MANITOBA PUBLIC UTILITIES BOARD

RE:

MANITOBA HYDRO'S

APPLICATION FOR APPROVAL OF

ENERGY INTENSIVE INDUSTRIAL RATES

Before Board Panel:

Graham Lane	- Board Chairman
Robert Mayer	- Board Member
Susan Proven	- Board Member

HELD AT:

Public Utilities Board

400, 330 Portage Avenue

Winnipeg, Manitoba

January 22, 2009

Pages 1473 to 1584

APPEARANCES

Bob Peters		)Board Counsel
Patti Ramage		)Manitoba Hydro
Janet Mayor		)
Byron Williams	(np)	)Coalition
John Landry		)MIPUG
Michael Anderson	(np)	)MKO
Bill Gange		)RCM/TREE
Beth Tait-Milne		)

TABLE OF CONTENTS

LIST OF EXHIBIT

--- Upon commencing at 1:07 p.m.

THE CHAIRPERSON: Okay. Good afternoon, everyone. We're here today gathered to hear Manitoba Hydro's closing statement.

Before we call on Ms. Ramage I'd like to note that we have received, albeit late, MKO's submission. Counsel has surveyed Manitoba Hydro and it's the Board's understanding -- Ms. Ramage could correct me if I'm wrong -- that they don't have any objections to it being added to the record. Thereby, the submission will be reflected in the records as MKO Exhibit Number 2.

--- EXHIBIT NO. MKO-2: MKO's closing submissions

WRITTEN FINAL SUBMISSIONS BY MKO - INSERTED BELOW:

2008 Manitoba Hydro Energy Intensive Industrial Rates Application

Outline MKO's Final Summation and Recommendations

January 20, 2009

1. The Chairman succinctly set out the core issue of concern to the shareholders, to the customers and to the regulator that underlies any

consideration of Manitoba Hydro's proposed Energy Intensive Industrial Rate (EIIR) in the Chairman's opening remarks at Tr. 33 (and as also noted at page 374 of Order 116/08:

> "In the days ahead, the Board looks forward to your assistance in its gaining a further understanding as to how best to address the issue of embedded cost rates being considerably lower than marginal costs and the potential negative financial impact that can result to the Utility and its domestic customers."

2. Manitoba Hydro described its corporate objectives for the EIIR in its Application and at PUB/MH-1-1(c). Manitoba Hydro's objective No. 1 for the EIIR is "economically more effective price signals." It remains MKO's view that the design of rates for all customer classes must address the "issue of embedded costs rates being significantly lower than marginal costs" - and not just through the design of a unique rate to apply to those customers within the General Service Large (GS Large) class who are forecasting significant load growth. MKO recommendation No. 16 in the 2008 General Rate Application stated:

"MKO suggests that properly designed inverted rate structures could accomplish the goals Manitoba Hydro is trying to achieve with their proposed energy intensive rate design and that Manitoba Hydro should propose such rates for all customer classes in the next proceeding. As noted by Manitoba Hydro, the hydroelectric generation built in Manitoba provides more than economic benefits, it also provides "quality of life" benefits (April 30, 2008 Tr. 3143 4-12). Inverted rates must reflect an appropriate trade-off between providing the appropriate level of "quality of life" benefits and maximizing the economic value of Manitoba Hydro's generation capability. In this regard, MKO further recommends that the Board order that the application of any inverted rate structure for any customer class must be accompanied by universally available and practically accessible DSM programs that are provided by Manitoba Hydro on a turnkey basis, as recommended by Mr. Dunsky."

3. Manitoba Hydro explained the removal of the previous exemption criteria in response to MKO 1-5 and PUB-MH 1-11(f) stating:

"Manitoba Hydro listened to the interveners and stakeholders who expressed a strong position that it was not Manitoba Hydro's responsibility to determine which companies were good for the province. This new rate proposal was designed to generally address the potential rate impacts associated with the rapid growth of energy intensive industries without the use of any economic benefit exemption criteria."

MKO suggests that the objective of any exemption criteria is perhaps unintentionally oversimplified by describing such a criteria as a mechanism for determining "which companies were good for the province." In any case, MKO has previously argued and agrees with Manitoba Hydro that the appropriate persons to make such a determination are the province of Manitoba in close consultation with First Nations, Manitoba Hydro's customers and stakeholders.

However, as already noted and alluded to by Manitoba Hydro in Objective No. 4 at PUB/MH 1-1(c), rate-making decisions - including those related to the proposed EIIR - must inevitably consider and incorporate broader societal values and goals, such as "quality of life" and "economic expansion of industry."

4. MKO would state the central objective of the shareholders, the customers and the regulator ought to be ensuring that the water power resources of Manitoba and the electricity generated by the development of these water power resources must achieve maximum value and benefits for Manitobans and in particular for those Manitobans who are adversely affected by Mantioba Hydro's projects and operations. The MKO First Nations therefore have a direct purpose in ensuring these values and benefits are achieved, which is intensified by the intimate relationship between Manitoba Hydro and the MKO First Nations established on Manitoba's developed waterways.

5. MKO submits that the appropriate persons to make a determination of whether the "maximum value and benefits for Manitobans" is being achieved are the province of Manitoba in close consultation with Hydro-affected First Nations, Manitoba Hydro's customers and stakeholders. In this respect, MKO is not comforted

by Manitoba Hydro's representation at MKO/MH 1-5 and to PUB/MH 1-18(d) that adequate proof of the engagement and authorization of the provincial government is reflected by the approval of the proposed EIIR by the Manitoba Hydro Board.

6. For example, while it appears that the Board and all parties including MKO agree with the general objective of ensuring that the sales of electricity achieve the revenues necessary to address costs - including all social and environmental costs - and risk to meet the needs of domestic customers, Manitoba Hydro's Objective 2 for the EIIR as set out at PUB/MH 1-1(c), being to "limit reductions in revenues caused by displacement of exports" by sales to one group of domestic customers in order to "limit or reduce rate increases" to domestic customers, is also properly a matter of public policy. Other options for the application of any EIIR revenues also exist, such as mentioned during the discussion between Mr. Peters and Mr. Chernick at Tr. 869-870 regarding direct application of EIIR revenues for the promotion of economic development.

7. In making such determinations of public policy, MKO submits that Manitoba owes a duty to the First Nations affected by Manitoba Hydro's projects

and operations to ensure that "maximum value and benefit" is being achieved. MKO asks the Board to take judicial notice of Article 18.2 of the December 16, 1977 Northern Flood Agreement, which assures:

> "18.2 Canada and Manitoba recognize that 'the Project is intended to benefit all citizens of Canada, and most particularly of Manitoba,' on the one hand, and that the resource users have been and may continue to be adversely affected on the other hand, and that 'it is in the public interest' to ensure that any damage to the interests, opportunities, lifestyles and assets of those adversely affected be compensated appropriately and justly. [emphasis added]

8. MKO also asks the Board to take judicial notice of Article 18.4 of the Northern Flood Agreement, which further assures:

> "18.4 The Project affects the activities and traditional lifestyles of the communities and anxieties have developed regarding the viability of the communities, the free and safe use

> of the waterways, and 'the continued opportunity to carry on traditional activities, particularly as they relate to the wildlife resources as a source of food, income-in-kind and income.' These anxieties may be allayed by Hydro, Manitoba and Canada using their best efforts 'to ensure that potential benefits of the Project are made available' in a practical manner to the residents of each Reserve. [emphasis added]

The Northern Flood Agreement acknowledges that the wildlife resources adversely affected by The Project would otherwise be employed by the residents of each Reserve as a "source of food, income-in-kind and income." The Northern Flood Agreement also assures that the "potential benefits of The Project are made available" to address the adverse effects of The Project. Using the Merriam-Webster dictionary's definition of capital (noun) as "accumulated goods devoted to the production of other goods" or "accumulated possessions calculated to bring in income," it is arguable that the "wildlife resources" referred to in the Northern Flood Agreement are capital invested in The Project and that the "potential benefits of The Project" are a return on that investment.

9. Discussion during the proceeding touched on the role and expectation of shareholders in respect of the financial performance of utilities generally and of Manitoba Hydro specifically, such as Mr. Mayer's comment at Tr. 871, Mr. Ostergaard at TR. 1058 and 1135. MKO's recommendation No. 17 in the 2008 GRA stated that:

> "As to the Board's consideration of who is the 'shareholder' of Manitoba Hydro, MKO recommends that the Board acknowledge that the Hydro Affected First Nations are also the original capital investors in the Manitoba Hydro system, as is acknowledged under Article 18.3 [18.4] of the 1977 Northern Flood Agreement. MKO recommends that the Board acknowledge that the Hydro Affected First Nations are - at a minimum, co-investors in the hydroelectric generating facilities and are, in effect, perpetual holders of Class 'A' shares in Manitoba Hydro for which a return on investment should be

identified and 'paid' by Manitoba Hydro."

10. MKO submits that the MKO First Nations are both customers of Manitoba Hydro and historic capital investors and "shareholders" in the development of Manitoba's water powers and ought to be directly engaged in any discussion of significant changes in Manitoba's energy policies or in the financial, operational and rate-setting policies of Manitoba Hydro, including in respect of ensuring maximum value and benefits from the sale of electricity to domestic customers.

11. In respect of the proposed EIIR, MKO notes that four "models" have been addressed: Manitoba Hydro's proposed EIIR; the proposal advanced by Mr. Chernick; the BC Hydro "Stepped Rate" and BC Hydro's "System Expansion." MKO adopts Mr. Williams' able summary and comparison of the various models based on the evidence.

12. MKO agrees with the Coalition's observation made during Mr. Williams' summation that while much has been learned during the proceeding regarding means to address the issue of embedded costs rates being significantly lower than marginal costs in respect of the potential impacts on Manitoba Hydro of

expanding GS Large customers; the Board ought not to approve the EIIR as proposed by Manitoba Hydro. MKO also supports the Coalition's recommendation that the Board direct Manitoba Hydro to further consider the EIIR in the context of a "needs and alternatives" analysis.

13. As to Manitoba Hydro's request that the Board approve December 31, 2007 as the date for determining the baseline load for the purposes of any EIIR, MKO agrees that December 31, 2007 should be used to set the load "cap" for the purpose of further refinement of the EIIR proposal. In respect of any future application by Manitoba Hydro of any baseline load determination to GS Large customers, MKO recommends that the Manitoba Hydro further develop the EIIR proposal through the addition of an appeal mechanism in respect of the customer baseline load as discussed at Tr. 463.

14. MKO also recommends that an appropriate service extension policy be developed to accompany any future EIIR in order to address the potential for disproportionate cost of load expansions by GS Large customers.

15. While taking no position on Mr. Turner's comments at Tr. 1215 in respect of any assurances made by Minister Selinger to Canexus, MKO is satisfied that Manitoba and Canexus likely had

discussions regarding the energy requirements associated with at least a portion of the expansion of Canexus's operations in Brandon. Again, while taking no position on the operations and expansion plans of Canexus, MKO is concerned that Manitoba Hydro is asking the Barod to approve an apparently discriminatory rate which will have the practical effect of limiting the further expansion of a single GS Large customer, which expansion may have been implicitly, if not explicitly, endorsed by Manitoba.

16. For these and other reasons enumerated by MKO during the GRA, MKO submits that Mr. Turner's comments are further reasons why the Board ought to receive clear direction from Manitoba before approving the EIIR or any rate similar to the EIIR. In the alternative, the Board should request and receive the explicit endorsement of the Province of Manitoba for any proposed EIIR prior to approving any such a rate. MKO's recommendation No. 25 in the 2008 GRA stated that:

> "MKO requests that Manitoba Hydro provide confirmation from the Manitoba government and to file the appropriate documents in the upcoming proceeding clearly showing that the Manitoba government directs Manitoba Hydro to seek approval for a new rate for new

and expanding energy intensive
industries."

17. Finally, MKO recommends that Manitoba and Manitoba Hydro engage the Hydro-affected First Nations, Manitoba Hydro customers and stakeholders in a broad public policy initiative conducted under the auspices of the Board to consider public and economic development policy and rate-setting matters including:

- the "issue of embedded costs rates being significantly lower than marginal costs"'
- inverted rates for all customer classes;
- an EIIR;
- "quality of life";
- "economic expansion of industry";
- universally available and practically accessible DSM programs provided by Manitoba Hydro on a turnkey basis;
- means to ensure "that (the) potential benefits of the Project are made available in a practical manner to the residents of each Reserve."

