

New Brunswick Energy and Utilities Board

IN THE MATTER OF an application by New Brunswick Power
Distribution and Customer Service Corporation (DISCO) for
approval of changes in its Charges, Rates and Tolls (Includes
Interim Rate Proposal)

Delta Hotel, Saint John, N.B., on December 11th 2007.

INDEX

Mr. Knecht

- Direct by Mr. Theriault - page 1828
- Cross by Mr. Lawson - page 1853
- Cross by Mr. Kidd - page 1859
- Cross by Mr. MacDougall - page 1861
- Cross by Mr. Wolfe - page 1869
- Cross by Dr. Sollows - page 1874
- Cross by Mr. Peacock - page 1896
- Cross by Mr. Morrison - page 1901
- By Mr. Barnett - page 1912
- By the Vice Chairman - page 1915
- Redirect by Mr. Theriault - page 1918

Mr. Drazen

- Direct by Mr. Lawson - page 1918
- Cross by Mr. Morrison - page 1923
- By Mr. Barnett - page 1927

Mr. Charleson

- Direct by Mr. MacDougall - page 1929
- Cross by Mr. Peacock - page 1932
- By Mr. Barnett - page 1934

Dr. Sollows

- Direct by Mr. Kidd - page 1941
- Cross by Mr. Zed - page 1953
- Cross by Mr. Peacock - page 1957
- Cross by Mr. Morrison - page 1969

9 for identification - CEA study - page 1912

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Distribution and Customer Service Corporation (DISCO) for
approval of changes in its Charges, Rates and Tolls (Includes
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Delta Hotel, Saint John, N.B., on December 11th 2007.

BEFORE: Raymond Gorman, Esq., Q.C. - Chairman
Cyril Johnston, Esq. - Vice Chairman
Mr. Roger McKenzie - Member
Mr. Don Barnett - Member
Ms. Connie Morrison - Member
Mr. Yvon Normandeau - Member

N.B. Energy and Utilities
Board Counsel - Ms. Ellen Desmond

Board Staff - Mr. Doug Goss
- Mr. John Lawton
- Mr. David Keenan
- Mr. Dave Young
- Mr. Andrew Logan

Secretary to the Board - Ms. Lorraine Légère
Assistant Secretary - Ms. Juliette Savoie

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CHAIRMAN: Good morning, everyone. I will take the
appearances at this time.

MR. MORRISON: Good morning, Mr. Chairman, Members of the
Board. Terry Morrison and Edward Keyes on behalf of the
Applicant. And with me at counsel table is Neil Larlee
and Darren Murphy.

CHAIRMAN: Thank you, Mr. Morrison. CME?

MR. LAWSON: Good morning, Mr. Chair. Gary Lawson and with

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me this morning is David Plante and Mark Drazen.

CHAIRMAN: Thank you, Mr. Lawson. Conservation Council of
New Brunswick?

MR. KIDD: Good morning, Mr. Chair. Scott Kidd.

CHAIRMAN: Thank you, Mr. Kidd. Enbridge Gas New Brunswick?

MR. MACDOUGALL: Good morning, Mr. Chair. David MacDougall
and I am joined today by Dave Charleson from Enbridge Gas
New Brunswick.

CHAIRMAN: Thank you, Mr. MacDougall. Irving Oil Limited?
JD Irving Pulp & Paper Group?

MR. WOLFE: Good morning, Mr. Chairman. Wayne Wolfe and
this morning I am joined with Andrew Booker.

CHAIRMAN: Thank you, Mr. Wolfe. NB Forest Products
Association? Dr. Sollows?

DR. SOLLOWS: Good morning, Mr. Chair. Present and
accounted for.

CHAIRMAN: Utilities Municipal?

MR. ZED: Good morning, Mr. Chair. Peter Zed and I am
joined by Dana Young, Eric Marr, Marta Kelly, Dan Dionne,
Jeff Garrett and Paula Zarnett.

CHAIRMAN: Thank you, Mr. Zed. Vibrant Communities Saint
John? Mr. Peacock not here yet? Public Intervenor?

MR. THERIAULT: Good morning, Mr. Chair. I am joined this
morning by Robert O'Rourke and Robert Knecht who is

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already in the witness chair.

CHAIRMAN: Thank you, Mr. Theriault. NB Energy and Utilities Board?

MS. DESMOND: Good morning, Mr. Chair. Ellen Desmond and with me is Doug Goss, Dave Young, John Lawton and Board Consultant Andrew Logan.

CHAIRMAN: Thank you, Ms. Desmond. Any preliminary matters this morning, Mr. Morrison?

MR. MORRISON: There is just one, Mr. Chairman. I believe there is an error in the transcript from yesterday at page 1816. It is evidence at line 21, 20 and 21. Questioning Mr. Larlee and Mr. Larlee in the transcript is quoted as saying, I believe that if the costs are deferred then they won't be recovered in a fair and equitable manner out over time. And I believe what Mr. Larlee said is that they will be recovered in a fair and equitable manner out over time. And I raised it with Mr. Theriault a few moments ago and I believe he concurs with my interpretation.

MR. THERIAULT: Yes, Mr. Chair. Much to my disappointment I do.

CHAIRMAN: Do any parties have any issue with that? Then we will direct that that transcript be changed. Anybody else have any preliminary matters? All right, Mr. Theriault.

MR. THERIAULT: Thank you, Mr. Chairman. Board Members.

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2 Would you please give us your full name and occupation?

3 CHAIRMAN: Perhaps before we go ahead, I don't believe that
4 the witness has been sworn. Ask Board counsel to come
5 forward. Rarely do we see a witness so anxious.

6 MR. THERIAULT: He has a flight to catch.

7 CHAIRMAN: So the witness has been duly sworn.

8 ROBERT D. KNECHT, sworn:

9 DIRECT EXAMINATION BY MR. THERIAULT:

10 Q.1 - Would you please give us your full name and occupation?

11 A. My name is Robert D. Knecht. It is spelled K-n-e-c-h-t.

12 I am a principal of Industrial Economics Incorporated, a
13 consulting firm located in Cambridge, Massachusetts.

14 Q.2 - And Industrial Economics Incorporated, what sort of
15 business is that?

16 A. It is an economic consulting firm consulting in a variety
17 of areas, including environmental policy natural resource
18 damages, environmental enforcement and a relatively small
19 utility regulatory practice.

20 Q.3 - And which area are you involved in?

21 A. I am in the utility regulatory practice.

22 Q.4 - And could you, by way of background, Mr. Knecht, give
23 the Board a brief overview of your academic
24 qualifications?

25 A. I received an undergraduate degree in Economics for

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2 the Massachusetts Institute of Technology in 1978 and I
3 received a Masters of Science in management from the Sloan
4 School of Management at MIT with concentrations in applied
5 economics and finance in 1982.

6 Q.5 - Okay. And how long have you been with Industrial
7 Economics?

8 A. Sine January 1st 1989.

9 Q.6 - Okay. And could you explain to the Board what your
10 utility and regulatory practice involves?

11 A. My utility and regulatory practice is primarily in the
12 area of cost allocation and rate design. I have provided
13 expert assistance and expert testimony in a number of
14 jurisdictions in Canada which are listed in my evidence.
15 And then a few places in the United States, primarily over
16 the last ten years.

17 Q.7 - Okay. And have you testified in New Brunswick before?

18 A. I testified in 1992 which my partner Sharon Chown on
19 behalf of the large power users group at the time. I
20 testified in 2005 on behalf of the Public Intervenor in
21 the CARD proceeding. And then I testified again in 2006
22 in what I have described as the compliance phase of the
23 CARD proceeding in which the decision of the Board was
24 implemented or at least was addressed.

25 MR. THERIAULT: Mr. Chairman, at this time I would ask that

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Mr. Knecht be qualified to give opinion evidence with respect to cost allocation and rate design.

CHAIRMAN: Thank you, Mr. Theriault. Any intervenors wish to question Mr. Knecht with respect to his qualifications or make any comments on the motion to have him qualified as an expert witness? Does the Applicant have any comments?

MR. MORRISON: No objection and no comments.

CHAIRMAN: All right. Then the Board will qualify Mr. Knecht as an expert witness in the area of cost allocation and rate design.

MR. THERIAULT: Thank you, Mr. Chairman.

Q.8 - Mr. Knecht, before we start, do you have any corrections to your pre-filed evidence?

A. Unfortunately I do. As part of my preparation for the hearings I was reviewing the cost allocation analysis that I had prepared. And in my analysis I had attempted to segregate the costs so they were allocated between the large industrial firm customers and the large industrial interruptible and surplus customers. And in so doing I made an error.

I have prepared replacement sheets for page 16, page 18 and page 20 of the text of my evidence as well as the first page of exhibit IEC-2.

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MR. THERIAULT: At this time, Mr. Chairman, I have prepared copies of the replacement and Mr. O'Rourke will hand them out to the Board and to the parties.

CHAIRMAN: Thank you.

WITNESS: I would add that the changed numbers do not affect any of the conclusions in my evidence.

MR. THERIAULT: Perhaps we will just wait a few minutes until the Board and the parties have an opportunity to --
(Pause)

CHAIRMAN: I believe the replacement pages have now all been distributed.

MR. THERIAULT: Thank you, Mr. Chair.

Q.9 - Now, Mr. Knecht, perhaps you could just run through the replacement pages for the benefit of the parties and the Board.
A. Turning to page 16, in the table that is labelled IEC-2, you can see that there are two shaded rows in that table in which the allocated costs to the large industrial firm and the large industrial interruptible classes have changed slightly from what was in my original filing. And that represents a correct allocation of the transmission costs between those two subclasses. The effect was to lower the revenue cost ratio slightly for the large industrial interruptible class and to increase the revenue

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cost ratio slightly for the large industrial firm class.

On page 18 I have corrected some of the recorded revenue cost ratio numbers in the text in the first paragraph and I have shaded those on the top of the page.

On page 20 we have a similar correction, again correcting the revenue cost ratios for large industrial firm and large industrial interruptible. I have also corrected the rate increase for the large industrial firm. The original number was the transmission customers only. And the table is the back-up exhibit for those numbers, table IEC-1 -- I'm sorry -- IEC-2.

MR. THERIAULT: Mr. Chairman, Members of the Board, at this time I would like to take the opportunity to walk Mr. Knecht through the major points in his evidence, and to allow him to comment briefly on the evidence filed by Mr. Drazen and Professor Sollows.

I have organized my comments conventionally, addressing first cost allocation, then revenue allocation and finally rate design.

Q.10 - Mr. Knecht, let's turn first to the issue as to whether cost allocations should be on the table in this proceeding. With respect to DISCO's allocation study, the CCAS, DISCO has interpreted the Board's procedural decision in this matter as justification for not

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responding to interrogatories with respect to many cost allocation issues.

It appears DISCO's position to be that methodological changes to the CCAS should only be made in the context of a generic cost allocation proceeding. Now can you comment on this approach from your perspective as an expert in utility cost allocation and rate design?

A. Yes, sir. As I said in my evidence, I believe that this approach -- it's unfortunate for a couple of reasons.

First, in my experience when a regulator makes a decision regarding cost allocation the regulator makes that decision based on the economics that are in place when the decision is made. If those economic conditions change, the methodology may no longer be appropriate because the underlying economics aren't there any more.

So at a minimum it seems to me that both the regulator and the intervenors as part of a rate proceeding ought to be able to examine what the underlying economic conditions are in order to evaluate whether that methodology remains appropriate or whether it needs to be rethought.

The second major point that I raise in my evidence is that any generic proceeding in New Brunswick is going to focus almost exclusively on the classification and allocation of generation costs, because that represents

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2 such a large piece, and it's where the biggest debate exists
3 between the parties with respect to what the appropriate
4 methodology is.

5 When that happens some of the other issues, such as
6 developing the allocators or the distribution cost
7 allocation or some of the more technical things, may get a
8 little bit of the short shrift in a generic proceeding,
9 and I think that a regular rate proceeding where these
10 things are addressed sequentially would be a better
11 opportunity to address those, rather than to do them in a
12 generic proceeding where the focus is on generation costs.
13 So I am hoping that the Board will allow the cost
14 allocations to be evaluated in regular rate proceedings,
15 including this one, to the extent that the evidence is
16 available on the record.

17 Q.11 - Now, Mr. Knecht, let's turn to the specifics of the
18 cost allocation study. Can you comment on the position of
19 the various parties in this proceeding with respect to the
20 classification and allocation of generation costs?

21 A. As briefly as I can. Let me start with DISCO's filed
22 approach. In my evidence it's my assessment that DISCO
23 has implemented the same methodology -- the same
24 allocation methodology -- for generation costs that it
25 used in its compliance filing in the 2005-002 proceeding.

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2 That approach is more or less consistent with the Board's
3 decision in the CARD proceeding. However, it does not
4 incorporate the more detailed actual generation cost
5 information that the Board deemed would be useful in that
6 proceeding -- in that decision.

7 The approach that was approved in 2005-002 is also
8 reasonably consistent with the methodology that New
9 Brunswick Power has used since the 1992 CARD proceeding
10 and in fact is the methodology that DISCO proposed in the
11 1992 CARD proceeding.

12 In this proceeding no party has offered a specific
13 alternative generation cost methodology for all of the
14 rate classes, but both Mr. Drazen and Professor Sollows
15 object to the methodology with respect to specific rate
16 classes. Mr. Drazen argues that both the capacity related
17 generation costs and the fuel related generation costs are
18 over assigned to the large industrial -- the firm large
19 industrial customers -- in DISCO's CCAS.

20 In particular on the capacity side for the capacity
21 related costs Mr. Drazen argues that the energy portion,
22 or at least some of the energy portion of the capacity
23 costs, should be allocated on a duration basis up to the
24 breakeven capacity for each type of generating plant.

25 That is, instead of allocating those costs over all of

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the generation over the year, he only allocates them up to the first 2000 hours, and that has the effect of reducing the energy costs assigned to the large industrial class, and if it were applied to the rest of the classes, increasing it to I believe all of the rest of the classes.

Mr. Drazen also argues that the fuel cost allocation should reflect the higher on peak period cost of fuel, which is not reflected in DISCO's CCAS. Unfortunately, because DISCO has not provided and information regarding costs, I think Mr. Drazen can only make rough estimates of the impact of his proposed changes to the CCAS, and as I mentioned, he only evaluates that impact for large industrial customers.

Both conceptually and in many ways quite practically both of the points that Mr. Drazen raise and the analysis that he conducts were raised in the 2005-002 proceeding by Dr. Rosenberg on behalf of EGNB. And Dr. Rosenberg actually had significantly more cost information than was available to Mr. Drazen in this proceeding.

