro currently uses the average service life, or ASL, procedure with 5 6 group asset accounting to calculate depreciation rates. 7 As part of the depreciation study, Manitoba Hydro has concluded that the ELG procedure is 8 9 the preferred method of calculating depreciation rates, 10 as it considers the expected retirement pattern for 11 each asset within an asset class and produces an even 12 pattern of depreciation expense that fairly reflects 13 the assets in use each year throughout the life of a 14 pool of assets. 15 The second change is the removal of net 16 salvage costs from depreciation rates. While the 17 inclusion of these costs and depreciation rates is a 18 valid approach under the current rate-regulated 19 accounting model that exist in the two (2) test years, 20 including these costs and depreciation rates is not 21 permitted under IFRS. 22 Under IFRS the future cost to retire and 23 salvage assets will become a cost of the replacement 24 asset. The combined impact of these two (2) 25 depreciation policies' changes for electric operations

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in 2014/'15 is to reduce depreciation expense by 1 2 approximately \$27 million. 3 MS. PATTI RAMAGE: In Mr. Bowman's evidence filed on behalf of MIPUG he describes the ELG 4 5 depreciation procedure as being unfair to customers and 6 inconsistent with hydroelectric utility and IFRS 7 requirements. 8 Do you have any comments? 9 MR. DARREN RAINKIE: Yes, I do. In 10 terms of fairness to customers, as a result of the even pattern of depreciation that I mentioned in the 11 12 previous response, the ELG procedure improves 13 intergenerational equity by better matching the amortization of the costs of an asset to the life of 14 15 the asset in use, ensuring a fair allocation of the 16 costs of these assets to those customers that bene from -- benefit from their use. 17 18 The ELG procedure is consistent with the 19 operations of a hydroelectric utility when you consider that the primary function of Manitoba Hydro's assets is 20 21 to ensure an adequate and continuing supply of 22 electricity for domestic customers each and every year. 23 Recording depreciation expense based on 24 the forecast profitability of generating stations, as 25 it appears to be suggested by Mr. Bowman, is not

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consistent with IFRS and would not be considered a 1 rational or systematic method of depreciation. 2 In fact, a recent IFRS exposure draft related to 3 International Accounting Standard 16, that's the 4 5 property, plant and equipment standard, clarifies this 6 and indicates that a depreciation method that uses 7 revenue generated from an asset is not an appropriate 8 depreciation method. 9 MS. PATTI RAMAGE: In Mr. Bowman's same 10 evidence he characterizes that changes that Manitoba Hydro has implemented to it's overhead capital --11 12 capitalization practices since 2008/2009 as aggressive 13 and inconsistent with the Corporation's future capital 14 plans. 15 Do you agree with these characterizations? 16 17 MR. DARREN RAINKIE: No, I do not. The 18 changes that Manitoba Hydro has implemented to date to 19 its overhead capitalization practices are not 20 aggressive, and are not an early adoption of IFRS, as 21 has been suggested during the information request 22 process. 23 Rather, these changes recognize Canadian 24 ulit -- electric utility industry trends to move away 25 from full-cost accounting and are designed to ensure

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that Manitoba Hydro's practices are consistent with 1 other Canadian electric utilities. 2 3 These changes are compliant with generally accepted accounting -- Canadian generally 4 5 accepted accounting principles and have been endorsed 6 by Manitoba Hydro's external auditors, as Mr. Warden 7 mentioned in his opening directive. These changes are also consistent with the past recommendations of the 8 9 Board for rate-setting purposes. 10 Contrary to Mr. Bowman's conclusion that 11 Manitoba Hydro was now expensing costs that are more 12 appropriately capitalized assets, an examination of the 13 nature of the costs indicates that they are not direct 14 capital expenditures. Rather they are sunk costs like 15 building depreciation and information technology 16 infrastructure costs, or costs that do not vary 17 directly based on the level of capital activity, such 18 as executive costs for instance. 19 Without a direct relationship to the 20 capital asset these costs are more closely linked to 21 current operations. And as such it is appropriate that 22 they be expensed. There is no inconsistency between 23 expensing these costs and Manitoba Hydro's future 24 capital plans. 25 MS. PATTI RAMAGE: Mr. Rainkie, both

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MIPUG and CAC have expressed concern that Manitoba 1 Hydro has not pursued any mechanisms to mitigate the 2 rate impacts of accounting changes like a number of 3 other utilities. 4 5 Can you address their concerns for the 6 Board? 7 MR. DARREN RAINKIE: Yes, I can. Manitoba Hydro has reviewed its financial reporting 8 9 options, but they are limited given that public sector 10 accounting standards require that government business enterprises such as Manitoba Hydro adopt IFRS for 11 12 financial reporting purposes. 13 However, Manitoba Hydro has been making any changes that are necessary and permitted under 14 15 Canadian general -- generally accepted accounting 16 principles gradually over the past number of years in 17 an effort to transition them into customer rates and 18 moderate the impact on customers. 19 Manitoba Hydro has, like a number of 20 other Canadian Crown utilities, deferred the 21 implementation of IFRS for three (3) successive years 22 as permitted by the Accounting Standards Board of 23 Canada and continues to monitor the develops --24 developments of the International Accounting Standards 25 Board with respect to rate-regulated accounting to

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ensure that when it does transition to IFRS it is with 1 the lowest possible impacts to customers. 2 3 As Mr. Warden outlined on page 45 of his 4 presentation the income statement impacts of IFRS 5 transition to Manitoba Hydro are not significant. On -- on that page you'll find an increase in net income of 6 \$5 million in 2014/15. 7 8 While the potential writeoff of rate-9 regulated assets is not a welcome event, Manitoba Hydro 10 is in a much better position than other utilities where the balances of rate-regulated assets were so large 11 12 that the writeoff would have totally depleted their retained earnings. Other utilities really had no other 13 14 choice but to move to US generally accepted accounting 15 principles or adopt a modified IFRS approach. 16 But more importantly than what others 17 are doing, even if the lobbying efforts to recognize 18 rate regulated accounting are unsuccessful, Manitoba 19 Hydro has the flexibility to accommodate the writeoff of the associated amounts within the cost of service 20 21 rate-setting methodology without the need for near-term 22 compensating rate increases. 23 This also serves to demonstrate why 24 maintaining an appropriate level of retained earnings 25 for uncontrollable events is so important to the rate

stability of Manitoba Hydro customers. 1 2 MS. PATTI RAMAGE: Thank you, Mr. Rainkie. Does that conclude your direct evidence? 3 4 MR. DARREN RAINKIE: Yes, it does. 5 MS. PATTI RAMAGE: Mr. Chairman, I can move onto Mr. Cormie's direct, or if you have any 6 7 questions of Mr. Rainkie...? MR. RAYMOND LAFOND: You said because 8 9 of the delay, if I understood correctly, you would 10 continue for the time being the capitalization of overhead -- Manitoba Hydro overhead costs attributable 11 12 to construction? 13 MR. DARREN RAINKIE: Yes, we would make 14 -- we would -- we were planning a further change of 15 approximately \$36 million in 2013/'14 when we thought 16 IFRS was going to be implemented in that year. Now that it's been deferred one (1) year we have deferred 17 18 those changes to 2014/'15. 19 MR. RAYMOND LAFOND: Because it will 20 not have to be implemented retroactively? 21 MR. DARREN RAINKIE: It sill will have 22 to be implemented retroactively to your previous fiscal 23 year but we have delayed it for rate-setting purposes 24 until it's actually implemented in our financial 25 reporting system.

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1 MR. RAYMOND LAFOND: Thank you. 2 THE CHAIRPERSON: Waiting for IFRS is the accounting equivalent of waiting for Godot. But --3 but you did say something that I want to pick up on, 4 and you did say that you are attempting to attenuate 5 6 the full impact of -- to the extent that you can, the full impact of -- of the significant changes that will 7 occur when you do implement IFRS. 8 9 Could you talk about that a little bit? 10 MR. DARREN RAINKIE: Sure. I -- I addressed in my remarks the -- the whole issue of 11 12 removing net salvage costs from depreciation rights. 13 And as I said that's a -- that's a valid regulatory 14 principle. 15 But in looking at, you know, the overall 16 impact of -- of IFRS, removing those costs for 17 depreciation rates will help us to manage the impact on 18 customers. It's one (1) of the offsets of some of the 19 higher costs that we will have to recognize under IFRS. 20 So we have -- you know, contrary to what 21 the Intervenors have said, tried very carefully to 22 manage the implementation of IFRS so it did not have a big impact on our -- on our income statement. And we 23 are in a fairly inevi -- inevitable position of -- of -24 25 - you know, of only having \$257 million write-off if

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rate-regulated accounting doesn't survive the -- the 1 next review, whereas as Mr. Warden mentioned others 2 have \$2 billion of rate-regulated assets. 3 4 So -- so we can very much manage the 5 impacts of IFRS within both financial reporting and 6 within rate setting. We don't have to resort to fairly extraordinary means of moving to US GAAP, and other 7 means that other utilities have used. 8 So -- and we don't have to resort to 9 10 having a second set of books and confusing, you know, everybody. I mean, we already have probably twenty 11 12 (20) binders of material in front of the Board right 13 now. If we did that, imagine all the reconciliations. 14 So -- so it's manageable within our cost 15 of service framework where we try to have reasonable average rate increases over time. We don't, under the 16 cost of service methodology, have to recoup that 17 18 writeoff if it does occur, you know, in one (1) year. 19 We -- we can take that into our retained 20 earnings, as Mr. Warden mentioned, fairly easily. I mean, it's not a welcome event but it's manageable for 21 22 us. 23 THE CHAIRPERSON: Now I'm trying to 24 recall Mr. Warden's -- Warden's words this morning, and 25 he did talk about being on the outer edge of

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1 capitalization and of overhead costs. And -- and I 2 guess the question is: The -- the changes that you 3 have effected, are you stepping away from the outer 4 edge in -- in terms of -- of -- or are those going to 5 be effected primarily through -- once IFRS is -- is 6 fully implemented?

7 MR. DARREN RAINKIE: I think generally we're moving into the -- into the mean or the median 8 9 with these changes. We've -- as part of, you know, our 10 whole IFRS transition looked at practices in other 11 jurisdictions and considered the -- the past 12 recommendations of the Public Utilities Board, because 13 in -- in -- particularly in Order 116/08 they were concerned about our -- our overhead practices of being 14 15 a bit aggressive. 16 And so in -- in doing that we've pulled ourself to be consistent with what we believe the 17 18 practices of other Canadian electric utilities are. 19 MR. RAYMOND LAFOND: When I'm listening 20 to all this I'm trying to relate this back to page 20

21 as was given to us by Mr. Warden. And precisely my 22 question is, these accounting changes you're talking of 23 postponing for one (1) year, are they totally included 24 in here?

25

Is -- we're looking at up to,

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eventually, \$75 million less per year in terms of costs 1 being capitalized, if I read this correctly. 2 3 MR. DARREN RAINKIE: This -- this chart has been updated to be consistent with IFF12. So there 4 5 is a further \$36 million worth of accounting changes 6 that would occur in 2014/'15. What's depicted on this page, page 20, is those accounting changes that we've 7 made up until the 2012/'13 year, the current fiscal 8 9 year, which will continue on to 2013/'14. So to be 10 fully IFRS-compliant there are further changes that have to be made. 11 12 MR. RAYMOND LAFOND: Are these to be 13 IFRS-compliant or just to follow GAAP, Canadian GAAP? 14 MR. DARREN RAINKIE: That's a good question, because I think there's, you know, been some 15 16 misunderstanding through the material on this. The -the changes that are depicted on this page are under 17 18 Canadian Generally Accepted Accounting Principles to be consistent with other electric utilities. The -- the 19 20 further \$36 million change will be what we need to do 21 to be compliant fully with IFRS. MR. RAYMOND LAFOND: So the further \$36 22 23 million needs to be added to every one of these numbers 24 at the bottom of page 20, the total? 25 Yes, that's a fair MR. DARREN RAINKIE:

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509 conclusion. Sorry, just for -- for clarity, in 2 --1 starting in 2014/'15 that would occur, because that's 2 the year that we're assuming IFRS implementation right 3 4 now. 5 MR. RAYMOND LAFOND: Starting in 6 '14/'15? MR. DARREN RAINKIE: Yeah, in 2014/'15. 7 8 9 (BRIEF PAUSE) 10 11 THE CHAIRPERSON: I think we're going 12 over the ground -- I'm going over the same ground 13 again, but I'm looking, again, at page 20. And I think 14 this is a quotation I've written down from Mr. Warden, 15 which described it as, "Not IFRS changes, but IFRS-16 related." 17 Now, I quess this is the ground we've 18 been talking about, right? This is the adjustments 19 that you --MR. DARREN RAINKIE: That's -- that's 20 21 correct, Mr. -- Mr. Chairman. I mean, it's not --22 certainly not an effort to confuse the Board. I think 23 when we use the term "IFRS-related," we're meaning that 24 they're consistent. These changes that we've under 25 Canadian GAAP are consistent with IFRS. We won't have

to unwind them. 1 2 You know, everybody in the industry is looking at this as a -- a revolutionary change for 3 4 accounting if -- if there is a revolutionary change in 5 accounting ever. And, you know -- so we've used the 6 term "IFRS-related" just to, I think, mean that they're not going to have to be unwound under IFRS, they are 7 directionally consistent with IFRS. We just have a 8 9 further -- a further step to go to achieve full 10 compliance. 11 MR. RAYMOND LAFOND: I think I 12 understand that last comment, but regardless of IFRS, 13 if it did not exist, you would be moving there and 14 implementing the changes as indicated on page 20 just 15 to satisfy Canadian GAAP? 16 MR. DARREN RAINKIE: That's correct, and I think Mr. Warden did a good job of outlining that 17 18 in his -- his direct evidence. 19 (BRIEF PAUSE) 20 21 22 CONTINUED BY MS. PATTI RAMAGE: 23 MS. PATTI RAMAGE: Thank you. So I 24 will now move to Mr. Cormie. Mr. Cormie, what is your 25 position at Manitoba Hydro?

511 1 MR. DAVID CORMIE: I hold the position 2 of division manager of Power Sales and Operations. MS. PATTI RAMAGE: 3 And can you please describe your professional qualifications? 4 5 MR. DAVID CORMIE: I'm a registered 6 professional engineer in the Province of Manitoba and 7 have a bachelor of science in Civil Engineering. I have been employed at Manitoba Hydro for the last 8 9 thirty-three (33) years, and for ten (10) of those years I was on the Lake of the Woods Control Board, 10 which has legislative authority to control the flows of 11 12 the English and Winnipeg Rivers in Ontario. 13 MS. PATTI RAMAGE: And what are your 14 responsibilities at Manitoba Hydro? 15 MR. DAVID CORMIE: My responsibilities 16 include directing the management of Manitoba Hydro's energy supply, including the regulation of hydro system 17 18 of river -- rivers and reservoirs. In addition, I 19 direct the management of Manitoba Hydro's wholesale export marketing and sales activities in both Canada 20 and the United States. And I've had these 21 22 responsibilities for the last ten (10) years. 23 I have testified on behalf of Manitoba 24 Hydro at several previous rate and environmental 25 regulatory hearings, the most recent being the 2010

general rate application and risk review hearing. 1 2 MS. PATTI RAMAGE: Would you please update the Board on current water conditions as they 3 affect Manitoba Hydro's operations? 4 5 MR. DAVID CORMIE: Yes, and if I could ask the -- the Board to turn to page 47 of the handout 6 package that Mr. Warden was going through this morning. 7 And that -- that'll be the -- the bright blue chart on 8 9 page 47. 10 I would describe current water conditions in the Manitoba Hydro system as favourable 11 12 at this time. The overall supply for this year 13 compared to average is slightly above average, as 14 indicated by the red bar on the extreme right-hand side 15 of that chart. That chart illustrates the history of 16 the water supply in the Manitoba Hydro system, going 17 back to 1912. 18 The chart indicates that the water 19 supply is highly variable. It has lows as -- as little 20 as 50 percent of average, as shown in -- around the 21 year 1940, and as high as 160 percent of average, as occurred in 2005. 22 23 Of note, and as Mr. Warden indicated 24 earlier this morning, over the last nine (9) years 25 Manitoba Hydro has experienced average or better than

average flow conditions. We haven't had unfavourable 1 water conditions. And as can be seen from this chart 2 that's quite an unusual condition when you look back a 3 hundred (100) years. 4 5

For the last two (2) months,

6 precipitation across our watersheds has been just above 7 average. And as a result, inflows into the reservoir system are currently above average. And if you turn to 8 9 page 48, this is a chart that we would refer to as a 10 spaghetti chart because it shows the history of river 11 flows back for the last thirty-five (35) years. And 12 we've expressed the flows in terms of energy, because the flow of water in the river is like the flow of 13 14 energy to our generating stations.

15 The -- the dark -- or, the black line in 16 the middle of that, what I call a mess of spaghetti, is 17 the average of all of those thirty-five (35) years. 18 The red line indicates the water supply conditions on a 19 daily basis for this current year. And if you look at 20 the right-hand side of the chart, you can see that for 21 the last few months that red line is just above the 22 average of -- of the last thirty-five (35) years. 23 And so this indicates how much water is 24 flowing into the reservoir system of Manitoba Hydro. 25 So it's like the flow of gas in a pipeline; the flow of

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the waters in the rivers is our fuel supply. 1 2 MR. RAYMOND LAFOND: so it would include the flow in every station down the -- the 3 4 Winnipeg River, the Nelson River, et cetera? 5 MR. DAVID CORMIE: Yes, it -- it's as 6 if all the flows that are arriving are arriving at the downstream point in time. So there are no storage 7 effects shown in this graph. So it's just the supply 8 9 of water. 10 You'll note at the -- at -- at the -- at 11 about April of this year, the red line was coming out 12 of the winter below average. And normally around the 13 middle of March and going into April there's a sudden rise in inflow. And that's the result of the snowmelt 14 15 runoff. You'll see that this year there was a small 16 bump, but nothing really happened until our -- late in And then by that time, the snowmelt runoff was 17 April. 18 complete. 19 And the first rise in water supply in 20 May was a result of -- of a large rain storm. And then 21 conditions deteriorated through June, and it wasn't until the middle of June that inflows into the 22 23 reservoir system bumped above average. And -- and they 24 reached a peak at the end of June, and they've been 25 declining -- they declined through the fall. And -- and

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1 around the early October, they again jumped up above 2 average and have been above average for the last few 3 months.

So from -- with regard to how much water is coming down the -- in the system, we have favourable inflow conditions as of today.

7 Turning to page 49, the water that flows in our rivers generally flows into reservoirs and --8 9 where it can be held in storage for release at another 10 date. And this chart indicates the storage position for the eighteen (18) major reservoirs across Western 11 12 Canada that are used to regulate the river flows. Of 13 that eighteen (18), Manitoba Hydro controls several of them, but we don't control all of them. 14

15 But the water that's in storage upstream in Saskatchewan and Alberta and in Ontario does have 16 17 potential to generate water in Manito -- or, 18 electricity in Manitoba when it's released. And so 19 this aggregated picture tells us the status of water 20 storages across Western Canada that affect us. 21 The orange band indicates the range of 22 energy in storage since 1977, the black line in the 23 centre is the average condition, and the red line 24 indicates where we are this year. And as of early 25 December, we're above average, about 3 terawatt hours

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or 3 million megawatt hours above average. And we 1 expect to be above average for the remainder of the 2 winter, going into next spring in a -- in a favourable 3 4 storage position. 5 6 (BRIEF PAUSE) 7 8 MR. DAVID CORMIE: And lastly, on page 9 50, there's a chart showing for the last -- since 10 Limestone came into service in 1992, hydraulic generation -- the red bar on the extreme right hand 11 12 indicates the hydraulic generation that we expect for fiscal year 2012/'13, about 33 terawatt hours. And 13 consistent with the water conditions for the last nine 14 15 (9) years, this 33 terawatt hours continues our -- our 16 favourable hydraulic generation situation. The last 17 year that we were below average was in 2003/2004. 18 In -- one (1) change that's occurred in 19 the -- in the current year is the -- the red bar 20 includes the expected generation from Wuskwatim as it 21 came into service this fall. So the -- the previous 22 years were -- were the current system as of Jan -- as 23 of 1992, when Limestone came in. So there's a slight 24 change in the basis of reportings this year, because it 25 now includes Wuskwatim.

1 CONTINUED BY MS. PATTI RAMAGE:

2 MS. PATTI RAMAGE: Mr. Cormie, would you please update the Board on recent natural gas and 3 electricity prices in the export markets? 4 5 THE CHAIRPERSON: I wonder if we couldn't intervene now with respect to this issue of 6 water supply/water generation. I have some questions. 7 And -- and I guess it relates to talking about the --8 9 your water forecasting skills generally, Manitoba Hydro, because, you know, embodied in this Rate 10 Applications are some projections around what your 11 12 generation is going to be like for the next -- for the 13 current year and the next year. 14 How good are they? Like, I mean, how 15 good are -- how good are you, being honest here? I 16 mean, are we talking of a significant range of 17 possibilities? Are we talking a fairly narrow range? 18 Are we -- how much could it swing? 19 MR. DAVID CORMIE: The -- Manitoba --20 Manitoba Hydro has a good skill in forecasting what's 21 going to happen tomorrow. We -- we have a good idea 22 what will happen in the next few months, because we 23 know how much water is in reservoir storage and -- and 24 we know how much precipitation has fallen in the last 25 few weeks.

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Once you get out past a month or two (2), it's essentially a function of the rainfall and we do not have any skill in predicting long-term rainfall and water supply conditions. And -- and that's -- no one has those skills of predicting a fut -- the future weather conditions.

7 For the -- for the Rate Application, in the current year we reflect the current amount of water 8 9 that's in the reservoir storage, the amount of water that's flowing in the rivers, and we make the 10 assumption that rainfall for the balance of the current 11 year will be normal. And so it's -- it's kind of a 12 13 current condition, assuming that there will be normal 14 rainfall.

15 For the second year of the application we assume it will be the median. So it will be the 16 middle -- middle amount, or the -- the amount that you 17 18 can expect to be exceeded 50 percent of the time. So 19 50 percent of the time we would anticipate hydraulic 20 generation would be higher than -- or, inflows to the reservoir will be higher than what we -- what you would 21 22 do norm -- what you would expect based on the long-term 23 and 50 percent time it would be less. So it's not a 24 prediction; it's an assumption of what the water flow 25 conditions are going to be.

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1 And then for the third year and on in the IFF it's based upon the assumption that each of the 2 historic -- hundred historic river flow conditions 3 could occur in each of the forecast years. 4 So in 5 2014/'15 we have a hundred years of record; we give 6 each year 1 percent weight. And so we calculate the 7 financial impacts a hundred times and we average those out. And what's show in the IFF is then the average 8 9 revenues and the average costs associated with the 10 average of all the flow conditions. 11 And so, for the last eighteen (18) years 12 of the forecast it's based on the -- each of the 13 historic one -- each is -- each of the historic river 14 flows having equal probability of occurring. 15 So with regard to forecasting and 16 forecasting skill, in the -- in the near term we -- we 17 have some skill; in the -- in the longer term we --18 we're not presenting a forecast. We're presenting 19 revenue forecasts around an assumption of what the 20 river flows are going to be. I -- I can't tell you 21 what river -- river flows will be next year because I 22 can't forecast what the weather will be next year. 23 THE CHAIRPERSON: So looking at that 24 graph, say, for example, that the -- you know, the --25 we have 10 percent -- can -- can -- you use 10 percent

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less water next year; what is the mean to our financial 1 2 forecast? 3 Like, I'm trying to get a sense of -- of what -- what might result if you don't have the kind of 4 5 flows that you'd expect. 6 MR. DAVID CORMIE: In the -- in the IFF we do the sensitivity around river flows. I think the 7 sens -- the only sensitivity that I'm aware of is -- is 8 9 a five (5) year draught starting in 2014/'15. And that's the -- that's the only sensitivity in there. 10 11 But we haven't -- we don't have a 12 situation where we say, well, if river flows are 10 13 percent lower than what was in the IFF, what that 14 calculation -- but -- but roughly what it would mean, 15 there would be about 3 million megawatt hours less of 16 hydraulic production. So there would be 3 million 17 megawatt hours less going to the export market, twenty-18 five dollars (\$25) a megawatt hour. And that would be 19 a reduction in export sales. 20 If -- if you made the next 10 percent, 21 then you may have to start buying replacement power to 22 serve your load obligation. So there's some sost 23 implications as you start reducing the water supply. 24 And under -- under the dry -- the lowest 25 flow on record, instead of having hydraulic generation

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-- or, hydraulic inflows of -- of about 30 million 1 megawatt hours, you only have 15 million megawatt 2 hours. So you've now lost 15 million megawatt hours of 3 4 hydraulic supply, and you need to replace that. So 5 you've lost the revenue associated with the exports, but now you also have the additional costs associated 6 7 with having to purchase power and to run natural gas and -- and potentially burn coal. 8 9 But we don't have one -- you know, we --10 we don't have that specific calculation shown in the 11 IFF. 12 THE CHAIRPERSON: Just so --13 unfortunately here, and I want to ask these questions, 14 so looking at -- looking at what was going on this 15 summer, I mean, you were sort of facing -- we were sort 16 of getting into a drought situation; we were getting 17 worried about water supply. How did Manitoba Hydro 18 respond in terms of its -- addressing its market? 19 I mean, in terms of not so much the base 20 load, but, you know, looking at exploiting the export 21 market? I just want to understand what your behaviour 22 was, your market behaviour was during that period. 23 MR. DAVID CORMIE: The operations 24 planning process, Mr. Chairman, involves a weekly 25 review of current conditions and an updating of the

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operations plan for the Utility for the next sixteen 1 2 (16) to twenty-four (24) months. 3 If a week goes by where there's no -- no additional rainfall it's likely that for the near term 4 5 the conditions will be dryer and we use statistical methods in order to predict what the short-term supply 6 of -- of water will be. 7 8 Dry conditions aren't an indic -- aren't 9 -- don't indicate that, you know, that it will continue 10 to be dry, but dry conditions indicate that it's likely 11 that by the end of the year you will have lower than 12 normal conditions. 13 So if we have a -- a week of continued 14 dry weather we will then reduce our forecast of water 15 supplies for the year as a whole and we will have to 16 adjust on a weekly basis the amount of surplus that 17 we're making available to the export market. 18 So as we came out of last winter with 19 near record amounts of snow on the ground. And it was 20 our expectation that with normal rainfall that we would have a below average water year. So each week we would 21 22 be turning -- dialling down the knob that con -- of how 23 much water we would be indicating is available as 24 surplus and reducing our export market activities 25 accordingly.