(END OF MKO WRITTEN SUBMISSION)

THE CHAIRPERSON: I also am advised that we should probably note that the final version that came through was dated today at 11:53 a.m., but counsel advises that he cannot detect any difference from the one that was received yesterday. So I think we can probably take some comfort and assume that Ms. Ramage has had a full opportunity to have a look at MKO's submission, but I don't want to take any liberties on that.

Ms. Ramage, do you want to check with Mr. Peters or...?

MS. PATTI RAMAGE: I can indicate we had an opportunity to -- to look at the submission. I don't know if I'd call it a full opportunity, but from our -- our fairly cursory look at it we didn't see any issues raised that we won't be addressing in our final argument, any issues of relevance that we won't be changing -- or addressing in our final argument. I haven't seen this other version, but I'm sure the Board would allow us, if we did look at it and saw something that needed addressed, to address that at a later date.

THE CHAIRPERSON: Yes, in writing if that event occurs. Mr. Peters has had a quick look at this latest version. He doesn't believe it's any different than the one of yesterday but there may be some subtle change in it that we'll detect at later review.

Okay. So now we'll call on Manitoba Hydro -- Ms. Ramage, for Manitoba Hydro's closing statement.

FINAL SUBMISSIONS BY MANITOBA HYDRO:

MS. PATTI RAMAGE: Thank you, Mr. Chairman. Mr. Chairman, in your -- in your comments immediately prior to Intervenor closing submissions, you indicated that when Manitoba Hydro's turn to speak arrived the Board wants to hear Manitoba Hydro comment on its application and its response to any criticisms raised.

You also indicated the Board expects Manitoba Hydro to file -- to provide its views of the strengths and weaknesses of any alternatives raised by Intervenors during their closing submissions. Finally, you asked Manitoba Hydro to share with the Board information regarding any other alternatives Manitoba Hydro may have considered in the course of developing or advancing its application.

Manitoba Hydro intends to address each of these topics in closing submission. We will be addressing the urgent need for this application and the rationale behind the Energy Intensive Industrial Rate. We will discuss the various components of the proposal:

The 100 gigawatt hour threshold, the growth allowance, the 1,500 gigawatt hour cap, and the Tier 2 rate. And we will respond to the concerns and criticisms that have been raised, not only during final submissions, but also during the evidentiary portion of the hearing.

Next in our submission, we intend to address comments regarding the sufficiency of the information before this Board. Manitoba Hydro is strongly of the view that there is sufficient information before the Board to allow it to make its determination.

When we look at the breadth of information this Board has before it at the close of the evidentiary portion of the hearing, I believe the Board will agree that it has the information it requires and can make its determination in the best interest of electricity ratepayers of Manitoba.

I will also be addressing the Board's jurisdiction when exercising its rate approval function. While this Board has a very specific and defined mandate, with respect to Manitoba Hydro, the approval of rates, it has been afforded broad discussion as to how it carries out that function. While rates must be just and reasonable and not unduly discriminatory, such assessment is to be carried out in the context of the Board's legislated mandate, which is to balance the needs of the

Utility and those of its diverse stakeholders.

I will also be reviewing the various options Manitoba Hydro has considered in the course of developing and presenting its application. I understand the Board wants to hear about all the options considered, and that's not a short list.

At this point it may be useful to look -- to note that we have distributed a list of options considered, and with the Board's concurrence we will mark this listing as Exhibit MH -- now, I've left a blank in my notes. I'm wondering if Mr. Gaudreau could let us know the number.

And while he's doing it I should also point out that with that we also distributed an outline of Manitoba Hydro's arguments, just so that you have a scorecard to see how we're doing in terms of time.

Mr. Peters advises that he believes that's Exhibit Manitoba Hydro 20.

THE CHAIRPERSON: Okay, subject to check.

--- EXHIBIT NO. MH-20: List of options considered by Manitoba Hydro

CONTINUED BY MS. PATTI RAMAGE:

MS. PATTI RAMAGE: Now, I don't intend to go into detail regarding each and every option considered, as it's readily apparent that most are simply not viable in Manitoba.

We will also be examining the options put forth by Intervenors. None of these options came as revelations to Manitoba Hydro. Their strengths and weaknesses had already been assessed by the Corporation before coming to the conclusion that the proposal you have before you represents the optimum balance that can be achieved in the circumstances.

After six (6) days of hearing, Board counsel's -- I'm sorry, later six (6) days of hearing, as well as argument from the Coalition, MIPUG and RCM/TREE, this Board is well acquainted with the specifics of Manitoba Hydro's rate proposal. I don't believe a detailed description is necessary.

Manitoba Hydro's position is that the Energy Intensive Rate is needed to address a serious issue. As the Public Utilities Board clearly stated at page 3 of its Order, 117 of '06, and I quote:

> "When there are export opportunities at prices in excess of rates charged to Manitoba consumers, Manitoba Hydro can increase its overall revenue and net income by selling to its export

customers rather than the domestic market.
When it does not, that is, Manitoba Hydro sells the energy to a domestic customer, which is always its first priority, overall Manitoba Hydro's revenue and net income are lower than otherwise would be the case -- than otherwise would be the case.
Linkages between export potential, Manitoba consumption, and average industrial rates below average export prices prompted Manitoba Hydro to express concern related to large industry energy intensive firms.
The Board's description of the problem is a good description.
Simply put, when a small group of customers uses an exponentially large amount of power it reduces the amount of power available for export and has the effect of driving up costs for all customers."

It's a relatively straightforward problem; that is not to say that the solution is straightforward.

Manitoba Hydro is keenly aware that the solution requires the balancing of multiple often competing interest.

But that is exactly what this Board is empowered to do. This is the third hearing where we're discussing the impacts of disproportionate load growth amongst our largest customers yet we're still being dragged back into the debate whether there is a problem.

The PUB has recognized the problem. It's time to move on and focus on the solution. This isn't the first time Manitoba Hydro's expressed its concerns and the Board has been sympathetic. In Order 117 of '06, the Board stated:

> "In this Board -- [or] In this Order the Board supports Manitoba Hydro's concern and directs the establishment of a new industrial class, one that would include new industrial heather -- heavy energy consuming firms meeting a to be defined profile with respect to time-of-use, energy consumption, and demand."

And there I refer to page 54 of that order.

The Board's views on this subject were further enunciated in Order 8 of '08, which dealt with

MIPUG's motion to sever hearing the Energy Intensive Industry Rate from the 2008 GRA. There the Board said:

"Obliging Manitoba Hydro to undercharge, considering market price levels for energy, not only existing large industry electricity load but also new industrial load, whether from new industry coming into the province or by existing industry expanding operations, would be to penalize domestic, residential, commercial and institutional customers to the benefit of large industry. The penalty would even extend to existing large industry and would come in the form of higher rates."

The Board's view is expressed in Order 117/'06, was that:

"Manitoba Hydro's revenue base, financial situation and plans, and its existing customers need to be afforded protection against the risk that new or materially expanded current industry requires new electricity load at prices which would drive the prices for all customers higher, as well as the risk of advanced construction dates for new projects with potentially damaging financial implications. Manitoba Hydro sells electricity to large industry at rates below the rates it could obtain for sales to export market, and at rates below those offered by other North American jurisdictions."

And there I'm quoting from page 25 of that Order.

Following a review of the issues in the context of Manitoba Hydro's 2008 GRA, the PUB agreed with Manitoba Hydro, stating:

"Identifying the problem is relatively straight forward. The solutions are more elusive."

And there I refer to page 317 of that order.

Well, it's now 2009. The Coalition and RCM/TREE agree with Manitoba Hydro's assessment that there exists a significant issue, an issue of importance. While at least one (1) MIPUG member acknowledged, during the presentation portion of the hearing, the need to address this problem and went as far as to support

Manitoba Hydro's proposed solution.

Those who are most negatively impacted by the proposed solution still want to debate the existence of the problem. It's time to move on and put a solution in place. We cannot sit back and wait until this load materializes to a greater extent than it already has. Whether we're talking about a new 500 megawatt load, a new 50 megawatt load, or a large expansion of an existing customer, the fact remains theses loads -- load increases drive up costs to other customers. The solution needs to be put in place so that industry knows the rules of the game when making location and expansion decisions and customers are adequately protected when those plans materialize.

Now I'm going to focus next on the source of the problem.

Manitoba Hydro has stated on numerous occasions that large Energy Intensive Industry is being attracted to Manitoba on a scale large enough to threaten the Corporation's revenue position. The Coalition and RCM/TREE appear to accept the accuracy of this statement. MIPUG does not.

With PUB approval of new rate schedules to domestic customers, effective July 1st, 2008, dependable energy sales to major industrial customers typically earn the Corporation about three point three (3.3) cents per kilowatt hour. As noted in Manitoba Hydro's Application, page 3, at line 13, the average value of firm long-term export sales made during fiscal 2007/2008 was five point two five (5.25) cents per kilowatt hour. This was down from five point eight (5.8) cents per kilowatt hour the previous year.

Even at the lower of these values, however, a large energy intensive load of approximately 100 megawatts can reduce corporate revenue by approximately $14 million annually, thereby necessity -- necessitating a rate increase of approximately 1.4 percent to all domestic customers served by Manitoba Hydro.

Manitoba Hydro expects that the combination of higher fuel costs and internalized carbon costs will lead to significant increases in the prices of electricity in the markets into which Manitoba Hydro exports. Absent substantial domestic rate increases going forward, the gap between rates based on embedded cost and expect -- and export prices is expected to widen.

For the year 2008/2009 only, the levelized marginal cost is estimated at five point seven eight (5.78) cents per kilowatt hour. In the longer term, Manitoba Hydro estimates its marginal cost of generation and transmission to be in the order of seven (7) cents per kilowatt hour, levelized over twenty (20) years. And there I refer you to the application at page 3 line 21.

The indisputable fact is that virtually all new loads added to the Manitoba grid expose the Corporation to future costs which are greater than the incremental revenue received from these loads at rates applied to all classes of service; with perhaps the exception of residential and small general service, and -- and that exception I'll deal with later in my argument.

So the obvious question is: If all new loads expose Manitoba Hydro to future costs, or most new loads expose them to future costs, which are greater than incremental revenue received from these loads, why is this rate applicable only to Manitoba Hydro's largest customers, those served at -- at greater than 30 kV and who consume more than 100 gigawatt hours per year or energy? The answer is: Large loads have a greater impact on the need to advance new generation or on the reduction of surplus available for export.

Industrial loads are growing much faster than other Manitoba Hydro loads. The gap between revenue received from these loads and the export revenue foregone is larger and at least some of these loads are price sensitive.

Manitoba Hydro Exhibit 17 demonstrates very clearly the significance of large industrial load increases on the need to advance new generation and the impact on exportable surpluses. That exhibit demonstrates that forecast loads served at over 30 kV for the year -- I'm sorry, for the year; it'll be 2010/2011 -- they increased by 1,000 -- 1,257 gigawatt hours from 2003 to 2007, as compared to an increase of only 422 gigawatt hours for all remaining domestic customers.

In percentage terms, the significance is probably more obvious. With the forecast for GSL greater than 30 kV increasing by more than 20 percent compared to a little over 20 percent for the rest of customers. General service large greater than 30 kV accounted for 75 percent of the increase in forecast loads. 75 percent.

As Mr. Chernick noted during his direct examination:

"So the place where the forecast is growing, where things are changing, and where the energy use is -- is eating into the opportunity for export sales, seems to be primarily in the GSL class. So again, starting where the -- the load growth is occurring seems to be a reasonable way to prioritize these rate design issues."

And there we are referring to transcript page 799, at lines 5 through 11.

Changes from one (1) load forecast to another, as depicted in Exhibit Manitoba Hydro 17 are not the only indicator of significantly more rapid growth by the GSL greater than 30 kV class. As shown in Manitoba Hydro's rebuttal evidence at page 27, the increase in actual load of GSL greater than 30 kV, from 1998/'99 to 2007 to 2008, is 1,842 gigawatt hours, or 44 percent over nine (9) years. Examination of the 2008/2009 load forecast demonstrates that the load growth of these -- of this group of customers accounted for 50 percent of total domestic load growth during the nine (9) year period. 50 percent.