In that proceeding the Board did not accept Dr. Rosenberg's proposal and in this proceeding, I think because he doesn't really have a basis to do so, Mr. Drazen has not developed any reasons why the economic rationale in 2005-002 is no longer appropriate.

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Unfortunately without any evidence there is no real way to do a hard analysis of Mr. Drazen's proposal.

Professor Sollows in his evidence uses a different cost -- what I call a cost classification split between demand related costs and customer related costs -- I'm sorry -- for generation between demand related costs and energy related costs -- in his analysis for the residential class. In looking at one of his interrogatory responses, I believe that he would actually be willing to accept the CCAS methodology in that respect. So I think he has got two alternative approaches, one of which is the CCAS methodology.

My position is for this proceeding I have accepted DISCO's methodology because I don't have an alterative. Their -- in the 2005-002 proceeding I -- the recommendations I made in that proceeding I think are still appropriate, but I have not been able to update my quantitative analysis because the information isn't available.

In that proceeding my evidence was that if DISCO was going to change the methodology that it had used since 1992, it should adopt one that was more orientated toward how market prices -- or how prices are differentiated in competitive markets, than to how -- than to using

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traditional embedded cost allocation schemes.

I had proposed using a marginal cost approach as an alternative -- as a proxy for a market mechanism, and when I analyzed the marginal cost data for 2004/2005 that was available in that proceeding, I concluded that there wasn't a lot of variation from hour to hour in the marginal costs, and that therefore the results of the traditional embedded cost allocation methodology were providing a reasonable assessment of what the costs would be if we were to use the marginal cost approach.

Q.12 - Now Mr. Knecht, I would like to turn to the issue of distribution costs allocation and I would ask you to summarize your concerns with DISCO's methodology?

A. The primary issue that I address in my evidence is one of what we call the classification of distribution plant and distribution O&M costs. And when I say distribution, I'm using it for shorthand for the cost for poles, conductors and conduit, transformers and the associated equipment. I'm not talking about the meters or the service drops that are located at the customer level.

There is -- one of the debates in cost allocation is how you split the costs of that distribution equipment, poles and transformers and conductors, between a demand related component which varies with how high customer

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loads get and the number of customers.

Let me give you a little regulatory history. In the 1992 CARD decision, in going back and looking at it, the Board decided that the distribution cost classification approach may contain appreciable error, I think was the expression that the Board used at the time, and I think Mr. Larlee yesterday said even now we can't figure out how that -- how the classification methodology was actually developed for that proceeding. And in 1992 it ordered NB Power then to go and study the problem.

In 2005 DISCO came back with an analysis of distribution plant costs and proposed an alternative methodology. In that proceeding I also filed evidence saying, well I understand what DISCO has done but I believe it has the following set of analytical flaws, and I propose an alternative classification methodology for distribution plant costs. And in the 2005-002 decision the Board ruled that it felt that the evidence didn't provide the proper support for the changes proposed by DISCO and ordered it to go back to use the 1992 methodology.

In this proceeding it also directed DISCO to go study the matter some more. In this proceeding DISCO hasn't filed it as evidence but has submitted the results of what

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I call the CEA report, the report prepared by Concentric Energy Advisors, which evaluated the distribution classification methodologies.

And the CEA report is a fine analysis. I simply don't agree with its conclusion. It concludes that -- it evaluates the standard methodologies and concludes that the difference for allocated costs isn't worth changing the methodology, that the difference of using either of the two alternative methods would not change the results to make it worthwhile.

I disagree with that for two reasons. One, historical stability is an important regulatory principle but it's a principle I think that is best applied to rates, not cost allocation. I think the objective of cost allocation should be to focus on accuracy and not stability.

Second, I actually disagree that there isn't a substantive effect. The overall change in allocated cost is small because distribution costs are a relatively small piece of the overall cost pool. However, when we are looking at residential or general service rate design, how many costs we classify as customer related can have a very significant impact on what the right level of the customer charge ought to be for individual customers, and that is in fact an issue in this proceeding.

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2 If we look at DISCO's cost allocation study their analysis
3 suggests that the customer related costs would support a
4 customer charge for residential customers of \$22 a month,
5 whereas one of the studies prepared by CEA would suggest
6 that it would be as low as \$12 a month. And that's a
7 significant enough difference that I think this issue
8 merits some attention.

9 So in this proceeding I went and I did some additional
10 analysis relying primarily on the CEA -- on the CEA
11 report. When I relied on that analysis and compared it to
12 the recommendation I made in the last proceeding, they
13 were pretty similar. So at least until such time as DISCO
14 can follow CEA's advice and undertake a more thorough
15 evaluation of the cost split, I think it would be better
16 to adopt the methodology I propose, because it is based on
17 one of the standard methodologies, than to rely on the
18 1992 methodology.

19 Q.13 - Now, Mr. Knecht, has any other party proposed to modify
20 the classification of distribution plant?

21 A. Again no one has explicitly. However, in his allocation
22 within the residential class, Professor Sollows argues
23 that the distribution costs, the distribution costs that
24 I'm talking about, have no customer component at all. A
25 zero customer component.

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2 And you may recall yesterday in Mr. Theriault's cross
3 examination of Mr. Larlee, there are a number of
4 jurisdictions in the U.S. where there is no customer
5 component at all to distribution costs, and in support of
6 his argument Professor Sollows cites Bonbright text in
7 support of his argument.

8 While I respectfully disagree that the Bonbright text has
9 adequate statistical support for its conclusion, it is
10 true that a number of jurisdictions have accepted that
11 approach. In my experience Canadian jurisdictions
12 generally recognize both the customer component and the
13 demand component, whereas in some U.S. jurisdictions you
14 see a 100 percent demand.

15 In my view, distribution costs have both a demand
16 component and a customer component. The demand component
17 recognizes, for example, that it costs more to build a 50
18 KVA transformer than it costs to build a 25 KVA
19 transformer, and therefore they are -- as load gets bigger
20 the cost to serve that load gets higher.

21 The customer component recognizes that it costs more per
22 unit of demand to serve a large number of small customers
23 than it is to serve a small number of large customers.

24 When you have more smaller customers they are generally
25 more spread out, they require more poles, longer

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conductors, more and smaller transformers, than do a few larger customers. And therefore, the customer component in the distribution cost allocation reflects the scale economies of serving the larger customers. And I therefore, respectfully disagree with Professor Sollows' methodology.

Q.14 - Mr. Knecht, in your evidence you use the term "revenue allocation" by which you mean how much of the overall rate increase each class should pay. What are the key factors that regulators consider for revenue allocation decisions?

A. Most regulators define cost as the most important criterion for revenue allocation, and they try to follow the general policy that revenue allocation should try to move rates more into line with allocated costs.

The cost criterion in practice is most often tempered by two considerations. First is the principle of gradualism, dreaded or otherwise, which also can be called rate stability or avoidance of rate shock.

This principle is usually used to limit rate increases on the upside for classes and to temper the speed at which rates are moved into line with allocated costs.

The second tempering factor in my experience is the principle of value of service, which implies that larger rate increases may be granted to customers who place a

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higher value on a service and consequently lower increases for those who place a lower value on the service.

In practice this criterion is often invoked to justify lower rates for business customers who might otherwise downsize, shut down, relocate their operations, switch to alternative fuels, to the detriment of the remaining customers or even to the local economy.

Q.15 - Does DISCO use these criteria?

A. In its filing DISCO cites both the cost criterion and the gradualism criterion. However, if we observe what I call the revealed preference in DISCO's proposal it appears that DISCO is much more concerned with the principle of gradualism than it is with the idea of moving rates into line with allocated costs.

DISCO's proposal makes very little progress towards cost based rates for those classes who are outside the Board's range of reasonableness.

And in my evidence I offer an alternative approach. The primary difference between my approach and DISCO's is that I assign a larger rate increase to the large industrial firm customers and a smaller rate increase to the GS I and GS II customer classes.

The effective limit on my proposal is to restrict the rate increase to large industrial customers to 1.5 times

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the system average to reflect the principle of gradualism.

Even still my proposal, while it makes a lot more progress towards cost based rates than DISCO's, only moves the firm industrial transmission customers from 88-and-a-half percent revenue cross-ratio to 91.1, and it decreases the average GS class revenue cost ratio from 119.7 to 116.

Nevertheless I believe that this represents some reasonable progress towards cost based rates and it will provide some relief to the GS customers who have been paying rates far in excess of allocated costs for a long time.

Q.16 - Now turning to the issue of rate design, can you

summarize your evidence in respect of residential class rate design?

A. Let me start with the principle is that I generally agree with DISCO's philosophy of first phasing out the declining block tariff and then moving to evaluate the seasonal and possibly other tariff designs for the residential class when that is accomplished.

I also agree with the philosophy of phasing out the declining block nature of the residential rate tariff as fast as you can, subject to the principle of gradualism.

In this proceeding while DISCO's progress for phasing out the declining block rate is relatively modest, it is

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generally consistent with the philosophy in the Board's 2005
CARD decision in the first phase of that decision.

In my evidence I also agree with DISCO that leaving the
residential monthly customer charges where they are,
making no change to them at all, is a reasonable approach.

My cost allocation analysis suggests that the customer
charge should average no more than \$15 a month and right
now it's over 19 and 21 for the two customer charges.

My recommendation in my evidence was based on rate
stability and customer acceptance. To be honest, it would
not -- it would also be a reasonable approach I believe if
there were a modest reduction in the customer charge in
this proceeding.

Finally, the Board directed DISCO to study the issues of
farms and churches taking service under the residential
tariff. And DISCO addressed that issue -- or that issue
was addressed in Chapter 2 of the CEA report. CEA's
conclusions are consistent with my experience, including
all farms and the residential tariffs essentially without
limitation is pretty unusual, and there are sound cost of
service reasons for large farms to take service under a
different rate schedule.

At this stage I do not consider it advisable to exclude
large farms from the residential class at one fell

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2 swoop, but nevertheless, I felt we could make some progress
3 toward getting there by establishing a third block energy
4 charge that would only apply to the very large residential
5 loads.

6 With that as a starting point, I think then DISCO could be
7 directed to study the matter more carefully and develop a
8 specific proposal for shifting the large farm customers to
9 the GS tariffs or to another category over some reasonable
10 period of time.

11 Q.17 - Now, Mr. Knecht, what is your assessment of Professor
12 Sollows' recommendations regarding a residential rate
13 design?

14 A. Let me say at the outset that I think the methodological
15 approach that Professor Sollows takes towards residential
16 rate design, it's interesting, and I think it's
17 conceptually reasonable. I believe that with some
18 modifications it could potentially be useful as a way to
19 develop longer term goals as to what residential tariffs
20 should eventually look like, as to use that analysis to
21 see where we would like to get.

22 In practice I have two significant concerns with the
23 approach that Professor Sollows uses before it can be used
24 to provide useful directional signals.

25 First as I mentioned earlier, in his cost allocation

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within the residential class he uses a very different methodology than what is in the CCAS. And I -- as I mentioned, he doesn't use any customer component at all, whereas the CCAS produces a very different result. I don't agree that it's reasonable to use different cost allocation methods for inter-class and intra-class purposes. That is, you ought to use the same methodology. If there is a customer related component at the inter-class level there is a customer related component at the intra-class level. Otherwise, you know, every new customer is going to attract \$22 a month in customer related costs in the cost allocation study and it's not going to be reflected in rates properly. So if the Board wants to pursue using Professor Sollows' approach, I think it needs to be consistent with the principles that the Board has approved for the CCAS. The second concern I have at a big picture level with respect to Professor Sollows' analysis is that at least as of the last time I looked at the analysis that he had prepared, he has not considered the option of seasonal differentials. His approach is to segregate the residential class into three components, a winter peaking, a relatively flat load, and then a non-winter peaking group.

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2 And the problem is when you start breaking up the
3 residential class like that, you need to have a mechanism
4 for deciding who falls into what category. You are now
5 charging different rates to people who may be next to each
6 other for every hour or every day or every month. And I
7 think this can create a lot of problems in the way of
8 customer acceptance and a lot of complexity.

9 I think he could address this issue of the different times
10 when customers peak better by developing seasonal rates
11 which may be able to avoid a lot of the complexity that is
12 built into his recommendation.

13 Q.18 - Now, Mr. Knecht, what is your recommendations for a
14 General Service I and General Service II rate design?

15 A. Again, I basically agree with DISCO's philosophy with
16 respect to GSI and GSII. Because I assigned a smaller
17 rate increase to those classes than what DISCO has
18 proposed, I think with that smaller increase we could be
19 more aggressive about phasing out the General Service II
20 customer tariff -- I'm sorry -- phasing out the GS II
21 service, bringing the two rates together to be consistent.

22 In my rate design that I propose it follows DISCO's
23 philosophies. It moves there a little bit more quickly.

24 It does recognize the declining block nature that Mr.
25 Larlee spoke about yesterday with which I agree. And

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because there is -- because I am proposing a smaller increase for those classes, I'm hoping that it can be -- that it could be done without a major rate shock to particular customers.

Q.19 - One final area I would like to discuss. Could you summarize the concerns that you had in the last rate proceeding regarding interruptible and surplus service customers and how you propose that this address -- this issue be addressed in this proceeding?

A. In the last proceeding in 2005-002, I was concerned that the interruptible or the surplus service customers faced very little in the way of restrictions for switching from interruptible to firm service and then back to interruptible. I was concerned that with that freedom that firm service customers could potentially be on the hook for costs incurred by customers taking advantage of that flexibility.

In the decision -- the Board's decision in 2005-002 they directed DISCO to study the issue and this issue is addressed in Chapter 5 of the CEA report.

CEA concluded that there would be no harm to firm customers if firm rates were higher than the incremental cost of providing service to any such switching customers, and it concluded that they were.

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2 That conclusion is not at all obvious to me. Right now I
3 believe the firm rates, at least on average on the unit
4 cost basis, I believe Mr. Larlee alluded to this
5 yesterday, are actually a little bit lower per kilowatt
6 hour than what DISCO expects the interruptible rates to
7 be.

8 The -- and that issue could become exacerbated when
9 Lepreau is out for refurbishing because, as Mr. Larlee
10 says, the incremental costs which serve as the basis for
11 the surplus and interruptible rates, are likely to be much
12 higher when Lepreau is out.

13 The other issue I think that arises in this proceeding, if
14 I understood Mr. Larlee's evidence at the end of the day
15 yesterday, was that it appears that DISCO is buying
16 capacity to meet the shortfall when Lepreau is out, and
17 I'm not sure whether they are buying capacity that is
18 going to be sufficient to meet all of the interruptible
19 load or not, although Mr. Larlee did say that he didn't
20 anticipate that the level of interruptions were going to
21 get any higher when Point Lepreau is out for
22 refurbishment. And that surprises me a little bit.