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1 So there's a gradual adjustment based on current conditions. And then as you get into the 2 spring and rainfall events occur, suddenly there can be 3 a turnaround in the supply. And now instead of 4 5 forecasting below average you now -- if -- if you've 6 moved into an above average condition you would now 7 start gradually increasing the amount of supply that's available for surplus sales. 8 9 And so it's -- it's just statistically 10 based forecasting with the exception that when we get 11 to the situation where the forecast is so low that 12 there's a potential that there won't be adequate 13 supplies to serve Manitoba customers. At that point we 14 don't do what's expected anymore, we revert to what's 15 required in order to ensure that there's -- if it were -- continued to be dry, in the worst case adequate 16 17 supply is available to serve Manitoba load. 18 So there's a -- kind of an expected and, 19 based on economics, what we would like to do. And then 20 you check to see what you can do given that you have a supply obligation to serve Manitobans. And so you --21 22 you may have throttle back in to protect against the 23 worst-case situation. 24 THE CHAIRPERSON: So looking at -- you

25 know, one (1) of the I'm -- I -- I have on my computer

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is looking at MISO prices using one (1) of the 1 websites. And I guess -- there were some periods there 2 where there's some pretty good prices. And I guess 3 despite what you just said, if you see a -- a spike in 4 5 prices in -- in the MISO market do you open up the 6 floodgates and you sort of, you know, let's go -- let's 7 go get -- despite what you've just said? 8 MR. DAVID CORMIE: I'd like to say yes. 9 To the extent that we can capture those opportunities 10 we will, and it may be that we have to buy some power at night in order to supply that energy. 11 12 But because the majority of Manitoba 13 Hydro's generating stations are well downstream of Lake 14 Winnipeg and the -- and the effective travel time for a 15 release at -- from Lake Winnipeg to reach the lower 16 Nelson generating stations is in the order of three (3) to four (4) weeks, we can't be adjusting the reservoir 17 18 releases on a moment-by-moment basis to try and capture 19 the market spikes that occur. 20 So water management is dan -- is done on 21 a long-term basis looking forward based on expected 22 conditions, and loads, and prices, rather than on 23 what's the market price today. 24 However, we do have a presence in the --25 in the power markets on an hourly basis. And to the

extent that we have supplies available that are already 1 in the system, the water is already in the reservoir on 2 the lower Nelson. We will -- we will maximize the op 3 value, we will -- we will go and capture that 4 5 opportunity to the extent that we can. But we do not 6 regulate the reservoir system to capture the moment-by-7 moment spikes that occur in the MISO market. 8 THE CHAIRPERSON: I guess, you know, 9 when -- when export -- export markets were good and 10 prices were high, you're generating lots of cash, it 11 wasn't so much of an issue. But now, you know, export 12 prices have tanked, markets are not good, you know, we 13 really I think ratepayers depend on maximizing your 14 revenue from the export markets such as it is. 15 Much more critical now because, you 16 know, we -- we will suffer the consequences of Manitoba 17 Hydro's decisions in export markets. And it goes right 18 to the bottom line frankly, you know. It -- it affects 19 your profits, your bottom line pretty -- pretty 20 directly. 21 And I -- and I guess the question is: 22 You're managing this thing, how do you satisfy yourself 23 that -- that you are -- and I think it equally applies to the senior management of Hydro, how do you satisfy 24 25 yourself you're managing that market to maximize the

profits? 1 2 And, you know, how do you benchmark yourself against others to -- to say, Yeah we're doing 3 a good job but, you know, we -- we are doing the best 4 5 we can, we're -- you know, we're generating profits 6 that will impact the bottom line? 7 8 (BRIEF PAUSE) 9 10 MR. DAVID CORMIE: You know, and -- my -- my area has a unique opportunity on behalf of 11 12 Manitoba Hydro and its customers to focus on revenue 13 generating opportunities. And there's -- it means you 14 can come to work every day and say, How do we make more 15 money. How do we squeeze more out of the -- out of the 16 assets that -- that are there. And -- and I'm happy to say that I -- I believe that -- that we -- that we do 17 18 that. 19 And one (1) way we -- we do that is to -20 - through industry. Kind of what are other people 21 doing in the market. What advantages are they -- they 22 seeing. What opportunities are they seeing. 23 But Manitoba Hydro is not a trading 24 organization. We're not -- we're not -- we're -- we're 25 just trying to manage our -- maximize the value of the

assets. We're not taking speculative positions in the 1 2 market. 3 So there is -- there -- there is the potential for -- for the Utility to do that. But so 4 5 far our risk appetite has been such that we're -- that we -- we're not entering into transactions that are 6 Enron like, where you could go out and -- and take a 7 lot of risk with potential for great rewards. 8 9 Our -- our focus is on maximizing the value that we have from those assets and -- and not 10 entering into things that put the Corporation at risk. 11 12 It is conservative but that's -- that's the -- the 13 appetite of the Corporation. 14 What motivates us is the -- is -- is the 15 desire, like almost every hydro utility, to -- to do 16 the best possible job. And we -- we are not motivated 17 by bonuses and we are motivated to -- to do the right 18 thing. And we do -- we do measure all our forward 19 trading activities and sales activities against the market. 20 21 So we do mark to market -- we have a PNL 22 that says to the extent that we have taken risk in the 23 forward markets we measure those positions, and measure those profits. And on a quarterly basis we report to 24 25 an executive on the success of our -- our activities.

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1 With regard to our computer modelling and the tools that we have in place, we are involved in 2 benchmarking activities with other Canadian utilities 3 who have similar act -- similar business activities 4 5 through the CEATI. So our modelling and the tools that 6 we have are in line with -- with the industry. We've had external reviews of our -- our 7 -- our modelling -- our computer models, and -- and to 8 9 the extent that we can improve -- are always improving the models that -- that assist us in our -- in our man 10 11 -- or market and water management activities. 12 MR. RAYMOND LAFOND: Maybe a couple of 13 questions here. I am trying to relate Chart number 50, 14 the generation, to the inflows or the water supply on 15 page -- well, I'll start with 47. 16 When I look at these two (2) pages, I would con -- I would be tempted to conclude that the 17 18 hydraulic generation in the last few years, and more 19 particularly in '11 and '12, and '12 and '13, should increase rather than decrease. 20 21 What am I missing? 22 MR. DAVID CORMIE: Not all water that's 23 available can be converted to electricity, because the generating stations have a -- a fixed capacity to pass 24 25 water through the generating stations. For example, on

the Lower Nelson River at the Kettle generating 1 station, you can -- we can generate up to 160,000 cubic 2 feet per second. The flow in the river can go up as 3 high -- I think we've had as high as 230,000 cubic feet 4 5 per second. 6 So although the water may be there, it -- it -- it may be more than can be generated. And so 7 water passing through the spillway will be required. 8 9 And so the -- how much of the water supply can be converted into the -- into electricity is 10 a function of the design of the -- of the generating 11 12 station. So in the -- in the design of the generating stations, there's a tradeoff of should I add the next 13 14 unit, the twelfth unit, or the thirteenth unit. And 15 what percent of the time will it be used, how often 16 will we have flows high enough to capture that. 17 And so you end up having to trade off 18 the incremental benefit of having additional flow 19 capacity at the generating station versus the ongoing 20 carrying costs of -- of the unit. So those decisions 21 are made at the time this generating station is 22 designed. And so there can be more water supply than -23 - than -- than the system is capable. 24 So what you'll see as you look at it as 25 -- across the range of river flows, under very low

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flows you'll see very low generation. But as river 1 flows rise up, the generating stations reach their 2 maximum capacity at about the flow that would be 3 exceeded about 30 percent of the time. And then 4 5 they're -- they're maxed out. So even though there's 6 more water coming because the water supply conditions are better, the water is going through the spillway 7 rather than going through the turbines. 8 9 So that's the connection between water 10 supply and hydraulic generation. 11 MR. RAYMOND LAFOND: If I look at the 12 total hydraulic generation on page 50, why would two 13 hun -- 2005/2006, which had, I presume based on Chart 14 47, the year with the most inflows, it was able to 15 really increase its capacity compared to the last two 16 (2) years, for instance. So how would it have done 17 that? 18 MR. DAVID CORMIE: Yes. The other --19 the other factor is whether we can reach the export 20 market. So even though we have the water supply and we 21 have the capability to generate, the question is, can 22 we -- can we -- can -- do we have enough surplus 23 transmission capacity to get all the energy to market? 24 In 2005 and '06, we had very favourable 25 export capacity. And we were able to -- because the

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power prices were so high in the United States, our US 1 customers were allowing us to use a portion of their 2 transmission system that we're not allowed to use 3 today. And that resulted in -- in us being able to 4 5 convert more of the surplus water that we had into 6 surplus sales. 7 Since that time, they've been in -- had discussions with their lawyers and they're not now 8 9 allowed to use some of that transmission service and make it available to Manitoba Hydro under similar water 10 11 supply conditions. 12 MR. RAYMOND LAFOND: You said "not allowed" or "now allowed"? 13 14 MR. DAVID CORMIE: Not allowed. 15 MR. RAYMOND LAFOND: Thank you. 16 MR. DAVID CORMIE: We are trying to 17 negotiate use of that transmission service so it's 18 available to us in the future. But as of now, there 19 are restrictions on that. 20 MR. RAYMOND LAFOND: And you indicated 21 that in terms of your forecasting you would go back a 22 hundred (100) years and, for instance, if it was a 23 hundred (100) years you get 1 percent per year. I 24 would have thought you would have given a bit of a 25 higher rating for the last, for instance, quarter or

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1 half century than the first quarter -- or than the -2 for the last quarter and the last half-century versus
3 the first quarter, the -- yes, the first quarter and
4 first half, because simply -- I mean, environment have
5 changed, flows have changed, drainage have changed,
6 diversions, et cetera.

7 MR. DAVID CORMIE: Yes, Mr. Lafond, that's a -- that's a good question. And to the extent 8 9 that -- that in 1912 there were different water uses and different diversions in place than today, or there 10 were no diversions and now there are, we have gone back 11 12 in that historic record and we've assumed that those 13 facilities were in place since 1912. And we've -- what 14 we've -- what we've calculated is a present use flow. 15 And so from a planning perspective we assumed that the water supply was as in 1912. But if 16 17 there was a diversion in place now that diversion was -- would be in place in 1912. And so we've adjusted for 18 19 -- to -- to make sure that it's a -- it's a present-use file. 20 21 Over a time we believe that there are 22 some climate change effects in the record. They -- but

24 obvious. But our climate studies people have indicted 25 that they are -- that they are evident in certain parts

because our record is quite variable, they're not

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of our watershed and -- but they're just not -- they're 1 just not obvious, they're very subtle. 2 3 So if you look at the average line on 4 that chart compared to the bars it looks like there's not a trend, but apparently if you look in the right 5 way there is a trend of increasing water supply but it 6 7 is very subtle. 8 So the -- the question is how do you --9 how do you reflect into the future what those climate 10 change effects are. And Manitoba Hydro is doing those kind of studies. And we have yet to change our basis 11 12 for planning, but we know that the effects are there 13 and we're -- we're in the process of considering what 14 they will be. 15 MR. RAYMOND LAFOND: My last question, Mr. Chairman. Can I simply assume that, based on what 16 I've heard, that the total hydraulic generation equals 17 18 sales, that is to Manitoba consumers and exports? 19 MR. DAVID CORMIE: No, our sales will 20 be greater than the hydraulic generation because we have access to other low cost -- we have other --21 22 access to other energy supplies besides the hydro. 23 That means buying power at night when it's low priced and selling it in the daytime. And so you can increase 24 25 the supply by arbitraging low-cost purchases into high-

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cost -- high-value sales. 1 2 And -- and one of the unique aspects of the Manitoba Hydro system is in the wintertime the 3 discharge capacity from Lake Winnipeg is restricted 4 5 because of ice and we can't get down the river as much 6 water as we -- we would like to, to meet the demand. And so the Nelson River generating stations don't have 7 enough water to run continuously at -- in the winter 8 9 when the demand is high. 10 So what we do is we buy additional 11 energy at night so that we can back the genering --12 generators down at night and then run them more in the 13 daytime. And -- and so we can increase the supply by 14 purchasing low-cost energy to sell high-cost energy, so 15 even in a high water year you'll see that there will be 16 purchases as part of our supply. 17 Our -- we also have the ability to run 18 natural gas turbines and to run Selkirk on natural gas. 19 Unfortunately the efficiencies of those generating 20 stations are -- are quite low and they're -- end up 21 being some of the most expensive generation that can be 22 run in the MISO footprint. So they rarely run for 23 economics. 24 It's all -- almost always cheaper for us 25 to go to market to buy the energy we need rather than

to -- to start those units. But they're there as 1 emergency backup and for drought support, not -- and we 2 -- and we don't arbitrage them or use them to support 3 our export sales. 4 5 MR. RAYMOND LAFOND: What is the 6 capacity of generation for these gas plants and coal 7 plant? 8 MR. DAVID CORMIE: The station at 9 Selkirk is 130 megawatts. The two (2) combustion turbines at Brandon are 260 megawatts. So we have 10 about 400 megawatts of gas-fired generation. And then 11 12 the coal-fired unit at Brandon has the capacity for 13 around a hundred megawatts. 14 Unfortunately -- well, maybe not 15 unfortunately, the -- the legislation in the province 16 restricts the use at Brandon to emergency use only. 17 And -- and so it's only run for training and 18 proficiency runs, and it's not run for -- it's run for 19 emergency use only. 20 21 (BRIEF PAUSE) 22 23 THE CHAIRPERSON: I think it would be 24 an opportune time to break for lunch. I would suggest 25 that we adjourn now and resume the proceedings at one

o'clock. Mr. Peters...? 1 2 MR. BOB PETERS: Yes, before we do recess for lunch I should remind the panel and the 3 parties that I believe we will have presenters today at 4 5 1:00 p.m., Mr. Chairman. And I believe two (2) 6 individuals have requested an opportunity to come forward and make a presentation. So I'd just remind 7 the panel of that. 8 THE CHAIRPERSON: Thank you very much 9 10 for doing that. So let's adjourn now and resume at one 11 o'clock. 12 13 (PANEL RETIRES) 14 15 --- Upon recessing at 12:04 p.m. 16 --- Upon resuming at 1:02 p.m. 17 18 THE CHAIRPERSON: Good afternoon. Ι 19 would like to resume the proceedings. Mr. Peters, do 20 you have some comments? 21 MR. BOB PETERS: Yes, thank you, Sir. 22 At this time, Mr. Chairman and Board members, ladies 23 and gentlemen, the Board has made time available to 24 hear from presenters who, although not providing 25 evidence, have points of view that they want expressed

to the Board and also other parties. 1 And the Board has received a total of 2 eight (8) written presentations. And I'll just list 3 4 them: Ms. Boitson, Mr. Luby, Mr. Biggs, Ms. Fleury, Ms. 5 Pacaud, Mr. Macduff, and Allison Reid are seven (7) of the eight (8) who have provided written presentations 6 via email, I believe, or maybe a letter. 7 8 We have asked our transcription services 9 to incorporate them into the transcript of proceedings, 10 and a copy has been circulated to the parties, Mr. 11 Chairman and Board members. 12 The eighth written presentation that the 13 Board received was from Mr. Stokke, who is also with us 14 today. His -- his letter of -- it appears to be 15 October 17th of 2012 will also be incorporated into the 16 transcript by our transcription services, Ms. Lavigne. And in addition to that, he does want to make an oral 17 18 presentation today. 19 So with those notes, I would suggest 20 that the Chairman could call on Mr. Ciekiewicz, and he 21 could provide us with his presentation, being mindful of course of time restrictions that the Board likes to 22 23 adhere to. So, thank you, Sir. 24 THE CHAIRPERSON: Mr. Ciekiewicz, 25 welcome.

1 2 ORAL & WRITTEN PUBLIC PRESENTATIONS: MR. ALLAN CIEKIEWICZ: Thank you. 3 4 Okay, forgot that. 5 Good afternoon, Board members and to all 6 in attendance. My name is Allan Ciekiewicz. I'm a 7 resident of Springfield Municipality. This presentation is straightforward, consisting of two (2) 8 9 topics and approximately twenty (20) points, each point 10 followed by a set of braces that inclose my comment. 11 Topic 1: Can we believe Manitoba 12 Hydro's projections, forecasts, predictions, 13 statements, et cetera? 14 Manitobans were told by former CEO, Α. 15 Mr. Brennan, that Manitobans would not see an increase 16 in their electricity rates due to the drought of 2004. Comment: That was false. 17 18 Β. If you have Hydro's ho-hum attitude 19 of don't worry be happy because low water flows are 20 always more than balanced out by the average and the 21 higher than average water flows, then all is well. 22 Comment: How is that working out for Manitoba Hydro 23 and the ratepayers? It isn't. 24 A comment during a hearing for С. 25 interim rate increase stated that Manitoba Hydro

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expected the interim -- interim rate increase not 1 because Manitoba Hydro was in dire need, but because it 2 supports a solid financial management strategy. 3 That is a mind bog -- mind-boggling 4 Comment: 5 statement. No deleterious effects existed, but they 6 were still granted an interim rate increase. 7 Manitoba Hydro still operates a D. coal-fuelled generating station in Brandon. Comment: 8 Does anyone really need a comment on that situation? 9 10 Ε. About two (2) -- no, about five (5) 11 years ago, Manitoba Hydro stated during an earlier 12 hearing that it would take several years of good water conditions to recoup the losses of 2003/'04. Also 13 14 Manitoba Hydro stated even with an assumption of median 15 water flow conditions and general consumer rate 16 increases each and every year throughout the ten (10) 17 year forecast period, Manitoba Hydro does not recover 18 its pre-drought debt-equity ratio of 80:20 until 2012. 19 Comment: It was false. It was achieved 20 December 2006. So why didn't our rates go down instead 21 of asking for another rate increase? In other words, 22 that achievement of 80:20 did appear to indicate a 23 reasonable progress towards Manitoba Hydro's financial 24 targets. The debt-equity ratio values are in constant 25 flux, and it appears to fluctuate with the whims of

Manitoba Hydro. Also this indicates the inability of
 Manitoba Hydro to make accurate forecast projections,
 predictions, and it is having an negative effect on
 ratepayers.

5 A public utilities directive issued, I 6 think, sometime in 2008 requesting that Manitoba Hydro plan, outlining the pros and cons of the various 7 potential inverted-rates strategies. And Board Order 8 9 5/12 requested a status update regarding inverted-rates 10 impacts on the all-electric heat con -- customers. 11 Comment: After approximately five (5) 12 years, Manitoba Hydro indicates they have been studying 13 the Board's request and stated they formed a work --14 working group to study this request. Come on, give us 15 a break. An equitable solution is not that difficult

16 to develop.

Next, rate of inflation. Over the years we have been told many times that Manitoba Hydro will keep rate increases below the rate of inflation. Comment: How's that working out for the ratepayer? Not very well, especially if a rate increase was unnecessary. Next: In Manitoba Hydro's January 26,

24 2007, request for an interim rate increase effective
25 February the 1st, 2007, it was stated that the increase

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was required at the earliest possible date as a form of
 immediate rate relief.

3 Comment: Unfortunately the facts 4 regarding water flows that initiated this unnecessary 5 rate relief were inaccurate and contradictive, such as 6 the water flows of 2006/'07 were extremely poor for 7 most of the year.

8 Also, you would think that when a gas -when the gas sector of Manitoba Hydro suffers a net 9 10 loss for a major part of the year, which is addressed by the overall revenues, electric sector of the 11 Corporation, why is it when the electric sector demands 12 rate relief in the form of an immediate interim rate 13 14 increase, that the overall revenues of the Corporation 15 are not used to address a momentary financial shortfall 16 until an actual general rate application is completed? 17 Based on other requests for interim rate 18 increases, it becomes obvious that all rate increases, 19 if necessary and based on accurate and complete facts, 20 must be granted after an actual general rate application hearing is completed. 21 22 Now, I just have to sort of step -- step 23 aside from what I've got here. I sort of got a little

24 put off yesterday when I read the paper about -- it 25 says it's a -- "Hydro lays out case for new rate hike."

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So that's an electrical rate hike for the electric 1 side, not the gas side. But Mr. Thomson, or whoever it 2 3 was -- maybe the Free Press got this from Mr. Thomson -4 - he says they've suffered -- in the fir -- first six 5 (6) months they've suffered a \$43 million setback net 6 loss, but they don't mention 25 million of that was for 7 the gas sector, which has nothing to do with this hearing. 8 9 So -- and this happens frequently. You 10 can read their quarterly reports all the time. I know they -- they split it up into electrical and to gas 11 12 sectors, and he was talking con -- consolidated. But 13 this isn't a consolidated hearing; it's for the 14 electric side and that's it. Okay. 15 Next: Manitoba Hydro constant --16 constantly states they need rate increases in order to 17 make reasonable progress towards the attainment of a 18 financial target -- or, targets. Comment: Apparently 19 this progress is determined by the state of the 20 retained earnings and the debt-equity ratio. The only 21 problem is the fact that the targets keep changing. 22 Approximately a year ago Manitoba Hydro introduced the 23 phrases, a decade of investment to be followed by a 24 decade of return and verified by Manitoba Hydro's 25 forecast projections and predictions.

1 Unfortunately, and based on the main title of the October 12th, 2012, edition of Energy 2 Matters, it states: 3 "Infrastructure rebuild over next 4 5 twenty (20) years, key to maintaining 6 high reliability and low rates." So there is no decade of investment. 7 It's a double decade of investment. And of course 8 9 there has to be that ubiquitous phrase, "key to 10 maintaining reliability and low rates." 11 Next, Mr. Thomson, CEO and president, 12 reminded us in the August 2012, Volume XII, Number 8 13 edition of the Energy Matters, of Manitoba Hydro's 14 current application for a rate increase. He -- he also 15 reminded us that even with the applied-for rate 16 increase, the Manitoba consumer will continue to enjoy 17 electricity rates that are among the lowest in North 18 America. 19 Comment: And I don't see this -- I'm 20 not being -- try to be factious here or anything. I'm -- I'm serious. The comment is: Sorry, but I'm oh-so-21 tired of being reminded at the commencement of and 22 23 during a general rate application and during public announcements related to Hydro matters that Manitoba 24 25 consumers enjoy low rates when compared to other

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jurisdictions. 1 2 The sad fact of that statistic is that it appears that Manitoba Hydro is using the low rates 3 4 statistic as justification for a rate increase, just so 5 long as they keep rates low. Maybe Manitoba Hydro, if 6 they insist on continually mentioning the low-rate 7 statistic, should concentrate on making them even lower. 8 9 I believe that the Affordable Utility 10 Rate Accountability Act could very well prove not to be 11 in the best interest of Hydro electric sector 12 ratepayers. 13 Next: Manitoba Hydro has stated that 14 Hydro has not taken any steps, other than retained 15 earnings to protect itself from risks associated with 16 droughts. 17 Droughts coupled with firm Comment: 18 export contracts that do not contain clauses that 19 exempt Manitoba Hydro without penalty from supplying 20 export energy if Manitoba Hydro cannot meet its own 21 domestic requirement from its own generating stations 22 pose an unacceptable and probably the greatest risk --23 risk to Manitoba Hydro. 24 Manitoba Hydro expects droughts every 25 approximate ten (10) years. And if the next drought is

of a magnitude that has never before -- before been 1 witnessed, it will represent a risk not only to 2 Manitoba Hydro but to Manitoba. 3 Section 47, Part 1 of the Public 4 5 Utilities Board Act gives the Board the authority to 6 direct Manitoba Hydro within their orders to include 7 such an exemption clause in their firm export contracts. 8 9 Next: Manitoba Hydro makes the public 10 aware of the positives of Manitoba Hydro Place, such as special recognition awards for a building that costs 11 12 close to a third of a billion dollars to construct. 13 Comment: I would think that a building 14 that was supposed to be cost neutral -- that's what I 15 was told a while back -- because of opportunities for 16 extra revenue would also make available to the public, 17 actually prove to the public, that Hydro Place is cost 18 neutral by listing publically in their Energy Matters 19 pamphlet the actual sources of revenue in order to 20 justify the building as cost neutral, in order to pay 21 for the annual cost of approximately nineteen (19) 22 twenty (2) -- nineteen (19) to \$20 million to repay the 23 construction costs. 24 The list could include the number of 25 tenants, if all the extra space in Hydro Place has been

1 leased, the total revenue from the tenants, the number 2 of EFTs compared to the amount that Manitoba Hydro has 3 budgeted for. I still believe that rates are the prime 4 source of that revenue for payment, although it would 5 be nice or would be appreciated if Manitoba Hydro could 6 prove otherwise.