When we narrow our focus to the energy intensive segment of the greater than 30 kV classes, we see that the increase in load from 1998/'99 to 2007/2008 was 103 percent. This segment's load increase accounted for 70 percent of the increase for the entire greater than 30 kV general service large classes.

There I'm referring to page 27 of Manitoba Hydro's rebuttal evidence. This was also discussed with Mr. Williams at transcript pages 531 through 532.

Now, taking those numbers and contrasting them with the residential class load, I note that the residential class load increased by only 19 percent or 1,055 gigawatt hours over that same period.

Going forward, the general service greater than 30 kV load is forecast to increase by 2,137 gigawatt hours over the ten (10) period to 2017/2018. Again, from the same load forecast, we see that this is 54 percent of total domestic load growth forecast for the period. And again, that contrasts with forecast load growth of only 851 gigawatt hours or 21 percent for the residential class. Now MIPUG hasn't taken issue with Manitoba Hydro's load forecast information as confirmed in PUB/MIPUG-XXI.

Now I want -- I next want to deal with the gap between domestic customer rates and export revenue, which is the largest for the GSL greater than 30 kV load. As discussed in Manitoba Hydro's application at page 4 at line 11:

> "During the 2008 GRA, Manitoba Hydro's evidence was that the marginal cost to serve a -- to service a large industrial load was six point four (6.4) cents per kilowatt hour, while the marginal cost to serve a -- to

serve mass market [that being the residential and small customers] was about seven point two (7.2) cents per kilowatt hour. At the same time, the average revenue from a large industrial was determined to be three point two (3.2) cents per kilowatt hour, whereas the average mass-market revenue was six point four (6.4) cents per kilowatt hour. Hence [and this is the important part] the approximate revenue loss associated with the diversion of a kilowatt hour from the export market is three point two (3.2) cents for -- for an industrial customer, compared to about point eight (.8) cents for a mass-market customer."

Mr. Wiens concluded at transcript page 90, line 2, that:

"It is possible that increases in residential or general service small-demand loads may actually reduce revenue requirement, while an increase to a general service large load will almost certainly increase revenue requirement."

Summing the effects of their significant contribution to load growth with the relative gap between domestic rates and marginal costs suggests that load expansion by GSL greater than 30 kVs, especially in the energy intensive industry, will account for a significant majority of the cost of diversion of electrical energy from the export to the domestic market over the next five (5) years. The proposed Energy Intensive Rate is intended to mitigate this impact, while still providing for growth of all industry within the province.

In their evidence, Messrs. Bowman and McLaren, have atten -- attempted to dismiss Manitoba Hydro's view that large industrial load growth, particularly of energy intensive industry, at rates significantly in excess of load growth of other domestic classes, is a reason for concern.

To support their denial of this concern they cite four (4) factors. Manitoba Hydro's perspective is that none of these four (4) factors alleviates the concerns regarding the growth of large, energy intensive loads being driven at least in part by low rates for firm electricity. And I'll deal with each of those four (4) points in turn.

MIPUG suggested, in its closing

submission, that Manitoba Hydro had failed to provide evidence in support of its premise that recent growth was unexpected or extraordinary. Manitoba Hydro has never suggested that recent gross -- growth was not anticipated, nor that failure to anticipate growth is a premise for establishing the rate.

That the GSL greater than one hundred (100) load has not grown any more rapidly than was forecast in 1990 -- 1998, as pointed out in MIPUG's pre-filed evidence, is not a relevant consideration, with respect to this issue.

The concern is not whether the load increase may or may not have been forecast in some previous load forecast, but rather that the load is growing more rapidly than any other load in this province, and at least some of that load is attributable to low rates -- or some of that growth is attributable to low rates.

Manitoba Hydro's low -- load forecast for major customers substantially reflects the planning information provided to Manitoba Hydro by the customers themselves. The load forecast itself is completely neutral as to whether or not these rates should be of concern. These points are clearly set out at page 14 of Manitoba Hydro's rebuttal, and also by Mr. Wiens at page

88 of the transcript.

The MIPUG's witness' observation that forecast load growth of GSL greater than 100 kV is now expected to be less than actual growth during the 19 -- during 1998, '99, through 2007, 2008 is again irrelevant to the analysis of the problem.

The expected load growth of large industry, particularly energy intensive industry, is still expected to be significantly greater than growth of any other classes of customers. As noted at page 14 and 15 of Manitoba Hydro's rebuttal evidence, and page 89 of the transcript, the acknowledged year-to-year changeability of forecast for large load also affects the relevance of this observation.

MIPUG also suggested that the fact that as between the 2007 and 2008 load forecast that large customer forecast increases have declined by some 440 gigawatt hours for the 2016/'17 fiscal year. That -- that is evidence that rapid industrial growth is not an issue for Manitoba Hydro.

To the contrary, this observation actually relates to price sensitivity of large energy intensive loads. And Mr. Dudar discussed this at transcript page 651.

And this point was also picked up on by

Mr. Williams in his closing submission. And that is that most of this reduction is forecast due to existing or perspective new customers reconsidering their plans, in light of Manitoba Hydro's well publicized intent to seek approval of the Energy Intensive Rate.

Manitoba Hydro's rebuttal evidence found at page 15 refutes my -- refutes MIPUG's suggestion that residential loads have increased traumatically with -- and with that suggestion, the implication being that Manitoba Hydro and the PUB should be more concerned about residential load growth. The statement is misleading because it ignores the impacts of weather.

When the actual residential loads are adjusted to reflect weather variability, the annual load increase between 2005/'06 and 2007/'08 averages 1.8 percent per year. Similarly, the characterization of residential load forecast increase, in Bowman and McLaren's pre-filed evidence, depicts absolute forecast load increases and changes from one forecast to another.

This characterization masks the fact that current forecast increases to residential loads are expected to be about 1.2 percent over the next ten (10) years, significantly below the current forecast for industrial loads.

In summary, the evidence on the record in this proceeding is clear and unequivocal. Recent and projected load growth by large energy intensive industry is disproportionate to other classes of service and has had a significantly greater impact on Manitoba Hydro revenues and the cost that must be recovered from all domestic rate classes. As both this Board and Manitoba have stated over the past several years, there is a real issue here and it must be dealt with.

Now before moving onto the specifics of Manitoba Hydro's proposal I would like to address the role of price sensitivity, with respect to new or expanding loads in Manitoba.

The epocee (phonetic) of a price signal is reflected not only in the forecast of load that may be subject to it, but also in the decisions of companies that choose to locate elsewhere or defer expansion because of it.

Manitoba Hydro testified that it is aware of one (1) such load that has abandoned plans to expand in Manitoba owing to the potential introduction of this rate, and has chosen to upgrade an existing inefficient facility that was originally scheduled to close within four (4) to six (6) years in a higher priced electricity market.

Manitoba Hydro's experience of recent

years, as well as the declared location drivers of one (1) of the MIPUG members on the record at the 2008 GRA proceeding, are a testament to the price sensitivity of at least some large industrial loads in Manitoba.

Mr. Turner of Canexus provided the following as part of his presentation.

"Most of the more recent expansions were awarded to the Brandon facility due to the fact that Manitoba Hyd -- Manitoba has had a history of very stable and cost effective power rates. This has been a positive factor in convincing our Board of Directors that expansion should occur in Manitoba."

He also said:

"Increasing uncertainty, with respect to the continued stability of hydro pricing over the past two (2) to three (3) years, has caused us to seriously re-evaluate our -- our options, in order to justify a further expansion of the Brandon plant."

And there I'm referring to the 2000 and -- GRA, transcript pages 2791 through 2793; it's where those two (2) quotes were selected from.

So on the basis of the historical record, it is clear that low energy prices have driven location and expansion decisions of large Energy Intensive users and will continue to do so, absent the rate modification proposed by Manitoba Hydro.

It has been suggested that because most of the load that will be subjected to the new rate are pipelines, and that because pipelines have little choice in their location decisions, the PUB ought to reject the notion that this rate sends an appropriate price signal. First off, I would comment that rarely in rate making do we find a one (1) size fits all solution. So while the delivery of price signals is but one (1) of many objectives of a rate, we don't abandon the concept or the rate where one (1) type of business within the customer group is not easily able to respond to the price signal.

Manitoba Hydro acknowledges that pipeline loads while extremely energy intensive may have less choice than other loads, such as the chemical industry, in terms of their location or expansion, because changes in energy costs may be offset, to some degree, by the economies of the initial location of the line. However, as Manitoba Hydro noted in its rebuttal evidence, in the past pipelines can and have made location decisions to bypass Manitoba and also decisions to use fuel for their compressor stations other than electricity.

Mr. Dudar noted at transcript 270 at line 200 -- or through 271, that until six (6) or seven (7) years ago the pipeline in Ile des Chenes used natural gas for compression, but changed because the natural gas was more valuable as a commodity. That the Provincial Government may have encouraged some pipelines to use electricity back in 1965 is the type of situation that justifies setting baselines not lower than current usage, but it does not justify unlimited access to embedded rates to the detriment of the Corporation's revenue position.

As pointed out by Mr. Wiens, at transcript page 674, line 5 through 9:

> "These companies have had the benefit of Manitoba Hydro's embedded rates for a very long time. The fact is, pipelines use a tremendous amount of electricity. Customers using electricity in these quantities are increasing the cost of electricity to other Manitoba customers. Pipelines are regulated and they can pass their prudently incurred costs onto the parties who use their services. It's

"...not fair to ask Manitoba consumers to
pay higher rates to subsidize the cost
of pipelines transporting another
energy form through our province."

Next, I'm going to discuss determination of the baseline.

(BRIEF PAUSE)

MS. PATTI RAMAGE: In Order 117 of '06, the PUB suggested, and I'm quoting:

"Manitoba Hydro develop its Energy
Intensive Industry proposal, taking
into account that existing industry
came, remained, and expanded in
Manitoba, with certain assumptions as
to energy pricing and supply."

And that's at page 55 of that order.

In accordance with this guiding principle, Manitoba Hydro has proposed that existing and new industrial customers served at 30 kV and above, who, when aggregated with their Manitoba-based affiliated companies use 100 gigawatt hours or more of energy annually, be entitled to their current energy consumption at the initial block general service large energy rate; that is the heritage rate. Only that consumption above the defined baseline, or CBEL, as I'll be referring to it, and for the transcript that's C-B-E-L, all capitals. That was a Byron Williams moment I just had.

The CBEL will be subject to the tail block energy rate. A new customer CBEL will automatically be set at 100 gigawatt hours. The existing customers' initial CBEL will be calculated based on the maximum twelve (12) consecutive monthly energy -- the maximum monthly twelve (12) consecutive month energy consumption for the three (3) years ended March 31st, 2008.

Energy associated with previously implemented Power Smart energy reduction projects, non-made-up curtailable load energy, load displacement generation energy, and future energy consumption associated with energy efficient solutions for environmental compliance, will be added to the CBEL, up to a maximum CBEL of 1,500 gigawatt hours. The CBEL will then be subject to revision annually, up to a maximum CBEL of 1,500 gigawatt hours, to reflect long-term changes affecting the customer's plant, and in order to ensure that the CBEL continues as an appropriate baseline to encourage electricity conservation and efficiency of use, but while not discouraging economic growth.

The 100 gigawatt hour threshold is

reasonable, because, while it captures only ten (10) existing customers, those customers are responsible for 94 percent of the load of all domestic customers served at 30 kVs or higher. And there I refer to transcript page 477, at line 16.

Mr. Williams quite accurately pointed out that the rate doesn't apply to 94 percent of the load. The significance is that 94 percent of that load is facing a price signal when making consumption and efficiency decisions.

As shown in Manitoba Hydro's response to PUB/Manitoba Hydro 8D, during the five (5) years ending March 31st, 2008, customers with energy use in excess of 100 gigawatt hours, have accounted for virtually all the growth in load of customers served above 30 kV; that is 99.5 percent of that growth.

As noted by Mr. Warden, at page 79 of the transcript:

> "The hundred gigawatt hour threshold effectively zeros in on the primary issue. At the same time it avoids the administrative complexities and associated costs of expanded -- of -- of an expanded application of the rate."

These were outlined in detail during a discussion Mr. Williams had with Mr. Dudar, commencing at page 433. In that discussion Mr. Dudar agreed with Mr. Williams, in particular at page 450, that:

"The -- the administrative costs associated with..."

I'm sorry.