23 It sounds like the utility is buying capacity to meet the
24 load for interruptible customers and that's not the nature
25 of interruptible service. However, for the

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purposes of this proceeding it's probably too late to try to get DISCO to change its tariff and I'm not going to have any success doing it anyway. So that what I recommended in my evidence is that what we want to do is ensure that if customers switch to firm service that the firm service customers are not on the hook for any additional costs that are incurred, and that DISCO should have to demonstrate that.

In light of Mr. Larlee's testimony yesterday, I think we also want to make sure that to the extent that this additional capacity has been purchased and that some of the costs of keeping interruptible rates from going too high are loaded into the cost of the Lepreau refurbishment, we want to make sure that those get allocated fairly back out when it comes to amortizing -- when I say fairly, be allocated back to the interruptible customers when the Lepreau refurbishment costs get amortized in rates.

So I think the short answer is I'm not proposing any changes in the tariff. I'm just requesting that DISCO demonstrate that firm service customers are not injured by the special provisions for interruptible and surplus customers.

MR. THERIAULT: Thank you, Mr. Knecht. Mr. Chairman, Mr.

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Knecht is available for cross examination. That concludes my direct.

CHAIRMAN: Thank you, Mr. Theriault. For the record, I note that Mr. Peacock is now in attendance. Mr. Lawson, any questions for Mr. Knecht?

MR. LAWSON: Yes, Mr. Chairman.

CROSS EXAMINATION BY MR. LAWSON:

Q.20 - Good morning, Mr. Knecht.

A. Good morning, Mr. Lawson.

Q.21 - I have a few questions. I think I heard you say that you felt it was -- accuracy was very important in the question of allocating costs. Is that a correct assessment of your evidence this morning?

A. Yes. Particularly as being more important than historical stability, yes.

Q.22 - And I think also I understood from some of your evidence that you believe that there is a need for some cost allocations that have taken place in the past and some in accordance with the CARD decision of 2005 should be changed, that there should be a redirection of costs amongst classes, is that a fair assessment?

A. Philosophically in 1992 the evidence that my partner and I put on is still appropriate, which was I didn't feel that the methodology that the company proposed in 1992

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2 reflected the duality of the trade-off between the capital for
3 fuel substitution and the fuel for capital substitution
4 with respect to generation costs. We put evidence on
5 recommending an alternative method.

6 Therefore conceptually I don't agree with what the Board
7 has adopted, but that's not that unusual. In many places
8 Boards adopt approaches that I don't agree with. At some
9 point if you are going to use an embedded cost
10 methodology, you know, you accept -- you accept the one
11 that the Board has adopted.

12 Q.23 - Okay.

13 A. That has been my approach. If we are going to use an
14 embedded cost methodology the Board has already ruled on
15 that. Fundamentally there aren't a lot of changes. If we
16 were going to go a forward looking -- if we were going to
17 go to a forward looking approach, then I think an approach
18 that incorporated marginal costs would be a better way of
19 looking at it.

20 Q.24 - And would your approach marginal costs -- the
21 conclusion, generally, not necessarily in precise detail,
22 be similar to the kind of approach that Mr. Drazen has
23 made on this breakeven analysis in his report?

24 A. Yes and no. Yes, in that --

25 Q.25 - You have been practising to be a lawyer.

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2 A. I was just following Mr. Larlee's cue from yesterday. The
3 -- I believe that what Mr. Drazen is getting at in the
4 adjustments that he makes is to try to reflect the duality
5 of the trade-off. And in fact it's the adjustments that
6 Dr. Rosenberg presented in much -- in great detail -- in
7 the 2005-002 proceedings, and it's a more sophisticated
8 approach, to be honest, than the approach that my partner
9 recommended in 1992.

10 However, fundamentally my approach is one that rather --
11 Mr. Drazen's approach is an embedded cost approach. It's
12 an average cost approach. My approach would be a marginal
13 cost approach reflecting my background as an economist, I
14 think, to -- but to reflect what the marginal costs
15 incurred on the system are, and use the marginal costs to
16 reflect the fuel for capital trade-off rather than using
17 average costs.

18 Q.26 - But both would result in I won't say necessarily
19 exactly the same consequence but similar consequences in
20 terms of reallocating costs amongst the classes?

21 A. Actually no. If we had a perfect system and if we had an
22 optimally configured utility, which of course there are
23 none, but if we had one I believe they would give the same
24 answer.

25 Q.27 - Right.

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2 A. However, in the real world they give very different
3 answers, and I think that's something that we observe in
4 competitive markets for power, is that the prices are not
5 necessarily what we would expect from an embedded cost
6 approach.

7 Q.28 - Now as recently -- as I understand it, as recently as
8 2006 you had proposed a similar position with respect to
9 this breakeven concept, the approach of the breakeven
10 concept, and then the marginal costs, is that right?

11 A. My approach is not the breakeven. My approach does not
12 require a breakeven analysis. You simply use the marginal
13 costs. But I did in fact, both in this proceeding -- in
14 this jurisdiction in 2005-002 -- refer to that methodology
15 in my evidence in the CARD proceeding, and I believe you
16 are referring to my evidence in Quebec where I put it in
17 with more detail.

18 But yes, I have actually advanced that approach both on
19 behalf of the Public Intervenor in New Brunswick and on
20 behalf of the large industrial customers in Quebec.

21 Q.29 - In that you refer -- and I'm just quoting here from
22 your 2006 report -- this methodology implicitly recognizes
23 the nature of cost trade-offs in generation planning, and
24 that's the fundamental principle that also Mr. Drazen is
25 coming from in his opinion?

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2 A. Yes. I believe there is probably a similar sentence in my
3 2005 CARD evidence to that effect.

4 Q.30 - So you haven't changed your mind since 1992?

5 A. To be honest, with the move towards competitive pricing I
6 am increasingly focused on marginal cost and market based
7 approaches rather than the traditional embedded cost
8 approach.

9 In 1992 you would probably be thinking the fixed variable
10 approach would be an approach for generation cost
11 allocation. We didn't recommend that in that proceeding,
12 but nevertheless in my view the evolution of electricity
13 markets calls for more of a marginal cost based approach
14 than a traditional embedded cost approach.

15 Q.31 - Of course I think we have heard evidence and there
16 seems to be some inclination to suggest that the market
17 isn't working as it was planned here in New Brunswick at
18 least anyway.

19 A. That -- I certainly understand that a market has not yet
20 developed.

21 Q.32 - That's right.

22 A. I don't know what the outlook for that is or how long it
23 would take one to develop, but that was certainly the
24 intent of the Electricity Act, particularly as it relates
25 to my evidence from two years ago.

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2 Q.33 - Sure. Now just in terms of generally, am I correct in
3 understanding from some of your evidence this morning and
4 your report that you do believe though, other than with
5 respect to what Mr. Drazen is advancing, that there are
6 some costs that you think should be allocated differently
7 than have been allocated by DISCO for this hearing, is
8 that right?

9 A. In this hearing I have no data. In the last hearing if I
10 tried to develop a marginal cost approach with the
11 information --

12 Q.34 - I'm speaking not just on this one issue. I'm speaking
13 generally in terms of allocating costs --

14 A. Oh, in terms of --

15 Q.35 - -- are there issues? In other words, there are some
16 things that you believe -- I don't want to put words in
17 your mouth, but I thought you were saying there were some
18 things that you believe where cost allocations had taken
19 place for this hearing that you think need to be changed.

20 A. Yes.

21 Q.36 - Okay.

22 A. Yes.

23 Q.37 - And would you agree that --

24 A. If I may, and particularly it is the distribution cost
25 classification.

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2 MR. LAWSON: Right. And -- well that's all. Thank you very
3 much. Just one second. I had better consult with the guy
4 who knows something about what he is doing. No, I guess I
5 got everything. Thank you.

6 MR. COLLINS: Thank you, Mr. Lawson. Mr. Kidd?

7 CROSS EXAMINATION BY MR. KIDD:

8 Q.38 - Good morning, Mr. Knecht.

9 A. Good morning, Mr. Kidd.

10 Q.39 - Just a couple of higher level questions here. How

11 often do you believe that a review of a public utilities
12 cost allocation study should be conducted?

13 A. I think that the cost allocation study should be evaluated
14 in every rate proceeding. That doesn't mean it needs to
15 be a top to bottom review, that if -- as I mentioned, if
16 nothing fundamentally has changed with respect to the
17 underlying economics, then it doesn't make much sense to
18 take the issue on.

19 And in jurisdictions in the U.S. where I work, where they
20 get evaluated with each rate proceeding, the decision or
21 the precedent set by the board or the Public Utility
22 Commission in the U.S., carries a lot of weight. So while
23 I say it should be evaluated each time, it should be
24 evaluated with significant respect for precedent.

25 Q.40 - Could you give me a range of how many hours you have

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2 spent on preparing your report and reviewing other expert

3 reports for this? Is it less than 25 hours, more than 25

4 hours?

5 A. It's more than 25 hours.

6 Q.41 - More than 50 hours?

7 A. Yes.

8 Q.42 - More than 50?

9 A. More than 50.

10 Q.43 - How much chance does a non-expert or a person on the

11 street have of sorting all this out, all your evidence

12 out?

13 A. My sense in terms of a person on the street, the issue of

14 cost allocation and rate design is a little arcane. There

15 is no question about it.

16 In fact it's my understanding that one of the reasons why

17 you set up a regulatory commission is to allow a board to

18 focus on these kind of complexities which are not well

19 addressed -- which may be better addressed by a regulator,

20 with technical knowledge of these issues, rather than the

21 legislative process.

22 Q.44 - And this is just more of a rhetorical question. Your

23 services aren't free?

24 A. Yes.

25 MR. KIDD: Thank you. Thank you, Mr. Chair.

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CHAIRMAN: Thank you, Mr. Kidd. Mr. MacDougall?

CROSS EXAMINATION BY MR. MACDOUGALL:

MR. MACDOUGALL: Good morning, Mr. Chair and Board members.

Q.45 - Good morning, Mr. Knecht.

A. Good morning, Mr. MacDougall.

Q.46 - Mr. Knecht, could you turn to page 4 of your pre-filed testimony.

And Mr. Knecht, at line 11 on page 4 you say that "Where the Board agrees that the specific cost allocation issues merit further review, I recommend that the Board direct DISCO to address those issues in the next rate case."

Correct?

A. Yes.

Q.47 - And I think you mentioned that this morning and in fact in response just recently to Mr. Kidd as well, correct?

A. Yes.

Q.48 - And are you aware that in this jurisdiction DISCO can come forward for rate -- can institute rate increases without coming forward to this Board?

A. Yes.

Q.49 - And there is a so-called 3 percent or CPI cap?

A. Yes.

Q.50 - Is that something that is common in other jurisdictions in which you have participated in?

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2 A. There are jurisdictions that have adopted what is called
3 performance-based ratemaking, which is an issue that is
4 actually addressed in the last section of my evidence in
5 this proceeding.

6 This particular form of it I think would be most unusual.

7 But there are a number of jurisdictions that have
8 formally gone through a performance-based ratemaking
9 approach and instituted it.

10 I think one of the good things about performance-based
11 ratemaking is there is less need for cost allocation and
12 rate design experts.

13 Q.51 - But in this jurisdiction, if you are over 3 percent,
14 you come to the Board. But if you are under 3 percent
15 DISCO doesn't have to come to the Board?

16 A. Correct. That's my understanding.

17 Q.52 - And because of that, would it be your view that it
18 would be unclear when the next rate case may be in this
19 jurisdiction?

20 A. Yes. I think I saw an interrogatory response which
21 referenced 2010.

22 Q.53 - So do you think it would be inappropriate to deal with
23 cost allocation issues or rate design issues that had
24 broad application outside of the revenue requirement
25 hearing? Would there be any issues with that?

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2 A. I think the essence of my evidence was that it's useful to
3 address them in rate proceedings. I don't object to also
4 addressing them outside of regular rate proceedings.
5 As I said, if there is a generic proceeding, I would
6 expect that it would again focus primarily on the issue of
7 how to allocate 80 percent of the costs, which are the
8 generation costs.

9 Q.54 - That is great. Thank you very much, Mr. Knecht.

10 If we could go then to page 24 of your pre-filed
11 testimony. And here at line 18 you say "Further CEA's",
12 and that is Concentric's -- "recommendation for an overall
13 review of the nature of residential and GS service may
14 have some merit."

15 I just want to focus on the word "may" there. Do you
16 believe the recommendations have merit? I'm just confused
17 by your saying they may have some merit.

18 A. I would be willing to go along with have merit.

19 Q.55 - Thank you. If we could then go to --

20 A. Just so I can clarify, doing an overall review has merit.

21 Constraining any changes to only occurring when we do an
22 overall review is not something I agree with. I believe
23 that we can make changes on a step-by-step basis.

24 An overall review would be a useful thing. But in

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2 some sense that was I think one of the objectives of the
3 proceeding in 2005. And we didn't get it done.

4 Therefore I think that simply saying the only time we are
5 going to do it is when we have one of these generic
6 proceedings is going to get us into the position where we
7 are not making steady progress.

8 Q.56 - But you are not against doing it in a --

9 A. I'm not against doing it. I'm against limiting it to
10 that.

11 Q.57 - Okay. And are you aware that the present constituency
12 of the Board is fundamentally different than the
13 constituency of the Board that last heard these matters?

14 A. Yes.

15 Q.58 - Are you aware that all of the Board members are
16 different than the Board members that heard these matters
17 previously?

18 A. I believe that's correct.

19 Q.59 - Could we go to page 25 of your report, Mr. Knecht.

20 And Mr. Knecht, I want to focus here on the table, IEC-4
21 which is RDK proposed residential tariff?

22 A. Yes.

23 Q.60 - Now I just want to sort of briefly go through this to
24 make sure that I understand it correctly.

25 From what I see here, you are proposing that instead

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2 of an elimination of the declining block -- you are not
3 proposing necessarily at this time an elimination of the
4 declining block -- but you are proposing a third block be
5 put in place for customers whose usage in a given month is
6 over 6,000 kilowatt-hours.

7 And for that block it will be more expensive than the
8 second block, between 1,300 and 6,000 kilowatt-hours, but
9 still less expensive than the first block of under 1,300
10 kilowatt-hours, correct?

11 A. That's correct.

12 Q.61 - Okay. But my understanding is that this third block
13 would only affect approximately between 500 and a thousand
14 customers, correct?