7 Next: In Manitoba Hydro's current GRE, 8 in one of the documents there is a comparison of the 9 actual and forecasted export revenues for 2000/2001 to 10 2011/2012, those twelve (12) years.

11 Comment: Of the twelve (12) 12 comparisons, eight (8) of them, 67.7 percent, were 13 higher than the forecast by a total of close to 1/214 billion dollars. So much for forecast predictions and 15 projections. More importantly, how is that unexpected increase in revenue addressed? It is difficult to 16 17 know, because after 2003, the rates kept going up, up, 18 I would think that any ordinarily prudent and and up. 19 cautious person would have expected rate decreases or much smaller rate increases. 20 21

21 Next: Regarding Manitoba Hydro's Power 22 Smart Program, it is stated in Tab 7, Volume I, that 23 overall 2010/'11 was a successful year for Manitoba 24 Hydro's Power Smart porfo -- portfolio. Total Power 25 Smart expenditures in 2010/'11 were 45 million,

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consisting of 29 million from Power Smart Electric,
 eleven (11) from Power Smart Natural, 4 million from
 affordable energy fund, and 1 million from the furnace
 replacement fund.

5 For the expenditures for the power of 6 natural gas through affordable energy and the furnace 7 replacement budgets, it would be interesting to know how much of each of those program expenditures has as 8 9 its source monies from the electric side of the Corporation. Also, how much of the -- any money for 10 11 the various Power Smart expenditure is actually 12 recouped from taxpayers -- I'm sorry, from ratepayers 13 who participate in various smart -- Power Smart 14 programs?

15 Oh, next: Manitoba states in Tab 10-1, 16 rate objectives, that whenever possible, rates should 17 be designed with the view to sending the appropriate 18 price signal regarding the use, which would be the most 19 sensitive to such a signal.

20 Comment: It would help if Manitoba 21 Hydro indicated in that statement to whom it applies. 22 Note -- I'm finished with the comment stuff and the 23 separate little facts.

24Note: The reason that I included parts25A through 'O' in this presentation is to indicate that

Manitoba Hydro's statements have not been all that 1 accurate or transparent and tend to be misleading the 2 public at large. Therefore, the answer to that very 3 first question on page 1 -- therefore the answer to the 4 5 top of 1 on page 1 is "No." Before concluding -- I got a couple 6 7 other pages. Before concluding I'd like to refer to a 8 couple of quotes. Some -- some time ago when I was 9 reviewing Manitoba Hydro's comments relating to varying Board Order 99/11, I came across, and still remember, 10 11 the following Manitoba Hydro quote, short quote: "The PUB has made statements that, in 12 13 Manitoba Hydro's view, are non-14 constructive and not in the public 15 interest." 16 My comment to that is: Actually, if you apply that quote to parts A through 'O' above Manitoba 17 18 Hydro may just be guilty of that which it accused the Public Utilities Board. 19 20 The other quote, this is an old one. 21 "The fact is" -- and I'm just going to read the quote: 22 "The fact is that they [Hydro] were 23 totally ill prepared. They 24 approached the situation with 25 considerable arrogance and felt that

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549 anybody who questioned them, in 1 2 effect, was questioning God. Somehow 3 they were touched with infallibility in terms of decisions. Who had the 4 5 tenarity (sic) to question them?" 6 That comment was made by Hugh Tentalef 7 (phonetic) during a December 2nd, 1986, interview referring to his involvement with Manitoba Hydro's 1968 8 9 licence application for the Churchill River Diversion South Indian Lake. It is oh -- so -- it is oh-so-10 11 unfortunate that after forty-four (44) years, the two 12 (2) quotes above seem to have eerie similarity. 13 Moving on. Manitoba Hydro's mission 14 states it is: 15 "To provide for the continuance of a 16 supply of energy to meet the needs of 17 the province and to promote economy, 18 efficiency in the development, 19 generation, transmission, 20 distribution, supply, and end use of energy." 21 22 In the October 2012, Volume XII, Number 23 10 edition of Energy Matters pamphlet, it indicates the 24 electricity used in Manitoba is -- in question marks --25 projected to grow by 1.6 percent annually. And it also

states that to meet that demand Manitoba Hydro is
 proposing a development plan that continues a path of
 predominately hydro generation with enhanced access to
 export markets.

5 My understanding of Manitoba Hydro's 6 mission is to meet the needs of the province. But it is clear from the Energy Matters pamphlet that that may 7 not be the case. It is time to stop all the hoopla 8 9 about exports and the needs of Americans and make sure 10 that the province will have a secure supply of energy 11 for Manitobans first and foremost, especially in times 12 of threat to the energy needs of Manitoba.

Topic 2: Conclusions, recommendations, undertakings, and others. I wrote these -- these conclusions a little differently than I've done in the past.

17 So, A) Conclusion, Recommendation, 18 Undertaking. The ratepayers are always told that 19 export profits contr -- excuse me -- contribute to 20 decreasing our rates; we are not told by how much. So 21 let's say someone with a magic finger and a magic 22 switch switches off all export profits. 23 So undertaking 1: After all the export 24 profits are switched off, how much would the 25 residential ratepayer be charged per kilowatt hour?

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Undertaking 2: After all the export 1 2 profits are switched off and taken into consider -consideration that labour costs would be lower because 3 less staff would be needed, some Manitoba Hydro 4 5 departments/divisions would become obsolete, there 6 would be a decrease in transportation and transmission, 7 et cetera, how much would the residential payer -ratepayer be charged per kilowatt hour? 8 9 Undertaking 3: After all the export profits are switched and taken into consideration in 10 11 addition to undertaking 1 and 2, that some 12 cancellations of generation construction would occur, 13 Bipole 3 probably would not be needed. And when the combined savings of undertakings 1, 2, and 3 are 14 15 determined, now how much would the residential 16 ratepayer be charged per kilowatt hour? 17 Undertaking 4: Calculate the total 18 savings from the first three (3) undertakings, and 19 maybe other savings, which should be billions of 20 dollars; now determine the cost of installing one (1) 21 hyper-efficient gas turbine. Also, determine the most 22 strategic areas of Manitoba to install hyper-efficient 23 gas turbines. In my opinion the cost of such a hyper-24 efficient gas turbine program would be a fraction of 25 the savings determined in undertakings 1, 2, and 3.

1 This program, and depending on many hyper-efficient gas turbines install -- installed, 2 coupled with Manitoba Hydro's existing hydraulic 3 generating stations should protect Manitoba's energy 4 5 needs now and well into the future. But that will 6 depend on how many hyper-efficient gas turbines are 7 installed, installations that will take a fraction of the time to install when compared to an hydraulic 8 9 system construction.

After this undertaking is complete, how much would the residential ratepayer be charged per kilowatt hour? And if by chance this program yields surplus energy, then it can be exported, but not on the condition that new hydraulic generating stations and transmis -- transmission lines must be constructed to meet any export opportunity.

17 It would be appreciated if the Board 18 includes in its order that such undertakings take 19 place, preferably -- preferably by an independent body, and reserve its findings regarding the current Rate 20 21 Application until such undertakings are complete. 22 Recommendation B: It is my 23 recommendation to the Board regarding interim rate 24 approvals that regarding the 1 percent interim rate 25 that was continued to be billed to cons -- customers

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and held in a deferral account should be -- should be 1 refunded to the ratepayers; 2) the interim rate 2 increase granted effective April 2010 should be reduced 3 4 by 1 percent; 3) the interim rate increase granted 5 effective September 2nd, 2012, should be reduced by 1 percent. Considering 1, 2, and 3 that I just 6 7 mentioned, this should bring the rate increase for parts of 2012 and 2013 closer to the rate of inflation. 8 9 In general, I make the following recommendations for the Board's consideration and based 10 on some comments within my presentation that there 11 12 should not be any interim rate increases granted at any 13 time unless Manitoba Hydro is in dire straits and 14 deleterious effects actually exist. All rate increases 15 and/or decreases should only follow the completion of a 16 general rate application. 17 Recommendation C: The request of -- for 18 the approval of this five (5) -- 3.5 percent rate 19 increase effective April 1st, 2013, and coupled with 20 the fact that Manitoba Hydro has already been granted -21 - while it may have been not on a permanent basis; it's still interim -- two (2) substantial rate increases in 22 23 the first five (5) months for the fiscal year 2012/'13,

24 the requested expected 3.5 percent increase effective 25 April 1st, 2013, should be reduced to a percentage that

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554 represents one-half (1/2) the rate of inflation at the 1 time the rate increase becomes effective. That is, if 2 a rate increase is actually necessary. 3 Also the excessive 3.5 percent rate 4 5 increase request appears to be a ploy -- I'm sorry to 6 say this but I'm saying it -- appears to be a ploy on 7 Manitoba Hydro's part to even the score for man -- for 8 the Board's decision to decrease an earlier requested 9 rate increase by Manitoba Hydro. 10 Request -- I'm sorry, recommendation --11 recommendation D: It would be appreciated if the Board 12 gave consideration to the importance of applying Section 47(1) of the Public Utilities Board Act 13 14 regarding Manitoba Hydro's firm export contracts, and 15 the potential losses to Manitoba Hydro before the next 16 drought or any other significant negative situations 17 That would be the inclusion of exempt clauses appear. 18 within firm contracts, as mentioned earlier in this 19 presentation and earlier presentations. 20 This is -- this is kind of a Ε. 21 recommendation, and you'll have to interpret how you 22 see fit. Manitoba Hydro, in its application to vary Board Order 99/11 stated: 23 24 "On the basis of the legislation as 25 it stands, the Board has no

555 jurisdiction to approve, reject, or 1 2 vary Manitoba Hydro's major capital 3 projects such as construct -construction of new generating power 4 5 stations or transmission lines." 6 A comment: From what I remember, that 7 is probably correct. However, I do not recall any legislation that compels the Public Utilities Board to 8 9 approve any rate application, whether it's for a rate increase or a rate decrease, submitted by Manitoba 10 11 Hydro to the Manitoba Public Utilities Board. 12 I've got a series of question marks 13 there. At the back of page 2, at the back of -- back 14 of page 4, and the back -- you -- you're right at page 15 6 now. At the back of page 6 there's -- it's a similar statement three (3) times. So I would like to read the 16 17 statement, and -- and I call it the existing program. 18 As -- as a ratepayer, I see this as the existing 19 program. 20 "We build up retained earnings. We 21 improve the debt equity ratio. We 22 construct hydraulic stations too 23 early; concen -- concentrate on 24 exports that can have a tremendous 25 negative impact on Hydro's finances;

556 wait for adverse condition --1 2 conditions, such as a super; address the severe condition after it occurs 3 with imports; allow the retained 4 5 earnings to drop, adversely effecting 6 the debt-equity ratio; increase the 7 rate to ratepayers; and start all 8 over again." 9 And what's the point in such a vicious -- vicious circle? Makes no sense at all. And the last 10 little phrase there, "It's time to change." 11 12 Members of the Board, thank you for your 13 patience. 14 THE CHAIRPERSON: Thank you, Mr. 15 Ciekiewicz. 16 Do the Board members have any questions that they'd like to address to . . . 17 18 I don't have any questions either. Does 19 Manitoba Hydro wish to respond to the comments? 20 MR. VINCE WARDEN: We just would like 21 to thank you for your comments. We don't, obviously, 22 agree with all of your thoughts, but we still 23 appreciate hearing them. And -- and we will certainly 24 take them into consideration. Thank you. 25 MR. ALLAN CIEKIEWICZ: Okay. Thank

you. I appreciate that. 1 2 THE CHAIRPERSON: So thank you very much, Mr. Ciekiewicz --3 MR. ALLAN CIEKIEWICZ: You're welcome. 4 5 THE CHAIRPERSON: -- for taking the 6 time to come to meet with us and also taking the time to prepare your extensive report. Appreciated. We'll 7 certainly appreciate hearing from citizens about the 8 9 applications that are before us. So we'll certainly 10 consider it as part of the other evidence that we --11 that we have been provided with. Thank you very much. 12 MR. ALLAN CIEKIEWICZ: You're welcome. 13 Thank you. 14 THE CHAIRPERSON: I now call on Mr. 15 Stokke to provide his comments. Mr. Stokke, please. Welcome. 16 17 18 PRESENTATION BY MR. PER STOKKE: 19 MR. PER STOKKE: Good afternoon, 20 members of the Board, Hydro family. I still consider 21 myself a Hydro guy, although it has been seven (7) 22 years now -- more than that, actually -- since I 23 retired. And this actually feels a little bit strange. 24 Unnatural even, I must say. But Hollis Singh phoned me 25 and asked if I was interested in -- in talking to the -

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the letter that I dropped off here some time ago, and
 I thought that I couldn't very well say no to that. So
 here I am.

The -- it is a public letter, and it was addressed to Manitoba Hydro's ratepayers and owners. And the subject is Manitoba Hydro's decision to replace the spillway at that Pointe du Bois. And the issue is whether Manitoba Hydro had credible and defensible evidence for making this decision.

Now, you'll hear and you see in the re -11 - in my letter that I use the expression "credible and 12 defensible evidence" quite a bit. It's dam safety 13 speak, and it means that any evidence that doesn't pass 14 the -- the test of being credible and defensible by the 15 dam safety field is not valid. I sometimes refer to it 16 as "hard evidence" for -- for short.

Now, I shall go through the letter, Now, I shall go through the letter, that's the intention, but dam safety is a -- is such a vast field, and you can only put so much into a couple of pages. So I would like to expand a little bit on it and -- and elaborate and maybe provide some background other than what is in the letter if -- if I have the time to do that.

(BRIEF PAUSE)

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There's also a new 1 MR. PER STOKKE: factor here now since I've submitted that -- that 2 letter, and that is that Manitoba Hydro has submitted a 3 letter they sent to me in April this year as an 4 official document on dam safety. I won't talk to the 5 6 details of that one. I pointed out in my response to that letter that you have a copy of as well that -- I 7 feel very uncomfortable doing that, because it is an 8 9 integrity report and as such, no doubt, a fine one. What do I know? But I do know that it is not a 10 11 credible dam safety report. 12 At the end of -- after I gone through 13 the -- the letter, I'd like to make some words relative 14 to the question: What now? If times allow. Maybe my 15 meter has run out by then. 16 Let us observe right here and now, and 17 take heed, that this is only about Manitoba Hydro's 18 decision to replace the spillway at Pointe du Bois. 19 And all the matters, of course, that is directly related to that. 20 21 And it is a formidable task, and 22 undertaking, to back up such a decision for Manitoba 23 Hydro because it is, generally speaking, a way larger 24 and much more complex task to determine that a 25 replacement is necessary than to find that it isn't.

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560 I've been at this now for more than two 1 (2) years and what I've been after is to find if there 2 exists credible and defensible evidence that can 3 underpin Manitoba Hydro's decision and claim that the 4 5 spillway at Pointe doesn't meet the Canadian Dam Safety 6 Guidelines with respect to required capacity and that 7 it therefore must be replaced. I call this search as my "quest" for easy reference, and you'll find that 8 9 word used in Manitoba Hydro's report as well. 10 The onus is on Manitoba Hydro to provide 11 and demonstrate that it is true, that this is true that 12 it has to be replaced. It's not up to me to prove that 13 it isn't necessary, it's not up to me or anybody else 14 to -- to do that. 15 I start -- I started my quest in, of 16 course, Power Supply of Manitoba Hydro, but Power 17 Supplies blankly refused to review anything about this 18 decision. It was a done deal as far as they were 19 concerned and they were proceeding presently with the 20 project at their pace. 21 Then I turned to Bob Brennan and he was 22 interested. And I got access to all relevant reports 23 and documents through his assistant Shirley Denesiuk. 24 But Bob, unfortunately, was in the mode of retiring so 25 the -- you know, the quest went oh, ever so slowly.

And -- but just the same, questions were posed and
 forwarded to power supply, very tame ones initially.
 And they responded to those.

Then we sharpened the questions up so 4 5 they had a little bit more bite to them and then Power 6 Supply flatly refused. Then Bob Brennan retired and I 7 thought maybe the -- the search for evidence was halting there, but by-and-by I got this letter that I 8 referred to from Shirley Den -- Denesiuk. And -- and, 9 10 you know, it had a note at the end of it that they --Hydro now considered this matter as -- as closed. 11

12 I -- I still didn't give up. I sent a 13 letter to the President and it got refused, he didn't want to meet with me. And then I sent to the Chair. 14 15 And although we had a trip up to Pointe du Bois, I'm 16 not sure why because there was no agenda and we didn't 17 do anything but look at the thing. But anyways, after 18 that he sent me a letter and said that the matter was 19 closed.

And indeed the quest is now over, not just because Manitoba Hydro closed the door on me but because this letter that Shirley sent to me, which is now Manitoba Hydro's official document, makes it very, very clear that they don't have high-level studies to back up this decision. It would have been mentioned in

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that report, I'm sure, if they had it. So I conclude 1 that they -- they don't have it. 2 3 And in -- in that sense it confirmed 4 what were my worst fears, and that is that Hydro 5 doesn't have credible and defensible evidence to back 6 up their decision. 7 And the reason for that is that they didn't undertake to do high-level studies which could 8 9 have provided that evidence. And they should have done 10 that not because I say so but because the Canadian Dam Safety Guidelines say that high-level studies should be 11 12 made if you're making a high-level decision. And I 13 would say \$400 million is -- is an important decision 14 that deserves high-level evidence. 15 Now you will see in -- in their report 16 that there has been an unholy mixup of miscommunication 17 and misunderstandings all along this quest here. And 18 there has been an equally unholy mixing in of 19 impertinent issues and material that has nothing to do 20 -- it doesn't bear at all on the decision to replace the spillway at Pointe du Bois. 21 22 A point -- or a case in point, there is 23 something called the east re -- retaining wall for the power intake channels, sometimes called the "east 24 25 gravity wall." That one has bad concrete in it, and

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1 there is no doubt that that one has to be remedied for
2 operational reason.

Now a world-renowned engineering consultants and contractor in 2002 suggested that that wall be backed up, buttressed, that is, by rollercompacted concrete. And he suggested it at the price of about 4 to \$6 million. That was in 2002. You know, at least double that now but still that's pittance, you know, compared to 400 million.

10 And that would make -- that would be --11 replace that -- that wall. Gold-standard replacement. 12 It will take any probable flood that would possibly 13 come down that river. It could -- water could pour 14 over it. It's roller-compacted concrete. It's solid. 15 It can take overflow. So, you know, that is -- it's a 16 moot point in the context of dam safety to mention even 17 In that context, dam safety, because that is that one. a prime reason that Manitoba has said they have for 18 19 replacing that spillway.

Now, you know, the -- the way I kind of perceived it at the time was that this invasion of irrelevant issues was maybe one of the reasons that we didn't make much headway on the -- on the quest. We didn't really get off base. But we also got to remember that Power Supply was very much against any

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review of their decision all along. 1 2 Now, I'll be the first one to say that dam safety is a serious business. There's no option to 3 take that one lightly. And, therefore, I'm very glad 4 to see that Manitoba Hydro is sticking to their policy 5 6 of following the dam safety -- the Canadian Dam Safety Guidelines. 7 8 Now, dam safety at Pointe Du Bois is 9 about what risk to life does that dam pose to the 10 public downstream of the dam during periods of high flow or flood. The public affect -- possibly affected 11 12 by a dam breach at Pointe du Bois are in dwellings 13 about in the 2-kilometre stretch downstream of Pointe 14 du Bois. 15 There are about a dozen dwellings 16 affected, possibly two (2) if you include those who are 17 minimally affected, some of them maybe an inch or two 18 (2) of flooding. Hardly a dam safety concern. And as 19 I understand it, those dwellings are, for the most 20 part, uniseasonal, and occupied or used by Manitoba Hydro staff employed at Pointe du Bois. 21 22 Not that that necessarily is much of a point, but it -- it strikes me as -- as something we 23 should remember, because, you know, the dam safety 24 25 guidelines is about many things, but common sense is --

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1 is one (1) of the fundamentals in -- in the dam safety
2 guidelines.

3 And, that -- you know, I should mention here that there are generally two (2) types of dam 4 5 failures. And that is a sunny day dam failure that can 6 happen any time and without any warning. And it can 7 happen for any reason whatsoever other than flood. That's because flood-induced failure is the other type. 8 9 And that only happens if you get a flood that is larger 10 than what the spillway can handle. 11 The failure mode there is -- is usually 12 that, you know, since the spillway can't handle the 13 flood, the water level will rise and the dam gets 14 overtop, and start to erode and eventually fail. 15 Especially earth-filled dams are very susceptible and vulnerable to that kind of failure. 16 17 Now, Pointe du Bois has a rock-filled 18 dam, and it's pretty robust. It won't fail just 19 because it gets a little bit of overtopping. And it 20 can be -- be made as robust as you want for a few 21 hundred thousand dollars, say a million, that it can

22 take just about any amount of overtopping cost by a
23 probable flood coming down there.

24 Now, the other thing about a flood-25 induced failure is that it comes with plenty of

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566 warning, plenty of warning. Especially on the Winnipeg 1 River at that point. It's a large river, well 2 regulated, and it rises only so slowly, days and days 3 it takes. You can be alert to it and aware of it. 4 5 Now, it's -- ironically, when you look 6 into Manitoba Hydro's report, the one (1) that they have now tabled as their dam safety report, they got 7 this backwards. They claim that the sunny-day failure 8 comes with plenty of advance warning and with the 9 ability to warn all affected residents, et cetera. 10 They also state that the sunny-day failure at Pointe is 11 12 not a problem. It's not a risk to lives. The 13 estimated loss of life is zero. I kid you not. That's 14 what it says in there. You can read it on page 14 and 15 15 of the report. The --16 THE CHAIRPERSON: Mr. Stokke, have you got an idea of how long you need to go? 17 18 MR. PER STOKKE: Oh, I see. I am just 19 about going into the -- into my letter here now. And 20 I've addressed many of the points in the letters 21 already, so it -- it won't take that long to go through 22 the -- through the letter. 23 So I shall -- you know, there's a -- a difference how you deal with the -- with the hazard of 24 25 the two (2) types of -- of dam failure.

567 1 Now, okay, to the public letter then. 2 As I say in the first paragraph here: 3 "The evidence put forward by the corp -- Corporation in support of the 4 5 decision strikes me as sorely 6 inadequate and inappropriate." 7 And I go on to say that: "It is a big decision and that the 8 9 detail of accuracy of the evidence 10 supporting the decision should be 11 proportionately high." 12 This -- this is straight from the 13 quidelines. The guidelines say that. I have been 14 through these -- the next paragraph here. I -- I 15 should say here I'm not a dam safety expert. I think 16 everybody knows that. But I -- I think I know enough 17 about the subject to know this when red flags go up. 18 And I have seen them go up just about everywhere I care 19 to look in this case. 20 What struck me first that something was 21 wrong was that I couldn't find a -- a document that 22 detailed the decision-making process in Hydro. A 23 document that sets down the essentials and the -- the 24 line of reasoning from data to conclusions. 25 The guidelines call for such a document.

And they also call for it to be open and transparent,
 because we are, after all, dealing with public safety
 here. And so the public has a right to know, but it is
 missing.

5 Now, the guidelines is, of course, about 6 dam safety, but it also speaks to -- to many other 7 things like balances and tradeoffs between conflicting objectives, commensurations, and so on. And 8 9 specifically it warns against creating an imbalance between costs incurred and the risk reduction obtained. 10 11 Now, at point we don't know what the 12 risk to life is. Manitoba Hydro has never addressed 13 that. We don't know even if the total risk to life is 14 less or more with this replacement project, because we 15 don't know what the risk to life is during the 16 construction period.