"The administrative costs associated with this rate proposal to the remaining -- to the remaining members of their class would be time consuming. They would be significant and they would be onerous. These costs relate to developing baselines and -- and monitoring baselines, monitoring and communicating available growth allowances, evaluating DSM and environmental compliance projects."

And there I refer to page 433.

For example, Manitoba Hydro reviewed the implications of reducing the threshold from 100 gigawatt hours to 50 gigawatt hours a year in its response to PUB/Manitoba Hydro 8D. It would only increase the amount of energy billed at the second block rate over the next twenty (20) years by 4 percent. And that's by lowering it from hundred gigawatt hours to fifty (50), would get 4 percent. That's from nineteen (19) -- we forecast from 19,200 gigawatt hours to 20,000 gigawatt hours.

(BRIEF PAUSE)

MS. PATTI RAMAGE: Manitoba Hydro implemented the 1,500 gigawatt hour maximum energy consumption threshold as a mechanism to curb rapid growth in energy use at low embedded cost-based industrial rates.

It's important to have perspective on just how large a 1,500 gigawatt hour load is. At page 79 of the transcript, Mr. Warden testified that Manitoba Hydro's single largest customer consumes approximately 1,450 gigawatt hours per year. By comparison -- and these are all customers who use a tremendous amount of power; they're the pipelines, the mines, the steel mills -- by comparison, the tenth largest customer consumes 140 gigawatt hours or less than 10 percent of the 1,500 gigawatt hour cap. The twenty-fifth largest customer is at 22.5 gigawatt hours; that's 1.5 percent of that cap.

If the -- a customer at the 1,500 gigawatt hour level was afforded the 3 percent growth allowance, Manitoba Hydro testified that the Corporation's revenue loss by year 5 would be over $5 million per year, and the accumulated loss in those first five (5) years would be in the order of $15 million. And there I refer you to transcript, page 79 through 80.

Manitoba Hydro designed the cap to ensure that all customers, even the one whose load is far in excess of all other large loads, were treated the same, with respect to the application of heritage rates to grandfathered load. Despite the fact that one (1) customer's load is not the same as the others, by virtue of its size, its impacts on the revenue position of the Corporation, and ultimately the costs that must be recovered from other ratepayers, despite those differences that customer was nevertheless treated the same, with respect to the provision of heritage rates. But a line had to be drawn somewhere.

Manitoba Hydro does not apologize for setting the cap based on the load of its largest customer. This Board expressed a desire to see that existing customers not be affected by the new rate for their established load. The Board did not say existing customers were entitled to unlimited growth. The Board was speaking about existing load.

The 1,500 gigawatt hour cap is generous and it accords with this Board's stated desire to protect the energy consumption of existing customers, so that their incremental growth would be potentially impacted by the new rate.

And there is certainly regulatory precedent for drawing lines like this. Manitoba Hydro/MIPUG-9 discloses that Tariff 6 was established following negotiations amongst multiple stakeholders. The evidence goes on to state that the threshold of a 150 MVAs was viewed as striking a balance between allowing new customers to share in BC Hydro's low-cost power and protecting existing ratepayers from unduly subsidizing the needed capital costs of providing power to new industrial customers. There was no mathematical formula applied to derive this limit; it was a matter of judgment.

Manitoba Hydro has applied its judgment with a view to striking that same balance through the hundred gigawatt hour per year threshold, and the 1,500 gigawatt hour per year cap.

The minimum value of 100 gigawatt hours was chosen based on the size of existing customer load profiles and size of new companies that have recently moved to the province. The 1,500 gigawatt hour cap was chosen to shield all potentially impacted customers existing energy consumption, including the largest customer, from the new rate, and have it only apply to the incremental new energy consumption.

The 1,500 gigawatt hour cap also recognizes that there's a limit to the amount of subsidized energy that Manitoba Hydro will provide to any one (1) customer in the province. Manitoba Hydro used its best judgement to determine levels that were reasonable, based on Manitoba Hydro's current customer base, and which mitigated future rate impacts to all ratepayers associated with the rapid expansion of a few industries.

The proposed growth allowance allows for a fair and equit -- equitable treatment of all industrial customers affected by this proposal. These customers require growth options to remain competitive. The largest of these customers already enjoy a huge, lucrative advantage by virtue of the non-discriminatory treatment of their exceptionally large existing heritage loads.

The proposed allowances, coupled with the 1,500 gigawatt hour cap allow for fair treatment to all. It will manage and control energy growth in the near term, with the goal of maintaining the export surplus advantage, while allowing for domestic growth within prescribed bounds that meet most customer's growth needs for the foreseeable future.

It is certainly not Manitoba Hydro's intent to unduly constrain load growth in the province. We do, however, need an effective rate structure to ensure that growth is prudently managed for the benefit of all of our stakeholders.

The growth allowance strategy was developed based on customer input regarding their expansion and growth plans for the next five (5) to ten (10) years. Manitoba Hydro consulted extensively with its customers to develop a baseline proposal that provided reasonable opportunity for reasonable growth. It was one (1) year ago that we were here dealing with a motion by MIPUG that Manitoba Hydro hadn't consulted enough. A year later, we're hearing that because Manitoba Hydro consulted, because Manitoba Hydro listened and because Manitoba Hydro acted where it thought reasonable, that such actions resulted in personal discrimination.

Not all growth plans could be accommodated; the fact is some customers are different. They are exponentially larger or they want to expand in a manner so much more rapid than the norm that we cannot accommodate those types of plans. The resulting impacts on revenue are too much to ask other customers to bear.

Overall, system load growth is approximately 2 percent per year. We have afforded industrials more than that level of growth at heritage rates. From Manitoba Hydro's perspective, that is more than fair.

Mr. Chernick, on behalf of RCM/TREE, opposes Manitoba Hydro's proposal to provide a growth allowance to customers' baseline energy. At page 10 of his prefiled evidence, Mr. Chernick called upon the Board to reject Manitoba Hydro's proposal to increase the baseline and argued that in subsequent cases the Board should gradually reduce the baseline.

Manitoba Hydro has not proposed a declining baseline because it deliberately chose, for the reasons I've just outlined, to allow some degree of growth at embedded cost-base rates for all customers subject to the rate. Manitoba Hydro acknowledges that it may be appropriate to expose more customers to the higher rate for some of their load, but believes the best way to do this is through the introduction of a general inverted rate for all customers in the GSL classes. For those customers who are affected by the Energy Intensive Rate, this could involve a one (1) time reduction in the baseline, along with a reduction in the first tier rate, such that the customer who did not change load would be revenue neutral.

Manitoba Hydro agrees, however, with the Coalition, that we need time to reflect on this and to develop a proposal before the Board weighs in on how or when this should be accomplished.

No party took issue with the application of Power Smart credits to baseline. RCM/TREE, however, has advocated that Manitoba Hydro be required to audit these savings for measures implemented prior to 1999.

When including credits for previously implemented Power Smart energy saving measures, Manitoba Hydro chose to accept that early adopters who elected to invest in DSM measures, would not easily accept underperforming systems and would maintain or improve them as required.

Mr. Dudar testified that Manitoba Hydro would have been aware of any major systems that were installed and were not performing.

Further, Manitoba Hydro provided estimates that less than 10 percent of the efficiency measures that were previously installed may have been decommissioned or removed. The need to audit all of the previously implemented measures were seen as another administrative burden without significantly improving the performance of the rate.

Manitoba Hydro believes that the process for establishing the maximum twelve (12) consecutive months of energy consumption for the purposes of setting the CBEL is relatively mechanical and there's no need for the PUB to review each baseline. As indicated by Mr. Warden, at page 463 of the transcript, Manitoba Hydro would not oppose an appeal process being in place should an issue arise.

The same appeal process could apply to the assessment and quantification of previously implemented Power Smart, or other energy efficient measures, and future environmental projects, should disputes between the customer and Manitoba Hydro arise.

Now on this note, Manitoba Hydro wishes to briefly address statements made by Canexus during the presentation portion of the hearing.

Statements were made to the effect that Manitoba Hydro gave assurances to Canexus that certain energy efficiency approvements would be eligible for DSM credits. These statements were made after the Manitoba Hydro panel stood down and were not referenced in the pre-filed evidence of MIPUG's experts, and Manitoba Hydro has not been afforded the ability to respond.

Statements during presentation are not evidence and have not been tested in any manner.

I can advise that Manitoba Hydro disputes that any such assurances were given. However, if Canexus, or any other customer, have an issue with how their baseline or Power Smart credits are calculated, their issues could be resolved using the appeal mechanism. Individual concerns, without both sides of the story having been heard or tested, should not form the basis for changing the principles of a sound proposal.

In Manitoba Hydro's earlier intensive rate proposal, the second tier price was to reflect marginal cost and was based on Manitoba Hydro's forecast of market prices. it became apparent during the course of that hearing that significant issues existed with respect to providing the PUB and Intervenors with sufficient information to gain acceptance of the Corporation's forecast, without compromising Manitoba Hydro's need to protect the most market -- market sensitive information.

In Order 116 of '08, at page 328, the Board stated that it, quote, is:

> "...concerned about the use of forecast export prices as opposed to actual export prices in the determination of marginal costs, and encourages Manitoba Hydro to explore and advance other

options." End quote.

The PUB's preference for use of actual versus forecast pricing was further demonstrated in Directive 19 Sub E of Order 166 of '08, where the PUB directed Manitoba Hydro re-file its Cost of Service Study using, quote:

"...the most recent actual, not forecast, export prices, to establish export revenue in the Cost of Service Study."

With this in mind and in the interest of simplicity and transparency Manitoba Hydro has proposed that a proxy be employed for marginal cost that is the average price of firm extra provincial sales during the pre -- the previous two (2) fiscal years, which in this instance is March 31st, 2008. That average price was fifty-five dollars and twenty-seven cents ($55.27) per megawatt hour.

RCM/TREE takes the position that the average price of extraprovincial sales over the past two (2) years is not a good indicator of marginal cost, and suggests that the second block rate be based on either levelized energy cost of Wuskwatim, or if Wuskwatim is not cost effective, on Manitoba Hydro's projection of market prices.

If the former price were adopted the second block rate would be about seven point four (7.4) cents per kilowatt hour, which is 54 percent higher than the -- then the rate Manitoba Hydro was proposing. If a projection of market prices were to be adopted, the second block rate would be approximately six point six (6.6) cents per kilowatt hour, or some 38 percent higher than Manitoba Hydro's proposing. And there we refer to page 17 of Mr. Chernick's pre-filed evidence.

Manitoba Hydro has stated that it's not impose -- opposed, in principle, to adopting a more forward looking approach to marginal cost in designing the rate. However, to do this, two (2) practical obstacles need to be overcome:

The first is that a mechanism would have to be found to provide sufficient information to all parties, particularly the Board, to accept the marginal cost forecast without compromising Manitoba Hydro's need to protect the most marketed -- market sensitive information.

Second, in the absence of some capability to review the economic benefits associated with major load -- load expansion, the differential price, with respect to other utility rates, is simply extreme. As noted in Manitoba Hydro's rebuttal evidence, at page 22, Manitoba Hydro's proposed second block is already 98 percent higher than the rate based on embedded cost. Mr. Chernick's recommended second block rate is as much as 205 percent higher than the existing rate.

Another option that's not advocated by any party, but which was reviewed during the course of Mr. Ostergaard's evidence, would be a methodology similar to BC's second tier rate calculation methodology. In BC they use the average price paid to new independent power producers under BC Hydro's most recent call for tenders. This is obviously a non-starter in Manitoba.

Mr. Ostergaard confirmed, at transcript pages 1166 through 1169, that there are forty-five (45) IPPs operating in BC. An open -- open tender process was used to elicit offers to sell energy and BC Hydro ultimately awarded thirty-eight (38) separate contracts following that process.

BC Hydro's Tier 2 price of seven point three six (7.36) cents per kilowatt hour was based on the average of those thirty-eight (38) contracts. AS all parties to this room are well aware there's only one (1) IPP presently operating in Manitoba. There can be no average price per se and that price is negotiated for a specific product: wind. And that -- and in the market Manitoba Hydro operates in, it's considered commercially sensitive information and not publicly available.

BC's development of an internal competitive market for independent power producers represents a significant difference from the Manitoba situation. A similarity between the provinces, at least from a power marketing perspective, is the need to hold details of export contracts and the forecasts of export prices used by power marketers when negotiating contracts in confidence.