15 I believe you refer to that on the previous page, page 24
16 starting --

17 A. Yes.

18 Q.62 - -- at line 22?

19 A. That's correct. Yes.

20 Q.63 - So if we made these changes, instituting a third block
21 on top of the existing two blocks, this would only impact
22 at the most approximately a thousand customers?

23 A. With some very large loads.

24 Q.64 - Yes.

25 A. But yes, it would only impact those customers because

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2 in fact my proposal is targeted on those very large customers
3 as part of a first step in moving towards eliminating the
4 eligibility of the very large loads for residential
5 service.

6 Q.65 - And you have now helped me get rid of a lot of my
7 questions. That is the aim of this. It is to --

8 A. That is correct.

9 Q.66 - -- impact solely those approximately a thousand
10 customers?

11 A. That is correct.

12 Q.67 - Thank you. And a lot of those, for example, would be
13 these large firms we were discussing yesterday with Mr.
14 Larlee?

15 A. Yes.

16 Q.68 - Now if we could go back a few pages to page 17. And
17 here at line 20 you say "However, as a matter of practice
18 DISCO also appears to elevate the principle of rate
19 stability far above the principle of setting cost-based
20 rates."

21 And again you mentioned some of this I believe this
22 morning. But you went on and you just gave some
23 observations. But you didn't make a conclusion.

24 I guess could you expand upon that for the Board and us?

25 Is this a concern to you?

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A. It is a concern. And in -- I raise the issue in this particular section of my evidence which relates to the issue of revenue allocation which is the issue of how big a rate increase each rate class faces. And for those classes that are very far outside of the 95 to 105 revenue cost ratio range, DISCO's proposed increases are very close to what the system average increase is. And therefore, they are not moving closer to that range of reasonableness at any speed. I think I calculated it was going to take about 11 rate proceedings to get the General Service class within the 95 to 105 percent range. So I think I did reach a conclusion with respect to this, which is we ought to move those classes in this proceeding a little faster towards cost-based rates. And so in this context what you are referring to here is the issue of rate stability with respect to revenue allocation. There is also an issue of rate stability with respect to rate design. And again there is an issue, and I believe I mentioned it in my opening statement, is that the amount of progress towards getting where we want to go with respect to the residential tariff, which is phasing out the declining block, and with respect to the General Service tariffs,

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2 which is bringing the two rates closer together, the progress
3 is relatively modest.

4 I did propose an alternative design for General Service
5 which would move the classes closer together faster. But
6 I felt that I could do that because I was giving that
7 class a smaller rate increase.

8 Q.69 - And Mr. Knecht, I just -- I'm going to try -- I hope I
9 get this correct. Because I'm basing my next questions on
10 just your comments from this morning that weren't in your
11 pre-filed testimony.

12 I think you said with respect to DISCO's proposal on the
13 residential rate that it was consistent with the first
14 phase of the Board's CARD ruling in the last two phase
15 proceedings, is that correct?

16 A. Yes.

17 Q.70 - Were you aware of what the Board did with respect to
18 the residential rate in the second and subsequent phase?

19 A. I believe I saw it in I believe your witness' evidence
20 that they concluded that faster progress was warranted on
21 the order of moving two-thirds of the way, if I recall
22 correctly.

23 Q.71 - You recall exactly.

24 A. That is what the Board decided. And that is not what
25 ended up happening, which is of course my major concern

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2 here.

3 Q.72 - And it didn't end up happening because their -- is it
4 your recollection that that was overturned by a government
5 decision?

6 A. Yes.

7 Q.73 - But when you were talking about consistent with the
8 first phase, the move -- the more significant move
9 occurred in the second phase after the Board had further
10 information, correct?

11 A. Yes.

12 MR. MACDOUGALL: Thank you, Mr. Knecht. Those are all my
13 questions.

14 Thank you, Mr. Chair.

15 CHAIRMAN: Thank you, Mr. MacDougall. Mr. Wolfe?

16 MR. WOLFE: Thank you, Mr. Chairman. I have a very short
17 couple of questions.

18 CROSS EXAMINATION BY MR. WOLFE:

19 Q.74 - Mr. Knecht, one comment you made was that Mr. Larlee
20 had stated replacement power was bound for the Lepreau
21 outage.

22 And if I remember the number correctly from your exhibit
23 yesterday, it showed a shortfall of 280 megawatts, do I
24 remember correctly?

25 A. Yes, I think. There was the load and resources review

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was at 280. And I believe the interrogatory response that DISCO filed, I think it was more like 200, but --

Q.75 - Okay. Since that table was produced, are you aware that more than 200 megawatts of power has disappeared in this province? And I suspect that peak would be close to 250 megawatts.

So knowing that, would that change any of your analysis?

A. That would I think contribute to -- that probably contributed to Mr. Larlee's conclusion as to why the likelihood of interruption was not going to increase significantly despite the loss of I believe some 500 megawatts of Lepreau capacity.

But yes, the answer to your question as am I aware of it, yes, I have heard that there is loss of industrial load here and in Quebec.

Q.76 - Also part of that will be interruptible -- would disappear as well. And this could be a significant part of today's interruptible power?

A. Yes. I understand -- and I don't know the mix of the loss of load between interruptible and firm service. However, when you reduce the interruptible load it doesn't -- it doesn't create any less pressure for the need to retain new capacity. Because the interruptible load is

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not counted for the determination of the capacity requirements.

So the fact that -- when you lose the interruptible load, it does not mean that -- or at least it usually does not mean that the utility needs to go out and procure any less capacity because they didn't count that load in the first place in its capacity -- in their capacity requirements.

Q.77 - But if I recall the chart correctly, the interruptible was in that 280 megawatts?

A. I don't believe so. When you say it was or was not, is that -- the 280 megawatts I don't believe was required to meet the interruptible load. The interruptible load was subtracted from the firm requirements.

I believe it was actually added -- I believe it was actually added as a supply option. But in essence it's not counted for calculating the capacity requirements.

Q.78 - Are you aware that when power is purchased at very high rates or are produced at very high values, that the interruptible customers will voluntarily take the power off rather than being counted as interruption?

So in fact the interruptions are much, much higher than what shows as being interrupted by NB Power?

A. I don't -- I'm aware that the customers that are

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2 called interruptible in New Brunswick have their own
3 generating capacity.

4 And therefore when the prices get very high they may very
5 -- they are likely to -- I would assume they are likely to
6 self-interrupt. I don't have the statistics on that.

7 But your point is well taken, sir, that if in fact they
8 are self-interrupting then they are providing -- then the
9 interruptions are greater than the ones that I have
10 referenced.

11 Q.79 - Excuse me. But I used the wrong word. Interruptible
12 is for generators, you are correct. The part that is
13 going to disappear is surplus power.

14 And it is the surplus people that generally go and
15 interrupt their power when the rates go high, rather than
16 the interrupt -- interruptible people.

17 One other question I had was knowing what you know about
18 the forest products business, both in New Brunswick and in
19 Quebec, since you are well aware of that, what level would
20 you consider rate shock for that part of the sawmill and
21 pulp and paper business today?

22 What would you consider a number to be rate shock?

23 A. The evidence that I put forward is that a rate increase of
24 one and a half times system average is a rule

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of thumb that some regulators use for evaluating rate shock.

There are certainly concerns about loss of large industrial load, both here and in Quebec.

The circumstances are somewhat different in Quebec than they are here in that the revenue cost ratio for large industrial customers in Quebec is well above 100 percent.

And it is well below 100 percent here.

I think one of the concerns that I have is that as a matter of public policy, if you want to provide a subsidy or benefit to the large industrial classes, doing it in electric utility rates is not necessarily the best public policy.

Because electric utility rates tend to impact -- have a higher percentage impact on lower income customers than they do on higher income customers.

And if as a matter of policy the government wants to provide some relief to large industrial customers, it might be done better than through a mechanism other than electric utility rates.

So in terms of rate shock, is rate shock any worse for an industry that is under intense competitive pressure than anything else, I think you have to evaluate that in the context of whether or not those customers are providing a subsidy to the other rate classes or are they

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2 receiving a subsidy.

3 Q.80 - I believe you are correct in saying that New Brunswick
4 has not shown any changes to their rates. But I believe
5 Quebec does do such a thing?

6 A. I'm sorry, I don't understand the question.

7 Q.81 - You were talking about lowering the rates for large
8 industrial. And the Quebec rate is quite low compared to
9 the rest of Canada?

10 A. The Quebec rate is quite low compared to New Brunswick.

11 I'm not sure that my clients in Quebec would consider it
12 low relative to Manitoba and B.C. However the rates are
13 certainly lower in Quebec.

14 My experience in the last three or four rate proceedings
15 in Quebec is that the rate increases have been across the
16 board, that is all rate classes have seen the same
17 percentage rate increase in I believe each of the last
18 three proceedings.

19 MR. WOLFE: Thank you, Mr. Chairman. That is my questions.

20 CHAIRMAN: Thank you, Mr. Wolfe. Dr. Sollows?

21 CROSS EXAMINATION BY DR. SOLLOWS:

22 Q.82 - Good morning, Mr. Knecht.

23 A. Good morning, Professor.

24 Q.83 - You noted in my evidence that my evidence is based on a
25 different allocation of costs than was used in the

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approved CCAS.

Just for clarification purposes, you will agree that that allocation acts only within the residential class and that I do use the cost allocated to the residential customer class as a whole in terms of -- I have made no change to the allocation of costs between classes. Is that fair?

A. I think it is fair. I'm not sure whether you use the total costs or the total revenues that DISCO has assigned to the --

Q.84 - Yes.

A. -- residential class. But yes.

Q.85 - Yes.

A. I agree that you did not propose to modify the CCAS for inter-class --

Q.86 - Right.

A. -- cost allocation.

Q.87 - But you are quite correct, that within the residential class I -- you characterized it I think fairly that I chose to allocate -- well, I chose to simply allocate costs in excess of an arbitrary energy cost, entirely to demand. That is understood?

A. I believe, yes. I believe that's right. I believe you used a coincident peak demand too for --

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2 Q.88 - That is right.

3 A. -- allocation for all of those costs.

4 Q.89 - That is correct. Yes.

5 Now I know that you did indicate in your earlier comments
6 that you feel it may be more appropriate to use a seasonal
7 rate structure than it would be to differentiate between
8 winter peaking and summer peaking and flat use customers.
9 Have you done any analysis to support your view that a
10 seasonal rate results in a better match between the cost
11 of service and the revenue that the rate would recover
12 from individual residential customers?

13 A. No.

14 Q.90 - Okay.

15 A. I have not. But conceptually, think about the issue that
16 you are addressing, which is try to recognize that the
17 higher costs associated with service in the winter, by
18 establishing a seasonal rate that would clearly be higher
19 in the winter, you would be able to target that rate for
20 those winter loads.

21 And that would achieve the same objective as separating
22 out the classes into each of the pieces.

23 Q.91 - Okay.

24 A. Now as I'm sure you are aware, the more pieces you

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2 break this thing up to, the better fit --

3 Q.92 - Yes.

4 A. -- you are going to have on a statistical basis in getting
5 your analysis -- in doing your analysis you will get a
6 better fit.

7 Q.93 - Better match between costs and --

8 A. You will get a better match. But you sacrifice a lot of
9 complexity, that is you now have a set of different
10 categories of residential customers that you need to
11 evaluate.

12 So I believe I would agree that you would get a better
13 statistical fit. But you might not have a better rate
14 design.

15 Because you now have different categories of residential
16 customers and a lot of complexity and a lot of customer
17 acceptance problems, which I think could be -- a lot of
18 the issue that you are addressing could be addressed with
19 seasonal rates.

20 Q.94 - Okay. So based -- I guess what you seem to be telling
21 me then is it wouldn't be just applicable to residential
22 customers.

23 And you would subject large industrial customers to a
24 seasonal demand charge because they have load in the
25 winter?

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2 A. The large industrial customers are quite high load factor
3 customers. They probably pay a demand charge that is
4 probably about the same in every month. I would have to
5 go back and look at the large industrial tariff to see
6 what the ratchet provisions are in the large industrial
7 tariff.

8 But I mean, if they peak in the winter then they pay a
9 higher demand charge in the winter already under the
10 tariff. There may be a ratchet that applies that to all
11 of those months. But whatever their peak is in the
12 winter, that is what applies.

13 There might possibly be some modest benefit to developing
14 a lower demand charge for large industrial customers who
15 peak at some other time, you know, if in fact it's a clear
16 off-peak.

17 Q.95 - I guess what is motivating my question here is that
18 when I look at the residential class then I just sort of
19 lump all customers together and take all the residential
20 customers, take all the General Service, industrial
21 customers and simply ignore how they are classified but
22 look at their variation and load with temperature.

23 I find that there are a very large number of residential
24 customers who are indistinguishable from the large
25 industrial customers in that their load is not

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2 correlated with temperature at all.

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And I guess what I'm getting at is a proposal to put a

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seasonal rate, apply a seasonal rate to all residential

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customers would subject those customers that are really

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indistinguishable in terms of their load characteristic

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except for size from industrial customers, it would

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subject them to a seasonal rate when in fairness would it

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not be appropriate to have industry subjected to the same

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rate?

11

A. I think maybe you set me off track a little bit with

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respect to large industrial service. So I think one of

13

the things that you would want to do, if you were going to

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implement seasonal rates, would be to have a seasonal

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structure, not so much for the demand charge for large

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industrial customers, which is usually subject to a

17

ratchet, but to have a seasonal charge for energy, the

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energy component of large industrials.

19

Q.96 - So --

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A. And with that I would agree.

21

Q.97 - Okay.

22

A. To be honest, I'm a little surprised that there is a

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material number of customers who have a load shape that

24

looks like large industrial customers. Because those

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large industrial customers are on a very flat rate 24

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2 hours a day and --

3 Q.98 - No, no. I didn't mean to imply that their short-term

4 load shape is the same. What is the same is their

5 correlation of their load with outside air temperature.

6 They are essentially flat, seasonally flat use customers?

7 A. That makes sense.

8 Q.99 - Yes. So just for clarity, in the notion of seasonal

9 rate that you would propose, you would propose that it

10 should apply to large industrial customers and wholesale

11 customers and all customers basically, not just

12 residential customers?

13 A. I think that is something that we should evaluate when we

14 achieve the goals that have been established, yes.

15 Q.100 - Okay. Thank you.

16 Now you did -- you also commented or indicated, I think

17 I'm characterizing it correctly, that the result of my

18 methodology is that I don't indicate -- I allocated only

19 those costs to the customer component that Bonbright would

20 allocate?