A big project like that has significant risk to life and then there will be residual risk after they have replaced the spillway as well. And -- and those two (2) things have to be balanced against what the risk is now in order to make a rational decision. Manitoba Hydro hasn't done that.

To get off the base, you know, regarding that, it is necessary to turn to the guideline's two primary questions, which is, what can go wrong and

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what is the probability of it going wrong? 1 2 And I say that the first phase of that was addressed by a local consultant who studied the dam 3 breach in 1995. I don't think there has been any dam 4 5 breach studies since. And the guideline says that as a 6 first approximation you may use, you know, the most simple methods and most conservative assumptions. 7 And I found that this study certainly fit the 8 9 characteristics of -- of being just that, a first 10 approximation. 11 The second guideline primary question, 12 what is the probability of this happening, I don't 13 think has been addressed at all by Manitoba Hydro. 14 Now, if you clear those two (2) 15 questions, you may not have to go any further. You 16 might find that the site is okay, the dam is okay. But if it isn't, if it is non -- if it isn't conclusive 17 18 then you go into, you know, the third guidelines 19 question, which is, if it does happen, if you get a flood -- flood-induced dam failure, what are the 20 21 consequences. And this was studied by three (3) consultants in 2001 and 2002, and I don't think it has 22 23 been addressed since for the existing dam. 24 And the reports didn't reveal much 25 details but they had every sign, as I saw it at least,

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1 of being a first approximation type of studies. And 2 that was perfectly okay at that time for the purposes 3 because they came up and said that the thousand (1,000) 4 year flood would be, you know, the right one. Two (2) 5 of them said that.

The third one had a preliminary report -6 7 - repeatedly warned that it was a preliminary report, and they came up with slightly larger figures. But the 8 other two (2) consultants reviewed that and -- and said 9 10 that, No, they were unnecessarily conservative, and 11 therefore they -- they stuck with the thousand (1,000)12 year flood. Now Pointe du Bois can handle that with 13 just a very modest surplus on the forebay.

14 So now you might have to go into a third 15 phase as I call it here if they -- if they still 16 inconclusive that the dam is safe enough. And that is to find, you know, the -- the most suitable and 17 18 economical remedies to make it -- to make it safe. 19 Because the paramount guideline question respecting 20 existing dams, as opposed to new dams is: Is the dam 21 safe enough. And it doesn't have to met regulations 22 so-called that you would have for a new dam say. It is 23 -- you have to pass the criteria, Is it safe enough. 24 And to figure that out you have to turn 25 to the second approach that the guidelines have to dam

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safety, and that is the risk-based approach. Manitoba 1 Hydro has used the standards approach only, to date. 2 I'm not aware of them having even looked at the risk-3 4 based approach. 5 Now I -- I'm not -- this is not a 6 critique of what I call the "working floor" at Manitoba 7 Hydro. Because the way Manitoba Hydro is organized and the way it functions, it is the duty and the privilege 8 9 of upper management to decide on -- to what level to take the evidence for it to be credible and defensible 10 11 for a decision of this magnitude. 12 I -- the last thing I have in here is, 13 you know, some -- something about the site. I -- I 14 find it kind of amusing to see that, you know, they 15 built this one a hundred (100) years ago for a little bit over \$3 million which amounts to about 60 million 16 in today's money. And now they suggest to replace just 17 18 the spillway for 400 million. 19 I mean, you know, it -- it's an amusing 20 bit of information and it -- it rests, I think, to a 21 large extent on the fact that in those days they worked 22 -- the engineering worked with nature. Today there's a 23 tendency to want to conquer nature. Way more 24 expensive. But then of course we have lots more money 25 now.

1 The last paragraph here is just an appeal for people to take action if they are motivated 2 enough and curious enough to get to the bottom of this. 3 Personally I -- I find it so incredible that I -- I'm 4 5 not just puzzled by it but I -- I find it fascinating. 6 7 (WRITTEN PRESENTATION) 8 9 Attn: Who It May Concern 10 11 Public letter to the Ratepayers and the Owners of 12 Manitoba Hydro 13 As a retired Manitoba Hydro engineer 14 previously involved in the planning of Pointe du Bois, 15 I feel it is my responsibility to let you know I am 16 troubled by Manitoba Hydro's decision to replace the spillway at Pointe. The evidence put forward by the 17 18 Corporation in support of the decision strikes me as 19 sorely inadequate, and inappropriate. 20 This is a big decision: \$400 million 21 (base cost only?), creating no direct or indirect The level of detail and accuracy of the 22 revenue. 23 evidence supporting it should, therefore, be 24 proportionately high. While this is common sense, it 25 is also what the Canadian Dam Association's Dam Safety

Guidelines state, the very same Guidelines Manitoba 1 Hydro points to as a reason why the spillway has to be 2 replaced, claiming it has insufficient capacity. 3 For the last couple of years I have 4 5 tried to find out what credible and defensible evidence 6 the Corporation might be sitting on, and was 7 disappointed to find that it all was at such a preliminary, same old low level of study, striking me 8 9 as highly inappropriate and clearly insufficient for the task at hand. 10 11 While I am not a Dam Safety expert, I 12 think I know enough about the subject to appreciate it 13 when red flags go up, and in this case I have seen them 14 go up just about anywhere I cared to look. And it takes 15 just one flag, of course, to warrant the halting of the 16 process, until the flag has been cleared. 17 To begin with, Manitoba Hydro does not 18 appear to have a document with a detailed account of 19 the decision-making process. A document that sets down all the essentials and shows the line of reasoning from 20 data to conclusions. The Guidelines call for such a 21 22 document; it should be logical, clear and presented in 23 an open and transparent manner. The reasons for this 24 are elementary; eg, this is about public safety, and 25 the public has the right to know.

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The Guidelines strive for 1 2 Proportionality and Balance in all things, and specifically warn against creating and 3 "imbalance between the costs incurred 4 5 and the risk reduction achieved". 6 Has this warning been properly heeded 7 and addressed in the decision-making process? The first part, the big time \$400 plus plus million "cost 8 9 incurred", is pretty clear, but how about the second part, the "risk reduction achieved"? Indeed, is it even 10 clear that the spillway replacement would entail any 11 reduction in the overall Risk-to-Life? 12 But it is to the more immediate 13 14 question: To what extent does the existing dam pose a 15 flood-induced Risk-to-Life? that my attention in the main has been directed. 16 17 The First Phase of trying to answer that 18 question consists of answering the Guidelines' primary 19 two questions: "What can go wrong?" and, "What is the likelihood (probability) of this happening?" 20 21 - An Engineering Consultant made a dam breach study in the mid-'90s. The Guidelines state 22 23 that "The simplest and most conservative procedures may 24 be applied as a first approximation", and I found the 25 study to have all the signs of being just that, "a

first approximation". 1 2 - The second of the Guidelines' primary questions, "What is the likelihood (probability) of 3 this happening?" has to all appearances not been 4 5 addressed at all by the Corporation. The Second Phase of a Risk-to-Life 6 assessment, if deemed necessary as based on the outcome 7 of the First Phase, would comprise the various studies 8 9 required to answer the Guidelines third primary question, "If it (a flood-induced dam failure) should 10 11 occur, what are the consequences?" 12 - Based on the just-mentioned dam breach 13 study, three Engineering Consultants studied this in 2001/2002. Their ensuing reports did not reveal much 14 detail, but showed every appearance of being at the 15 "preliminary assessment", "first approximation" stage 16 17 called for in the Guidelines. 18 For the purposes at the time, the level 19 of all these studies was appropriate. But how can such low-level studies, piled on top of each other, possibly 20 21 provide an appropriate foundation for the present \$400 22 plus plus million decision? Is that in accord with the 23 Guidelines 24 "The level of effort and the 25 resulting level of accuracy should be

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576 1 commensurate with the importance of 2 the dam safety decision that need to be made"? 3 Manitoba Hydro owes you and me, the 4 5 ratepayers and owners, a detailed explanation of how 6 this can be, so should provide higher-level studies 7 that do. 8 A Third Phase, that of investigating 9 alternative ways of dealing with what extent a Dam 10 Safety Issue(s) possibly could remain at that point, 11 would now follow. 12 There are many puzzles lurking within 13 the general mystery of the spillway replacement 14 decision; eq, why did Hydro reject the findings, as 15 apparently based on the "[the] most conservative 16 procedures", of the two Engineering Consultants, that pointed to a required spilling capacity (the 1000-year 17 18 flood) that the existing spillway can handle with just 19 a modest surcharge of the forebay? How did Hydro determine that an even more conservative value was 20 needed? 21 22 The paramount Guidelines' question about To answer 23 any existing dam is, "Is it safe enough?" 24 this, should the above three Phases of the Standards-25 based Approach all prove inconclusive, one must

ultimately turn to the Guidelines Risk-based Approach
 to Dam Safety; it would appear that Manitoba Hydro has
 neglected to do that.

Look, I know: Dam Safety can be a bit of 4 5 a beast; difficult to handle an outright scary. This 6 is, therefore, not a critique of the "working floor" at 7 Hydro; I know them to be stellar. The way Manitoba Hydro is organized and functions, it is the duty of 8 9 upper management to determine to what level of detail 10 and accuracy the evidence must be taken for it to "be 11 commensurate with the importance of the resulting dam 12 safety decisions", as per the Guidelines; i.e., for the evidence to be credible and defensible. 13

14 The successful resolution of the 15 spillway questions that Pointe involves many issues 16 beyond the small sample of engineering aspects touched 17 on here. There are the Guidelines themselves, full of 18 admonitions. Then there is all the other matter, 19 including: the destruction of the Falls; the impacts of 20 all those \$400 plus plus million worth of disturbing 21 activities in the middle of the Falls, in a Provincial 22 Park; the risk to life and limb by a huge construction 23 project in a difficult spot; the residual risk of the 24 planned replacement structures; the destruction of a 25 historic engineering gem and delight. For the dam here

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was engineered to work with nature not to conquer it. 1 That is how they were able to build and complete the 2 entire project, everything and all, for just a bit over 3 \$3 million - about \$60 million in today's money - a 4 5 hundred years ago. Now compare that to the \$400 plus 6 plus million decision to replace just the spillway! 7 Ratepayers and owners of Manitoba Hydro, maybe you will decide that you care about all this and 8 9 want to do something about it. If you should find that 10 you are getting curious and want to unravel the strange enigma this decision appears to be wrapped in; I 11 12 encourage you to take action. I have tried and failed, 13 but I have heard the public clamour can be ever so 14 effective. And maybe we shall get some help from our 15 common friends and fellow Manitobans, in the media. 16 17 Per Stokke P.Eng 18 19 (WRITTEN PRESENTATION CONCLUDED) 20 21 THE CHAIRPERSON: Thank you very much, 22 Mr. Stokke. You should know that in response to the 23 letter that you forwarded to us we have forwarded some 24 questions to Manitoba Hydro, written questions to them, 25 to get further un -- information so that we can deepen

our understanding of the issues that you have raised 1 with the various parties. And we're still awaiting a 2 response from Manitoba Hydro. 3 Perhaps you might want to comment on the 4 5 status of that request? 6 MS. PATTI RAMAGE: Yes. Thank you, Mr. Chair. Those responses, we should be able to have 7 those in by tomorrow. 8 9 THE CHAIRPERSON: And so we'll wait for 10 that response, and then we're going to consider that information and any other information that we might get 11 12 from Manitoba Hydro before we make any decisions about what we shall do with the information that's before us. 13 14 So thank you very much. You're obviously deeply 15 concerned about the issue and certainly have spent a 16 fair amount of time and -- on this issue. So on behalf 17 of the Board, thank you very much for your 18 presentation. 19 MR. PER STOKKE: Thank you for 20 listening. 21 MS. PATTI RAMAGE: Mr. Chairman, if I 22 may just interject. 23 Mr. Stokke, a number of times, 24 referenced Manitoba Hydro's report. And it is 25 something in -- in the normal course, Manitoba Hydro

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presenters -- presentations aren't evidence, and as 1 such, parties don't cross-examine presenters. But 2 something in our preparations or in speaking with Mr. 3 Peters, we indicated this was -- there -- Mr. Stokke 4 5 agreed that that would be a document that could be 6 disclosed. And he has spoken about it today, and I'm 7 just wondering, I don't know if the Board has copies or if that's something Manitoba Hydro can provide. 8 9 Now, I know it was provided to Mr. Peters, but it was referenced. We do have copies here. 10 11 Because I didn't see it in the distribution of 12 presentations. 13 MR. BOB PETERS: Thank you, Ms. Ramage. 14 And, Mr. Chairman, I might -- Mr. Stokke, you've 15 indicated, I believe, through to the Board that the 16 report from the Manitoba Hydro integrity officer was a 17 document that you were giving consent could be shared 18 with the Board and with the public. Is that ... 19 MR. PER STOKKE: Oh, absolutely. 20 MR. BOB PETERS: Yes. Okay. And, Mr. 21 -- Mr. Chairman, Ms. Ramage and I have had -- I think 22 they've been late-night emails on this, and she did provide me with a copy of the report in response to the 23 24 consent that the Board obtain from Mr. Stokke. My 25 recollection, Ms. Ramage, is there were some conditions

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on it being distributed. So I have not, Mr. Chairman,
 distributed it to the Board, but we do have it
 available.

I -- I actually thought it might be part
of the package of material that Manitoba Hydro may want
to file with the Board. We did ask a number of
questions, as the Chairman has indicated, Mr. Stokke.
And if the -- if the response to those is provided,
perhaps that's where the report should be included, if
that suits Ms. Ramage.

MS. PATTI RAMAGE: That's not a problem from our perspective. There wasn't a question that actually addressed the report, but we could file it along with those questions if that's the best way. Really, my concern was how we were going to get that in front of the Board today.

17 MR. BOB PETERS: I should indicate, Mr. 18 Chairman, that once we do get a copy of Manitoba 19 Hydro's materials, as a courtesy, of course, we'll 20 certainly provide a copy to Mr. Stokke as well so that he knows what the Board has received. Thank you. 21 22 MR. BYRON WILLIAMS: Mr. Chair, Byron 23 Williams for CAC (Manitoba) here at the back, in my 24 very short chair. 25 I'm assuming that that report from the

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integrity office will be shared with Intervenors as 1 2 well? 3 MR. BOB PETERS: Mr. Stokke, Mr. -- Mr. Williams has asked if it's your -- if you're consenting 4 to the report from Manitoba Hydro's integrity officer 5 6 to be shared with all parties to this hearing. MR. PER STOKKE: I -- as I understood 7 it, this -- it is an official document right now, and I 8 9 am perfectly happy with that, yes. Actually, I'm very 10 glad that it is. 11 MR. BOB PETERS: All right. Thank you, 12 sir. We just wanted to make sure that those protocols 13 were met, because there were some -- there were some 14 concerns about whether the doc -- whether you would 15 agree to the document going forward publically. So we 16 thank you for your -- for your consent, sir. 17 And I thank the Chairman. So that 18 information, when it for -- comes from Manitoba Hydro, 19 will be provided to -- to the parties as well. 20 THE CHAIRPERSON: Thank you very much, Mr. Stokke. 21 22 23 (WRITTEN PRESENTATION) 24 25 From: Carol Boitson

Sent: December 10, 2012 1 2 Subject: Rates 3 I disagree with Manitoba Hydro putting 4 5 up the rates by 4 percent every year. I think that the 6 big guys working there should have a pay-cut instead. 7 8 (PRESENTATION CONCLUDED) 9 (WRITTEN PRESENTATION) 10 11 From: Gary Luby Sent: December 11, 2012 12 13 Subject: Proposed Hydro Rates 14 I just awoke this a.m. and read an 15 article today in the Free Press regarding Hydro's 16 proposed rate increases for the next 18 years. I am 17 outraged that a public utility owned by the taxpayers 18 would even think of such an increase. I am a senior 19 citizen who just retired and I am on a fixed income. I 20 don't get increases in my pension cheque to cover these outrageous increases. 21 22 Manitoba Hydro has to start getting 23 their financial house in order. Building dames, and 24 the proposed hydro line down the east side of Lake 25 Winnipeg are luxuries that we cannot afford.

1 Should Manitoba Hydro want to build these projects, the costs should be incurred by the 2 customers in the United States and the other Provinces. 3 These projects are being built to supply power to 4 5 customers other than Manitoba ratepayers. Selling 6 cheap hydro to American customers is unacceptable. If building dams and hydro lines are cost prohibitive, 7 then they should not be built. 8 9 Manitoba Hydro needs to start running this business in an efficient manner. This should not 10 be a business where political hacks are appointed and 11 12 then have the same hacks propose hydro increases on the 13 public. I am not against some type of modest increase 14 every couple of years. But not to the extent that 15 Manitoba Hydro is proposing. 16 I have read in the paper the past number 17 of years about mismanagement at Hydro. This really 18 looks and appears to be the real problem at hand. 19 Hydro needs to understand if they cannot afford to 20 build these projects, then they should not. They also 21 should be running this Crown corporation as a real 22 business and if it means laying off and cutting back, 23 then they should do so. 24 Manitoba ratepayers do not deserve to 25 have these outrageous increases dumped on our backs.

If Manitoba Hydro will not run this outfit as a 1 business, then the time has come to privatize this 2 business. Maybe we all need to start buying candles 3 and investing in power generators. 4 5 6 Yours Gary Luby 7 8 9 (PRESENTATION CONCLUDED) 10 (WRITTEN PRESENTATION) 11 12 From: Doug Biggs 13 Sent: December 11, 2012 14 Subject: Hydro Increase 15 16 Rather than the customers paying more at the whim of Hydro's revenue shortfalls, how about that 17 18 corporation tightening its belts and/or, do more with 19 what they already have, like the rest of us have to do. 20 21 (PRESENTATION CONCLUDED) 22 (WRITTEN PRESENTATION) 23 24 From: Brandy Fleury 25 Sent: December 03, 2012

1 I am writing to express my concern over a news story aired on Global News on Monday, December 2 3rd that stated Manitoba Hydro was applying for a rate 3 increase. The reason given was to upgrade lines in 4 5 southern Manitoba as well as into the USA. Ι 6 understand that our own lines need to be maintained but 7 Manitoba Hydro sells our power (at a low premium price) to the US and the maintenance to those lines 8 9 should be paid out of the revenue generated to supply 10 those states with their power. I do not wish to be paying to maintain something that isn't even in my own 11 12 country. 13 To be frank, if Manitoba Hydro wants to 14 upgrade those transmission lines, they can pay for it. 15 I hope the Public Utilities Board recognizes that this 16 is an outrageous request. For Hydro to ask the 17 citizens of Manitoba to pay to supply those in the US 18 is just asinine. 19 Thank you for your time, 20 Brandy Fleury 21 22 (PRESENTATION CONCLUDED) 23 (WRITTEN PRESENTATION) 24 25 From: Jennifer Pacaud

1 Sent: December 03, 2012

2 I am writing to express my concern over a news story aired on Global News on Monday, December 3 3rd that stated Manitoba Hydro was applying for a rate 4 5 increase. The reason given was to upgrade lines in southern Manitoba as well as into the USA. 6 Ι understand that our own lines need to be maintained but 7 Manitoba Hydro sells our power (at a low premium 8 9 price) to the US and the maintenance to those lines 10 should be paid out of the revenue generated to supply 11 those states with their power. I do not wish to be 12 paying to maintain something that isn't even in my own 13 country. 14 To be frank, if Manitoba Hydro wants to 15 upgrade those transmission lines, they can pay for it. 16 I hope the Public Utilities Board recognizes that this 17 is an outrageous request. For Hydro to ask the 18 citizens of Manitoba to pay to supply those in the US 19 is just asinine. 20 Thank you for your time, 21 Jennifer 22 23 (PRESENTATION CONCLUDED) 24 (WRITTEN PRESENTATION) 25

Date: December 4, 2012 1 Dear Sir: 2 Re: Manitoba Hydro rate increases 3 September 1, 2012, Manitoba Hydro 4 5 requested and received a 2.5 percent increase and wants 6 another 3.5 percent increase on April 1, 2013 which I believe should be refused. 7 8 The taxpayers of Manitoba, in essence, 9 own Manitoba Hydro. My request is that Hydro rates be rolled back rather than increased for the following 10 11 reasons: 12 1. Manitoba Hydro incurred major costs 13 in purchasing Winnipeg Hydro and should not have done 14 so. 15 2. Manitoba Hydro should not have built 16 their expensive office building on Portage Avenue. 17 3. The Provincial Government of 18 Manitoba and Manitoba Hydro spent and is still spending 19 the taxpayers' money on advertising, i.e., Bipole III 20 going on the West side of Lake Manitoba, et cetera. 21 Why do they need to advertise? They are a monopoly -22 no competition. 23 4. The NDP under Doer and Sellinger 24 have taken \$275 million from Manitoba Hydro to cover 25 Provincial shortfalls.

589 1 5. If Hydro is short of money why would they offer \$40 plus pickup to retire old refrigerators? 2 This means that the Hydro consumers/taxpayers are 3 paying for this. 4 5 6. Another costly scheme by Hydro is 6 the latest offer to pay for Retrofitting or Upgrading and actual costs are to be paid back via the Hydro bill 7 over an extended period of time. 8 9 7. Since Hydro are having problems 10 selling all the extra hydro power, why are they building or wanting to build another series of dams? 11 12 8. Hydro should not be supporting 13 and/or sponsoring various organizations or 14 competitions, tournaments, entertainments, et cetera. 15 Their function is to serve Manitoba and provide their consumers with hydro power. 16 17 9. Customers are subsidizing Hydro 18 employees' parking costs - employees and their bosses 19 should be responsible for their own parking costs. 20 10. In 1975 Hydro and the Provincial 21 Government said that in the future Hydro would be 22 cheaper than natural gas - that didn't happen - so for 23 those that were stupid enough to believe and went 24 totally electric, we got screwed! 25 11. It is the belief of many that the

590 reasons for the recent floods in Manitoba were caused 1 by Manitoba Hydro and the Provincial Government by 2 keeping the water levels too high. 3 12. Hydro should quit the Power Smart 4 5 Program and quit giving companies and corporations 6 breaks that the ordinary homeowners end up paying for. Manitoba Hydro does not appear to be 7 operating very efficiently. 8 9 Yours truly Douglas Macduff 10 11 12 (PRESENTATION CONCLUDED) 13 (WRITTEN PRESENTATION) 14 15 From: Allison Reid 16 Sent: December 11, 2012 Subject: Manitoba Hydro's New Cash Grab 17 18 I'm writing to Public Utilities Board as 19 a concerned citizen over the new rate hikes proposed by 20 Manitoba Hydro. I cannot fathom why I am on the hook 21 for an 8 percent increase by Manitoba Hydro in a single This is madness. I don't see 8 percent hike in 22 year. 23 minimum wage. And it seems everything in terms of 24 dollar figure is going up (tax, insurance, gas, food 25 prices, et cetera) except wages.

591 Manitoba Hydro should cut back, like the 1 2 rest of us would do it such a situation, or slash its executive pays and make due with what it has. I urge 3 Public Utilities Board to not allow this cash grab by 4 5 Manitoba Hydro. This simply isn't the solution. I am 6 not Manitoba Hydro's chequing account which they can 7 raid as and when needed. 8 Sincerely Allison Reid 9 10 11 (PRESENTATION CONCLUDED) 12 13 14 THE CHAIRPERSON: Back to you, Ms. 15 Ramage. 16 MS. PATTI RAMAGE: Thank you. 17 18 (BRIEF PAUSE) 19 20 THE CHAIRPERSON: Let's take two (2), 21 please. 22 23 --- Upon recessing at 2:03 p.m. 24 --- Upon resuming at 2:13 p.m. 25

592 1 THE CHAIRPERSON: Once all the lawyers are sitting down, we can start. 2 3 4 (BRIEF PAUSE) 5 6 THE CHAIRPERSON: I believe everyone -all the lawyers are sitting down. We -- back to you, 7 Ms. Ramage. 8 9 MS. PATTI RAMAGE: Yes, thank you, Mr. 10 Chairman. 11 12 MANITOBA HYDRO PANEL 2 - REVENUE REQUIREMENT RESUMED: 13 CONTINUED EXAMINATION-IN-CHIEF BY MS. PATTI RAMAGE: 14 MS. PATTI RAMAGE: When we left off 15 this morning, Mr. Cormie, I think you were having a 16 discussion with the panel regarding the optimization of 17 Manitoba Hydro's participation in the export market. 18 And before I move on to my next 19 question, I'm just wondering if you were able to finish 20 off on that topic? 21 MR. DAVID CORMIE: Thank you, Ms. 22 I -- I wanted to -- to speak a little bit Ramage. 23 about the other activities that Manitoba Hydro does 24 that are beyond those that under my direct 25 responsibility as -- as being the -- in the power

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1 sales.
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2 The -- the entire operation of the bulk power system, including the dispatch of the generators 3 and the scheduling of maintenance outages, are all 4 5 timed in order to make sure that the capacity of the 6 power system is available at the time when the power 7 prices are -- are most advantage to Manitoba Hydro. 8 And one of the fundamental changes that has occurred in the way we -- we need to operate and 9 10 maintain the power system is -- is, for example, example we do most of our outage maintenance at night. 11 12 And that requires our staff, when they're doing outage 13 maintenance, to -- to work in off-peak hours so that we 14 can get the generators back into service during the on-15 peak hours, when the power prices are high. 16 And so -- and generally we find there's 17 a significant value proposition there. For every 18 dollar that we spend in overtime in order to work those 19 night shifts we get back, you know, about ten dollars (\$10) in -- in value. 20 And so we -- we've changed the way we 21 22 plan and operate the power system, recognizing there's 23 a time value of energy and there are -- are times when -- when you can do the maintenance. It may cost more 24 to do the maintenance, but you're -- the benefits far 25

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1 out -- off -- offset those.