Mr. Ostergaard confirmed that the transactions entered into by BC Hydro's marketing subsidiary, Powerex, are not reviewed by the BCUC. While BCUC may review energy delivered under those contracts and the revenues which flow to BC Hydro, pursuant to its jurisdiction over BC Hydro, the regulator does not see, nor is there public review of Powerex's export contracts or specific pricing information.

Manitoba Hydro is a net exporter of power. Arms -- arm's length counterparties negotiate power purchase contracts with Manitoba Hydro in a competitive market. While there are confidentiality issues associated with using the Corporation's forecast of export prices, the same issues do not, for the most part, apply to prices achieved in the immediately past. As noted, the PUB itself expressed a preference for using actual prices, as opposed to forecasts.

The Tier 2 rate derived using this methodology, four point eight eight (4.88) cents per kilowatt hour for customers served at 30 to 100 kV, and four point seven nine (4.79) cents per kilowatt hour for customers served at greater than a hundred kV, is in line with the prices charged by other Canadian utilities to large industry.

For example, Manitoba Hydro/MIPUG-3 discloses that a 50 megawatt or 30.6 gigawatt hour load with a load factor of 85 percent would pay five point one one (5.11) cents per kilowatt hour, if served by SaskPower in Saskatchewan -- and that's inclusive of a demand charge, which mean -- the rates I've quoted from Manitoba Hydro are not -- they would pay nine point six nine (9.69) cents per kilowatt hour, if served by EPCOR Energy in Alberta, again, inclusive of a -- of a demand charge; and four point four seven (4.47) cents per kilowatt hour if served by Hydro Quebec, also inclusive of a demand charge and assuming the load is not captured by their 50 megawatt limit.

In BC the first 90 percent of baseline, two point four six two (2.462) cents per kilowatt hour with the remainder at seven point three six (7.36) cents with the remainder at seven point three (7.3) -- seven point three six (7.36) cents per kilowatt hour includes the demand charge.

Oh, I'm sorry, I -- Mr. Wiens points out I'm incorrect. The demand charge would still have to be added to that rate as -- as was the case with the rates I quoted from Manitoba Hydro.

As indicated earlier, Tier 2 -- the Tier 2 rate proposed by Manitoba Hydro is a proxy for marginal cost, based on the average price of dependable energy, extraprovincial sales during the previous two (2) fiscal years, and is not based upon a forecast of Manitoba Hydro's true marginal costs.

Over the past two (2) years the average price for all dependable energy sales was fifty-five dollars and twenty-seven cents ($55.27) per megawatt hour, or five point five three (5.53) cents per kilowatt hour. From this price Manitoba Hydro has deducted its demand charge, that is, the five point four zero (5.40) demand charge, divided by seven hundred and thirty (730) hours in a month; is deducted from the fifty-five dollar and twenty-seven cent ($55.27) price to get the Tier 2 energy rate of four point seven nine -- seven nine (4.79) cents per kilowatt hour for customers served at greater than 100 kVs.

A small adder is applied to the rate for customers served between 30 and 100 kVs to account for losses, such that their Tier 2 rate is four point eight eight (4.88) cents per kilowatt hour.

And as I just noted, Manitoba Hydro does not disagree with RCM/TREE that the levelized energy of cost of Wuskwatim is a more accurate indicator of March -- of Manitoba Hydro's marginal cost. Commenting on Mr. Chernick's stated preference for using a forward looking price, such as export forecasts or the levelized cost of Wuskwatim, Mr. Surminski stated, at page 767:

> "Yes. And I agree with that statement. Forward looking is the more appropriate way to set value for these industrial loads."

As RCM/TREE has further pointed out, using Wuskwatim costs as a basis, those marginal costs are significantly higher than the fifty-five dollar and twenty-seven cents ($55.27) per -- per megawatt hour proposed -- proxy, proposed by Manitoba Hydro. However, for the reasons we outlined a moment ago, Manitoba Hydro has chosen not to base the rate on a true forward looking marginal cost.

As a result, any argument challengi -- challenging the rate, as if it were based on a traditional measure of marginal cost, is not relevant.

As indicated earlier, using Wuskwatim costs or market forecasts as an indicator of Manitoba Hydro's marginal cost, would have resulted in a rate of at least 38 percent higher than the rate being proposed. This would not accord with the principles of gradualism Mr. Williams spoke of.

It was pointed out Mr. Warden at page 784 of the transcript:

"Manitoba Hydro's proposed rate is only a proxy and a conservative one at that. It is intended to be a compromise between rates currently being charged and Manitoba Hydro's true marginal costs."

The Board heard the Tier 2 rate challenged on the basis that the breakdown between demand and energy in the firm export contracts is not available, and its specific contract detail is necessary to test the appropriateness of the proposed rate.

The proposition was put forth in cross-examination, although I didn't hear anything in final submissions, that with the detailed contract price revisions, capacity charges could be extracted and the remaining energy prices would be reflective of marginal cost of energy and parties could then test the proposed rate on that basis.

However, as we've stated already, the proposed rate is a proxy, not based on a forward looking true marginal cost. Thus, having the capacity and energy prices from each of the contracts is of no benefit in testing the proposed rate. Further, as Mr. Cormier pointed out at transcript, page 315 through 316:

> "When Manitoba Hydro negotiates a price they start with an all-in price and work backwards. Manitoba Hydro's concern -- its main concern is not about the split as long as at the end of the day Manitoba Hydro gets its required dollars per megawatt hour. The split is more for the counterparty's benefit."

And I specifically reference page 317, line 9 through 17, in that regard.

The Board made it clear that it wanted to see transparency in the Tier 2 rate. The proposed rate is based on Manitoba Hydro's internal accounting system that is used for management purposes. To such extent the numbers need to be verified with individual, dependable energy sales. Manitoba Hydro files the revenues and energy volumes associated with those contracts with NEB, which makes the information publicly available on its website. Through that transparent process it is possible to verify, within reason, the established Tier 2 rate.

Mr. Warden told us he hadn't expected the derivation of the rate to be a significant issue; "That's a relatively straight forward process." And there I refer to transcript, page 612.

And to demonstrate this, Manitoba Hydro provided details regarding the calculation of the fifty-five dollar and twenty-seven ($55.27) amount, including the adjustments made in Exhibit Manitoba Hydro 11. The rate is not going to change without this Board's approval and Manitoba Hydro can certainly repeat this process in the future.

When evaluating Manitoba Hydro's proposal, I ask the Board to be mindful of the fact that regulation only exists as a substitute for competition, where -- in situations where competition doesn't exist. Regulation does not purport to be a better indicator of a fair price than that derived in a competitive market. In this case the Tier 2 rate is based on the price arrived at in a very competitive energy market. That the Energy Intensive Industry customers cannot participate in the market is no dis -- reason to discount the validity of prices negotiated between arms length parties.

It's of note that in BC, where customers do have access to power produce outside the province, using the -- using BC Hydro's open access transmission tariff, or to purchase their power directly from IPPs, not a single customer exercised this option and has instead opted to pay the Utility's Tier 2 rate. And there I refer you to transcript page 1171.

Tie-line limits were discussed at length. Manitoba Hydro provided evidence that indicated that tie-lines are not a limiting factor in making dependable exports. That is, those sales are dependent on the availability of dependable energy and accreditable capacity. For example, I refer to transcript page 84, beginning at line 5, or transcript page 332, at line 16, and at transcript page 357, at line 4.

Manitoba Hydro provided extensive evidence in response to Information Requests on the high availability of tie-line space for interruptible sales. Mr. Cormie stated on numerous occasions that tie-line limits restricts sales much less than 10 percent of the time. For example, at page 349, where he said -- where he went as far as saying:

> "Probably more likely 5 percent of the time."

Manitoba Hydro also provided evidence that generation capacity was the main limiting factor. And here I refer to transcript page 362, a discussions between Mr. Peters and Mr. Cormie.

And despite its ability to defend its position with respect to each of these issues, Manitoba Hydro's main area of disagreement in the area is the relevancy of these issues in the circumstances. These issues would only be important if the proposed rate was truly marginal cost based. As a result, the rate shouldn't be tested on that basis and any allegation that lack of information on tie-lines and generation limits, customer load factors, and export contract DC sales should not even be a consideration for reducing or rejecting Manitoba Hydro's proposed rate.

Because it is a proxy, Manitoba Hydro believes it's only fair to those who will be required to pay the tier rate that it be a conservative proxy. Comparing the two (2) year average to Wuskwatim costs demonstrates that it is conservative. In addition, the two (2) year average prices -- applying the price of an inferior product to the superior domestic product. And there I refer to Mr. Cormie, at page 336, line 7.

Manitoba Hydro views the adoption of the average of the past two (2) years of extra -- of actual extraprovincial sales as a reasonable proxy given the circumstances in which the Utility operates and the desire of the Board to use actual information.

I'm at about the halfway mark. I don't require a break but I'm not sure if the Board wants one.

THE CHAIRPERSON: I think we'll take a ten (10) minute break. Thank you.

--- Upon recessing at 2:08 p.m.
--- Upon resuming at 2:23 p.m.

THE CHAIRPERSON: Any time you're ready, Ms. Ramage.

CONTINUED BY MS. PATTI RAMAGE:

MS. PATTI RAMAGE: Thank you, Mr. Chair. Now, beginning my section on regulatory principles, and first I'm going to discuss the PUB's jurisdiction.

You may want to have Manitoba Hydro's book of authorities with you. And I can say that I haven't put all of the authorities I'm going to refer to, in particular, not the statutory authorities, because I think the Board could probably recite them in their sleep, so I didn't bother to reproduce them.

But the PUB gains its jurisdiction, with respect to Manitoba Hydro, by virtue of the Crown

Corporation's Public Review and Accountability Act, which I'll refer to as the Accountability Act.

Section 26 Sub 1 of that act provides, with respect to Manitoba Hydro:

> "...that no change in rates for services shall be made and no new rates for services shall be introduced without approval of the Public Utilities Board."

This Board ought to clearly and outright reject any notion that it is slave to any principle beyond that enshrined in legislation. As stated by the Manitoba Court of Appeal in its May 2005 Decision, rejecting MIPUG and CAC/MSOS's application for leave to appeal this Board's 2004 GRA Order:

> "The intent of the legislation is to approve fair rates, taking into account such considerations as cost and policy, or otherwise as the PUB deems appropriate. Rate approval involves balancing the interest of multiple consumer groups with those of the Utility."

Now that's at page 63 of the Decision. And unfortunately I neglected to put that Decision in my book of documents, but I suspect this Board has a copy.

The Court of Appeal went on to state that:

"The PUB has two (2) concerns when dealing with a rate application: The interest of Utility's ratepayers and the financial health of the Utility."

There I refer to paragraph 65. Manitoba Hydro's concerns in bringing this application relate directly to the interests of the Utility's ratepayers and the financial health of the Utility.

MIPUG's position that the proposal is discriminatory is premised on its view that where the same embedded costs are incurred by the Utility to serve members of the GSL class, the rates to members of the class must be the same. This simplistic logic fails to recognize any concept of cost, other than embedded cost directly incurred by the Utility.

Because of the of gap between embedded cost and marginal cost, we are asking the Board to focus its attention on a different kind of cost, that being the cost some customers impose on other costers (sic) by virtue of their disproportionate levels of consumption.

There are real cost impacts to the Utility's revenue position and therefore to other customers, when a kilowatt hour of energy is diverted from the export market to a domestic customer. These cost impacts are noticeable and measureable with respect to those customers served at the GSL greater than 30 kV level. It is clearly a factor that impacts rates, and the Board is entitled to consider this factor when assessing if proposed rates are just and reasonable and not unduly discriminatory.

The PUB has been given broad jurisdiction as to what considerations it may take into account when exercising its rate approval function.

The factors which the Board may take into consideration when exercising its rate approval function are found at Section 26 Sub 4 of the Accountability Act. These factors are not mandatory, nor are they limited to cost causation in the traditional sense. That the Legislature included in its guidelines compel us -- compelling policy considerations and any other factor the Board considers relevant, is a clear indicator that the Legislature intended the PUB to take into account a broad array of considerations when assessing whether Manitoba Hydro's rates are just and reasonable and not unduly discriminatory.