21 A. I believe you cited Bonbright --

22 Q.101 - I did.

23 A. -- as support for an approach in which there is a

24 relatively low or zero customer component for a number of

25 types of distribution.

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2 Q.102 - Do you have the response to interrogatories there?

3 A. No.

4 Q.103 - Can I provide it to you?

5 A. Yes, you may, unless my counsel is going to object.

6 Q.104 - Now this is for the record the responses to the

7 interrogatories that I prepared. I think it is filed as

8 SOL-7, I think. It is on the cover, SOL-7.

9 And it is interrogatory number PI IR-1, Question 4. And

10 so that would be under the middle tab, the middle section

11 of the responses to interrogatories. I forget which color

12 that is.

13 CHAIRMAN: Dr. Sollows, perhaps you could repeat the number,

14 the IR.

15 DR. SOLLOWS: Yes. It is SOL-7, PI IR number 1, Question

16 number 4.

17 CHAIRMAN: Thank you.

18 DR. SOLLOWS: And near the bottom of the page it says,

19 number 4, "Please specify the monthly fixed customer-

20 related costs if any used in Professor Sollows' analysis."

21 Okay, Mr. Chair?

22 CHAIRMAN: Yes.

23 Q.105 - Mr. Knecht, I refer you to the list starting with item

24 (a) with my answer to your question number 4, "specify the

25 monthly fixed customer-related costs."

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You will note that item (a) is -- I certainly say that the Board should consider evidence of the minimum cost of customer service as defined by Bonbright, which I think is consistent with your statement.

But then in part (b) you note that I suggest that the Board should make an allowance of no more than \$2.50 per month as the customer cost associated with transformer costs.

Will you agree with me that that amount of money, 2.50 a month would be a portion of the kinds of costs that would normally be captured under the customer component and the allocation that you favor?

A. Yes. If you have included that in your analysis, when you allocate the costs to each of the customers, then yes I would. It's quite a bit smaller than the number that's used in DISCO's study.

Q.106 - Fair enough. But it is in fact something in excess of Bonbright. And it is something that would normally be included at least in principle in a customer cost allocation, is that correct?

A. Yes.

Q.107 - Thank you. Now it is true, when you look at item (c), that when setting a monthly service charge I don't think that the Board should consider any allowance for fixed or

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2 variable costs beyond those outlined, which is item (c).

3 But then I would ask you to come down to item (d) and
4 where I suggested the Board should allocate any other
5 minimum system costs, which I think we agree are probably
6 a very substantial component of what are termed the
7 customer costs. In excess of those detailed in item (b)
8 each of the customer energy and demand categories are
9 proportionate to their fraction of total allocatable
10 costs.

11 So would you agree with me that that methodology would in
12 fact add a portion of those minimum system costs again
13 back into the customer cost component and contribute to
14 the service charge?

15 A. Yes. I don't know what you have included in here in your
16 analysis. I did not -- I did not go through the work
17 papers in detail. If maybe we can summarize here, is that
18 if we were to use the analysis that you prepared, I
19 believe that you should allocate to each customer the same
20 cost per month in terms of customer-related cost that
21 comes out of the CCAS.

22 And it was my understanding that in reading in other
23 places in your interrogatory response that you did not do
24 so. And in fact you cite Bonbright in support of a
25 smaller customer component than that implied by the

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2 traditional minimum system or zero intercept analysis.

3 Q.108 - Okay. But when it comes to my advice that I would
4 give this Board, it is -- you agree that it is fairly
5 clear that there should be -- these things should be added
6 into what you would call a customer component cost in some
7 degree, and that would then allow you to set a service
8 charge?

9 A. If your advice is the same as mine then I'm going to agree
10 with that.

11 Q.109 - Fair enough. I want to now come to the three block
12 rate design that you have proposed for the residential
13 class.

14 Can you -- it consists of a service charge, a first energy
15 block, a second energy block and a third energy block and
16 sort of a runout block, is that correct?

17 A. I wouldn't call it a runout block. It is a runout block
18 technically. But it's a targeted runout block only for
19 extremely large customers.

20 Q.110 - Right. Can I now ask you to refer to -- and I will
21 give you this copy of it. It is SOL IR-6(1). And it
22 would be my revised evidence filed with the response to
23 interrogatories, table 3 on page 36.

24 And I just want to compare your rate design to some of
25 those that I have provided in that table.

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A. Can you help me here?

CHAIRMAN: Dr. Sollows, perhaps you could repeat that reference to the evidence.

DR. SOLLOWS: Yes. It should be SOL-6 (1). And it is on page 36 of the evidence. I think it is labeled Table 3. And it summarizes the parameters of each of the candidate rate designs that I provided in my evidence. And I'm going to focus on the ones labeled in Table 3 items 6, 7 and 8, which are the three block rate designs that have been derived with respectively a service charge of \$6.41 per month, which was simply the result of the regression analysis, a service charge in item 7 of \$10 per month and the rest of the parameters determined by regression, and a service charge in item 8 of \$20 per month with the rest of the parameters determined by regression.

Q.111 - Now Mr. Knecht, if I understand your evidence correctly, you would support a service charge somewhere in the order of \$15?

A. That would be consistent with my cost allocation study as proposed in this proceeding. The text of my evidence was that I supported the company's proposal for rate stability reasons. But from a cost perspective, yes.

Q.112 - And so you would agree with DISCO's decision not to

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2 use the indicated cost in the cost allocation study of \$22 a
3 customer?

4 A. Well, DISCO's position I think is that their customer
5 charge is quite close to the results of the cost
6 allocation study. I -- my proposal is actually that for
7 rates -- I agreed with their proposal.

8 In my opening statement I said a modest reduction in the
9 customer charge would not be unreasonable in this
10 proceeding. You do have to, for the purposes of this
11 proceeding, temper any recommendation you make for
12 gradualism and rate shock and where we are going.

13 If you ask me over the longer term do I think we should
14 target what the customer cost, the allocated customer cost
15 in the cost allocation study is for the customer charge,
16 my answer would be yes.

17 Q.113 - Okay. So you said DISCO indicated -- and you feel
18 comfortable with the fact that their choice for the
19 monthly service charge is reasonably close to the
20 indication.

21 Well, in the case of urban customers I think it is
22 something in the order of 19. And the indication is 22.
23 So a \$3 difference doesn't bother you?

24 A. Well, it's not a \$3 difference in total. Because as Mr.
25 Larlee said, the customer component in the cost

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2 allocation study doesn't distinguish between urban and rural
3 and seasonal. So therefore you would want to be comparing
4 the average. So --

5 Q.114 - So it is 20 then?

6 A. -- it would be 20.

7 Q.115 - 10 percent doesn't bother you?

8 A. That's reasonably close within the --

9 Q.116 - So we don't need to be exactly at the cost allocations
10 that we get in any of these studies. We accept that they
11 are for guidance purposes really.

12 And some deviation from them is quite reasonable, is that
13 fair?

14 A. Yes.

15 Q.117 - So I want to direct your attention to the rates that I
16 have listed in items 6, 7 and 8.

17 And using item number 8, for example, the three block with
18 a \$20 service charge per month, that would be roughly
19 equivalent to what DISCO has now, right, the average
20 service charge being about \$20 a month, is that fair?

21 A. Yes, sir.

22 Q.118 - So when you look at the details that arise from the
23 process that I followed, which you fairly characterized as
24 allocating the costs other than those defined as energy to
25 individual customers based on their estimated peak

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coincident demand, you find that the regression analysis, which tries to minimize the total error in allocation of costs to each customer, gives a first block size of 720 kilowatt-hours and a first block price of 6.77 or about 6.8 cents a kilowatt-hour.

There is a second energy block size of 4,580 kilowatt-hours and a price of about 10.9 cents a kilowatt-hour and a remaining energy or runout rate of about 9.2 cents, 9.17 per kilowatt-hour.

How does that compare or comport with the proposal that you are making?

A. It's obviously substantially different. The proposal that I make -- I believe we are coming at this from two very different directions.

I'm coming from it from the existing rate structure and trying to first phase out the huge problem in the existing structure, which is the declining block nature. And my proposal is focused only on this proceeding.

As I mentioned in my opening statement, I think that if we can structure this kind of analysis in a reasonable way, we could set a longer term target for where we would like -- what we would like the residential tariff to look like as a target for where we might get over the longer term.

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So that I think we are comparing apples and oranges when we compare my proposal which is a short-term adjustment to your proposal, which I at least would characterize as a longer term place to go.

I mean, I think that implementing this, any of these particular ones, might very well have substantial rate shock implications --

Q.119 - Fair enough.

A. -- if it were done at once.

Q.120 - If I may, would you -- carry on.

A. If I may finish my response, in terms of this particular analysis, I believe that your optimization routine that is in here is again relying on a cost allocation approach I think that has a lower customer component than what is in the CCAS. And I think that's having an effect on your parameters. I'm sure it is.

And it may very well be why you see such a small first block charge, because you have now constrained to have a \$20 customer charge. And that is forcing that first block charge size to be smaller and then showing up in your second block charge with a big jump for that second block charge.

This tariff design is U-shaped like this. Mine is actually the existing charge goes down like this and then

2 just comes up a little for those --

3 Q.121 - Right.

4 A. -- very large customers.

5 Q.122 - I think you are right. I'm not sure that it is in a
6 sense -- it is not really -- it is constrained by the
7 definition of the service charge at \$20, which I think you
8 have already agreed, and I think DISCO has agreed, pretty
9 much covers all of the customer-allocated costs. Is that
10 not fair?

11 A. But you haven't allocated the costs on a \$20 basis. You
12 have simply constrained, as I understand this -- and you
13 will --

14 Q.123 - Yes.

15 A. -- correct me if I'm wrong. But as I understand it, in
16 your algorithm you have constrained that number to be \$20.

17 Q.124 - I have defined it, yes.

18 A. But you haven't -- I don't think you have allocated the
19 costs to each class as \$20. And those I think are two
20 different things.

21 Q.125 - Well, each class?

22 A. I'm sorry. To each customer.

23 Q.126 - No. That is quite right. I had simply done, as you
24 suggested instead, the customer charge which will be \$20.

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2 And that I think I understood was reasonably consistent with
3 the CCAS as we have it, is that not fair?

4 A. The \$20 as a charge is consistent with the CCAS as we have
5 it. However when you run your analysis here, you haven't
6 allocated the cost to each customer --

7 Q.127 - Absolutely.

8 A. -- that represents \$20.

9 Now I believe that if you reran this analysis using \$20
10 allocated customer cost to each customer, you would get
11 very different parameters for your rates.

12 Q.128 - Possibly. I suspect not. But possibly.

13 How do you believe the parameters would -- this you would
14 characterize as a inclining block tariff structure, is
15 that fair?

16 A. I would --

17 Q.129 - With the exception of the runout block?

18 A. I would characterize it as inverted U-shaped.

19 Q.130 - Okay. Do you agree that, for the sense that it is an
20 inverted U-shaped, that the block price charged to the
21 largest customers only applies to a relatively small
22 percentage of the customers?

23 A. Yes. As I mentioned, the first two blocks get you up to
24 7300 -- I'm sorry -- 5300 kilowatt-hours a month, which is
25 not so different than the 6000 I use in my evidence.

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And we have established that is 500 or a thousand customers.

There is a fair amount of load there.

Q.131 - Right. Yes. And the whole purpose of the third or runout block or the lower price in the runout block is to not -- you would agree with me is to not unduly injure or really overcharge the very largest customers, which could easily happen if you just had a simple two-block inclining rate with a wide distribution of customer size?

A. Well, the purpose of my third block was to start to move the large, the very large customers out of residential service.

And to be honest, if we have made a decision that we are going to move the large, the very large farm customers out of residential service, then that would be another thing that you would want to change in your analysis to exclude those customers when evaluating a longer term -- evaluating a longer term target for where we might go.

My interpretation of your analysis is that you set up three blocks in order to as closely match revenues and costs as you can. And again as you set up more blocks you increase complexity. But you also increase your ability to match revenues and costs.

Q.132 - Can I then quickly again take you back to the response, the PI IR-7 which is the response to

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2 interrogatories?

3 CHAIRMAN: Dr. Sollows, would this be a good time for a
4 morning break? Do you have much cross examination left?

5 DR. SOLLOWS: I think this might finish it up.

6 CHAIRMAN: All right. Well, let's save it.

7 DR. SOLLOWS: I will take the hint. Let's take a break.

8 CHAIRMAN: All right. Take 15 minutes.

9 (Recess - 11:15 a.m. - 11:30 a.m.)

10 CHAIRMAN: Any time you are ready.

11 Q.133 - Thank you, Mr. Chairman. Mr. Knecht, before we broke

12 I was directing your attention to the three block rate
13 design that I provided you in response to your IR number
14 1, question 2, where you wanted me to reconcile the five-
15 and-a-half cents per kilowatt hour energy related cost
16 that I used in my evidence with the six-and-a-half implied
17 by the CCAS, and that is again -- that is SOL-7. Do you
18 have it there?

19 A. I'm sorry. It's --

20 Q.134 - PI IR-1, question 2.

21 A. Question 2. I believe I have that.

22 Q.135 - And the answer when I go back -- going to the second

23 page, you will note that I re-analyzed a rate using the
24 six-and-a-half cents from the CCAS that you had suggested,
25 and as you will note in the table that appears in response

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2 to that estimate labelled Parameter Estimates, two block rate
3 differentiated by load profile derived using six-and-a-
4 half cents per kilowatt hour cost of energy in invoices
5 for customers with annual 2007 energy use of 65,000
6 kilowatt hours or less. You see that?

7 A. Yes.

8 Q.136 - Okay. Will you agree with me that using the customer
9 invoices, the customers that were 65,000 kilowatt hours or
10 less, more or less handles the problem of the influence of
11 large customers on the rate design?

12 A. Yes.

13 Q.137 - Okay. Thank you. You will note in the parameters
14 that arise from this that the service charges are
15 relatively small, and we have discussed that, and we could
16 -- they are certainly inconsistent with the CCAS, but we
17 are also looking at -- you will see the first block sizes
18 for both winter and flat customers, which are the vast
19 majority of residential customers, it's about the same,
20 it's about 1,250 kilowatt hours a month at that rate.

21 A. Yes. Not very different from the current level.

22 Q.138 - From current, which is 1,300.

23 A. Correct.

24 Q.139 - And the first block price is about ten-and-a-half
25 cents for the winter peaking customers and about

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2 eight-and-a-half cents for the flat use customers. The second

3 block price is 11 cents and a little for the winter

4 peaking and about 8.9 cents for the flat. Do you agree

5 with me that that is essentially an inclining block rate?