2 We -- in our maintenance planning process we require every generating station to show 3 significant payback on the scheduling of overtime at --4 5 at least three (3) to one (1) so that -- so that if we 6 spend a dollar, we -- we need to get back at least three dollars (\$3). And that's because it creates a 7 significant burden on the staff to work at night, when 8 9 normally their work hours would be during the day. 10 And we want to be able to -- we want to have the certainty that, after the fact, that -- that 11 12 we've got enough justification to impo -- to justify 13 the expenditure of the overtime, but also the -- you 14 know, the -- the benefit has to be significant enough 15 for the Corporation so that -- that we're imposing, you 16 know, unusual working conditions on the -- on the staff 17 at the generating stations. 18 And that -- that scheduling of 19 maintenance not only applies to the generators, but it 20 also applies to the scheduling of outages on the 21 transmission lines, especially those lines that go to -22 - to the neighbouring market so that if -- we have the 23 ability to have an outage, the outage will be schedule 24 in the -- in the low-value months rather than in the 25 high-value months.

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And -- but there all -- there always is 1 a cost associated with an outage, the question is: 2 Where do you -- where do you -- when do you time that? 3 And so, you know, the -- the whole operation of the pow 4 5 -- power system has been attuned to the -- to the fact 6 that our success as a company in the export market means that everybody needs to be pulling their --7 pulling their weight. 8

9 And that even comes down to having the 10 MISO prices posted in every generating station, in the 11 control -- in the control room of the generating 12 station, so that the operators can see the value in 13 real time of the power that they're producing. And 14 when they see that power prices are really high, the --15 those aren't times when they -- they should be taking 16 discretionary outages. They should be waiting for more opportune times, because there are times when 17 18 generators are -- you know, the have the discretion of 19 taking the outage or not. 20 And -- and so, you know, all the 21 operating staff understand the importance of -- of the 22 export market and -- and the importance of every 23 generator unit in making Manitoba Hydro successful. 24 So I -- I just wanted to give a little

25 bit of background. It's not just about the power

traders; it's everybody who's involved in the 1 production planning process, from those people who 2 measure the water levels to those people who manage the 3 water resources to those people who do the scheduling 4 of the maintenance, and the actual workers who are at 5 6 the end of the wrenches, you know, fixing the 7 equipment. 8 Everybody has a good understanding of 9 the importance of the export market to Manitoba Hydro 10 and -- and we're constantly reenforcing that. 11 MS. PATTI RAMAGE: Now moving to the 12 next topic. Would you please update the Board on 13 recent natural gas and electricity prices at the export 14 markets? 15 MR. DAVID CORMIE: Yes. In the last 16 year natural gas prices have fluctuated quite 17 dramatically, and those prices have a significant 18 effect on the price that Manitoba Hydro receives for 19 its electricity exports, especially in the on-peak 20 hours, when natural gas tends to be the marginal supply 21 source of generation who sets the market clearing 22 price. 23 The average spot price at Henry Hub this November compared to last November is approximately the 24 25 same, around three dollars and forty cents (\$3.40) a

1 million BTUs. However within this time frame the price
2 had dropped almost 50 percent, reaching a low of -- it
3 was a dollar eighty (\$1.80) last April. And since that
4 time it has rebounded, almost doubling to its current
5 price.

6 The elec -- for electricity, the MISO, 7 day ahead, on peak price at Manitoba Hydro's commercial 8 pricing node has averaged for November twenty-eight 9 dollars and fifty cents (\$28.50) a megawatt hour. And 10 that compared to twenty-seven dollars and sixty cents 11 (\$27.60) a year ago in November 2011. So it's up 12 slightly about -- about 3 percent, on peak.

13 THE CHAIRPERSON: The -- when you talk 14 of the pricing node, is it a notional pricing node or 15 is it a --

MR. DAVID CORMIE: It is a notional pricing node. It's -- you know, there are -- there are four (4) transmission lines across the border but there is -- it's deemed to be a single point. And MISO calculates that -- the price at that -- at that -- at the border. And the off-peak prices last November

23 were -- or this November were nineteen dollars and 24 fifteen cents (\$19.15) a megawatt hour compared to 25 fifteen dollars and fifty cents (\$15.50) a megawatt

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hour a year ago. So they're up 23 percent year over
 year.

3 And when we inclu -- include short-term 4 contract prices, these aren't the long-term prices, but 5 these are prices that we entered into months or a season in advance. Average prices in -- in November 6 were thirty-one dollars (\$31) a megawatt hour, compared 7 to twenty-seven dollars (\$27) a year ago. So up about 8 9 15 percent year over year. And a lot of that has -- as a result of some transactions that we are making with 10 11 Saskatchewan to the west. So that's -- that's a 12 favourable thing. 13 In spite of the volatility of the off-14 peak prices, our dependable long-term sale prices have 15 been relatively unchanged year over year: fifty-two 16 dollars twenty cents (\$52.20) a megawatt hour this 17 November, fifty-two dollars and thirty-nine cents 18 (\$52.39) last year. So the stable pricing in the --19 for the long-term contracts, quite volatile prices in -20 - for the -- for the opportunity sales. 21 22 CONTINUED BY MS. PATTI RAMAGE: 23 MS. PATTI RAMAGE: Mr. Cormie, you've 24 spoken about dependable and opportunity sales. Why 25 does Manitoba Hydro have these two (2) type of sales?

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1 MR. DAVID CORMIE: Manitoba Hydro maintains a mixed portfolio of long-term fixed price 2 export sales, and we have spot market sales that --3 4 that -- where the price floats with the -- with the 5 market. 6 And the main reason we have for locking into fixed price sales is to maximize the value of --7 of Manitoba Hydro's surplus because long-term sales not 8 9 only bring the value of the energy but they reflect the 10 value of capacity, environmental attributes, price stability, and predictability. 11 12 And so customers value those things, and 13 they're prepared to pay for them. And they're prepared 14 to pay up to the value of their -- the alternative. So 15 if they can avoid building a generating station that 16 would cost more, they're comparing that all-in cost to 17 -- to Manitoba Hydro's price. 18 And -- and generally these long-term 19 price contracts reflect the long-term value, and they don't necessarily reflect the opportunity sales. 20 So if 21 we have surplus that we can commit at -- at these long-22 term prices, we do that because we can -- we can 23 extract that significant val -- additional value from -24 - from the market. 25 And there have been times in recent

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memory when spot prices have exceeded the long-term 1 power prices. You know, when natural gas prices around 2 2004, 2005, and 2006 were -- were rising, spot prices 3 for several years there exceeded the value of the long-4 5 term contracts. But since 2009 spot market prices are 6 significantly lower. I think for the month of November we're 7 -- we're 83 percent more -- we're getting 83 percent 8 9 more from our long-term sales than we are getting for 10 the spot market energy. 11 MS. PATTI RAMAGE: Mr. Cormie, there 12 was a fire at Jenpeg Generating Station recently. 13 Would you update the Board on that event? 14 Yes. Unfortunately, MR. DAVID CORMIE: 15 on Sunday, November the 4th there was an electrical 16 fault at Jenpeg at Unit number 1, and the Jenpeg 17 Generating Station was completely shut down. 18 Fortunately, no one was injured. There 19 was extensive damage to the unit and its ancillary 20 equipment, and the final cost of repair is not yet 21 known. We have initial estimates that the damage is in 22 the \$10 million range and that it will take a couple of 23 years to repair all the damage. 24 An investigation is underway, and 25 Manitoba Hydro fortunately does have insurance and it's

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working with its insurance provider to -- to see the 1 extent of coverage. That coverage is subject to 2 Hydro's deductible and to the exclusions in the 3 insurance contracts. 4 5 As of last Friday only one (1) of the six (6) units at the station had returned to service. 6 7 Three (3) more units are expected to return to service over the next few months. One (1) unit was already out 8 9 of service due to an overhaul. We're estimating the loss generation had a value of about fifty thousand 10 11 dollars (\$50,000) a day. 12 The station has a capacity of 130 megawatts and produces about 900,000 megawatt hours a 13 14 year. In an average year, it only represents about 3 15 percent of our total capacity. And the costs of this 16 damage have not been included in the -- in IFF12. 17 THE CHAIRPERSON: Is it your 18 expectation that the insurance would cover most of it 19 if it's -- if it's an eligible loss? 20 MR. DAVID CORMIE: I believe our 21 deductible is 5 million, so we -- I -- I don't think 22 And we'll -- we'll be exposed to that 5 million so. 23 for sure. Plus all the -- the value of the energy 24 that's not being produced. 25 THE CHAIRPERSON: So I quess the --

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602 that's the elephant in the room, is the energy that we 1 can't sell because the -- the station is down? 2 3 MR. DAVID CORMIE: Yes. That's the fifty thousand dollars (\$50,000) a day. And we're 4 5 trying to bring those units back into service as soon 6 as we can. It will take several months to have -- have the other three (3) units back in service. 7 8 THE CHAIRPERSON: So the insurance would cover both the -- the loss of equipment and also 9 the loss of revenue? 10 11 MR. DAVID CORMIE: No. The insurance 12 doesn't cover the lost revenues. 13 14 (BRIEF PAUSE) 15 THE CHAIRPERSON: I'm not sure about 16 the timing of this, but since we are talking about 17 18 export markets or you have talked about export markets 19 and fixed versus the opportunity sales and so on. Ι 20 quess one (1) element of export contracts that we don't 21 read a great deal about is the export contracts -- I'm 22 sorry, the export markets involving the neighbouring 23 provinces. 24 And I guess, you know, there was a 25 potential contract with Ontario back in the Conawapa

1 days, early Conawapa days. And, I guess, the question
2 I have for you is, given the spread in prices between
3 the neighbouring provinces, Saskatchewan and Ontario,
4 it seems to me that would be a prime opportunity for
5 Manitoba Hydro. And I'm just wondering, is it a prime
6 opportunity for Manitoba Hydro?

7 MR. DAVID CORMIE: There is opportunity more to the west in Saskatchewan than east in Ontario. 8 9 However -- and -- and we are actively working with Saskatchewan on some transactions. We held extensive 10 discussions with Ontario about 2005 with regard to a 11 12 2,000 megawatt sale. Ultimately, the province decided 13 that they would develop their own internal resources 14 rather than purchase from Manitoba Hydro. And at that 15 point, Manitoba Hydro took the majority of its surplus 16 to the United States market. And -- and that led to the sale to Minnesota power and the discussions that 17 18 we're having with Wisconsin Public Service.

One (1) of the issues is that -- that we face with both to the east and the west is that there's lack of a load diversity and lack of water supply diversity. So when Manitoba's in drought, Saskatchewan's in drought, so there's -- or northwest Ontario's in drought because we all share the same water. So when we have lots of water to sell, both --

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604 both those neighbouring markets have lots of water, and 1 they don't need our surplus, whereas in the United 2 States, there's always an opportunity for the United 3 States to absorb the surplus power that Manitoba has. 4 5 And the second factor is that both these areas are resource rich. And so we would -- it's like 6 7 selling coal to, you know, Galasco (phonetic) or wherever that place is. But, you know, where -- you 8 9 need to sell to maximize the value of the resource into a market that's short in resources. And -- and the 10 11 United States is -- has that shortage. We don't see 12 that lack of local resources in Saskatchewan or 13 northwest Ontario. So they're not -- they're really 14 not preferred markets. 15 We would like to get to southern 16 Ontario, but that would involve a several-billiondollar transmission line from northern Manitoba to 17 18 Sudbury. That was the -- that was the focus of the 19 discussions we had in 2005. And ultimately, they've chosen not to build transmission to serve -- to have 20

21 Manitoba Hydro serve their -- load -- their -- they'll 22 be developing their own transmission network to serve 23 their own renewable resources. They don't -- they 24 don't see Manitoba as being a supplier to them. 25 MR. RAYMOND LAFOND: In reference to

605 export prices, several minutes ago, you indicated to 1 us, for instance, that the -- the prices of natural gas 2 in November of 2011 versus November of 2012, and 3 somewheres in -- in the middle of this it was nearly 4 5 down to half. 6 I want to have some understanding of the relationship of electricity spot prices versus the 7 price of natural gas, like what kind of relationship is 8 9 there to that, or correlation? 10 11 (BRIEF PAUSE) 12 13 MR. DAVID CORMIE: The -- the market 14 price for electricity is in the -- in the MISO market 15 is tied to the most expensive generator that's running 16 at that moment in time. And -- and in the on-peak 17 hours when there's the peak demand for power generally 18 the -- the natural gas units are at -- are at -- are 19 the marginal supply of -- of power. 20 And so the co -- the cost of -- of the 21 fuel, which is the natural gas, is -- is a significant 22 part of that -- of that production cost. In addition 23 to that you have the transportation costs. For 24 example, the price of gas at -- in -- delivered to 25 Winnipeg is fifty (50) cents -- generally fifty (50)

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back to us.

cents more per decatherm than the straight cost of the 1 You have to take the cost of the gas plus the --2 qas. the delivered cost of gas. And that becomes the cost 3 of the energy. 4 5 And then in addition there's the cost of 6 starting and stopping the unit, which can be 7 significant. So in the off-peak hours natural gas is generally is not the marginal fuel supply, it's 8 9 generally coal, or on -- on real windy nights it could 10 be wind setting the price of -- of electricity. 11 So it really depends on the -- the 12 magnitude of the load and which generator is -- is

And if there's not enough transmission then the -- the price would be set more locally to Manitoba Hydro than in Pennsylvania or in -- in Illinois. So there has to be adequate transmission for -- for that price from the marginal generator to work its way back to Manitoba Hydro.

transmission capacity between the marginal generator

and Manitoba Hydro so that price signal works its way

serving the load and whether there's enough

23 MR. RAYMOND LAFOND: I understand that. 24 However, could you give me, for instance, over the last 25 year between November '11 and November '12, the dates

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607 you were looking at, for instance the -- the spot price 1 at peak time and off peak for electrical -- for 2 electricity versus the price of natural gas. For 3 instance, on the 1st, the 10th, and 20th of the month 4 5 of every month, to see if there is a -- I'd like to 6 understand -- I'd like to see the correlation between 7 one (1) and the other. 8 9 (BRIEF PAUSE) 10 11 MR. DAVID CORMIE: We can prepare that, 12 Mr. Lafond, yeah. 13 MR. RAYMOND LAFOND: Thank you. 14 MS. PATTI RAMAGE: Yeah, that will be 15 an undertaking from Manitoba Hydro. 16 17 (BRIEF PAUSE) 18 19 MR. DAVID CORMIE: Yes, the undertaking 20 is to compare the -- the price of natural gas to the --21 the peak and the off-peak price of electricity for each 22 day for the last year. 23 MR. RAYMOND LAFOND: I'm sorry, not for 24 each day. I just want, like for instance, the 1st, 25 10th, and 20th of the month, like three (3) days per

608 month. I mean, I don't need three hundred and sixty-1 five (365) days just to get --2 3 MR. DAVID CORMIE: It's actually easier to do them all. 4 5 MR. RAYMOND LAFOND: Thank you. 6 7 --- UNDERTAKING NO. 2: Manitoba Hydro to compare 8 the price of natural gas to 9 the peak and the off-peak 10 price of electricity for 11 each day for the last year 12 13 MR. DAVID CORMIE: That's why we have 14 computers. If you make it complicated, then we have to 15 go there and -- and do it selectively and -- better to do them all. 16 17 MR. RAYMOND LAFOND: No problem. 18 MR. LARRY SOLDIER: What -- what is the 19 extent of your American market that you can sell power 20 to? I know on the MISO diagram I think the southern 21 region is Oklahoma. Can you transmit power to Oklahoma or can you make sales in...? 22 23 MR. DAVID CORMIE: The vast majority of 24 Manitoba Hydro's exports are actually consumed in 25 Minnesota. Theoretically you can construct a contract

609 path going all the way to Florida and -- but, you know, 1 so contractually the -- the power is paid for and 2 priced in Florida, but physically the electrons 3 probably sink in -- in Minnesota. 4 5 And -- and so, you know, there's this 6 issue of where the power flows, but who actually pays the bill, those are separate. We have entered into 7 transactions that go almost all across the eastern 8 9 interconnection. The United States and Canada are divided in two (2). There's the eastern 10 11 innerconnection and there's the western 12 innerconnection; Saskatchewan and Manitoba and Ontario, 13 everything to the east is part of the eastern 14 interconnection, and Alberta, British Columbia, and 15 most of the western states are part of the western 16 interconnection. And -- and electrically and 17 fundamentally they're separate power grids. 18 So anywhere in the eastern 19 interconnection we can -- we can almost transact; but 20 where the power flows, its generally used locally. 21 MR. LARRY SOLDIER: Now you'd indicated 22 that you couldn't transmit power right now, and before 23 you could. 24 Is the reason because they don't want to 25 let you use the transmission line, or is it the

610 capacity of the transmission is they can't add any more 1 2 power to the line? 3 MR. DAVID CORMIE: Transmission lines 4 have a physical capability, and then there's the 5 contractual right to use that capacity. And under -and under those rights, at times there are limits to --6 7 regulatory limits to who can use that transmission. And so at -- in 2005 one of our US 8 9 companies interpreted their rights to include using transmission that had been reserved for their native 10 11 load for use for merchant transactions. And since that 12 time, they've -- they've changed their position, and --

13 and Manitoba Hydro is not allowed to use tho -- that 14 what we call network service for the -- for merchant 15 transactions.

16 And network service is firm 17 transmission, and it provides us guaranteed access into 18 the market. If we're not allowed to use that firm 19 transmission, we have to use non-firm transmission. 20 And our transactions then get -- cause congestion and 21 they're subject to curtailment. So if we're not able 22 to use the firm transmission, we have less firm access, 23 and we're subject to the ability of the -- of the grid 24 to absorb our electrons. It's -- it's an issue of -- of rules 25

rather than the physics of the -- of flow when it comes 1 down to the use of transmission. 2 3 MR. LARRY SOLDIER: Would there be any time that Manitoba Hydro could construct its own 4 5 transmission line in the United States, and what 6 permissions are required in - - in order to serve some 7 -- some of your customers further south? 8 MR. DAVID CORMIE: I think theoretically Manitoba Hydro could propose a 9 10 transmission project in another jurisdiction, and it could be in Saskatchewan, Ontario, or any of the states 11 12 -- United States. But there is a regulatory process. And -- and like -- like it is in 13 14 Manitoba, building transmission is very controversial. 15 And not only do you have to have a proponent, but you 16 have to have a -- you have to convince the -- the 17 regulator to condemn lands for the purpose of that 18 transmission. And -- and politically, we believe it 19 would be almost impossible for Manitoba Hydro to come 20 and start to acquire lands and for the -- to acquire 21 right-of-way in a -- in an area that it doesn't have 22 any customers. In effect, we're building through a 23 state trying to reach another state, and I would judge 24 it almost to be impossible to convince one jurisdiction 25 to allow a flowthrough transmission line.

1 And that's the -- that's the reason why we have a partner in Minnesota, with Minnesota Power, 2 who is prepared to build transmission not only for 3 their own use, but to help Manitoba Hydro reach markets 4 5 in Wisconsin. And that's the value of having Minnesota 6 Power at the table right now. We can build a bigger line than we would normally be able to build because 7 they're prepared to advocate and -- on our -- on our 8 9 behalf to condemn lands for the purposes of this line. 10 Yeah, it's -- I -- building transmission 11 is difficult in Canada. It's -- it's extre -- very --12 extremely difficult in the United States, even more difficult than here. 13 14 MR. RAYMOND LAFOND: As a matter of 15 curiosity, you referred to the eastern interconnection, 16 or grid, versus the western grid. Generally speaking, 17 are the spot prices peak and off-peak fairly similar 18 between one grid and the other, or are they totally 19 different? 20 If the fuel -- if MR. DAVID CORMIE: 21 the fuel is the same for the marginal generation, they 22 should be -- should be the same. But they're -- they -23 - they -- there's -- there's no main physical connection. So you can have prices in -- you had 24 25 prices in 1998 in California of three thousand dollars

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(\$3,000), where the price in -- in -- in -- in 1 Minneapolis was -- was a hundred dollars (\$100). If 2 there was a -- if there was a connected transmission 3 line of sufficient size across the interconnection 4 between the two (2) regions, you wouldn't get those 5 price difference -- those basis -- those basis spreads. 6 7 So there -- they should reflect the cost of natural gas, but they don't necessarily, because it 8 9 -- it could be that, you know, there's a shortage of generation, and it -- it's causing the price spike, 10 rather than the fundamental fuel price. 11 12 MR. RAYMOND LAFOND: I -- I understand 13 that. I'm -- and I know, having read about this, like, of the California prices. But generally speaking, 14 15 like, at this -- as of this time, like, not any particular gay -- day, but, like, are they relatively 16 17 similar on the average over a period of a year? 18 Or are they very different, like, more -19 - like, double or something to that effect? 20 MR. DAVID CORMIE: I don't know the 21 answer to that. I --22 MR. RAYMOND LAFOND: That's fine. 23 MR. DAVID CORMIE: -- know the prices -- the prices in -- in the MISO go up and down, you 24 25 If prices are high in Minneapolis, they're know?

generally high in Chicago. But prices go up and down 1 in California, and they are not related to what's 2 happening in -- in -- in the East. 3 4 THE CHAIRPERSON: My question's in 5 relation to St. Joseph and St. Leon, the wind farms 6 there. And I guess I know there's a pre-established form of setting the prices that -- that you -- for the 7 power that you get from them. 8 9 Do you have to take all of the power 10 that they generate? 11 MR. DAVID CORMIE: Yes, we do. It's a 12 take or -- take-or-pay contracts. THE CHAIRPERSON: So -- so even though 13 14 that the prices may be cheaper in the US for wind -wind energy, you still -- you're still committed to the 15 -- to the contractual arrangements you have from those 16 local wind farms? 17 18 MR. DAVID CORMIE: Yes. And -- and 19 it's like the cost that we incur for Wuskwatim. It's 20 an all-in cost, and it's -- it's -- it's -- you 21 calculate the price that the -- the contractor ha --22 or, the -- our -- our supplier has contracted the --23 has calculated the cost of the wind farm to construct. 24 He's determined what his taxes are and his -- his 25 depreciation and his interest, and he's rolled that

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back into a price. And we pay that price. 1 2 So we're not paying for anything that they're not delivering, but it's an all-in price, 3 whereas spot market electricity is just the cost of --4 5 of the incremental fuel needed to provide that. It's 6 not an all-in cost. We're not recovering the -- the supplier of spot market energy in the market place. 7 He's not recovering any fixed costs. He's just 8 9 recovering his marginal operational costs. 10 So it's -- it's -- it's not really a 11 fair comparison to compare, you know, the cost of the 12 output of a facility that we've contracted for to the 13 cost of spot market electricity. There -- it's an 14 apples and oranges comparison. 15 THE CHAIRPERSON: Now, the addition of the ener -- energy region into the MISO footprint will 16 have a number of impacts. And I quess the question I 17 18 have is: 19 Do you expect that that would have an 20 out -- put -- put upper -- put pressure on prices in 21 the MISO region? I -- I believe that 22 MR. DAVID CORMIE: 23 to be the case. I think that's a favourable thing for Manitoba Hydro, especially if there are stronger 24 25 interconnections built between the existing MISO

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footprint and energy in order to allow more trade 1 across those seams. We will then more often see the --2 the price set in -- in -- acro -- in a bigger footprint 3 than in the footprint that we're seeing now. 4 So I 5 think it is a good thing for -- for Manitoba Hydro. THE CHAIRPERSON: 6 Now, I have some 7 questions regarding reliability, and I was sort of wondering what the -- whether it's the appropriate 8 panel to address those questions or do -- do you --9 10 MR. DAVID CORMIE: Yes, we will take 11 those. We may not be able to answer them here, but 12 we'll undertake to do so. 13 THE CHAIRPERSON: Well, referring back 14 to some of the testimony we heard this morning about, 15 you know, the concerns around the aging infrastructure 16 and the -- the -- the consequent issues around 17 reliability, and I recall reading some data relating to 18 the benchmarking that you're doing with respect to 19 liability and particularly the outages and so on that 20 you're experiencing in your network. 21 And, I guess, could you comment about the general direction of -- of those benchmarks and 22 23 what's driving the fact that we're seeing results that are beyond the sort of targets you've set for 24 25 yourselves?