And on this point, Manitoba Hydro doesn't take issue with the proposition that its rates must be just and reasonable and not unduly discriminatory, but from a legal perspective, I think it's important to recognize the origin of -- of this principle as it applies to the decisions of the Board and the factors or tests if any which must be applied when the Board makes its decisions.

Neither the terms "just and -- just and reasonable," nor "unduly discriminatory," can be found in the Accountability Act. The Legislature not -- chose not to use this or any other particular terminology, with respect to this Board's rate approval authority.

In terms of application to Manitoba Hydro, the concept has -- has its roots to English -- its roots in English common law. So while rates ought to be just and reasonable, the Legislature has not chosen to impose a particular method to be used by the Board or factors to be considered when assessing the justness and reasonableness of its rates.

Ensuring that the costs incurred by the Utility are allocated fairly amongst customer classes is certainly a very important factor in determining whether rates are just and reasonable. The Board, however, is not limited to this factor. It has the discretion to look at other factors; factors such as how the use of energy or power by one (1) group of customers impacts the costs imposed on all other customers.

And as noted, by the Federal Court of Appeal in the trowns -- Trans Mountain Pipeline decision -- and that's at Tab C of your book of documents; and that's in -- that's at paragraph 9 in Manitoba Hydro's book of -- Tab C in the book of authorities, and I'm going to quote from paragraph 9:

> "The meaning of the words 'just and reasonable' is very easily resolved since those words are not used in any special technical sense and cannot be said to be obscure and need interpretation. What makes difficulty is the method to be used by the Board and the factors to be considered by it in assessing the justness and reasonableness of tolls. The statute is silent on these questions. In my view, they must be left to the discretion of the Board which possess in that field an expertise the judges do not normally have.
>
> If, as has clearly -- if it has clearly done -- if, as it has clearly done is the case, the Board addresses its mind to the right question, namely the

justness and reasonableness of tolls and does not base its decision on clearly irrelevant considerations. It does not commit an error of law merely because it assesses the justness and reasonableness of the tolls different from that which the court would have adopted."

This Board's duty is to review the rates of Manitoba Hydro. The Board has been given this authority in the broadest of terms to make orders with respect with rate approval authority. Its power is not trammelled or fettered by statutory rules or directions as how that function is to be carried out or how the purpose is to be achieved.

The PUB commented at page 54 of -- of Order 117 of 06 that:

"Setting higher rates for firms that require significant quantities of energy differently than other customers [and I'm quoting here] could be screwed -- construed as discriminatory. It holds that such discrimination may be acceptable in a broader public interest context." End quote.

The Board there was getting at the distinction between a discriminatory rate and an unduly discriminatory rate, there being no statutory direction as to what constitutes undue discrimination, and in providing the Board with authority to take into consideration policy and any other considerations the Board considers relevant, Manitoba Hydro submits the Board clearly has been given broad discretion when assessing whether a rate proposal is unduly discriminatory.

Manitoba Hydro has canvassed both Canadian and American authorities in an attempt to provide this Board with guidance from other regulators or courts on the issue of undue discrimination and rates. Canadian case law suggests that the regulator's role in deciding whether a rate is unjustly discriminatory is not dissimilar from the passage I quoted earlier, with respect to the determination of justness -- of just and reasonable rates.

And turning to Tab 4 in the book of documents, and here I'm looking -- Tab 4 is the Town of Summerside versus Maritime Electric Case. The appellant there took the position that an interruptible rate approved by the Island Regulatory and Appeals Commission was injustly discriminatory.

In dismissing the appeal the Prince Edward -- oh, I'm sorry it's -- did I say -- oh I said "C", I'm sorry, it's Tab B. I'm all over the place.

Anyways, it is Tab B, and I'm going to quote from paragraph 18 of that case.

> "The Commission's duty is therefore to weigh the evidence before it and to ensure, on the basis of the evidence, that the rates that the rates it approves are not unjustly discriminatory.
>
> Therefore, a determination of whether or not a rate is unjustly discriminatory is in my view the same as whether or not a rate is fit or whether or not an expenditure is reasonable. It is the formation of an opinion."

Now to the contrary, MIPUG has employed a very narrow and, I would submit, inapplicable use of the terminology. They rely on a concept they describe as personal discrimination.

Now I want to be very careful here so I'm going to quote from the transcript. And Mr. Landry said, at page 1,405:

"Now the second type of discrimination is discrimination between treatment afforded to specific customers within a class who are charged different rates for substantially the same product rendered under similar conditions. This is referred to as personal discrimination and described as the anathema to rate regulation. That is, there is no test of due or undue discrimination in these circumstances, and where these facts exist there can be no justification for the rate. And I've provided the reference for that."

Now the reference Mr. Landry refers to is found at page 5 of MIPUG's written submission and it's at footnote number 1.

Now we went to our copy of Bonbright, the 1988 edition, and we were unable to find any reference to personal discrimination. So last night I went on-line and lo and behold, I found the 1961 edition of Bonbright in full. And I located MIPUG's reference to page 370, which they refer to at their footnote 1. And I've got that reference produced at Tab A, and I'd to read the full passage from the reference.

"Readers of the treatises and the case law on public utility and railroad rates will often come across bold statements, to the effect that in these regulated industries the practice of rate discrimination is illegal. In fact, however, such statements are grossly inaccurate. What the law forbids is merely undue or unjust discrimination.

To be sure, the statutes also declare to be unjust, without qualification, a certain type of overt discrimination that had a disgraceful early American history, particularly in railroad rate making, namely, personal discrimination, whereby different customers are charged different rates for substantially the same service rendered under similar conditions. But beyond this point the legislatures have been content with general language forbidding undue or unreasonable preferences or prejudices, leaving the task of interpretation to the commissions, subject of course to review by the Appellate Courts."

And now when I go back to that MIPUG footnote 1, following MIPUG's reference to the page 370 passage, the one I just read in full, the MIPUG written submission goes on to say later at page 374, this -- this is described as, and MIPUG quotes:

"The type of practice forbidden without qualification." End quote.

Now these do -- words do appear in Bonbright and they appear at page 374, but I think the meaning's lost if you take it out of context and you don't finish Bonbright's thought. It doesn't say, The type of practice forbidden without qualification. It says:

"The type of practice forbidden without qualification by the various public utility statutes and by Section 2 of the Interstate Commerce Act."

It is clear Bonbright was intending to draw a distinction between discrimination and undue discrimination. He points out that it's grossly inaccurate to state that there exists an absolute prohibition against discrimination, with the exception that statutes may explicit -- statutes -- not -- its statutes may explicitly provide such absolute prohibition.

The statutory provision referenced in the text appears to be against racism. It would be difficult and in fact unconscionable to argue an absolute prohi -- argue against an absolute prohibition against this type of discrimination in any circumstance. But the point is, Bonbright is speaking of statutorily prohibited discrimination.

Short of such statutory prohibition, Bonbright agrees with Manitoba Hydro's point that where legislators use language forbidding undue or unreasonable discrimination, or are silent on the point, as the case is in Manitoba, the task of interpretation falls to the regulators.

Failing a specific statutory pro -- prohibition, in Mr. Bonbright's words, again:

> "Beyond this point the Legislatures have been content with general language forbidding undue or unreasonable preferences or prejudices, leaving the task of interpretation to the Commissions, subject of course to review by the Appellate Courts. The Canadian Courts have told us that as

long as the regulator addresses the
right question and does not rely on
irrelevant considerations, resolution
of the issue becomes a matter of
opinion."

In Manitoba there is no legislative direction as how to define undue discrimination, nor absolute -- the absolute prohibitions Mr. Bonbright discusses. There is no technical test that has to be met. The Board is empowered to assess whether undue discrimination exists. It is a matter of opinion and a question of reasonableness.

Rates not directly in accordance with traditional cost causation principles are not without precedent. This Board itself stated in Order 8 of '08:

"The Board will set rates that though
influenced by Manitoba Hydro's costs
will not be solely determined by cost."

And that's at page 24.

And the PUB is by no means the first regulator to adopt this view. In this regard, I -- I direct your attention to Tab D in Manitoba Hydro's book of authorities, where you'll find the Northern Indiana Public Service Company case, which dealt a proposal to charge a lower rate to industrial customers than would have been the case if only cost-based factors were applied.

This practice was not uncommon in the -- in the case, it tells us, the practice was not uncommon at that time when the utilities -- when utilities sought to offer lower rates to industrial customers who would otherwise leave their system, with the result being an increase in costs for the remaining customers. It's almost the reverse of what we have here.

In essence, it was better to have a large industrial cover all of its variable costs and some of the utilities' fixed costs, than have no industrial customer at all.

In the Indiana case, the electric utility was proposing to sell power at discount rates to certain customers that agreed to defer self-generation for a minimum of five (5) years and to purchase all of their electric power require -- requirements from the Utility during that five (5) year period. A term of this rate was that it would be offered only to those customers whose physical and technological characteristics were such that their existing thermal load would make self-generation economically feasible.

The rate was not offered to existing co-generators, nor to companies that re -- could reduce their load in other manners -- manner, and -- and by reducing their load their contribution to fixed costs by virtue of non-generating alternatives such as load management.

The Indiana Regulatory Commission reviewed similar issues to those that have been discussed in the course of this hearing. For example, one (1) Intervenor argued that the rate was discriminatory between those customers for whom self-generation was a viable option and for those who -- whom it was not.

And while the Commission acknowledged that the dollar cost of service for both customers could be the same, they determined that the conditions and circumstance of service to the two (2) were dissimilar. Customers capable of self-generation were capable of producing ramifications, which may have impacted all customer classes.

The Commission determined that the customer's ability to impact the costs to other customer classes was sufficient, so as to justify a differential rate.

The Indiana rate was negotiable and qualifying customers would not necessarily each receive the same rate. The Commission acknowledged that negotiated prices constituted a discriminatory price scheme. However, the Commission reasoned that while each customer could receive a different rate, those deferring -- differing rates would result from reasonable considerations, based on the unique circumstances of service provided to each large customer.

They concluded that the rates, while different, were not discriminatory, noting that they balance the interest of all parties concerned.

MIPUG has argued that there is no regulatory precedent for treating differently customers who characteri -- whose characteristics cause the Utility to incur similar costs to serve them. This is incorrect. The Indiana case clearly illustrates that where appropriate it's reasonable to look beyond cost of service in the traditional sense, particularly where a customer's individual decision to decrease or to increase its consumption has system-wide impacts.

Now before I leave my legal argument section I'd like to discuss briefly comments made by the MIPUG witness and a MIPUG presenter regarding any "B" permits and Order in Council 437/1996. I believe this is also addressed in MIPUG's written argument, although not during the oral submission.

It was suggested that the adoption of this rate proposal will have the effect of placing Manitoba

Hydro in breach of the terms and conditions of its NEB permits and the referenced Order in Council, or alternatively, that the proposal is contrary to the intent of these documents.

Order in Council 437 of 1996 provides Manitoba Hydro with blanket authority to export surplus power and energy. By way of background, under Section 16 of the Manitoba Hydro Act, without this blanket authority Manitoba Hydro arguably requires Lieutenant Governor and Council approval prior to concluding an export transaction.

The authorization to explore -- to explore it was provided to avoid having to go back for -- for approvals on an ongoing basis, particularly you can see the time in 1996 was when the market was opening up.

And the -- but the authorization to support does state:

> "It's conditional upon the power and energy to be sold, that the power and energy to be sold, is surplus to the needs of customers located in the province of Manitoba."

And the argument, as I understand it from Mr. Bowman, is that Order in Council 437 of 1996 speaks directly to Manitoba Hydro's duty to serve. This position completely fails to recognize that the duty to serve is not an unfettered one and is accompanied by a corresponding duty to pay the applicable rate of -- for service provided.

Under Manitoba law the applicable rate is that approved by the PUB. There is nothing in the Order in Council which alters this proposition or otherwise fetters the discretion of this Board when approving rates. It had nothing to do with rates.

There is no evidence that Manitoba Hydro is seeking to withhold or otherwise deny service to any customer. To the contrary, Mr. Wiens stated, at transcript page 397, line 19:

"This rate is saying, you know, if the energy is worth it to you, then by all means. If it's not, then presumably the load won't appear."

The provisions of NEB permits play no role whatsoever in a provincial retail rate approval issue. Mr. Bowman has erroneously interpreted the export permit conditions relating to Manitoba Hydro's obligation to not export without first giving an opportunity to purchase electricity on terms and conditions as favourable as the terms and conditions which apply to the proposed exports to those who demonstrate an intention to buy electricity for consumption in Canada as applying to retail purchases. However, the NEB has no jurisdiction over retail rates, so the permit conditions must be read down from a constitutional perspective.