6 A. Yes.

7 Q.140 - And with the exception of the service charge, that

8 would meet your -- would meet the requirement that the

9 energy charge be consistent with the CCAS, is that

10 correct?

11 A. As I understand your analysis, yes, but this analysis was

12 performed using the same cost allocation methodology for

13 energy and demand costs as is in the -- as is in the CCAS

14 with -- for energy, it meets the condition that the energy

15 costs be the same as in the CCAS. The demand cost will be

16 different because the demand customers split slightly

17 different, yes.

18 Q.141 - Right. And the customer portion of the costs would

19 have been captured in the service charge which is

20 undoubtedly too low here and in your evidence or your

21 estimate it should be in the order of \$15 per month, is

22 that correct?

23 A. Yes.

24 Q.142 - So in looking at this, and I think you alluded to it

25 before the break, if -- you would agree with me that the

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2 likely outcome, if I were to do in this -- using this
3 analysis with the same energy cost parameters to increase the
4 service charge -- you would agree with me that the likely
5 outcome of the analysis might be a lower first block price
6 and maybe a difference in the size of the first block?

7 A. I would be speculating rampantly.

8 Q.143 - Okay. If you -- I thought I heard you make just that
9 -- make just that conclusion when we talked about the rate
10 design more generally.

11 A. I was probably speculating beyond what one should do on
12 the witness stand.

13 Q.144 - Okay. That's fine. That being the case I don't think
14 I have any further questions. Thank you very much.

15 CHAIRMAN: Thank you, Dr. Sollows. Mr. Zed?

16 MR. ZED: We do not have any questions of this witness.

17 CHAIRMAN: Thank you, Mr. Zed. Mr. Peacock?

18 CROSS EXAMINATION BY MR. PEACOCK:

19 Q.145 - Thank you, Mr. Chair. A few very brief questions. In
20 earlier comments, Mr. Knecht, you had mentioned that while
21 respecting gradualism it would be -- and I apologize if I
22 am paraphrasing -- a good idea to remove the declining
23 block rate as fast as you can. Would it be fair to state
24 then that in your opinion the three step process as

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2 proposed by the Applicant could in fact be sped up?

3 A. In terms of phasing out the declining block rate, yes. I
4 must say that I think it could be done faster than what is
5 in the proposal. In fact if you look at my evidence in
6 2005-002 in the first phase I propose a much more
7 aggressive first step toward phasing out the declining
8 block.

9 What gives me some pause here for doing it any faster than
10 what DISCO has proposed is that if we look right now at
11 the ratio of the first block charge to the tail block
12 charge of the two block structure right now is that ratio
13 is exactly the same going into this proceeding as it was
14 going into the 2005-002 proceeding.

15 So what gives me pause is that, you know, when I proposed
16 a more aggressive approach, when the Board came up with a
17 decision in the compliance phase of that proceeding that
18 resulted in a more aggressive approach, we ended up with
19 no progress at all.

20 Q.146 - Okay.

21 A. So yes, if -- absent considering those things, yes. My
22 evidence in the last proceeding was we can move faster.
23 And in fact the overall rate increase for the residential
24 class in that proceeding was quite similar to what we
25 propose in this proceeding. So they are quite comparable.

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2 So if you wanted to look back at what I thought before we had
3 the outcome in the last proceeding it's there in my
4 evidence.

5 Q.147 - Okay. If I could perhaps expand your thoughts on the
6 June 2006 decision from the Public Utilities Board that
7 was ultimately overturned by Order-in-Council, that
8 decision was I think perhaps in spirit with some of your
9 own rate design proposals, more aggressive on the
10 declining block rate that the Board had previously ordered
11 -- more aggressive on removing the declining block rate, I
12 should say.

13 Do you believe that the rate proposal that was suggested
14 in June 2006 would -- could in fact still be applied
15 coming out of this rate hearing?

16 A. I didn't look at the specifics of that. And again my
17 judgment is that I would rather make a good solid step
18 towards phasing out the declining block than to have what
19 happened the last time. If we put that all aside and we
20 simply ignore it, I would come back with the same proposal
21 that I made in the last proceeding.

22 Q.148 - Okay.

23 A. I'm not sure exactly how that compares to what the end
24 result was from the Board's compliance phase decision.

25 Q.149 - Okay. I guess I would like to just briefly explore

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the question of the monthly service charge. Our organization of course is concerned about what we see as a relatively high toll.

In your evidence you had suggested that perhaps on a cost basis \$15 a month may be more appropriate, and you I believe in your comments had suggested that you would in fact support a modest reduction in the monthly service charge.

Would proposing that the urban monthly service charge be reduced by say \$4 in one test year, would that be too swift a move, or do you think that would in fact be acceptable?

A. Let me re-characterize a little bit on your summary of my evidence, I'm not sure that I would say I support a reduction in the customer charge, but that I would consider it to be within the range of something reasonable that could be accomplished within this proceeding. However, remember if we do that you lose revenues from the customer charge and you need to recover them somewhere. You could simply -- and when you do that, you are going to recover them in the energy charges, which is going to impose a larger increase on larger customers. And so the more you reduce that customer charge, the more potential you have to run into rate shock concerns for the

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2 larger customers because you need to get that revenue back.

3 So -- and to answer your question, you know, I have not
4 tried to analyze what the impact of a full \$4 reduction in
5 the customer charge would be. I think what my
6 recommendation would be is that we set the customer -- the
7 longer term target for the customer charge should be the
8 customer related costs that come out of the CCAS.

9 Q.150 - Okay. I guess I will conclude my questioning with
10 just some thoughts on the presence of some very, very
11 large residential customers, you know, in excess of say
12 10,000 kilowatt hours a month.

13 From your experiencing in examining utilities across North
14 America, are these large consumers fairly common within
15 the residential class or do other utilities have
16 essentially a cap in terms of the maximum monthly usage of
17 the residential consumer.

18 A. My experience is -- and I think you -- let me answer
19 carefully. Utilities have their own way of doing things.

20 So to say there is, you know, a general standard is
21 always difficult when it applies to utilities.

22 In terms of looking, I think the reason -- the primary
23 reason that you are getting some very large customers in
24 the residential class is the existence of allowing farms

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2 to be eligible, even farms up to quite a large size.

3 And that was the subject of the CEA report, and they

4 looked at it and I think they concluded that there are

5 very few utilities that allow large farms to take service

6 under the regular residential rate without any

7 constraints. And they have actually gone out and done a

8 survey, I think that's consistent with my experience, but

9 they did actually conduct a survey.

10 So I think the answer to your question is it's unusual to

11 see large farms be eligible. It was not only 10,000 a

12 month, there was one that's over 100,000 kilowatt hours a

13 month identified in the CEA report. So I think that's

14 quite unusual.

15 MR. PEACOCK: Thank you. That is all, Mr. Chair.

16 CHAIRMAN: Thank you, Mr. Peacock. Mr. Morrison?

17 MR. MORRISON: Yes, I do have a few questions, Mr. Chair.

18 Thank you.

19 CROSS EXAMINATION BY MR. MORRISON:

20 Q.151 - Good morning, Mr. Knecht.

21 A. Good morning, Mr. Morrison.

22 Q.152 - Mr. Knecht, in your report and also in some of the

23 questioning today you mentioned several times that DISCO

24 didn't provide responses to IRs requesting generation cost

25 information which would enable you to do a full cost

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2 allocation study. Am I characterizing that correctly?

3 A. Yes, that's fair.

4 Q.153 - But you are aware, I take it, Mr. Knecht, that this

5 matter was brought up before the Board on September 27th

6 and we argued and the Board ruled that we did not have to

7 provide that information? You are aware of that?

8 A. I have seen the Board ruling on that. I didn't -- I

9 wasn't aware of all of the aspects of the argument, but

10 yes, that's the Board ruling.

11 Q.154 - Okay. Thank you. The only exhibit I am going to

12 refer to is PI-3 which is your report. And if you could

13 turn to page 32. And I'm referring specifically to lines

14 15 to 18. And we were talking about -- I believe you

15 broached it briefly this morning.

16 This is the notion of interruptible customer switching to

17 firm service, is that correct?

18 A. Yes, sir.

19 Q.155 - And if I refer you to the last line of that paragraph,

20 you say "To the extent that DISCO cannot make that

21 demonstrate" -- sorry, the last line of paragraphs 13 and

22 14. Sorry, I have lost my spot here.

23 Dealing with it generally, it is not your recommendation

24 that this issue of switching should be dealt with in this

25 hearing, Mr. Knecht, is that correct?

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2 I believe you say that it should be dealt with in the next
3 hearing?

4 A. I don't -- I believe you asked me -- DISCO asked me an
5 interrogatory in that respect. And I believe my response
6 to that interrogatory was that if there are no customers
7 that have switched or are switching in the test year, then
8 it is not an issue in this proceeding.

9 Mr. Theriault yesterday asked Mr. Larlee if he had assumed
10 that any interruptible or surplus customers were switching
11 to firm service in the test year. And he said no. I
12 think therefore I have concluded that it is not directly
13 an issue in this proceeding.

14 Nevertheless, I think it is reasonable that if the Board
15 is concerned about this issue and also concerned about the
16 potential issue that during the Lepreau shutdown that some
17 of the costs associated with providing interruptible
18 service are going to be rolled into the refurbishment cost
19 pool, just to make sure that it is going to be DISCO's
20 obligation to demonstrate -- and I think as Mr. Larlee
21 said -- the allocation of those costs is fair and
22 reasonable and that firm service customers are not being
23 required to bear those costs.

24 Q.156 - But you would agree with me that that issue is for
25 another day, wouldn't you?

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2 A. As I said, I think that if the Board said this is the
3 issue that we are going to address, and we are hoping that
4 you will make sure you keep track of that as we go
5 forward, that would be better regulation than simply
6 springing it -- you know, bringing it up after the fact.

7 Q.157 - Fair enough. If you can turn to page 25 of your
8 report. And we have had some discussion about this
9 already this morning.

10 And this is the third block rate that you are proposing in
11 the block of energy above 6000 kilowatt-hours in the
12 residential class?

13 A. Yes, sir.

14 Q.158 - And I guess I'm referring to this basically as the
15 farms and churches issue, is that fair?

16 A. I think it's the farms issue.

17 Q.159 - The farms issue?

18 A. I didn't -- I didn't object to the churches.

19 Q.160 - And when we were dealing with the farms issue, Mr.
20 Knecht, I believe you said this morning that there are
21 approximately 1,000 customers that would be impacted by
22 this third block.

23 is that -- did I get you right on that this morning?

24 A. Yes. Mr. MacDougall was kind enough to refer to my
25 evidence I believe on the prior page, page 24 at lines 22

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2 to 24.

3 Q.161 - And that was -- is it fair to say that your reference
4 is really to customers who average in excess of 6,000
5 kilowatt-hours a month? It is the average?

6 A. Yes. That's what it says here. So I'm trying to remember
7 the analysis I did. But that I believe is what I did.

8 Q.162 - But many more customers will have bills in excess of
9 6,000 kilowatt-hours in one month?

10 A. I believe so, yes.

11 Q.163 - And if I told you that somewhere in the neighborhood
12 of 25,000 bills would be in excess of 6,000 kilowatt-hours
13 a month, would you have any reason to think that that was
14 unreasonable?

15 A. I would not have any reason to think that's unreasonable.
16 And I probably wouldn't even be surprised if it's that
17 high.

18 Q.164 - Thank you, Mr. Knecht.

19 You were here yesterday I believe when Mr. Larlee was
20 talking about farms and how they ended up in the
21 residential class.

22 And I think Mr. Larlee explained that farms got included
23 in the residential class as part of the public policy for
24 rural electrification in New Brunswick.

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2 Did you -- were you here when he --

3 A. Yes, I was. I'm sorry.

4 Q.165 - So your proposal would be, and I don't want to put

5 words in your mouth, would be a significant departure from

6 that historic rate structure. Would you agree with that?

7 A. I guess I'm not sure that I would, Mr. Morrison. I think

8 we have a question of scale here. And I may not disagree

9 either.

10 But I'm not familiar with the circumstances or the size of

11 the farms that were eligible, that were included in the

12 residential rate when the policy was adopted.

13 As we know, there are some very large farms in New

14 Brunswick that are eligible for this rate. And I don't

15 know that that was the original intent. I simply don't

16 know.

17 But I wouldn't necessarily agree that the original intent

18 of the policy was to make, you know, very large commercial

19 farms eligible for the residential rate.

20 Q.166 - You would agree with me though that historically in

21 this province farms have had the benefit of being included

22 in the residential class?

23 A. Yes, I would. But again -- and this is I think one of the

24 themes in my evidence, is that a decision gets made and it

25 gets made in the circumstances that apply to that

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2 decision, and that you ought to look to see whether the
3 circumstances have changed.

4 You know, if at the time it was adopted it was all for
5 smaller family farms, then that might be a very different
6 circumstance than what we face today.

7 Q.167 - I believe you said this morning, and correct me if I'm
8 wrong -- you were talking about historic stability. And
9 you said that the principle of historic stability -- and I
10 may not be quoting you directly -- wasn't an important
11 principle for purposes of cost allocation.

12 But my notes say that historical stability is an important
13 principle, as it goes to rate design.

14 Did I --

15 A. Yes.

16 Q.168 - -- quote you correctly?

17 So would you agree that with respect to what I would call
18 elimination of farms in the residential class, it should
19 be done gradually in order to respect this notion of
20 historical stability?

21 A. Yes. That was the intent of my -- that was the intent of
22 my proposal, rather than let it happen at one jump.

23 Q.169 - And the 6,000 kilowatt blocks that you are
24 recommending, that would capture large farms, I understand
25 from what you are saying.

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But would you agree that it would also capture very large homes and churches?

A. The -- I use these in evaluating that. The answer to your question is I'm sure it would. For large homes it might not be on average.

But it would certainly be -- there would be a number of months where you are over 6,000 kilowatt-hours. Maybe large homes average over 6,000 kilowatt-hours a month for the whole year. I'm not sure.

I used the 6,000 kilowatt-hour breakoff because that I think was the breakoff that was suggested in the CEA report as sort of a logical break point. I think it goes reasonably close to the 20-kilowatt cutoff within the GS class for when a demand charge gets imposed.

And they had recommended if -- you know, you could probably make a very reasonable case, instead of doing it at 6,000, to do it more at, you know, 8' or 9000. I used that number because that's what -- that was the figure that came out of the CEA report.

Q.170 - Now I just want to get back to this -- what I'm referring to as an historic rate structure with respect to farms and churches.