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1 MR. VINCE WARDEN: Mr. Chairman, we -we do set targets for ourselves, in terms of outage 2 frequency, outage duration. And what we're seeing more 3 recently, as I mentioned very briefly in my opening 4 5 comments, is that we're seeing degradation of the -- of 6 the service that's being provided such that we're having to revise our targets upwards, because we know 7 we're not going to be able to meet those targets. 8 9 So the -- this last -- actually, we --10 we review this annually as part of our strategic planning process. And because we were not meeting 11 12 targets, we made a decision to increase -- increase the 13 targets. 14 We're still -- we're still favourable, 15 compared to other jurisdictions in Canada. But -- but, 16 whereas that -- that was -- there was more of a margin 17 in the past, that -- that gap is definitely narrowing 18 So the people that work with this are attributing now. 19 that to the condition of the infrastructure. 20 THE CHAIRPERSON: Are there areas that 21 are of -- of more concern than others? I mean, are we, 22 for example, seeing more outages in particular areas of 23 the city or particular regions of the province? 24 MR. VINCE WARDEN: We are, for sure. 25 The City of Winnipeg is -- is an area that's most

618 affected for a number of different reasons: the age of 1 the infrastructure, along with the load growth that 2 we're experiencing in different parts of the city. 3 4 We do have a expert on this that is sort 5 of in the wings that can speak to this issue which --6 yeah, depending on the -- on the depth of the questions, we can bring this person in to speak to this 7 more capably than -- than the people on the panel can. 8 9 If that's the desire of the Board, we can certainly -we can certainly bring that person forward. 10 11 THE CHAIRPERSON: Well, given that this 12 is said to be one of the drivers for the near -- nearby 13 rate increases, we should probably have somebody come in and talk to us about that, please. 14 15 MR. VINCE WARDEN: We will make those 16 arrangements, yes. 17 MR. DAVID CORMIE: Now, Mr. Chairman, 18 an extreme example of aging infrastructure is the Point 19 du Bois generating station where nine (9) of the 20 sixteen (16) units are such down right now because of -21 - of their age and condition. 22 And so, if you leave it too long, eventually you would lose almost the entire capability 23 24 of the station then. And we hope to have some of those 25 units back in the next while. But that's an extreme

619 example of -- of leaving your maintenance way too long. 1 2 MR. RAYMOND LAFOND: On that particular point, what kind of analysis is done as to whether or 3 not it should be abandoned or repaired? If you look a 4 the cost of generating the electricity from one site 5 6 versus the new site -- because Wuskwatim just got online, it's on -- it's not fully used; so therefore 7 may be some infrastructure that needs to be replaced is 8 9 better off not being replaced and -- and shut down. 10 I mean what kind of analysis do we do in 11 that regards? 12 MR. DAVID CORMIE: With regard to the 13 units at Pointe du Bois there is a relatively quick It might just be three (3) years for -- to 14 payback. 15 get those units back into service, but those won't be -16 - those won't be long term. That will not -- not 17 result in a unit that will last another thirty-five 18 (35) years. That -- that will just get it probably 19 going another ten (10) years. 20 So, you know, the - the question is -for that station is, you know: Do we refurbish the 21 22 entire powerhouse and that's our ultimate plan and we think we can keep it going for -- for another fifteen 23 (15) or twenty (20) years? And ultimate -- but 24 25 ultimately we believe that that powerhouse will have to

be -- have to be replaced. 1 2 The question at that time will be is: What are the -- what are the cost of the alternative? 3 And does refurbishing Pointe du Bois and -- and to get 4 5 another hundred years out of it, is that compare -- is that cost competitive to a new -- a new supply source? 6 7 We will have already invested hundreds of millions of dollars in the infrastructure in the 8 9 spillways and the dams, so it will just be the cost of 10 getting the -- of replacing the powerhouse at that 11 time. But we think we can -- we can defer that 12 decision for -- for a good while now. We -- we think 13 we can -- it makes sense to get those out-of-service 14 units back into service and -- and keep them going 15 until that time. 16 MR. RAYMOND LAFOND: Because if I'm hearing right, I mean, you could at a point in time 17 18 decide not to proceed with the station or the 19 powerhouse and -- but you'd still have to do -- to fix 20 a spillway in the dam regardless? 21 MR. DAVID CORMIE: Yes. We believe we 22 have an ongoing obligation to maintain the water regime 23 at that location. So abandoning the site and walking 24 away is not an option.

25 MR. RAYMOND LAFOND: Thank you.

621 1 MS. PATTI RAMAGE: Mr. Chairman, it --Mr. Hall, who is the witness Mr. Warden just referred 2 to, is now present. I -- I was going to suggest 3 perhaps if we could have him sworn, I would just have 4 5 him very quickly introduce himself to you, and then you 6 could direct the questions you had with respect to 7 aging infrastructure to Mr. Hall. 8 9 JAMES HALL, Sworn 10 11 CONTINUED BY MS. PATTI RAMAGE: 12 MS. PATTI RAMAGE: Mr. Hall, this would 13 be your first time testifying before the Public 14 Utilities Board? 15 MR. JAMES HALL: Yes, it is. 16 MS. PATTI RAMAGE: Just to be clear, this would be your first time sitting in this front row 17 18 or in this room? 19 MR. JAMES HALL: Pardon, what was that? 20 MS. PATTI RAMAGE: This is your first 21 time at a hearing. Is that correct? MR. JAMES HALL: Yes. Yes, even in the 22 23 room. I thought I would be at the back. 24 MS. PATTI RAMAGE: I just thought we 25 should, you know, set the -- the record straight. Mr.

Hall, what is your position at Manitoba Hydro? 1 MR. JAMES HALL: I am the division 2 manager of Distribution, Engineering, and Construction 3 4 (Rural). And so in that context my resp --5 responsibilities would be for the distribution system 6 only. And there is a group in my division that looks at our reliability performance and -- and gathers those 7 measures that were discussed earlier. 8 9 MS. PATTI RAMAGE: Mr. Chairman, I -- I 10 have no further direct for Mr. Hall. So perhaps if you would like to just pose your questions to him. 11 12 THE CHAIRPERSON: The first time I 13 appeared before a Parliamentary committee in Ottawa, 14 the member of opposition pointed at me and said, You 15 should be fired. 16 MR. JAMES HALL: So -- so if I come out any less than that, then I'm good then. 17 18 THE CHAIRPERSON: Let's just say I'll 19 spare you the indignity. 20 MR. JAMES HALL: Thank you. 21 THE CHAIRPERSON: We won't -- we won't I -- I do want to understand the -- the state 22 do that. 23 of -- the state of Manitoba Hydro's infrastructure, 24 because it -- it's a message that comes out through and 25 through in the -- in the submission, that the state of

Manitoba Hydro's infrastructure needs to be addressed 1 on a go-forward basis, not -- I'm just talking -- I'm 2 not talking about new capital investment I'm talking 3 about the -- the baseline infrastructure that we have 4 5 in place. 6 What do you perceive to be the priorities, you know, looking at the -- the total 7 network? Where do you see that the -- the areas where 8 9 -- which are in the most need of investment? 10 MR. JAMES HALL: And there again, I'll 11 limit my answer just to the distribution systems, which 12 is basically outside of the substations. Poles and 13 underground cables, and -- and it would be those two 14 (2), I quess, in terms of what we see as the -- needing 15 the most investment. 16 Poles, because of their population, we have about a million poles in the province. And 17 18 underground distribution cable. And in the -- you 19 know, primarily when the question was raised, areas of 20 the province, the City of Winnipeg has the largest 21 length of -- of underground cable and so -- so they would -- there -- they'd be the -- the area that's most 22 23 affected because of that particular asset. 24 THE CHAIRPERSON: Now, are we talking 25 about a particular region of the city? Are we talking

of -- you know, I know that Manitoba Hydro has taken 1 over the assets of Winnipeg Hydro, are those the -- the 2 critical parts that...? 3 4 MR. JAMES HALL: No, these -- the 5 underground cables that we see being most in need of replacement are typically the ones that are direct 6 buried in subdivision areas. And so it wouldn't be 7 necessarily the -- the core area of Winnipeg, the --8 9 the former Winnipeg Hydro service territory.

10 THE CHAIRPERSON: Now, when -- when you 11 -- when a new subdivision is constructed, Manitoba 12 Hydro supplies all of the infrastructure that -- that 13 goes into the subdivisions? There's no contribution 14 from the developer, there's no --

MR. JAMES HALL: There is contribution from developers, but we certainly provide all of the material that is installed, right up to the -- the customer meter.

19THE CHAIRPERSON:So in terms of your20capital -- your capital budget, so there would be a21portion allocated to -- to do -- to new developments, I22guess, and a portion allocated to some of the existing23infrastructure? Is that how this --24MR. JAMES HALL: Yeah.25THE CHAIRPERSON: -- system works?

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Okay. And in terms of deciding where the investments will go for the aging infrastructure, how is that decision arrived at? How -- how do you prioritize the -- the various investments that you could potentially make each year?

6 MR. JAMES HALL: I would say in a 7 general sense we look at our reliability performance and the failure of different assets. And -- and so an 8 9 example would be our integrated pole maintenance program where we -- we inspect our poles and -- and get 10 11 a feel both for the -- the condition of our poles and 12 the -- the time we should be replacing them. And that 13 would give us an idea of the volume that we should be 14 replacing as well.

15 THE CHAIRPERSON: So some -- some part 16 of the infrastructure is being addressed on a 17 systematic basis? I quess you're replacing 'X' number 18 of poles per year. Is that -- that right? And then 19 anything that's sort of out of the ordinary, unusual, 20 is also a budget element? I mean, you have a portion of the budget 21 that's sort of the basic infrastru -- or at least the 22 23 regular investment plus whatever is needed over in top 24 -- overtop. Is that...? 25 MR. JAMES HALL: We have -- I guess we

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626 budgeted maintenance programs, and so we do have a pole 1 maintenance program that we would identify to invest in 2 poles in each year. I'm not sure if that --3 4 THE CHAIRPERSON: So what I'm get --5 trying to get at is if suddenly you have -- if suddenly 6 you have a dramatic failure of some component in the 7 system, and we just talked about Jenpeg, that would have to be accommodated within the budget you've 8 9 established? 10 Or is it -- do you -- do you -- is --11 the expectation is that those incremental expenses that 12 have to be borne by Hydro? 13 MR. JAMES HALL: In -- in distribution we would accommodate that within our existing capital 14 15 budget. If there was a replacement that -- that is 16 needed, we would accommodate it within our -- our 17 capital budget. 18 THE CHAIRPERSON: So, for example, if -19 - if this panel decides, Well, we're going to increase the tariffs or the rates for -- for customers because 20 21 we need to address aging infrastructure -- I guess the 22 question, and I'm not sure you're the one to answer the 23 question but the question is: 24 Is that investment going to be going to 25 infrastructure or is it going to be going to other

1 expenditures?

2 MR. JAMES HALL: I think you're right that I may not be the one to answer that question. 3 4 MR. VINCE WARDEN: Mr. Chair, with the 5 approval of this rate application Manitoba Hydro will 6 continue to maintain the system. The point I think we have been making all along though is that -- that we 7 are -- we have -- in terms of budget increases -- what 8 9 we have in the budget today is very minimal in terms of the -- what we see ahead of us in terms of increased 10 maintenance requirements for infrastructure. 11 12 So as Mr. Hall spoke of, poles and 13 underground cables for sure, but also it goes much 14 beyond that. It goes into a lot of the stations. A 15 lot of the stations around the City of Winnipeg are --16 have to be replaced. And -- and in fact we're getting 17 -- a lot of the outages that we're seeing are -- are 18 due to station -- problems within those stations. 19 So major expenditures that need to be re -- that are required to maintain and upgrade those --20 21 those facilities largely because of age but also 22 because of the growth around the City of Winnipeg. 23 THE CHAIRPERSON: So we keep -- we keep 24 talking about inflation increases and so on, CPI being 25 sort of the litmus test for expenditures. But in

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reality, in your world CPI doesn't mean a great deal. 1 I mean, you're talking about copper which is very 2 expensive, and electric -- have you got some idea of 3 the kind of rate increases that -- sort of increase 4 5 that we're looking at in that area going forward? 6 MR. JAMES HALL: I guess the short answer would be not yet in the sense that we know --7 we've -- we've done a -- prepared a report on the 8 9 distribution side that shows us that we do have a 10 looming increased need for investment in our infrastructure, not for new load reasons, not for 11 12 capacity increase reasons, but because that 13 infrastructure in different categories is reaching the 14 end of its life. But we are just in the process now of 15 quantifying that and laying it out in terms of the timeline. 16 17 THE CHAIRPERSON: I quess the point I 18 was getting at is, you know, part of your expenditures 19 involve labour, but there's a part of it that involves 20 components, all right, and so on. And I'm trying to 21 qet a sense of -- of the -- the inflation that's a 22 factor for tha -- for those components. 23 Can you give us a sense of that? You 24 know, what -- you'd be looking at 10 percent increases 25 per year, are you looking 3 percent?

1 MR. JAMES HALL: Yeah, I don't know. 2 I'm not sure. 3 MR. VINCE WARDEN: Yes. I believe, Mr. Chair, in our rebuttal evidence, we did refer to some 4 5 of the increases that we are experiencing in commodity 6 and material costs. And certainly, in previous proceedings, we filed a lot of material indicating how 7 susceptible Manitoba Hydro is to -- to the increases in 8 9 -- in those commodities. 10 You're absolutely right that CPI is probably not the best measure, because we don't --11 other than for wages and salaries we don't work a lot 12 with CPI. A lot of the material -- materials that we 13 14 purchase are -- are unrelated to CPI. 15 So yes, then -- it was just pointed out 16 to me on -- on page 11 of the rebuttal evidence, there 17 is some indication there of the cost changes that we 18 are -- we are -- we have an experience from January 19 2009 to December of two thou -- 2011. So the increases 20 are -- are -- are much higher than inflation over that 21 period of time for a lot of our input costs. 22 23 (BRIEF PAUSE) 24 25 MR. RAYMOND LAFOND: Just following up

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on the Chairman's questions, in terms of new 1 developments, new subdivisions, I heard that the 2 developer pays for a portion of a cost. What would be 3 4 that portion? Because I know, for instance, a 5 developer of a new subdivision has to pay for all the 6 streets, et cetera, originally, except that they're main thoroughfares. What would be an estimate of -- is 7 it 20 percent, 50 percent? 8 9 MR. JAMES HALL: I think I'd have to 10 refer to our Customer Care and Marketing division manager for help with that. Is Lois around? Oh, she 11 12 is right at the front. How'd you get here? 13 MS. LOIS MORRISON: We have an 14 allowance policy for when a developer is, say, putting 15 in a new subdivision and we are extending natural gas 16 and electricity to -- to the unit. The allowance is 17 based on what we anticipate to recover as a portion of 18 that distribution char -- through the distribution 19 charge into the future. 20 I can get you the approximate value. Ι 21 don't have that at the tips of my fingers, but we do 22 have an allowance policy that recognizes that over the 23 term of the installation we will be recovering a portion of that capital investment through the rate 24 25 base. But they are asked to pay for the off-setting

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contribution required. 1 2 MR. RAYMOND LAFOND: So you will pro -be providing us this additional information? 3 4 MS. LOIS MORRISON: We will get you an 5 approximation for it, yes. 6 MR. RAYMOND LAFOND: Thank you. 7 MS. LOIS MORRISON: We will identify the approximate capital contributions that are requi --8 9 that are asked for when we're doing a development. We 10 will be using a Winnipeg development as an example. 11 12 --- UNDERTAKING NO. 3: Manitoba Hydro to identify 13 the approximate capital 14 contributions that are 15 asked for when doing a 16 development, using a 17 Winnipeg development as an 18 example 19 20 MR. RAYMOND LAFOND: From what I have 21 heard, every Manitoban -- I think just about every 22 Manitoban owns one of these poles, based on the numbers 23 you indicated. Why -- what's the cost-benefit analysis 24 of having wood versus cement? Because if you travel in 25 some countries it's nearly all cement. And do you have

a response for that? 1 2 MR. JAMES HALL: We could prepare that as well. Generally, wood is significantly less 3 expensive. And in Manitoba, because of our winters, 4 5 the age of the poles are -- or in the northern 6 climates, poles are typically used because they last a lot longer. Southern climates would have issues with 7 earlier rot and insects also is an issue where you may 8 9 find that -- that cement poles are used. 10 MR. RAYMOND LAFOND: So there's a cost-11 benefit to use wood rather than cement in Manitoba? 12 MR. JAMES HALL: Yes, there is. 13 MR. RAYMOND LAFOND: That's sufficient. 14 Thank you. 15 The other issue of the provision of providing distribution through underground cables 16 versus aboveground. What kind of analysis do you do 17 18 for this? 19 MR. JAMES HALL: Analysis in terms of...? 20 21 MR. RAYMOND LAFOND: In terms of cost-22 benefit analysis. 23 MR. JAMES HALL: Lois, can you help me 24 with that one, as well? 25 MS. LOIS MORRISON: The -- the

developer is given the option of overhead or 1 2 underground, and the developer pays the difference. 3 MR. RAYMOND LAFOND: My last question: I -- I've heard that Manitoba Hydro is still in the 4 5 process of essentially evaluating the future costs of 6 replacing degrading infrastructure. I know we've seen 7 some numbers, something like \$11 billion over the -- if I remember correctly -- over a period of twenty (20) 8 9 years. 10 Am I hearing that we could have some 11 real surprises yet on this, and that could may -- maybe 12 increase substantially? 13 MR. JAMES HALL: I -- I think there was a note in the submissions that talked in the 14 neighbourhood on the distribution system of 50 million 15 16 per year over the next twenty (20) years. And although 17 that is certainly an average, and it's a very early 18 cost in that sense, I don't think we're in a -- in a 19 crisis in that sense. I don't think there's surprises. 20 We are assessing what those investments 21 will be and in which years they will be. But I -- I 22 wouldn't say that there's a surprise on the 23 distribution side. And once again, I'll talk just 24 about the distribution side of the -- the business. 25 MR. RAYMOND LAFOND: The distribution

side would be about \$50 million per year for twenty 1 2 (20) years? MR. JAMES HALL: Additional investment 3 -- that's the -- the -- you know, the -- the ballpark 4 5 in terms of --6 MR. RAYMOND LAFOND: Yeah. 7 MR. JAMES HALL: -- additional investment in replacement of our infrastructure. 8 9 MR. RAYMOND LAFOND: Strictly in terms of distribution. 10 11 MR. JAMES HALL: Yes, excluding -- and 12 that's excluding the substation. So the -- the 13 substations are, you know, a separate matter. And 14 there are both capacity and age issues, especially in 15 Winnipeg, on the substation side. Thank you. 16 MR. RAYMOND LAFOND: 17 THE CHAIRPERSON: I have some friends 18 that live in Southeastern Manitoba, and in the area 19 that was affected by the significant power outage this 20 year. And I quess the question I have for you is: For the client that has a disruption of service that runs 21 22 on for an extended period of time, what accommodations 23 do you make for that particular client? 24 In other -- in other words, just say to 25 him, There's no power for the next two (2) weeks, we'll

see you in two (2) weeks. Is -- is -- I -- I want to 1 understand to what extent do you assist the clients in 2 those kinds of scenarios while they're waiting for 3 4 power to be re -- reestablished? 5 MR. JAMES HALL: I think communication 6 is key with our customers during that time. And so 7 there is significant public communication about our plans to restore power. There is a -- in using the 8 9 example of the -- the ice storm in Southeastern 10 Manitoba, we -- we had an emergency operating centre 11 that would keep track of and assess and triage the 12 damage, and dispatch our resources accordingly to -- to 13 ensure that we both restore power to the most number of 14 customers as quickly as possible. 15 And so often that process -- there are 16 some customers who are at the tail end that may be on 17 long feeders that have been significantly damaged. And 18 really, what we do is communicate through the -- the 19 different public media of the -- the plans that we 20 have, and -- and be available to -- to answer 21 customers' questions in that sense. 22 THE CHAIRPERSON: So there -- for 23 example, you -- you don't put generators in place, 24 diesel generators or portable generators, in place to 25 assist hospitals or schools, or...

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1 MR. JAMES HALL: No, and typically a facility like a hospital would have its own backup 2 generation, typically diesel. 3 4 THE CHAIRPERSON: So fundamentally the 5 client is on his own, or her own, in terms of -- of 6 dealing with a power outage? 7 MR. JAMES HALL: Yes, in -- in that type of situation, yes. Yeah. 8 9 MS. LOIS MORRISON: Perhaps I should 10 weigh in here. We do work very closely with the local municipalities' emergency operating centres also and 11 12 work in coordination with them to make sure that they 13 are well aware of the extent of the outage, the 14 duration of those outages, so that there are -- if 15 there are -- they can help us identify customers that might be vulnerable or help them better understand how 16 17 they should be dealing with it, from a life and safety 18 perspective. 19 So if we know that we're going to have 20 an extended outage in, say, Lac du Bonnet, and there's 21 a personal care home there and they are looking to, 22 say, evacuate that personal care home, we work very closely with them so that it -- they can best identify 23 the best place to evacuate to so that they don't go to, 24

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say, Beausejour if Beausejour is also going to be out

for an extended period of time. 1 2 It's -- when we're dealing with a large storm such as what we experienced during the 3 Thanksgiving weekend, we coordinate with all the other 4 5 resources in place to make sure that we are -- that we 6 keep life and safety at -- at the forefront. 7 All right. THE CHAIRPERSON: I quess the -- the follow-up question, you know, given that we 8 9 are dealing with aging infrastructure more likely to 10 have outages that last -- that -- more frequent outages that last longer in the context of an aging 11 12 infrastructure scenario, I guess the question is: 13 What are the plans for Manitoba Hydro to 14 assist clients who will be suffering these outages? 15 MR. VINCE WARDEN: Well, Mr. Chair, I think that's the reason why we want to make sure, first 16 17 of all, we have sufficient funding to -- to avoid a 18 situation where there is -- a catastrophe occurs and 19 that we have the facility to move crews to the areas 20 that are hit the hardest during unexpected events such 21 as storms that -- that affect the aging infrastructure. 22 The age -- age of infrastructure is more 23 vulnerable to storms than -- than the infrastructure 24 that would have been installed more recently. So we're 25 aware of that and we make sure that we restore power

just as quickly as we possibly can and that we limit 1 the -- the duration of the outages. 2 3 THE CHAIRPERSON: The norther --Northeastern United States suffered an extensive outage 4 5 not that long ago and -- which went on for a number --6 quite a long time for some of the clients. And I guess 7 the question -- there will be some lessons that will be generated from that experience and I -- I guess the 8 9 question to -- to Manitoba Hydro is: 10 Do you have systems in place to -- to 11 draw the lessons out of those experiences and apply 12 them to the situation in Manitoba? 13 MR. VINCE WARDEN: We absolutely do have emergency preparedness plans in place for events 14 15 that can be foreseen. If we were to lose though -- if we were to lose -- had a major impact on one of our 16 17 converter stations you -- either north or south, the 18 impacts could -- the impacts on Manitoba could be very 19 significant. That's the -- the risk that we're most 20 concerned about at Manitoba Hydro is addressing an 21 outage at Dorsey or -- or along the trans -- the major 22 transmission line from the North, the HBDC system. 23 The outages could be -- you know, we're -- as I mentioned earlier, we derive 75 to 80 percent 24 25 of our power from the North. And if we got an outage

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639 of that magnitude in the middle of winter, the results 1 would be catastrophic. 2 3 THE CHAIRPERSON: I -- I quess this -the question then: We talked about insurance that was 4 5 available in the Jen -- to deal with the Jenpeq 6 scenario. But I guess the question I have is a -- more generally about what insurance might be available to 7 deal with similar scenarios, whether that's possible or 8 not, whether it's available somewhere in the system. 9 10 You know, I know for example that a number of years ago United Grain Growers developed a 11 12 policy which provided for a drop in revenues stemming 13 from droughts in Western Canada. And they -- they got 14 some significant payouts from -- from that insurance 15 policy. 16 And I guess the question I have is: Is that something that has ever been considered by 17 18 Manitoba Hydro? And perhaps you could just answer that 19 question. 20 MR. VINCE WARDEN: Yes, we have looked 21 at weather-related insurance in the past, the --

insuring against the impacts of weather. The premiums associated with that were very large, and we determined there was -- there was insufficient potential for payback for us. So we did not pursue that.

1 THE CHAIRPERSON: And I guess that 2 would apply as well to outages that may -- may impact 3 the system. You -- getting insurance for outages that 4 are of varial -- variable duration would be expensive. 5 Is that...