In practice, when Manitoba Hydro submits export permit applications, the NEB routinely asks Manitoba Hydro to demonstrate, that is inform Canadian wholesale purchasers of electricity available -- of the availability for export consistent with their jurisdiction.

MIPUG members again don't fall into this class. Further, domestic customers are also Manitoba Hydro's first priority. This does not mean at low embedded cost rates. Even if these permit provisions did apply, it says on terms and conditions as favourable as being offered to exports. Clearly, the proposed rate is on as or more favourable terms than those offered to exports.

Turning to the Options section. In response -- response to the Chairman's request, Manitoba Hydro has prepared a list of the various options it reviewed in the course of developing its proposals to deal with the issue of rapid industrial growth. As you can see, it's not a short list. This is indicative of the fact that Manitoba Hydro's solution was not something that was just pulled out of the air. A range of alternatives has been -- has been examined.

We've outlined the relative strengths and weaknesses of each option in the document. Because the number of options are numerous, I'm not going to deal with all the options, just those that have garnered the most attention in this process and the ones that Manitoba Hydro most seriously considered.

And I'll finish this section of my submission by addressing Manitoba Hydro's concerns with adopting a service extension model to deal with the problem and also, while we -- we must not be deferring action now to implement Manitoba Hydro's proposal.

And before I delve into the analysis of the BC and Quebec systems I'd like to correct a statement made during MIPUG's argument.

We were told that the gap between embedded cost rates and marginal cost is much larger in BC and Quebec where it is four (4) cents per kilowatt hour as opposed to Manitoba where it's two (2) cents per kilowatt hour. And that was at transcript page 1419.

The two (2) cent gap is derived using Manitoba Hydro's Tier 2 rate, a conservative two (2) year historic proxy employed for transparency and simplicity purposes.

The BC and Quebec gap is derived using a true marginal rate, a forward looking marginal cost. So if we compare apples to apples and employ the seven point zero (7.0) cent kilowatt hour export forecast based -- or twenty (20) year levelized export forecast base marginal cost referred to at page 3 of the Application, or the marginal cost based on Wuskwatim which is in the range of seven point four (7.4) cents, we discovered the gap is very comparable in Manitoba.

Through the course of this hearing, as well as the 2008 GRA and 2006 Cost of Service Study hearing, we have looked at what is going on in other provinces, particularly Quebec and British Columbia. Manitoba Hydro has consistently maintained that these approaches are not the answer to the Manitoba problem.

The imposition of a 50 megawatt limit on the duty to serve in Quebec potentially has far harsher consequences than Manitoba Hydro's proposal.

Such proposal is simply not an option in this province. Manitoba Hydro has a duty to serve customers located in the province and there has been no indication that the legislature is interested in limiting or otherwise altering this duty as was done in Quebec.

Nevertheless Quebec Hydro faced a similar problem and the Quebec response certainly constitutes precedent for differential treatment of large customers whose load expansion served to impose costs on other customers.

MIPUG argues that because the 50 megawatt limit on the duty to serve large industrials was accomplished by virtue of legislation, it is of no precedential value. I would suggest that's a distinction without a difference.

This Board has the jurisdiction to approve the proposed rate if it considers it reasonable. I do not believe that was the case in Quebec. I have put a tab in the book of documents dealing with some of the Quebec legislation. I don't intend to go through it except to say it appears that the Quebec Regie does not have the same broad powers when approving rates that this Board does.

The important point to take from the Quebec example is that the problem was studied and a limit on the amount of power the Utility was obliged to provide at embedded cost rates was deemed the appropriate response.

During the proceeding MIPUG brought Mr. Ostergaard here as a witness in order to benefit from his knowledge of rate design and the service extension policy practices of BC Hydro.

However, nothing Mr. Ostergaard told us has changed our mind with regard to the inapplicability of the solutions devised in British Columbia to the problem we are trying to address here in Manitoba.

To be clear at the outset, the BC model is not a solution for the problem identified in Manitoba nor does it purport to be. As stated at page 20, line 19 of Mr. Ostergaard's evidence, the fact that new loads added to the BC Hydro grid exposed BC Hydro to future costs, which are greater than revenues, is not a significant issue in British Columbia.

This has not been the assessment of the issue in Manitoba. However, it's not entirely surprising that it's not a significant issue in BC. They operate under an entirely different model which mutes the impacts of new load on rate payers.

In BC, export revenues applied against revenue requirement for the benefit of ratepayers is capped at $200 million and it is government, not ratepayers that bear the risk of export losses. And there I refer to transcript page 1176 through 1177.

Mr. Ostergaard confirmed, at page 1178 of the transcript, that the effect of these limits is that the impact of trade income on what rates could -- rates would otherwise have been is a maximum of approximately

6.5 percent.

By comparison, Hydro's Cost of Service Study discloses export revenues of $551 million on domestic revenues of $1.068 billion. There are no caps in Manitoba and ratepayers have come to rely on those revenues to keep rates low in Manitoba and that's the crux of this issue.

The BC industrials rate structure does not nor is it intended to address the problem identified by this Board. Mr. Ostergaard tells us, at page 13 of his evidence, that the main purposes of the stepped rate structure is to elicit a DSM response and create a level playing field for IPPs to compete with the BC -- with BC Hydro for a customer's Tier 2 load. Manitoba Hydro doesn't take issue with these objectives, but they are not the objectives of this application. BC Hydro's inverted rate applies to all customers served at transmission voltage and is intended to expose the last 10 percent of each customer's energy usage to the marginal cost of electrical energy.

A customer baseline is established at 90 percent of historical load. If the customer's annual energy moves outside a band of 98 percent to 100 -- 110 percent of their customer baseline, the baseline is reset to equal 90 percent of the new annual energy use. The rate structure is revenue-neutral to individual customers if the customer doesn't -- does not change -- customer load does not change.

The second block rate is set equal to marginal cost and the first block rate is set such that revenue neutrality with respect to an embedded cost-based rate is maintained. Thus, the second block rate provides an economic price signal for incremental load adjustments within 90 percent to -- to -- between -- within the 90 percent to 110 percent band, but not for major expansions and not for new load locating in the province. It does not send a price signal regarding major load expansions or the location of new major loads within British Columbia.

The primary purpose of the Tier 2 rate in Manitoba Hydro's proposal is to offset lost export revenues resulting from the increased load. This purpose is entirely defeated if the baseline is reset following a load increase.

Mr. Ostergaard provided evidence, and that's at page 3 of his pre-filed evidence, that electric tariff supplement number 6 has for many years dealt with the concerns relating to the potential financial implications to BC Hydro and its domestic ratepayers arising from new large industrial loads.

The tariff requires one-time payments for generation and transmission cost implications for connecting very large industrial loads. The provisions of Electric Tariff Supplement 6 do not appear to afford any significant protection to other consumers.

The evidence suggests it has not been applied consistently. At page 11 of his pre-filed testimony, Mr. Ostergaard provides examples of where the BCUC or the province have directed that the cost of providing service be fully covered by the Utility.

With -- with respect to generation, the tariff only applies to loads in excess of 150 MVAs. At this level, it's unlikely to capture load -- load expansions or new load except in the most extreme cases.

As noted in Manitoba Hydro's rebuttal evidence, which was not challenged, the formula effectively requires the Utility to invest an amount equal to more than seven (7) years' revenue received from the customer for the purpose of funding grid improvements required to serve the customer.

The only offset to annual revenue in the formula appears to be the estimated incremental operating and maintenance expense of supplying the incremental load during the first year of normal operations. And there, we refer to PUB/PO and "PO" is Peter Ostergaard dash 1, page 3.

It is not apparent that the estimated incremental operating and maintenance expense includes the most significant incremental cost of supplying the customer, that being the excess of the incremental cost of the energy that the customer will be taking over -- taking, over the embedded cost that is included in rates. The formula appears to assume that the only cost that the Utility must recover is the incremental cost of transmission improvements required to serve the customer.

Similarly, if the new customer has load that is less than 100 MVAs, the excess of marginal over embedded costs becomes the responsibility of ratepayers collectively. If the customer has a load in excess of 150 MVAs, they may be required to make a contribution for generation system reinforcement, "based on the same basic principles as the transmission system reinforcement." Again, PUB/PO-1 at page 1.

If the application of these principles is similar to those affecting transmission reinforcements it would not appear likely that the general ratepayer is being compensated for anything close to the full impacts on general consumer rates. Likewise, Manitoba Hydro's current service extension policy provides no protection to other customers related to the gap between marginal and embedded energy cost, although it does provide more protection than BC Hydro's Tariff Number 6 relative to the cost of extensive new transmission facilities.

Mr. Wiens noted in his testimony, at page 96, that the last time Manitoba Hydro reviewed other utilities' allowances Manitoba Hydro's were amongst the most generous in the country. As explained by Mr. Wiens, transcript page 94, the maximum Manitoba Hydro investment in primary voltage facilities to serve a new customer, other than those exceeding 30 kV or loads exceeding 5 megawatts where the customer owns the transformation, is three (3) times the estimated annual revenue.

For loads exceeding 30 kVs, prior to June 23rd, 2005, Manitoba Hydro's Service Extension Allowance was applicable to the cost of upgrading the corporation's existing common integrated system on the supply side of the point where facilities tap into the system.

Effective June 23rd, 2005, no allowance was applied to facilities required to serve new loads exerting -- exceeding 30 kV or loads in the excess of 5 megawatts without approval of Manitoba Hydro's executive committee.

The suspension of allowances was an initial response to the concern that is driving the application which is before the Board today. The continuing expansion of energy-intensive industry, whose incremental cost to serve is substantially in excess of the revenue that was being received as a result of these expansions. Mr. Wiens discussed this at page 97 of the transcript.

At that time, it was determined that the net annual cost to Manitoba Hydro of delivering energy to just the sodium chlorate and pipeline industries, rather than to the export market, was in the order of fifty (50) -- $55 million annually. Over a thirty (30) year period, discounted at Manitoba Hydro's then weighted-average cost of capital, the net present value of this foregone revenue was an estimated $750 million.

Now that was revised to $766 million as per Exhibit Manitoba Hydro-9 in the current proceedings.

Eliminating service extension allowances was far from sufficient to compensate for the long-term net costs of serving new energy-intensive loads. As pointed out by Mr. Wiens, at transcript page 146, most of the costs don't relate to new transmission facilities, rather most is energy-related, lost potential export sales or required new generation.

However, with respect to service extension policy, it was believed that until a more comprehensive approach to the issue could be developed, the corporation should at least stop subsidizing the costs of connecting unprofitable new loads to the system.

Manitoba Hydro concludes that the BC Hydro rate structure is not an option to deal with the issue of large lows -- loads imposing costs on the system as it exists in Manitoba.

A few -- a few conclusions we did draw from the BC situation are that where circumstances warrant, it's acceptable to draw lines in the sand. The application of the Service Extension Tariff to only load in excess of 150 MVAs is no different in principle than the proposal that this rate applied to loads in excess of 100 gigawatt hours per year.

The selection of both these benchmarks are judgement-based, and as Mr. Ostergaard stated in his response in Manitoba Hydro/MIPUG-9B, are intended as striking a balance between allowing BC Hydro's new customers to share in BC Hydro's low-cost power and protecting existing ratepayers from unduly subsidizing the needed capital costs of providing power to new industrial customers.

Mr. Williams appears to suggest in his closing argument that a modified version of TS-6 might be a preferable approach to revenue protection. He -- he's -- that's found at transcript page 1323.

As I previously indicated, a new feasability test was, in fact, one of the options that was given early consideration to mitigate the revenue impacts of rapid expansion of -- of energy-intensive loads.

Manitoba Hydro gave serious consideration to integrating the gap between rates and marginal cost into a feasibility test for service to the new load. The present value of this gap would be incorporated into customer contributions required before service would be extended.

We heard Mr. Warden testify that this type of solution was looked at by Manitoba Hydro but was ultimately rejected because of fairness concerns related to disproportionate contributions from customers depending on how close they were to Manitoba Hydro transmission facilities and because the one-time contribution was simply too much for customers to bear. And here I direct you to a discussion between Mr. Williams and Mr. Warden at page 491 of the transcript.