Would you agree with me, Mr. Knecht, that before the Board undertook a wholesale change in this historic rate

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structure, in other words, took farms and churches out of the residential class, that it would be appropriate for members who have an interest in farms and churches to be given the opportunity to voice their concerns before the Board, before that type of change occurred?

A. The answer is certainly yes to that question, is that they should certainly be given an opportunity to voice those concerns.

One of I think the advantages of the proposal that I have is that it not only makes it a little bit easier to move in that direction, and by quite a modest step, it also provides some modest assistance towards phasing out the declining block structure of the residential tariff itself.

But the answer is yes. I think that the customer should have a chance to comment on that. You know, it certainly is something that the company might have undertaken when it had the results of the Concentric report which suggested that including those large farms in the residential tariff was relatively unusual.

Q.171 - I want to turn now, and very briefly I might add, Mr. Chairman, to page 16 of your report. I just want to talk a few minutes about interruptibles.
And I look specifically at Table IEC-2.

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2 A. Yes.

3 Q.172 - And in that table, for purposes of cost allocation,
4 you break out the large industrial class into two
5 subclasses or segments, large industrial firm and large
6 industrial interruptible, is that correct?

7 A. Yes.

8 Q.173 - Am I correct in concluding that for purposes of cost
9 allocation you are considering large industrial firm and
10 large industrial interruptible as two separate rate
11 classes?

12 A. In terms of cost allocation both DISCO and I use very
13 different cost allocation methodologies for those two
14 types of service.

15 What you call a class or what you call a subclass or what
16 you call a category is more a matter of terminology, I
17 think. Because the costs are allocated using such a
18 different methodology for those two classes, I have kept
19 them separate.

20 Q.174 - And you are aware I assume, Mr. Knecht, that the vast
21 majority of New Brunswick's industrial customers who take
22 interruptible service also take firm service for a large
23 portion of their electricity requirements?

24 A. I know that some of them do. I don't know the magnitude.
25 I have not reviewed the magnitude of it. That

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would not surprise me. It's fairly common.

MR. MORRISON: Those are all my questions, Mr. Chairman.

Thank you, Mr. Knecht.

CHAIRMAN: Thank you, Mr. Morrison. Ms. Desmond, any questions from Board Staff?

MS. DESMOND: We have no questions, Mr. Chair. Although we do have two housekeeping items.

One is the marking of the exhibit from the Public

Intervenor, the additional three pages. I don't believe

the Board marked those pages for identification or as an exhibit.

And in addition to that the CEA study upon which significant reference was made yesterday, I just raise the question whether the Board wishes to mark that for identification for the record as well?

CHAIRMAN: Thank you, Ms. Desmond. I think with respect to the replacement pages, I think the intention was that the -- these were just, as I understood it, errors in numbers that were put in the chart. And they were replaced with the correct numbers.

So I think it would suffice, unless somebody has any objection, simply to pull out the old pages and insert the new. That was the intention I think that Mr. Theriault had when he introduced it I believe.

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MR. THERIAULT: That is correct.

CHAIRMAN: Anybody have any difficulty with that?

MR. MORRISON: No problem.

CHAIRMAN: Okay. Then we won't bother marking that as a separate exhibit. With respect to the CEA study, I guess a lot of reference was made to it yesterday. And I think at a minimum it should be marked for identification, so that anybody looking at the transcript would have a sense of what the cross examination involved.

MR. MORRISON: I have no objection to it being marked for identification purposes, Mr. Chairman.

MR. THERIAULT: No objection.

CHAIRMAN: All right. The last ID number that we used I believe was identification number 8. So this would be number 9 for identification.

Any other matters, Ms. Desmond?

MS. DESMOND: Nothing further, Mr. Chair.

CHAIRMAN: Thank you. Any questions from the Board?
Mr. Barnett?

MR. BARNETT: Just one, Mr. Chairman.

BY MR. BARNETT:

Q.175 - Mr. Knecht, in the discussion yesterday between Mr. Lawson and Mr. Larlee, I believe you were present at that time?

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A. Yes.

Q.176 - Mr. Lawson put the question to Mr. Larlee in regards to revisiting the cost allocation. And we know the Board has made a decision in regards to that. But Mr. Larlee also made an observation. And it is on page 1682 and 1683 of the transcript.

And he particularly references -- he said "I guess in my opinion we are still under the PPAs." This is a reason he is giving for not going to this cost allocation review.

"The PPAs are what drive DISCO's costs. So there is really no change there."

He then went on to say also the Genco information is still not on the record either, and therefore if in fact the Board would reexamine that, they would in all likelihood end up with the same conclusion as occurred before.

If I could get your comment on the two points that Mr. Larlee makes in regards to the absence, continued absence of Genco NUGs information and the relation to the PPAs driving DISCO's costs?

A. I believe both of those comments are accurate, that in a very fundamental sense that the environment with respect to those two items is the same as it was in 2005. As was pointed out to me, there is a new Board. And that is --

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that, you know, is a change that may need to be considered.

In my analysis in 2005 I had done a marginal cost analysis which is laid out in my evidence in that proceeding. And I was not able to do that marginal cost analysis in this proceeding.

So I couldn't say with confidence that I would come to the same conclusion that I did in 2005 without having looked at the underlying economics that are in place.

Nevertheless, Mr. Larlee's comments I think are both accurate and well taken.

Q.177 - Just to follow up, so if in fact at some point in time in the future we will go to in a further cost allocation study or a generic hearing or whatever format it were to take, the absence -- or the continuance of the PPAs, and particularly the absence of the Genco NUG costs, they would carry a fundamental impact on the ability of being able to do an appropriate cost allocation study?

A. It would certainly limit the accuracy that you would have in doing a cost allocation study. As long as you haven't moved to a market structure for generation services in the province, I think you need to rely on the underlying costs for the generator and generators, both the ones owned by the utility and the ones from the

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purchased power, in developing a cost allocation methodology.

You know, the NUG costs are not an insignificant component of the overall costs. But they don't -- I don't think they are enormous. And you might be able to do -- you know, it would not be as accurate as if you had the cost information. But I'm not sure that it would serve as a complete bar to actually doing a cost allocation study.

MR. BARNETT: Thank you. Those are my questions.

CHAIRMAN: Any further questions from the Board?

Mr. Johnston?

BY THE VICE CHAIRMAN:

Q.178 - Mr. Knecht, yesterday Mr. Larlee talked about rate shock or gradualism, this concept. And the questions which were put to him related to comparisons between the increases in rates in certain classes under the earliest proposal that was put forward before the PDVSA settlement and then under the new proposal.

And he talked about having to look at gradualism or analysis of rate shock in terms of a comparison within the price increase itself rather than between two possible things.

I would like your comments on that. And I would like you to, as well if you can, comment on the fact that some

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of the argument that has been raised I guess through cross examination and we can anticipate is that we should be considering environmental or social factors particularly with respect to the declining block rate and how that relates to this analysis of gradualism particularly and the relative aspect of rate increases.

I hope that question is not too muddled.

A. Let me have a run at it. The issue of gradualism as to whether it's a standard against the average increase that is across the board or whether it compares to a previous proposal, to an adjusted proposal, is not one that we deal with that often, because it's unusual for a utility to come in in mid-proceeding and lower its proposed rate increase. It's welcome of course. But it's unusual.

In my evidence, the way I looked at that is when I tried to set a limit for what the upper limit on a rate increase for a particular class would be, I looked at it relative to what the average increase was after the overall reduction.

However, I did think that the original proposal was useful in providing some clues as to what the utility was thinking would be too high an increase for particular customers or even for whether it would get into a rate

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increase that would exceed the value of service standard, more specifically for the large industrial customers.

The rate increase I proposed was actually lower than what the company originally filed, and you know, with the assumption that the company considered, you know, the issue of value of service for the large industrial class, I felt like my proposal was within that because it was lower than the original proposal.

With respect I think to the back half of your question is are there other considerations that might counterbalance kind of standard utility rate shock or gradualism principles. And that is should we recognize environmental benefits associated with moving more aggressively.

I think I would say yes, that that would be another consideration that a regulator would want to use to say we are willing to move a little faster towards phasing out these declining block rates because we get these additional benefits.

There aren't any hard and fast rules about gradualism, you know, one and a half times the system average, two times the system average. It's simply there are a number of factors that a Board has to consider. And I would include environmental benefits as one of them, yes.

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2 VICE CHAIRMAN: Thank you.

3 MR. THERIAULT: Mr. Chairman, I do have one redirect
4 question based on Mr. Morrison's questions.

5 CHAIRMAN: I was just going to check to make sure there are
6 no more questions from the Board. Okay. No, I guess
7 there are no more questions. So redirect.

8 MR. THERIAULT: Thank you.

9 REDIRECT EXAMINATION BY MR. THERIAULT:

10 Q.179 - Mr. Knecht, as it relates to farms, is your proposal
11 to take farms out of the residential class?

12 A. Not for the purposes of this proceeding.

13 MR. THERIAULT: Thank you.

14 CHAIRMAN: That concludes your redirect?

15 MR. THERIAULT: That is all the questions.

16 CHAIRMAN: All right. It is quarter after 12:00. So we
17 will reconvene at 1:15.

18 (Recess - 12:15 p.m. - 1:15 p.m.)

19 CHAIRMAN: Mr. Lawson, are you ready to proceed?

20 MR. LAWSON: Yes, Mr. Chairman.

21 CHAIRMAN: I will call Board Counsel forward to affirm the
22 witness. Mr. Lawson?

23 MR. LAWSON: Thank you, Mr. Chair.

24 ~~MR.~~ MARK DRAZEN, sworn:

25 DIRECT EXAMINATION BY MR. LAWSON:

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2 Q.1 - Would you please state your name for the record?

3 A. Mark Drazen. D-r-a-z-e-n.

4 Q.2 - And what is your occupation, Mr. Drazen?

5 A. I have a consulting firm in energy and regulatory
6 economics.

7 Q.3 - And perhaps you give us a little bit of the history that
8 you have in that field?

9 A. I have been doing this since 1972. Pretty much across the
10 U.S. and Canada. I have testified in how many cases in
11 seven other provinces, 40 states on electric gas, all
12 kinds of regulatory issues.

13 Q.4 - And the report that's been filed as CME-1, marked as
14 CME-1, that is the report which was prepared by you or
15 under your direction?

16 A. Yes.

17 MR. LAWSON: Now I would like to ask this Board that this
18 witness might be declared as an energy and regulatory
19 economist.

20 CHAIRMAN: Any questions of this witness on the
21 qualification as an expert?

22 MR. MORRISON: No objection and no comments, Mr. Chairman.

23 CHAIRMAN: Any of the other Intervenors? He will be so
24 declared then as an expert in energy and regulatory --

25 MR. LAWSON: Economics.

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CHAIRMAN: Economics.

MR. LAWSON: Yes. Whatever that means right.

CHAIRMAN: Probably about to find out.

Q.5 - Now perhaps if we could just before offering him for cross examination could get you to give a very brief overview of your report for the purposes of the Board. I think it breaks down into two parts. First you address the issue of interest coverage. Perhaps you could just give us a brief summary of the interest coverage position?

A. Sure. DISCO's evidence says that if it doesn't have sufficient interest or sufficient income to make the payments on set and provide some coverage that it will affect the credit rating of NB Power and of the province.

And I simply point out that DISCO is a fairly small portion of NB Power. It's 18 percent of the debt. So a change in DISCO's coverage doesn't really affect the change in NB Power's coverage all that much. And by extension the credit worthiness of the province.

Q.6 - Thank you. With respect to the other part of your -- the balance of your report, I am going to call it the break even aspect of your report. Could you perhaps in simple terms explain to the Board what it is that your position is with respect to break even issue and it's impact on large industrial customers?

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A. Yes. My data is two points. The first point is that DISCO's class cost allocation study follows the method that is used for many years and was approved in the 2005 CARD decision, but I think that everybody, including DISCO recognizes that it is not the most accurate allocation of costs particularly with respect to supply costs, which is the largest portion of the total.

Mr. Knecht has one view on what might be appropriate. DISCO might have another view. But all in all I think it's clear that there is some important -- the aspects of the cost causation that aren't reflected in the cost of service of study. So the first one of my recommendation is don't rely too heavily on DISCO's class study as the basis for allocating the increase. And in particular what I show is that if you take a more accurate allocation which includes recognition of the energy or the fuel cost differentials among classes, the large industrial revenue to cost ratio is within the cost base range if it receives the average increase.

So there is an average increase through the large industrials consistent with oh, I think a more accurate cost of service study would show.

The next part of that analysis is should there be a new CARD? And since -- yes, I think there is a lot of

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agreement that the existing method isn't not that great. Yes,

I think there should be a new CARD review. One thing to think about is when is it appropriate.

First I thought well maybe you could do it right after this case, but I think the reality is that the government has said it may be reviewing the structure of NB Power, because things haven't worked out as they expected. There have been some large load losses in the large industrial class. For the next two years at least, the actual costs are going to be anomalous, because of the Point Lepreau refurbishment shutdown. So that eventually there should be a CARD review, but it should be based on numbers that people consider to be representative of the future in the long term. That's pretty much the sum of my testimony.

Q.7 - Just for clarification you referenced to supply costs.

There you are referring to the cost of energy from Genco, is that correct?

A. Yes. Genco and Nuclearco.

Q.8 - Sorry. Yes.

MR. LAWSON: Those are all the questions I have. He is available for cross examination, Mr. Chair.

CHAIRMAN; Thank you, Mr. Lawson. Mr. Kidd?

MR. KIDD: Thank you, Mr. Chair. The Conservation Council

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doesn't have any questions for this witness.

CHAIRMAN: Thank you. Mr. MacDougall?

MR. MACDOUGALL: No questions, Mr. Chair.

CHAIRMAN: Mr. Wolfe? Is Mr. Wolfe in the room?

MR. LAWSON: I know he went for a meeting and he doesn't appear to be back. So I guess he thought everything would be as clear as it has been.

CHAIRMAN: We will take that as no questions. Should he return before we finish, we will ask him. Dr. Sollows?

DR. SOLLOWS: No questions, Mr. Chair.

CHAIRMAN: Mr. Zed?

MR. ZED: We do not have any questions of this witness.

CHAIRMAN: Mr. Peacock?

MR. PEACOCK: I think I will join this parade and offer no questions.

CHAIRMAN: Mr. Theriault?

MR. THERIAULT: The Public Intervenor has no questions at this time.

MR. CHAIRMAN: Mr. Morrison?

MR. MORRISON: I feel like I am the odd man out here, but I do have a couple of questions.

CROSS EXAMINATION BY MR. MORRISON:

Q.9 - Mr. Drazen, I'm only going to refer to two exhibits. My questions are brief. CME-2, IR-1, specifically IR-1(C).