6 MR. VINCE WARDEN: Yes, the outage that Mr. Cormie referred to earlier at Jenpeg, you know, we 7 do have insurance; we have fire and -- and casualty 8 9 insurance, but not for the revenue side. And I guess 10 that's -- that is your question as to whether we've ever considered that. And, no. No, we haven't -- we 11 12 haven't -- I suspect it wouldn't be not too dissimilar 13 though from -- from weather-related premiums that would 14 be -- that would likely be exorbitant. You know, after 15 all, supplying power is our business, and we have to 16 make sure that we can -- can supply that power under -under known -- all known conditions. 17

MR. RAYMOND LAFOND: I guess in the same line of thought, all this transmission that's coming in from up north is all above ground. Is there a possibility of adding that underground in the future whenever it's got to be replaced? MR. VINCE WARDEN: Well, there -- there

24 MR. VINCE WARDEN: Well, there -- there
25 certainly have been studies about transmission lying

641 under Lake Winnipeg. Haven't ruled it out totally, but 1 at this point, compared to the alternatives, it would 2 be cost prohibitive. 3 4 THE CHAIRPERSON: Given the time, I 5 suggest we take ten (10) minutes and resume proceedings 6 at 3:30. 7 --- Upon recessing at 3:16 p.m. 8 9 --- Upon resuming at 3:33 p.m. 10 11 CONTINUED BY MS. PATTI RAMAGE: 12 MS. PATTI RAMAGE: Mr. Chairman, it 13 looks like we've shuffled the deck again and brought Mr. Rainkie back up, and we have Mr. Hall in the back. 14 15 I thought at the break -- or, following 16 the break, we would finish off. I have a very brief direct of Mr. Miles and Ms. Morrison, and then we would 17 18 open ourselves up to cross. So we wouldn't be long 19 with that. 20 Mr. Miles, really the only question I 21 had for you today, could you perhaps outline your 22 qualifications and areas of responsibility with respect 23 to Manitoba Hydro's filing? 24 MR. TERRY MILES: Certainly, yeah. 25 Thanks Ms. Ramage. My name is Terry Miles. Good

afternoon, Chairman and members of the Board, 1 2 Intervenors, and others present here today. 3 I hold a position of manager, Resource 4 Planning and Market Analysis in the Power Planning 5 Division of the Power Supply Business Unit. I'm a 6 professional engineer, registered with the Association 7 of Professional Engineers and Geoscientists of the Province of Manitoba. 8 9 I've been with Manitoba Hydro for over 10 nineteen (19) years and have been working in the power 11 resource planning area for the past four (4) years as a 12 manager of Resource Planning and Market Analysis. I've 13 been involved in several proceedings related to 14 Manitoba Hydro Electric rate applications. I've been in the back row. I have never been a witness except 15 16 for this year. First time as well. 17 In my testimony today, I will be 18 providing evidence -- or, throughout the hearings, I 19 will be providing evidence with respect to Manitoba 20 Hydro's plans for future resource development, the 21 determination of export revenues and generation costs 22 in the long-term, and the expected cost of drought in 23 the future. I will also be providing evidence with 24 respect to the development of marginal cost that are 25 used in evaluating resource options, including DSM.

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1 MS. PATTI RAMAGE: Thank you, Mr. Miles. I -- I didn't have any specific questions for 2 you. And I was just going to bring Ms. Morrison, who's 3 already jumped into the -- the fray. But I thought I'd 4 5 get her qualifications onto the record. 6 And I should provide the caveat, in fairness to Ms. Morrison, that in Mr. Peters's and my 7 exchanges, she was originally set for the second panel, 8 9 but when we saw the -- Mr. Peters's book of documents, 10 she was brought into the first panel. So our -- our 11 direct is -- is limited to her involvement with respect 12 to the load forecast and the fuel switching report. 13 Mr. Warden had indicated Ms. Morrison would also be 14 dealing with demand-side management. We'll deal with 15 that portion of our direct when we get to the third 16 panel, if that's okay. 17 So Ms. Morrison, could you please 18 outline your qualifications and area of responsibility 19 with respect to this portion of Manitoba Hydro's 20 filing? 21 MS. LOIS MORRISON: Good afternoon, Mr. 22 Chairman, members of the Board, Intervenors, and -- and 23 everyone else present. 24 My name is Lois Morrison, and I hold the 25 position of division manager of Consumer Marketing and

644 Sales of the Customer Care and Marketing Business Unit. 1 I'm a graduate of the University of Manitoba, faculty 2 of commerce. I have been with Manitoba Hydro for over 3 twenty-two (22) years and, for the majority of that 4 5 time, working in various roles supporting our Power 6 Smart initiatives. 7 In 2007, I moved into the role of division manager of Business Support Services with 8 9 responsibilities including billing, metering, and collections, returning to Consumer Marketing and Sales 10 11 in 2010. 12 I've also been involved in several 13 proceedings related to Manitoba Hydro's electric rate 14 applications, and this is also my first time as a 15 witness. 16 MS. PATTI RAMAGE: Ms. Morrison, what is Manitoba Hydro's view of the forecast growth for the 17 18 province? 19 MS. LOIS MORRISON: Manitoba Hydro's 20 load forecast reflects the best projection of 21 Manitoba's future electricity requirements. Manitoba 22 Hydro's load, net of projected Power Smart programs, is 23 projected to grow at an average of 1.4 percent annually 24 and is in line with the overall average annual growth 25 of one point seven (1.7) experienced over the last ten

(10) years, even with the recent economic downturn. 1 2 MS. PATTI RAMAGE: Ms. Morrison, with respect to the fuel switching report, what 3 recommendations arise from that report which could 4 5 impact rate changes -- or the rate changes Manitoba 6 Hydro is proposing in its current Application? 7 MS. LOIS MORRISON: The fuel switching report is an informational document that was prepared 8 in response to the PUB directive I spoke of -- or 9 10 sorry, that Ms. Ramage referred to. 11 The an -- the analysis examines the life 12 cycle impacts of fuel switching from natural gas to 13 electric or geothermal space and water heating, and 14 does not speak to short-term impacts. 15 Manitoba Hydro recognizes that there are 16 benefits when customers use natural gas for space and 17 water heating purposes from both the customer and 18 Utility perspective, and from global environmental 19 perspectives. 20 Manitoba Hydro believes that if 21 customers are well informed they will make the best choices for their situations, and in most chases --22 23 most cases will chose natural gas when available. 24 To aid customers in making informed 25 decisions, Manitoba Hydro has initiated a heating

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education campaign to enhance customers' awareness of factors relevant to their decisions in space and water heating. The campaign includes a multifaceted approach targeting homeowners, HVAC suppliers and installers, home builders, commercial builders, and property developers.

7 Manitoba Hydro will continue monitoring market trends in fuel choices, and will assess the 8 9 impact of its educational efforts on an ongoing basis. The Corporation's educational efforts will be adjusted 10 accordingly and further consideration may be given to 11 12 using additional intervention tools such as service 13 extension policies, rate design, and incentive 14 programs.

MS. PATTI RAMAGE: Thank you, Ms. Morrison. With that, that concludes Manitoba Hydro's direct. So if the panel has additional questions for the witnesses, or I -- otherwise I can turn it over to Mr. Peters.

20 MR. RAYMOND LAFOND: I just need some 21 clarification as to what I just heard. Did I actually 22 hear that using natural gas was better for the 23 environment than electricity? 24 MS. LOIS MORRISON: It depends on which 25 perspective you take. If you look at it from a local

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perspective as in within the -- within the -- the 1 borders of Manitoba there is a net GHG increase by 2 using a natural gas furnace or a natural gas water 3 tank. 4 5 However, if someone is choosing between 6 electric furnace or an electric -- or an electric water tank, or a natural gas furnace and natural gas water 7 tank, that means that's electricity being consumed in 8 9 the province not available for export which is offsetting GHG production in -- in our trading area. 10 11 Now the offset is greater than the local GHG reduction 12 that we would have realized in Manitoba. 13 MR. RAYMOND LAFOND: Thank you. 14 15 (BRIEF PAUSE) 16 17 THE CHAIRPERSON: I have a question in 18 relation to disconnections. Are you -- are you the 19 person to address that to? I think you're --20 MS. LOIS MORRISON: I could be. 21 THE CHAIRPERSON: I quess the question I have is -- is in relation to what's been the 22 23 experience of Manitoba Hydro given the current con --24 context -- I mean we -- we do deal with complaints at 25 our level. And I guess I'm wondering in terms of the

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1 experience you've had with users whether or not they've
2 -- we have more users that are delinquent than -- than
3 the past?

MS. LOIS MORRISON: I believe we have one (1) interrogatory that we resp -- we responded to that talks to the -- the number of accounts in arrears on a monthly basis over, I think, since 2005. I can try and find that quickly for you. But in terms of looking at the month-over-month averages I don't think we're seeing an increase.

11 MR. RAYMOND LAFOND: If -- I'm really 12 changing the subject so maybe you wanted to continue 13 that line. Essentially, if I look at the current 14 capacity, generating capacity, I read 5,000,485 15 megawatts -- or 5 -- no, sorry, I'll rephrase this, 16 5,485 megawatts. And if you add Wuskwatim, Keeyask, 17 and Conawapa it adds up to seventy-eight sixty-five 18 (7,865).

And I read somewheres that the peak use last year was something like four point three (4.3) -or four thousand three hundred (4,300) and something. Can you give me some explanation as to why this surplus is required, number 1.

24 My second question will be in terms of 25 peak use by consumers, what would be -- like how many

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days, for instance, do you exceed thirty five hundred 1 (3,500) versus four thousand (4,000), to have an idea 2 of what the peak days are and how many there are? 3 And if that's the case, indicate to us 4 5 what you could do if we lacked the -- the amount 6 required through interruptible services and such other matters or -- or using the gas turbines, though they're 7 not efficient, but, you know, for a day or two (2) or 8 9 this type of thing. 10 MR. DAVID CORMIE: Mr. Lafond, last 11 night at -- between five and six o'clock Manitobans 12 were using -- it -- it averaged around 4,400 megawatts 13 was the demand in Manitoba. The temperature, I think 14 at the time was 20 degrees -- minus 20 degrees. 15 And let's say that that was the peak for 16 the year, forty-four hundred (4,400), which is very 17 close to the number that you had mentioned. That peak 18 demand is growing at about eighty (80) a year. And 19 between now and when we need new resources for capacity, I believe that's around 2022 -- '23 -- '24. 20 21 So twelve (12) years at 80 megawatts is 960 megawatts. 22 So you add 960 megawatts to the forty-four hundred 23 (4,400), you know, we'll have a peak load around 6,000 24 megawatts in -- in the year that -- that we -- that'll 25 be the load.

1 In addition to that Manitoba Hydro 2 requires reserves, capacity reserves above the load of 10 per -- of equal then to 10 percent of the load. 3 So if you had 10 percent on top of the -- the six thousand 4 5 (6,000), that would bring you up to 6,600 megawatts of 6 required capacity. 7 Now, given that we are -- we will be -we are proposing to build Conawapa before it's 8 9 necessary there's -- there's going to be that surplus 10 above that that can be sold on the export market, 11 because those export contracts go year-round. 12 The number of days that -- that we're 13 above thirty-five hundred (3,500) is -- it's quite 14 significant. The summer peak is around three thousand 15 four hundred (3,400), three thousand five hundred 16 (3,500) now with the air-conditioning load. But we can -- we can tell you how many days. We'll get you that 17 18 information. You can take that as an undertaking. 19 With regard to what we can do if we do 20 not have capacity, for example, the Jenpeg fire, all of 21 a sudden it took out 130 megawatts of capacity. All 22 our -- all our export contracts are curtailable. That 23 means we have the right to cease delivery if we are in 24 the position in Manitoba where we have insufficient 25 resources to serve the Manitoba load.

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1 So at -- at this moment we have our sale 2 obligations to Northern States Power under the 500megawatt sale. If we got to the point where continued 3 4 delivery of the power under that contract resulted in a 5 shortage in Manitoba, we have -- we have curtailment rights and we can -- we can reduce the deliveries at no 6 -- at no penalty if Manitoba Hydro continued to serve 7 Manitoba load. 8 9 So one (1) of the values, or one (1) of 10 the benefits of having these export contracts and building for export -- because ultimately the capacity 11 12 that we've pro -- provided for those contracts is 13 ultimately available to serve the domestic load in --14 in emergencies. 15 Now, we don't -- we don't plan our 16 system around that right, but if that situation were to arrive, for example, the loss of the DC system and we 17 18 were desperately short in -- in Manitoba for power, our 19 force majeure provisions and our curtailment rights 20 under the contracts allow us to use power that would 21 normally go to them to serve our -- our loads first. 22 So those -- those are what -- those are 23 the -- the -- those are the options that we have. We

24 also have the option of serving our export sales from -25 - by buying the power in the market rather than using

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our own generators. And I mentioned earlier today how 1 2 expensive it was to run our combustion turbines. 3 And so last night at the time of -- of 4 peak deliveries, because of outages in the system, we 5 were delivering from Manitoba no megawatts to Northern 6 States Power under our contract with them. We were 7 purchasing all the megawatts we needed to serve the 8 contract from the market rather than having to start 9 our combustion turbines in order to serve the sale, 10 because purchasing the power was less expensive than --11 than running our expensive generation. 12 So all these contracts that we have 13 allow us to, in effect, financially settle. Although we could serve the sale with our combustion turbines, 14 15 it was probably twice as expensive to run the gas turbines at Brandon or to turn Selkirk on than it would 16 17 be to -- just to go to the market and buy power from --18 from the market to serve the sale. 19 So those are the cons -- those are some 20 of the options that we have when we run into situations. We can financially settle. And in the 21 22 worst case, when it's not a matter of -- of having --23 it's not a money issue, it's a supply issue, we have 24 rights to curtail. And in acts of God, force majeure 25 events, we have -- we can declare force majeure and

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653 cease delivery. And we can do all those things without 1 2 penalty. 3 MR. RAYMOND LAFOND: That brings a few 4 sub-questions to the comments. 5 MR. DAVID CORMIE: Yes. We will 6 provide an analysis of the number of days they are --7 where the peak load is above 3,500 megawatts. 8 9 --- UNDERTAKING NO. 4: Manitoba Hydro to provide 10 an analysis of the number 11 of days where the peak load 12 is above 3,500 megawatts 13 14 MR. RAYMOND LAFOND: Could you expand on the issue of capacity reserves of 10 percent for my 15 16 understanding of why this is needed and -- et cetera? 17 MR. DAVID CORMIE: Yes. In -- I -- I 18 misspoke earlier. Mr. Lafond, it's 12 percent, not 10 19 percent. 20 Planning reserves are to cover off 21 issues such as outages, either forced outages in a 22 sudden emergency event, or maintenance outages where we 23 plan to take a unit out of service, variation in -- in 24 load due to weather. So the -- so the load forecast 25 that's in the documents you have is -- is the expected

1 peak. Under extreme conditions it could be higher than 2 that or could be lower than that. And so we have this 3 additional -- we provide additional capacity equivalent 4 to 12 percent of the load to cover off those -- those 5 possibilities.

And in addition to that, we need to provide operating reserves to provide for moment-bymoment fluctuations and -- and that -- and those planning reserves make a -- make possible the -- the operating reserves that are necessary to operate the power system.

12 MR. RAYMOND LAFOND: Let's look at the 13 instance of last night, which you hinted at. We were 14 at 4,400 megawatts at the peak time. The current 15 production is -- or capacity is fifty-six eighty-five 16 (5,685). I understand that there is a hundred and thirty (130) out of service right now due to the fire. 17 18 So that's still about fifty-five hundred (5,500). And 19 we're using forty-four hundred (4,400). Like, what 20 happens with that difference, and -- and you said there 21 was no -- nothing spared to be able to export. 22 MR. DAVID CORMIE: Well, firstly, we 23 chose not to run the combustion turbines because we 24 could buy replacement power. So the 105 megawatts --25 or the -- the 260 megawatts at the combustion turbines,

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it wasn't economical to run. The 130 megawatts at 1 2 Selkirk wasn't economical to run. The 105 megawatts at Brandon, it's -- it wasn't an emergency, so all the 3 thermal capacity wasn't being run yesterday. So you 4 5 have to dis -- take that amount off. 6 In addition to that, we have thirteen 7 (13) generating units in the system that are out of service right now, nine (9) of which I spoke about at -8 9 - not being available at Pointe du Bois. There are other units in the system that are out of service right 10 11 now for overhaul. And -- and then there's the -- the 12 five (5) -- and additional to that there's five (5)13 units at Jenpeg that are out of service. 14 And so all that -- all those factors 15 reduce the amount of -- of capacity that's available. And then -- and then the control centre maintains 16 17 operating reserves to deal with contingencies. And so 18 the actual amount of generation, which is the hydro 19 generation that is available for commercial service, 20 would be around 4,500 megawatts. The power system could operate higher -- more than that but we're 21 22 holding back some reserves for moment-by-moment 23 variations. 24 The 4,400 megawatts was the average for 25 the hour. At the time of the instantaneous peak it --

656 it would be 100 or 150 megawatts higher than that. So 1 -- but in the -- in the load forecast we're -- we've 2 planned for the average hourly load as the -- as the 3 peak. We're not planning for the instantaneous peak. 4 5 And so the operating reserves allow us to meet that instantaneous peak without creating a 6 7 burden on the -- on the rest of North America by having to import power that we weren't planning to supply. 8 9 MR. RAYMOND LAFOND: In terms of 10 overhauls I certainly understand the unforseen fire that's put, whatever, nine (9) turbines out of service. 11 12 How about the other overalls? They're being done in 13 winter rather than, you know, off-peak season. And is that because these are overhauls that take more than 14 15 eight (8), nine (9) months? 16 MR. DAVID CORMIE: Yes. And we -- we 17 do not have enough resources to bring all our -- to get 18 all our generate -- generators back into service as 19 quickly as we would like. We are limited by capital 20 availability. And we're having to schedule the return to service of some of these units out over time because 21 22 we -- we just don't have the resources to get them into 23 service as soon as possible. 24 MR. RAYMOND LAFOND: I guess my -- my 25 last question, Mr. Chairman, you referred to the issue

1 of curtailment, possibilities of cur -- curtailment 2 without any penalties. What would be the amount in 3 that regard? Like what's the maximum possible in terms 4 of curtailment like on a night like last night without 5 any penalty?

6 MR. DAVID CORMIE: In an emergency, 7 there is no limit to how much we can cur -- 100 percent is curtailable. In a non-emerg -- in a non-emergency 8 9 situation we have the obligation to supply it. We 10 supply it by purchasing the required amount of power 11 from the market. It's not coming from the Manitoba 12 system, but Manitoba Hydro is financially responsible 13 for supplying it.

14 So the -- the power is still delivered, 15 it's just not coming off the Manitoba Hydro system. So we didn't have to run our combustion turbines last 16 17 night but we were still responsible for purchasing 18 enough power to serve -- to serve the export sale. 19 And -- and for example those -- those --20 the -- the contract with Northern States Power, it's in 21 the fifty-five dollar (\$55) range. We might have 22 bought, to serve it at, you know, twenty-five (25) or 23 thirty dollars (\$30). So its still economical to 24 serve. 25 We don't have the right to curtail for

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658 economic reasons. So if the power prices last night 1 had spiked it would still have been --2 3 MR. RAYMOND LAFOND: Yeah. MR. DAVID CORMIE: -- let's -- let's 4 5 say they had gone to seventy dollars (\$70), it would still have been cheaper to -- to purchase the seventy 6 dollar (\$70) power than to spend a hundred and fifty 7 dollars (\$150) to run the combustion turbine. 8 9 MR. RAYMOND LAFOND: Okay. 10 MR. DAVID CORMIE: So it's -- it's a matter of finding the least cost way of serving the 11 12 obligation. 13 MR. RAYMOND LAFOND: Sorry. The 14 curtailment you were referring to was in regards to 15 exports, correct? MR. DAVID CORMIE: 16 Yes. 17 MR. RAYMOND LAFOND: I was -- my -- my 18 question was really in terms of interruptible service 19 for like major industrial users who get a special price 20 but they can be cut off without penalty on certain 21 circumstances. That's what I was getting at. 22 MR. DAVID CORMIE: I understand. We 23 have a cur -- curtailable load program that allows Manitoba Hydro to ask customers to reduce their --24 25 their use of power. And it's -- there's a set of terms

and conditions. So many interruptions a year for so 1 long. And Manitoba Hydro pays a discount to the 2 customer to have that right. 3 And it's -- it's used to re-establish 4 5 reserves. It's used to deal with emergencies. It's --6 it's not used to help us with our economic dispatch. And -- but the customer gets paid that whether we use 7 the -- we use all the curtailments that are available 8 9 in the program. 10 Several years ago as we were still kind 11 of defining the terms and conditions we went through a 12 period of time where we were exercising them for 13 economics. Rather than starting the combustion turbine we would curtail. The customer found that we were 14 15 curtailing too often even though that we had the right. 16 And so we adjusted the program so that it -- it gets used on a much less often basis. 17 18 And so we found a nice balance point 19 between still being valuable to the utility, but not 20 disrupting the production processes at the -- at the 21 large industrial customers. And there are very few 22 customers who have the ability to have their production 23 processes interrupted without causing a significant 24 problem for them. 25 MR. RAYMOND LAFOND: I understand this.

And -- however, in terms of reasons -- for economic 1 reasons. But if there was an ice storm, for instance, 2 and we were down for seven (7) days and that's an 3 emergency, something, what is the total amount you 4 5 could actually cut off without any penalty to these, I 6 guess, industrial users? 7 MR. DAVID CORMIE: You know, I think Manitoba Hydro reserves the right in emergencies to 8 9 curtail everyone. I think, ultimately, that's -- you 10 know, whether we chose to or Mother Nature does it by taking the wires down, but I'm -- I'm not whether our 11 12 contractual obligation -- is it to customers who aren't 13 on the curtailable load program. 14 Lois, do you have an idea whether we 15 have curtailment rights beyond the curtailable rate 16 program? 17 MS. LOIS MORRISON: Not any outside of 18 what's been identified by yourself. 19 MR. RAYMOND LAFOND: But I still do not 20 hear a number --21 MR. DAVID CORMIE: I don't think -- I 22 don't think -- we haven't negotiated a contractual 23 right that's beyond the curtailable load program. 24 MR. RAYMOND LAFOND: Thank you. 25 If -- if, for MR. DAVID CORMIE:

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example, we were having the interruption to the -- to 1 the DC system where it caused Manitoba Hydro to do 2 rotating blackouts or load shedding around the 3 province, we would just go into a certain area of the 4 5 prov -- of the city or the province and we would shut 6 that area down, and we would rotate that outage across all areas of the province. And it would be -- you 7 know, maybe that's a substation, we would -- we would 8 9 shut that substation down. Everybody would be affected 10 and on a -- you know, on a non-discriminatory basis. 11 And it would -- it would -- I think in -- in choosing 12 the load-shed scheme they've selected the ones that 13 have the least impact to be done first, but -- but that 14 would be under an extreme emergency. 15 Under the curtailable rates program, the

16 maximum duration per interruption is four (4) hours.
17 But we can have back-to-back curtailments, but that
18 uses up the -- the numbers that are allowed under -- on
19 an annual basis.

THE CHAIRPERSON: I have a question in relation to the fuel switching report. I guess one (1) -- one (1) of the things I'm struggling with is the -the following. You know, I think all of us respond to price signals, whether it's a consumer or it's the Corporation, and, I guess, I'm -- I'm Manitoba Hydro,

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I'm looking at the export markets where prices are 1 really low and I can earn seven (7) or eight (8) cents 2 a kilowatt hour from a Manitoba consumer. Why would I 3 encourage the Manitoba consumer to switch to gas? Like 4 5 -- you know, I'm -- what -- I quess it's a rhetorical 6 question, but I -- not so much. 7 I mean, I'm -- I'm sort of wondering does it -- you know, that sort of calculation go into 8 the level in enthusiasm in -- in supporting consumers 9 10 in switching to an alternative fuel source? I think it's a question for Mr. Warden. 11 12 MR. VINCE WARDEN: We're -- with the fuel switching, we're, of course, motivated by what's 13 14 best for the customer ultimately. And if it's in the 15 customer's interest to -- to use natural gas for 16 heating purposes rather than electricity then we would encourage that, or at least provide the information 17 18 such that the customer can make that choice. 19 So our motivation is not so much to 20 increase our bottom line; it's more so to -- to provide 21 the source of fuel that's -- that's in the best 22 interests of that customer over the long-term. 23 I quess the -- the --THE CHAIRPERSON: 24 what I'm concern about is the uptake on some of the 25 demand-side management programs that are -- that are --

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that we've seen. I mean, the uptake is not quite what 1 most of us expected. We expected that the people would 2 be uptaking the programs and taking full advantage of -3 - of what those are offering -- dealing with what's 4 being offered. And I'm concerned that, you know, that 5 6 the price signal that Manitoba Hydro is getting from 7 the marketplace at -- you know, it's partly attributable to -- it's one (1) of the reasons why 8 9 we're not getting the level of -- of uptake that we --10 we would have expected from the dem -- demand-side 11 management.