Looking at the numbers in Exhibit Manitoba Hydro 9, the present value of the marginal cost to revenue gap over a thirty (30) year period was $766 million for 2,234 gigawatt hours, or about $343,000 per gigawatt hour.

For a new customer with 100 megawatt load at 82 percent load factor, some 620 gigawatt hours annually would have -- would exceed baseline and would lead to an upfront contribution of $122 million.

Alternatively, as expressed per unit of new demand, it would be $1.2 million per megawatt. Manitoba Hydro considered an upfront payment such as this to be a more significant barrier to expansion than applying a rate based on marginal cost. However, apart from the sheer magnitude of the contribution this approach also entails risk for both the customer and Manitoba Hydro. Neither has certainty going forward as to whether the actual load will accord with this forecast load over the horizon over which the MPV is calculated.

If the customer's actual use exceeds the forecast use on which the upfront contribution was based, the revenue impacts on the Corporation would not have been fully mitigated. Alternatively, if the customer uses significantly less than forecast, the customer will have over paid.

Further, the relationship between marginal costs and rates based on embedded cost is not known in advance with any degree of certainty. If the gap widens again the Corporation incurs unmitigated revenue impacts. If it narrows, the customer has overpaid.

Whether the contribution is expressed upfront as a demand charge or energy charge these concerns apply. It -- it matters not. Arguably, some type of true-up provision could address these concerns but the magnitude of true-ups is potentially very large and the true-ups could be required on an ongoing basis over a long period of time.

Service extension tests and upfront customer contributions work well with respect to facilities, such as distribution and transmission, where the costs are incurred prior to the connection and can be reasonably estimated. They may even work for generation if a specific unit of generation can be identified as required to meet the customer's need and is constructed as part of the overall service extension.

They work less well with respect to covering the cost of revenue deficiencies that may extend well into the future. As long as a sustained revenue gap, based on cost of supplying energy is recognized as a problem, it is difficult to resolve this issue through service extension policy and customer contributions alone.

As a comparison, Centra's feasibility test does not incorporate commodity costs or revenues. It simply assumed that commodity costs will be passed through as incurred and any potential revenue gap will be addressed that way.

Manitoba Hydro's current service extension policy deals with the cost of facilities other than generation, which are required to serve large new loads. Mr. Wiens provided his description of that policy at transcript page 95, line 12 through 96, line 14. It provides much better revenue protection than BC Hydro's TS-6 for other customer classes.

Even prior to the changes of June 2005, it provided for investment up to three (3) years anticipated revenue from the customer in transmission improvements required to serve the load, as compared to about seven (7) years in TS-6. With the change in June 2005, the full cost of transmission improvements is now funded by the customer.

I would be remiss if I finished on this topic without reminding the Board that there are significant jurisdictional issues associated with PUB review of Manitoba Hydro's service extension policy. I believe the Board they're -- I believe Manitoba Hydro made its position known in both the 2008 GRA and the review and vary application, and I don't think it necessary to repeat that legal argument and I certainly hope that Board review of the issue is not required.

And I say not required -- not required because based on the information provided in this hearing the Board can have confidence that further examination of Manitoba Hydro's service extension policy is not warranted, that Manitoba Hydro has considered multiple options, and that this Board has seen the best of those options.

The application filed represents the optimal balancing of multiple ratepayer and utility interests. The cost to ratepayers is adding up. Agreeing on a benchmark date of December 31st, 2007 does not address the loss in export revenues that are occurring while we're waiting to study the problem yet another time. It's a complex problem but further delay will not resolve the complexities. A decision must be made and the -- the rate must be put in place.

Now, there's been discussion during closing arguments about the need for further consultation and potentially a third hearing to deal with the application on the grounds that additional information or deliberation is required. Manitoba Hydro strongly disagrees.

Manitoba Hydro has already consulted with its customers. In addition to the numerous individual discussions described by Mr. Dudar over the past several years, we had a town-hall-like meeting in September for further input and several changes were made to the proposal as a result.

Manitoba Hydro has provided substantial information to support its application, including voluminous answers to Information Requests, numerous exhibits, direct testimony, cross-examination evidence, in not just this hearing but we had our 2008 GRA where we discussed the same issues and we also have the rebuttal evidence.

MIPUG has criticized Manitoba Hydro for not providing certain information at an earlier point in time. However, the material issues have all been addressed well in advance of closing argument.

For the record, an in-depth analysis of the value of on-peak and off-peak energy sales in the MISO region has been provided. And here I direct you to PUB/Manitoba Hydro 12-B and PUB/Manitoba Hydro 14-C supplemental.

I also direct you to the evidence of Harold Surminski starting at page 225, and the evidence of David Cormie starting at page 346, and Manitoba Hydro Exhibit 7, 8, 12, 13 and 14.

The definition of firm average price of firm exports has been reviewed. It's been discussed at length in PUB/Manitoba Hydro 14 and throughout Mr. Cormie's evidence. It's also discussed at Manitoba Hydro Exhibit 15.

There has been a review of other jurisdictions. Manitoba Hydro is of the opinion found -- opinion that the solutions found in other jurisdictions are not applicable here due to differing circumstances and objectives, but there has been a discussion.

And there's information on other jurisdictions provided at PUB 13-A through D and the Board heard from Mr. Ostergaard and you have Manitoba Hydro's position.

There's been a discussion of specific deferral values as explained at page 153. There is no deferral value resulting from Manitoba Hydro's ability to defer generation plant and associated transmission from this -- from the Energy Intensive Industry Rate.

We also have PUB 12-C. There's been an explanation of the 100 gigawatt hours and I've already addressed this point in my submission.

And I've also dealt extensively with service extension policies in my closing submission and I don't think that bears repeating.

Finally, there's the question of time of use rates. The Board requested an implementation strategy and Mr. Wiens gave direct evidence on this topic. Mr. Bowman commented that the -- Manitoba Hydro's time-line was not unreasonable.

The test relating to the provision of information on an application that must be met by an applicant has been set out by the Supreme Court of Canada, and we have it in Tab F of Manitoba Hydro's book of documents. And I'm not going to go into detailed analysis. I'll simply point out that the first question is were the Intervenors provided with sufficient information or disclosure to allow for their meaningful participation in the hearing?

The second question is, were the Intervenors fairly treated in all the circumstances? Manitoba Hydro submits that both of these questions could be answered in the affirmative.

There has been meaningful participation by all parties. The Board went to the extraordinary step of offering Intervenors the opportunity to pose followup questions on undertakings following the close of the evidentiary portion of the hearing.

That no party took the Board up on its offer suggests that all parties had the information before them that they felt necessary to present their case.

Mr. Chairman, Members of the Board, Manitoba Hydro has reviewed the options. It's consulted broadly with government and industry. It has the support of government and the tacit support of a large segment of industry.

The baseline approach is fair. The cap is generous. The growth allowance is also generous. Manitoba Hydro's proposal is a made in Manitoba solution to address a Manitoba problem.

We don't need a BC solution or a Quebec solution. We need to implement the option that works best for Manitoba. That option is the proposal you have before you today and we strongly recommend its -- its approval.

And that concludes my comments.

THE CHAIRPERSON: Thank you, Ms. Ramage.

MR. ROBERT MAYER: Mr. Chair, if I may.

Ms. Ramage, the first thing I've noticed is that it's the first time that all the Intervenors have recommended against giving you approval for your Application as submitted, but we will just take that into account I think as we go on.

But we are getting -- we have two (2) legal opinions in addition to -- or we will have two (2) legal opinions, we have heard of them, we don't see them yet -- in addition to Mr. Landry's about your 1500 gigawatt hour cap and the opinion appears to be virtually unanimous, except, of course, for your position, that that 1500 dollar (sic) cap is in -- is in all probability unduly discriminatory especially having regard to Mr. Dudar's testimony as to how it was arrived at and the issue of the competitive difference between the industries.

You haven't answered that specific issue. You say the 1500 gigawatt hour cap is generous but you haven't addressed the issue that has been raised about that particular portion of your Application being unduly discriminatory.

And I wonder if you have any comments on that.

MS. PATTI RAMAGE: Mr. Mayer, I -- I thought we addressed that when we discussed the -- the Indiana case, and that was to the extent that when one party's loads increase or decrease, and that includes load amount, impacts the -- the cost to other ratepayers or the cost to the Utility, that that is a consideration to take into account when setting a rate.

And when the -- and then it's ultimately up to this Board's judgment whether that is a significant enough of a -- of an impact that it -- that it merits leaving -- that it's not unduly discriminatory.

It may -- I -- I have difficulty saying it's not discriminatory but it's a question whether it's unduly discriminatory. And if you look at that Indiana case, that's exactly the kind of point they address is, when there is that kind of system impacts on others by virtue of one (1) -- a few large customers' loads, that the Board is within, certainly within the bounds of reasonableness to -- to look at that -- that as an impact and then weigh whether in those circumstances it's reasonable to impose those -- those sort of limitations.

MR. ROBERT MAYER: I understand what you're saying about in the setting of the rate and how a rate may have more impact on one (1) customer than another.

But if I recall Mr. Dudar's testimony correctly, firstly the 1500 dollar (sic) cap was -- was picked out of the air I think is the most generous way to say that, and that part of it had to do with the fact of the competition between the other user in the same industry.

That is a whole different issue, at least in my opinion and I think in the opinion of the other legal advice we have, than the mere establishment of a rate.

And Mr. Dudar's evidence I think struck all of us as interesting, to say the least, in how you arrived at that 1500 gigawatt hour cap.

MS. PATTI RAMAGE: I think it's fair that Mr. Dudar's evidence could be characterized as -- as very frank in that he picked that -- that cap or that cap was selected to -- because he wanted to see that existing loads got heritage rates. That's correct.

But we have to remember what that existing load is, how large it is and -- and what I've already dis -- I -- I discussed how Mr. Warden had described how big that existing load is compared to all other load and what those impacts are, and there has to be a limit. And that's where we're saying draw the line. Draw the line like they did in BC at 150 MVAs, like they did in Quebec at 50 megawatts. And 50 megawatts doesn't compare to 1500 gigawatt hours.

And that's where we're saying the Board has the ability to draw that line and say there are limits when our -- our 10th largest customer is -- is at 140 gigawatt hours and our 25th is -- is much lower than that, or I think --

We -- you have to understand how big that 1500 gigawatt hours is and why we're drawing the limit there. I wouldn't characterize it as -- as discriminatory. I would be more concerned about an argument coming from RCM/TREE that you're discriminating against the rest of our rate base by letting them have that much in the first place.

We expect -- we expect that attack, that look how much you've given these guys. They are so much larger than anybody else and you're letting them have that. So I think that -- that's something else the Board should be weighing in its mind when -- when it's looking at that issue is there's -- there's one (1) customer and then there's all the rest.

And -- and that amount is so much more than the other customer's and what we have already given them is so generous that -- that I really question whether you can call the -- the -- or whether -- I question the characterization of the fifteen hundred (1,500) cap as discriminatory.

THE CHAIRPERSON: Thank you. This brings to a close the public phase of this hearing.

The Board has benefited in its understanding of several issues of importance from the contributions of all parties and their witnesses. The Board notes and appreciates the efforts exhibited by the Applicant and the Intervenors, both professional and well spoken, towards assisting the Board in coming to a determination of the public interest.

While there has been commonality to the evidence and positions taken, in some cases there are also large differences, providing for a healthy exchange of views and perceptions, and of differing views of the implications that could arise from certain decisions that may result.

The Board appreciates the assistance provided by the Board's counsel, advisors, and staff. This proceeding has benefited from their dedication, experience, common sense and collective wisdom.

The Board will now sequester itself to consider the evidence brought before it. As the application and the issues surrounding it have a history and are of importance, not only to the parties present but to the wider economy and society, we cannot provide an estimate at this time as to when our order arising out of this proceeding will be issued.

That said, recognizes that risks lie with undue delay in coming to a sound decision. In the market there are many constraints that go beyond regulatory ones, but it is important that regulatory ones be as less uncertain as possible.

We note the reservation of a December 31st, 2007 date for the baseline, and it should continue until at least this Board has reached a conclusion and an order has been released in this particular matter.

So, again, I thank you to everyone that has been involved and we stand adjourned.

--- Upon adjourning at 3:16 p.m.

Certified correct,

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Cheryl Lavigne, Ms.