12 You know, I guess what I'm saying is 13 that there's not much in it for Manitoba Hydro from --14 from the standpoint of revenue, because you're making 15 most of your revenue from the electricity side, you 16 know, on a relative basis. So I quess I'm -- I'm 17 wondering, is that one (1) of the reasons why --18 potentially one (1) of the reasons why we're not 19 getting the uptake? 20 MR. VINCE WARDEN: I think the -- the 21 uptake and -- and Ms. Morrison can speak to this

22 certainly, but the uptake would be improved with the 23 appropriate price signals, and that's why previous 24 applications before this Board have been with inverted 25 rates. So we -- we'd like to see the more you use

electricity the more you're -- you're going to pay for 1 2 that. 3 So in -- in our -- in our application, and I think we're going to be talking about this in a 4 5 subsequent proceeding, is just that: to put more 6 emphasis on the tail-block rate such that we can send 7 that appropriate price signal to customers. 8 There is the issue, of course, in 9 Manitoba with electric heat. And that has -- that has been the -- the reason that inverted rates have not 10 really gone where we would like them to go. And there 11 12 has to be a solu -- a solution for that and we -- we 13 have been working towards that, which will be part of a 14 future application such that we could have seasonal-15 type rates, for example, that would -- inverted rates 16 for the part of the year that isn't -- isn't going to affect electric heat customers. 17 18 As far as the uptake though on the 19 programs, I think that for the most part, with the 20 incentives that have been provided, has been reasonably good, but Ms. Morrison might -- might want to speak a 21 little bit more to that. 22 23 MS. LOIS MORRISON: I'll be much 24 prepared at the second panel. However, we have had 25 quite a bit of uptake in our programs. We've offered -

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- we've been in the market since 1989, and over that 1 time we have had a large portfolio, a variety of 2 programs, and I've seen a number of customers 3 participate and have already realized significant bill 4 5 savings. 6 You are correct in -- in some of the discussions we've had to date about the low cost of 7 energy from an electricity perspective may not be the 8 9 driver for customers to -- or encourage them as much to 10 participate. However, we have to remember that, particularly in the residential market, customers don't 11 12 look beyond the borders. They -- they look at their 13 electricity bill and they think, Oh, what can I do to 14 impact that? And so we are seeing customers 15 participate. 16 We've just come off a period where the 17 federal government was running a program and we were 18 running supporting programs along with that, and we saw 19 significant uptake in terms of customers insulating 20 their homes, in -- installing water and energy saver 21 devices. So we are seeing a lot of activity in the 22 market and have seen that activity in a consistent 23 basis over the years. 24 THE CHAIRPERSON: You know, we --25 looking at the messaging, if, for example, we -- this

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1 panel makes a decision around the rates going forward, 2 we'd like to be able to say to -- to Manitobans, you 3 know, Sure, you're going to be facing significant 4 rates, you know, 20, 30, 40 percent rate increases, but 5 we think that you can save 30 percent of that by 6 undertaking demand-side steps.

7 In other words, you can take steps to actively reduce your power consumption. It's -- it's 8 9 quite feasible for you to reduce most of the edge --10 take the edge off that -- those increases you can be facing. And I -- I guess you're in charge of the 11 12 program; is there the potential -- is there the potent 13 -- potential out there to be able to say that to Manitobans? 14

15 MS. LOIS MORRISON: Well, there's a --16 there -- there -- right now we are -- it -- it comes 17 back to the point that we've had a lot of participation 18 to date. So a lot of the customers that we are talking 19 to that will be facing a rate increase have already 20 received the benefit of the -- the improved energy efficiencies in their homes already. And in -- and a 21 22 number of our commercial customers, industrial 23 customers also have already realized a lot of the savings, and will continue to realize that benefit as 24 25 we go forward.

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1 Secondly, in terms of looking to the future, we are undertaking a market potential study. 2 And we will be looking to -- to that to see what 3 additional potential may be existing in the market. We 4 5 continue to monitor the market to see whether 6 opportunities, economic opportunities, might still be out there for customers to undertake. 7 8 But when you're -- when you're looking 9 at -- speaking to the residential market; when you're looking at the residential customer there are only so 10 many things that you can do within the home to reduce 11 12 energy. And when you're looking at the -- the largest 13 portion of their bill being their heating or water heating bill, then you're looking at improving 14 15 insulation, improving -- reducing the amount of hot 16 water consumed, and -- and we have initiatives in place 17 right now to support that. 18 And as I mentioned, we just finished up 19 with the federal ecoENERGY program which had significant incentives tied in. So customers were able 20 21 to participate in incentives to in -- upgrade the

22 insulation or improve the energy efficiency of their23 homes, they got incentives from the federal government,24 they got incentives from us, and they were allowed to25 finance any shortfalls through our Power Smart

residential loan. 1 So we had a lot of financial tools and 2 communications out in the market to help customers 3 4 participate, and -- and to move them forward towards a 5 more energy efficient household. And from the 6 commercial side we have a very broad portfolio of offerings for a commercial sector that -- that look to 7 heating systems like the HVAC, lighting, insulation 8 9 envelop. 10 So -- so we are really still pushing 11 forward. We're -- we -- we are committed to pursing 12 the economic opportunities. MR. RAYMOND LAFOND: I -- I'd like to 13 14 add on this specific subject and if we're going to 15 cover it at length later on, please let me know. 16 I heard the -- the examples you gave; 17 however, I have the impression, or the perception, that 18 there has not been as much, I guess, publicity to make 19 people aware of the possible savings like there has been, for instance, with recycling. There's a lot of 20 21 aware -- of awareness about recycling, but I'm not so -- I'm not -- I don't think it's the same -- at all the 22 same level in terms of reduction of -- of use of an 23 24 energy like electricity. 25 For instance, do you do pollings to

669 determine whether or not people actually consider, or -1 - or actually do reduce their thermostat by 2 degrees 2 at night, and -- and do you know if people are really 3 aware if they kept their house at like 1 degree lower 4 all day and 2 degrees lower at night how much they 5 6 would save? Like, that type of information, for people 7 to act. 8 MS. LOIS MORRISON: We've been doing 9 comer -- customer surveys for a number of years looking 10 at a number of different measures. Some of them, behaviour-based activities such as you mentioned. 11 12 Others, more awareness of the concepts of energy 13 efficiency. So we do things like we want to know brand awareness of Power Smart, because if people are aware 14 15 of Power Smart then it's more top of mind; they're more 16 likely to undertake it. 17 We also did surveying. Some of the 18 measures that we -- metrics we looked at was people's 19 understanding that Manitoba Hydro has programs to -- to 20 help them improve the energy efficiency of their home. 21 So -- so we do track over time 22 customers' under -- awareness and understanding of what 23 Manitoba Hydro is -- is trying to communicate in the marketplace. We also do surveys on a -- on an end-use 24 25 basis to find out what type of behaviours customers

1 undertake.

2 MR. RAYMOND LAFOND: Thank you. 3 However, I have to -- and that could be my fault -- I 4 am not aware at all how much I could save by lowering 5 my thermostat by 1 degree during the winter and maybe 6 putting on a sweater, or by 2 degrees in the evening, 7 and I'm not sure this is prevalent amongst -- amongst 8 Manitobans.

9 MS. LOIS MORRISON: I would -- most of 10 our communication, our advertising, has been around, more recently, the Small Changes Adds Up campaigning, 11 12 which doesn't specifically say you can save 'X' amount 13 of money if you do this. We did have a campaign prior 14 to this where we did actually have that messaging on 15 the ads, but, as I mentioned, we've been in the market 16 for quite a few years and we do -- do change up the 17 messaging on our advertising to try and keep it fresh, 18 and to keep people engaged.

The advertising, as I mentioned, the Small Changes Adds Up campaigns talk about -- more so talk to what you can do as an individual to improve your energy efficiency. But you're right, it does not say specifically, you will save two dollars (\$2) a month during the winter months if you reduce your thermostat by a degree, so.

1 MR. RAYMOND LAFOND: Thank you. 2 THE CHAIRPERSON: I'm looking at the time. Mr. Peters, do you think that you would like to 3 start, or would you prefer that we hold off until 4 5 tomorrow morning? 6 MR. BOB PETERS: No time like the present, my dad always said, so let's --7 8 THE CHAIRPERSON: Okay. Okay. 9 MR. BOB PETERS: Let's use the time, because I -- I have a feeling we'll be needing it. And 10 it's not subject to a vote, I don't think, but -- but I 11 12 can be overruled, Mr. Chairman. But I am prepared to 13 proceed. 14 All right. I will proceed. 15 CROSS-EXAMINATION BY MR. BOB PETERS: 16 17 MR. BOB PETERS: And, Mr. Warden, did 18 you tell your colleagues -- and I know Mr. Rainkie was 19 lurking in the back row yesterday -- that any questions 20 that I have are not designed to elicit information that 21 the Corporation considers confidential, and so that --22 if you believe that your answer has to contain 23 confidential information, please don't disclose it. 24 You can alert the Board that there is a concern, and it 25 can be worked out with Ms. Ramage. In one (1) way or

another we can deal with it. 1 2 And, likewise, my questions that may relate to matters beyond the two (2) test years are not 3 asked in the context of a 'needs for an alternatives 4 5 to' process, but rather to provide the Board with a context in which this application is occurring. 6 7 And, lastly, Mr. Warden, my questions are seeking the best answer information for the Board, 8 9 and so I'll let the panel of witnesses decide who 10 that's -- who's able best to provide them. 11 Would that be okay to proceed on those 12 basis, sir? 13 MR. VINCE WARDEN: Yes. Thank you, Mr. 14 Peters. 15 MR. BOB PETERS: All right. In the time we do have, let's turn to Tab 1 of the book of 16 document that I circulated, which is PUB Exhibit 14, 17 18 and just remind the Board what Manitoba Hydro is asking 19 for with specifics. And, Mr. Warden, you did deal with 20 this also on page 26 of your Manitoba Hydro Exhibit 15. 21 22 And let's start with the -- Mr. 23 Chairman, I should note that the pages in this book of documents are numbered sequentially, and so a page 24 25 number will identify what -- what document we're on.

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The tabs also divide it by topics to some extent, and 1 that was the methodology behind it. So I hope the 2 parties can follow. 3 Mr. Warden, I'll start with you. 4 In the 5 application letter that was filed, letter number 'C' 6 was a request to maintain in base rates, rates approved 7 in orders 30-10 and 40-11. To cut through that, that's the 1 percent rollback that we're talking about, isn't 8 9 it? 10 MR. VINCE WARDEN: Correct. 11 MR. BOB PETERS: And when Manitoba 12 Hydro wants to keep the 1 percent in base rates, what 13 you're saying is you do not want -- sorry, you -- you 14 acknowledge that that 1 percent is already in the build 15 rate to consumers, correct? 16 MR. VINCE WARDEN: That's right. 17 MR. BOB PETERS: But it's not in what 18 Manitoba Hydro considers its base rates; meaning it's 19 fully approved and finalized rates, by this Board? 20 MR. VINCE WARDEN: No, that was 21 intended to be build rates, Mr. Peters. 22 MR. BOB PETERS: Understood. But you 23 want to -- you want to convert it over from build rates 24 over to base rates if ... 25 To approved rates, MR. VINCE WARDEN:

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1 yes. 2 MR. BOB PETERS: All right. And those approved rates, the Board can consider those as the 3 build rates; would I have that correct? 4 5 MR. VINCE WARDEN: With respect to the 6 1 percent, yes. 7 MR. BOB PETERS: All right. And you also indicate in there that the revenues that have been 8 9 accumulating in a deferral account, you'd like those 10 monies to be converted over to Manitoba Hydro's 11 revenues, correct? 12 MR. VINCE WARDEN: Yes. And to be 13 clear, the amount is \$23 million at the end of fiscal 2012. So at March 31st, 2012, 23 million plus an 14 15 additional 12 million for the current fiscal year, 16 '12/'13. So a total of 35 million in 2012/'13, and a further 12 million in the next test year, 2013/'14. 17 18 MR. BOB PETERS: All right. And we'll 19 -- we'll touch base on that in a few minutes, Mr. 20 Warden. 21 22 (BRIEF PAUSE) 23 24 MR. BOB PETERS: This 1 percent 25 rollback, sir, originates as a result of this Board's

675 final order, 5 of '12, stemming from that last general 1 rate application? 2 3 4 (BRIEF PAUSE) 5 6 MR. VINCE WARDEN: Yes. 7 MR. BOB PETERS: And this is -- the -the request didn't use the numbers, but the rate was 8 9 rolled back 1 percent as a result of that final order--10 MR. VINCE WARDEN: Yes. 11 MR. BOB PETERS: -- 5/'12, yes? Who 12 does Manitoba Hydro consider that revenue sitting in 13 the deferral account belongs to? 14 Well, until further MR. VINCE WARDEN: 15 order of this Board it belongs to the general consumers 16 of Manitoba Hydro. 17 MR. BOB PETERS: Do you consider it as 18 an over-collection then in what had been approved as 19 your base rates? 20 MR. VINCE WARDEN: No, I wouldn't say it's an over -- I wouldn't characterize it as an over-21 collection. It was a collection based on interim 22 23 approval that was -- was provide to Manitoba Hydro, so 24 we -- we collected that from customers on the basis of 25 interim approval which was sub -- subsequently rolled

back. 1 2 MR. BOB PETERS: Thank you, Mr. Warden. And then the financial statements for Manitoba Hydro 3 for fiscal '12, those statements were adjusted by \$23 4 5 million to reflect the 1 percent "rollback", as you 6 called it, in the two (2) prior years? 7 MR. VINCE WARDEN: Yes, the 23 million was not included in the determination of net income for 8 9 the fiscal year 2011/'12. 10 MR. BOB PETERS: And you said going 11 forward that if this amount is embedded in the base 12 rates it will generate an additional \$12 million a year 13 on a qo-forward basis? 14 MR. VINCE WARDEN: Yes. 15 MR. BOB PETERS: And I suppose any 16 other future rate increases would be compounded on top 17 of this? 18 MR. VINCE WARDEN: Yes, the -- the 19 financial forecast that is before this Board, the 20 IFF12, assumes that the 1 percent will remain in -- in what we've called "base rates." 21 22 MR. BOB PETERS: All right. And I'll 23 probably lose this, so I'll ask it now Mr. Warden. 24 Manitoba Hydro has already assumed that the \$35 million 25 approximately of additional revenues is in the general

consumers revenue line item on the IFF12? 1 2 MR. VINCE WARDEN: Yes. MR. BOB PETERS: The next item on your 3 application, lettered 'D', is to deal with approval of 4 5 a 2 percent interim rate increase effective April 1 of 6 2012 through Order 32/12. 7 Have I got that right? 8 MR. VINCE WARDEN: Yes. 9 MR. BOB PETERS: And on an annual basis I think you've indicated that's approximately \$25.8 10 11 million? 12 MR. VINCE WARDEN: Yes, I think I indicated it was 25 -- excuse me -- million -- \$25 13 million in 2012/'13, and 26 million in 2013/'14. Those 14 15 are rounded numbers however. 16 MR. BOB PETERS: Thank you. And again, 17 in Order 32/12 the -- the Board did not finalize that 2 18 percent rate. That's an interim rate, correct? 19 MR. VINCE WARDEN: Correct. 20 MR. BOB PETERS: And likewise, in that same order this -- the Board did not finalize the 1 21 22 percent rte increase rollback request that you sought 23 reversal of? 24 MR. VINCE WARDEN: Correct. 25 MR. BOB PETERS: And in turning to

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letter 'I' of the application in the book of documents 1 on page 1. The 2.5 percent, September 1, 2012, interim 2 rate increase was through Order 1/12, approved by this 3 panel on an interim basis only? 4 5 MR. VINCE WARDEN: Yes. 6 MR. BOB PETERS: And that generated -it was to generate approximately \$20 million of interim 7 revenues from September 1 through to March 31 of '13? 8 9 MR. VINCE WARDEN: That's correct. 10 MR. BOB PETERS: That's a seven (7) month indication, sir? 11 12 MR. VINCE WARDEN: Yes. 13 MR. BOB PETERS: In an -- that 2.5 14 percent -- sorry, that 2.5 percent interim rate 15 increase of September 1 of '12 on an annualized basis would result in approximately \$33 million, Mr. Warden? 16 17 MR. VINCE WARDEN: That's right. 18 MR. BOB PETERS: Is it tracking as 19 forecast, sir? Do you have any idea or any knowledge 20 of that? Are you on track to get that amount of 21 revenue from that rate increase, I guess is my proper 22 request, sorry. 23 MR. VINCE WARDEN: I -- would say, yes. 24 It -- you know, it's -- it's affected from month to 25 month by weather conditions, but in -- and we only have

679 results for September, October, so far. But generally 1 I would say, yes. Yes, we're -- we're on -- we're on 2 track. 3 4 MR. BOB PETERS: And, Mr. Warden, there was an issue that arose with the finalization of the 5 6 actual rates to be charged, and in my words it stemmed over an understanding of whether it was a 2 1/2 percent 7 rate increase or a 2 1/2 percent additional revenue 8 9 recovery. 10 Do you recall that issue? 11 12 (BRIEF PAUSE) 13 14 MR. VINCE WARDEN: Yeah, there was some 15 question, Mr. Peters, as to whether or not the 2.5 16 percent would apply across the board totally to all components of the bill, including the basic monthly 17 18 charge. There was clarification with this Board later 19 that -- or, subsequent that the -- it was not intended 20 for the basic monthly charge to increase, so therefore 21 it wasn't -- it -- holding the -- the basic monthly 22 charge constant at six dollars and eighty-five cents 23 (\$6.85) per month resulted in a slightly lower than 2.5 24 percent rate increase overall. 25 MR. BOB PETERS: And if I recall, Mr.

Warden, it resulted in a seven hundred and fifty 1 thousand dollar (\$750,000) a year revenue shortfall 2 from what would have been expected by the Corporation 3 on an average revenue basis, compared to a 2.5 percent 4 5 rate increase? 6 MR. VINCE WARDEN: Yes. 7 MR. BOB PETERS: All right. Is that additional seven hundred and fifty thousand dollars 8 (\$750,000) sought to be made up anywhere in this 9 10 Application? 11 MR. VINCE WARDEN: ΝO 12 MR. BOB PETERS: Mr. Warden, I'm going 13 to ask a hypothetical question just to let Ms. Ramage 14 maybe see if she can stop me here. The -- the --15 Manitoba Hydro actually asked for a 3 1/2 percent 16 interim rate increase effective April 1st of 2012. 17 Is that correct? 18 MR. VINCE WARDEN: Yes. 19 MR. BOB PETERS: And you were awarded -20 - Manitoba Hydro was awarded 2 percent. 21 MR. VINCE WARDEN: That's right. 22 MR. BOB PETERS: Had Manitoba Hydro 23 received 3 1/2 percent on April 2 of 2012, would there 24 have been a September 1st interim application? 25 I would say mostly MR. VINCE WARDEN:

likely not. The annualized amount of 2 percent 1 effective April the 1st, 2 1/2 percent effective 2 September the 1st, is 3.57 percent. So -- so, no, I 3 4 would say if we had received the three point five 5 (3.5), we would not have sought the additional two and 6 a half $(2 \ 1/2)$. 7 MR. BOB PETERS: All right. You acknowledge then that the 2 percent on April 1st and 8 the 2 1/2 percent on September 1st was equivalent to 9 10 three point five-seven (3.57) for the entire fiscal 11 year? 12 MR. VINCE WARDEN: Yes. MR. BOB PETERS: And if we look forward 13 14 to the next fiscal year, Mr. Warden, that 2 percent on April 1st and the 2 1/2 percent on September 1st, 15 16 that's going to look like 4 1/2 percent starting April 1 of 2013, isn't it? 17 18 MR. VINCE WARDEN: In the base to which 19 further increases would be applied, yes. 20 MR. BOB PETERS: Well, I'm not sure 21 what that answer means, Mr. Warden. But effectively, 22 starting April 1st of 2013, whatever happened this year 23 amounts to $4 \ 1/2$ percent? 24 MR. VINCE WARDEN: In total, yes, I 25 think we're agreeing.

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1 MR. BOB PETERS: Okay. 2 3 (BRIEF PAUSE) 4 5 MR. BOB PETERS: Mr. Warden, we're 6 fighting over your Exhibit 15. But this morning when 7 you compared and you spoke to Board member Lafond about rates in different jurisdictions, I think also the 8 9 Chair, you had a compilation where Manitoba Hydro was indexed at a hundred (100), and then I think the 10 11 province or Quebec was perhaps 110 percent of Manitoba. 12 Do you recall that? 13 MR. VINCE WARDEN: Yes, I do. 14 MR. BOB PETERS: And while I can't put 15 my finger on the page number, did you reflect an 16 increase going forward on page 36. When -- when I look at your page 36 of Exhibit 15 you show under the 2012 17 18 column Manitoba Hydro a 3.6 percent interim increase, 19 correct? 20 MR. VINCE WARDEN: Yes. 21 MR. BOB PETERS: How does that get 22 translated into 4 1/2 percent going forward, or does 23 it? 24 25 (BRIEF PAUSE)

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1 MR. VINCE WARDEN: It must be late in the day, Mr. Peters; I'm going to have to dwell on 2 that. The -- the average rate increase for the -- on 3 page 36 that I referenced was the 3.57 or the 3.6 4 5 percent was the average rate increase in that year. 6 We are requesting a further 3.5 percent 7 rate increase in '12/'13 over and above the three point five-seven (3.57) that was -- that we're re --8 9 requesting to be finalized in 2011/'12. 10 11 (BRIEF PAUSE) 12 13 MR. VINCE WARDEN: Now, how does that compare to the four (4) point -- I -- I'll have to give 14 15 that a little bit more thought and maybe I'll come 16 back, if you don't mind, in the morning with a better 17 answer than I'm -- it -- it is, you know, there's no --18 no denying that two (2) plus two and a half $(2 \ 1/2)$ is 19 four and a half $(4 \ 1/2)$, that -- that finds its way into customer's bills, to which we're applying another 20 21 three point five (3.5). So the cumulative rate 22 increase would be perhaps higher than what's indicated 23 here. 24 MR. BOB PETERS: Is the top line on 25 page 36 of Manitoba Hydro Exhibit 15 an attempt to show

annualized rate increases? 1 2 MR. VINCE WARDEN: Well, it is, but the cumulative increase is -- is also to show the, you 3 know, the impacts of -- of compounding those rate 4 5 increases over -- over time. 6 MR. BOB PETERS: Maybe I can leave you to do that overnight, although I don't want you to lose 7 much sleep over it. Manitoba Hydro has under the 2010 8 column taken in the 2.8 percent rate increase, which in 9 essence has reinstated that 1 percent rollback that 10 11 we've talked about earlier? 12 MR. VINCE WARDEN: Yes, that's right. 13 MR. BOB PETERS: Mr. Warden, and Mr. 14 Chairman, recognizing the time I'd be prepared to stand 15 down at this time if you wish. 16 THE CHAIRPERSON: I was hoping that we 17 would wring more service out of the two (2) fellow 18 Board members who are -- but I think we can -- we can -19 - it's probably appropriate to adjourn right now. Is 20 there any service to attend to before we adjourn? I'm 21 sorry --22 MR. RAYMOND LAFOND: I have --23 THE CHAIRPERSON: -- you do have a 24 question? 25 MR. RAYMOND LAFOND: -- I have -- yes,

685 thank you. This is in line with the -- and that's why 1 I'm asking it now, in -- in line to the rate increases. 2 What -- what Manitoba Hydro is applying for is 3.5 3 percent for the current year and the following year --4 5 or next year and the following year. And -- however, 6 it's looking at a 3.95 or 4 percent increase for the 7 following eighteen (18) years. 8 Why three point five (3.5) for the next 9 two (2) years and 4 percent for the following eighteen (18) years, rather than 4 percent across the board? 10 Ι mean, there must be a reason for this. 11 12 MR. VINCE WARDEN: Yes, there is a 13 reason, Mr. Lafond, we had applied for the 3.5 percent. 14 In -- in our -- in our previous financial forecast, 15 IFF11, the rate increases were 3.5 percent per year. 16 So we had already applied for the rate increase of three point five (3.5) on the basis of that 17 18 forecast. The fore -- IFF12 was prepared targeting 19 what -- what kind -- what magnitude of rate increase is 20 required to get back to our 75:25 debt-equity ratio. 21 And that worked out arithmetically to 3.95 percent per 22 year. 23 MR. RAYMOND LAFOND: Thank you. 24 25 (PANEL RETIRES)

THE CHAIRPERSON: Are there -- sorry, anything we need to do before we adjourn? MR. BOB PETERS: I have no matters to be attended, and I don't see counsel across the room indicating either, Mr. Chairman, so I think until 9:00 tomorrow we'll be fine. THE CHAIRPERSON: Okay. So let's adjourn now, then, and we'll see each other again tomorrow morning at 9:00. Good night. 11 --- Upon adjourning at 4:32 p.m. 15 Certified correct, 20 Cheryl Lavigne, Ms.

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