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2 And the question was, if a CARD hearing is required then on
3 what basis can the Board adopt an alternate methodology in
4 this proceeding. And your answer was, the recommendation
5 is not that the Board adopt a breakeven methodology in
6 this proceeding but that the Board consider the impact of
7 such a methodology in evaluating DISCO's proposed revenue
8 allocation among classes. I will finish the response.
9 We would also urge the Board to retain jurisdiction in
10 this case and hold a cost allocation study -- hearing
11 following the decision in the current application.

12 Mr. Drazen, do I understand from that response that you
13 are not recommending adoption of the breakeven methodology
14 in this particular proceeding?

15 A. That's right. We have enough information to calculate the
16 effect on the large industrial class because the load
17 pattern for that class is fairly flat. We can't do it for
18 the other classes because we don't have the hourly loads.

19 So we don't take into account the result of that kind of
20 a study for large industrials because DISCO's study
21 appears to show it's below -- outside the (inaudible)
22 range but we can't calculate what that would be for the
23 other classes.

24 Q.10 - Fair enough. And if I turn to your report, Mr. Drazen,
25 I'm looking at -- I believe it's marked as page A-2. It

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2 would be in the appendix A, A-2. There is a table there, a
3 diagram A-1, and it says it's -- the load duration curve
4 for a utility like DISCO looks like this.

5 Do I take it that load curve that you are depicting in
6 diagram A-1 is not based on an analysis of DISCO's load
7 data but is in fact illustrative?

8 A. Actually it is based on DISCO's load curve. I just --
9 DISCO's peak load is -- as I point out in footnote 7 --
10 DISCO's peak demand is about 3,200 megawatts. To make the
11 numbers a little bit easier to deal with I scaled it down
12 to 1,000. But this is more or less DISCO's load duration
13 curve.

14 Q.11 - But is it intended to be an analysis of DISCO's load
15 curve or is it done for illustrative purposes?

16 A. Well, the load curve is just a graphical representation of
17 the hourly loads and then we used it to illustrate the
18 trade-off aspect between peak and base loads and the
19 breakeven analysis results from that. So the analysis is
20 based on illustrative numbers but the load curve itself is
21 DISCO's load curve.

22 Q.12 - Fair enough. And if I turn to page A-3 and A-4 -- I
23 guess it's A-3 -- you show a comparison of load factors of
24 a residential class and an industrial class, is that fair?

25 A. Yes.

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2 Q.13 - And again is it fair to say that these are for
3 illustrative purposes only?

4 A. That's correct. The 50 percent and 90 percent are not
5 exactly what DISCO's classes represent. I think for DISCO
6 the residential load factor is closer to 43 percent and
7 the large industrial load has a higher load factor than 90
8 percent.

9 Q.14 - If you could turn to page 2 of your report. It's in
10 the main body of your report.

11 A. I have it.

12 Q.15 - And if I look at what I believe you are doing here is
13 that you are combining industrial firm and interruptible
14 to come up with a -- it looks like a weighted average
15 increase it looks like 13 percent, is that correct?

16 A. Yes.

17 Q.16 - And do you agree with me, Mr. Drazen, that
18 interruptible -- the interruptible rate is based on a pass
19 through of costs from Genco? In other words, what the
20 interruptible rate is is a fuel cost -- essentially a fuel
21 cost with an adder, \$3 on off peak and \$9 on peak?

22 A. Right. It's the real time incremental fuel cost plus
23 those adders, as you say.

24 Q.17 - So you would agree with me that as fuel costs go up,
25 the interruptible rate would go up and as they go down,

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2 the interruptible rate would go down?

3 A. That's correct.

4 Q.18 - And you agree that in this application DISCO is not

5 proposing any changes to the interruptible rate class

6 structure at this point?

7 A. Correct.

8 MR. MORRISON: Those are all my questions, Mr. Chairman.

9 Thank you. Thank you, Mr. Drazen.

10 A. Thank you.

11 CHAIRMAN: Ms. Desmond?

12 MS. DESMOND: No questions, Mr. Chair.

13 CHAIRMAN: Any questions from the Board?

14 MR. BARNETT: Yes, Mr. Chair.

15 BY MR. BARNETT:

16 Q.19 - Just one question, Mr. Drazen. I believe in your

17 response to counsel's questions where you were talking

18 your evidence, you indicated that there are a number of

19 changes that are going to occur in the next short while.

20 And particularly I believe you referenced the Lepreau

21 outage and you referenced somewhat perhaps hypothetical,

22 maybe not, the restructuring of the NB Power group of

23 companies.

24 Though it might take a little while before we -- we

25 obviously know when the Lepreau outage is and when it will

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2 be back in service if everything goes according to plan -- are
3 you suggesting that maybe we should hold off any further
4 review of cost allocation as a separate study until in
5 fact we have a better handle on what the impacts of those
6 two points in particular and maybe others are?

7 A. Yes. Although I normally don't counsel delay and
8 addressing problems, the fact is any numbers you look at
9 are going to be different than the ones that apply once
10 you finish the analysis if you do it too quickly. In
11 other words if we were to study -- if we were to do a CARD
12 hearing right now based on the 2007/2008 numbers as
13 presented here, you would say, well that's before the
14 Point Lepreau outage, so it's representative of Point
15 Lepreau, but it also includes a large industrial load that
16 is a lot larger than we are going to see in the future,
17 given that 40 percent of the large industrial load is shut
18 down.

19 MR. BARNETT: That's all I have, Mr. Chairman.

20 CHAIRMAN: Anything further from the Board? Mr. Lawson, any
21 redirect?

22 MR. LAWSON: No, Mr. Chair. Thank you.

23 CHAIRMAN: Thank you, Mr. Drazen, for your attendance. I
24 think I forgot to thank Mr. Knecht for his attendance this
25 morning as well, I believe he has gone. So anyway, I

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2 thank both of you for your attendance and testimony here
3 today.

4 Well that I think concludes the witnesses that we had
5 anticipated for today, looking at the draft schedule. So
6 for tomorrow we had Vibrant Communities Saint John, Dr.
7 Sollows and EGNB. Are any of them in a position to offer
8 their evidence today.

9 MR. MACDOUGALL: Enbridge Gas New Brunswick is ready to go
10 now, Mr. Chair, if that's your wish.

11 CHAIRMAN: That would be fine. We have got some time,
12 unless any of the parties are caught by surprise here and
13 aren't ready for the cross examination. All right. Then
14 as soon as Mr. Drazen has his material removed then you
15 can bring your witness forward.

16 I will ask Board counsel to come forward to swear or
17 affirm this witness.

18 DAVID CHARLESON, sworn:

19 DIRECT EXAMINATION BY MR. MACDOUGALL:

20 CHAIRMAN: The witness has been duly sworn.

21 Q.1 - Mr. Chair, Enbridge Gas New Brunswick is tendering as
22 its witness today Mr. Dave Charleson. Mr. Charleson,
23 could you tell the Board your position with Enbridge Gas
24 New Brunswick?

25 A. Yes. I am the general manager for Enbridge Gas New

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2 Brunswick.

3 Q.2 - And, Mr. Charleson, do you have in front of you exhibit

4 number EGNB-1, which is the evidence of David B.

5 Charleson?

6 A. Yes, I do.

7 Q.3 - And do you also have with you EGNB-2 being the responses

8 of EGNB to interrogatories of the Applicant DISCO?

9 A. Yes, I do.

10 Q.4 - And were those two documents prepared under your

11 direction and control?

12 A. Yes, they were.

13 Q.5 - And do you adopt them as your evidence and testimony in

14 this proceeding?

15 A. Yes, I do.

16 MR. MACDOUGALL: Mr. Chair, Mr. Charleson is being put

17 forward as a company witness, so there is no need to have

18 him qualified. He is not being put forward as an expert

19 witness.

20 CHAIRMAN: Thank you.

21 Q.6 - Mr. Charleson, could you just please briefly summarize

22 the essence of your testimony as filed in EGNB-1 and 2?

23 A. Yes. Based on a review of the evidence, EGNB believes

24 that the complete elimination of the declining block is

25 both appropriate and feasible.

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As Mr. Larlee has indicated in his testimony as part of this proceeding, consumers need to be sent the right price signals to make the most effective and efficient energy decisions. When compared to the DISCO proposal, the complete elimination of the declining block appears to only have negative impacts on a small percentage of large customers in the class, while a large percentage of customers will actually see a reduction in their annual costs.

EGNB also believes there are other rate design issues that also require attention, such as the stand-by rate for -- such as the stand-by rate for electricity generation that EGNB believes is warranted and that the Board -- warrants the Board ordering a generic rate design proceeding as part of its decision in this proceeding.

MR. MACDOUGALL: Thank you, Mr. Charleson. Mr. Chair, Mr. Charleson is now available for cross examination.

CHAIRMAN: Thank you, Mr. MacDougall. Mr. Lawson?

MR. LAWSON: No questions, Mr. Chair.

CHAIRMAN: Mr. Kidd?

MR. KIDD: No questions, Mr. Chair.

CHAIRMAN: Mr. Wolfe?

MR. WOLFE: No questions, Mr. Chair.

CHAIRMAN: Dr. Sollows?

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2 DR. SOLLOWS: No questions, Mr. Chair.

3 CHAIRMAN: Mr. Zed?

4 MR. ZED: If I could just have one second, please?

5 CHAIRMAN: Certainly.

6 MR. ZED: We don't have any questions of this witness.

7 CHAIRMAN: Thank you. Mr. Peacock?

8 MR. PEACOCK: Yes. I actually just have one or two, so I
9 will -- perhaps I will come to the front of the room.

10 CHAIRMAN: Thank you.

11 CROSS EXAMINATION BY MR. PEACOCK:

12 Q.7 - Thank you, Mr. Chair. Oddly enough we are a little bit
13 of fellow travellers as intervenors in the sense that we
14 both would like to see the rapid elimination of the
15 declining block rate, coming from different perspectives,
16 however we ultimately see the same policy goal.

17 I really have a question concerning what potential
18 opportunity the elimination of the declining block rate
19 might have in terms of offering larger consumers in this
20 province with energy choice.

21 I had asked I believe a member of the previous -- the
22 Applicant's panel whether or not they had examined whether
23 or not some of the larger residential consumers -- what
24 percentage of that group may in fact see an opportunity to
25 undertake some sort of fuel switching.

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2 I was curious to see if Enbridge Gas has any sort of
3 numbers or any sort of study that would suggest that there
4 are in fact customers that may be available to consume
5 your product?

6 A. While I don't have specific numbers, we definitely do have
7 -- we do on an ongoing basis assess the market potential
8 for the use of natural gas, both where we already have
9 existing main in place and also where there may be
10 customers in proximity to where we have main today.

11 We see the elimination of the declining block providing an
12 increased economic incentive, kind of a trigger for both
13 large consumers and smaller mid size consumers to see the
14 true cost associated with electricity, the use of
15 electricity for heating, and that it will provide a signal
16 that will incent some of those customers to then convert
17 to natural gas.

18 MR. PEACOCK: Thank you.

19 CHAIRMAN: Thank you, Mr. Peacock. Mr. Theriault, any
20 questions?

21 MR. THERIAULT: No questions.

22 CHAIRMAN: Mr. Morrison?

23 MR. MORRISON: No questions.

24 CHAIRMAN: Ms. Desmond?

25 MS. DESMOND: Nothing, Mr. Chair.

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MR. MORRISON: I think we should point out that this must be a record, Mr. Chairman.

CHAIRMAN: We haven't asked the Board yet. Anything from the Board? Mr. Barnett?

BY MR. BARNETT:

MR. BARNETT: I thought you were going to do it, Terry, but -- Mr. Charleson, the -- I would just like you to discuss with the Board the implications of the removal of the declining block rate on the basis that not all customers have an opportunity to participate in obtaining gas service throughout the province. I think put in context I believe maybe the lower third of the province has access to natural gas, roughly speaking a line from Fredericton over to Moncton to the border.

So the removal of the declining block rate, the pace at which it is removed, carries implications for some gas customers of DISCO that don't have at least one option, that would be obviously favoured in your company's case, that's the access to natural gas.

So I would like you just to discuss with the Board the implications that this would have in terms of removing the declining block rate as quickly as you would like on customers in the other parts of the province that don't have some options that say some parties have in the lower

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third.

A. You are correct that electricity consumers throughout the entire province do not have access to natural gas today. The removal of the declining block, while it will -- from our perspective will help to stimulate movement towards alternate energy sources, you know, natural gas is obviously our preference in terms of where we would see consumers move to, we don't -- we see it as being not strictly limited. That is obviously the most significant shift in a load that a consumer can make, but it may also stimulate other conservation efforts in terms of the more efficient use of electricity itself, undertaking measures in terms of the way that they use electricity, looking at alternate fuel sources, do they use -- you know -- does it create opportunities for increased use of geo thermal for other central heating products, does it change the behaviour in which electricity is consumed year round, making more efficient use of the product.

So while our interests are definitely driven more by a desire towards increasing the usage of natural gas, I believe there are secondary benefits or further benefits for consumers throughout the entire province by making more efficient use of electricity.

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2 Q.8 - The -- as far as access to gas is concerned, it's one of
3 the impediments you see as growing access to natural gas
4 consumer choice in the areas where gas is available, it's
5 only one of a number of factors that -- I think you refer
6 to it in your evidence -- is just one of -- that's
7 important in terms of growing your market?

8 A. That's correct. The lack of a price signal is one of the
9 impediments. It would be foolish of me to say that the
10 removal of that impediment would suddenly lead to a mass
11 conversion to natural gas. However, providing that price
12 signal does help consumers in terms of making more
13 informed choices.

14 Q.9 - I would just like to go to the second part of your
15 evidence dealing with the stand-by rate, and I think it's
16 on pages 8 and 9. It's at the bottom that I'm looking at.
17 In developing a stand-by rate, let's say as a
18 hypothetical, the utility does apply to put together a
19 proposal for a stand-by rate, how would you propose in
20 your thinking that the ability to address that issue that
21 when a customer needs to access the stand-by rate, they
22 obviously need access not just to kilowatt hours energy,
23 they need access to capacity, how would you think the
24 utility should handle that whole issue of capacity
25 availability at the time that say, for example, the

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cogenerator is not producing and requires that back-up supply through the stand-by rate?

A. I think I would be somewhat limited in terms of being able to provide much input in terms of the design of such a rate. I definitely do not have any expertise in terms of the way in which the electricity system has to be managed at the detail level.

However, I would note that there are stand-by rates that have been implemented in other jurisdictions, and I would see DISCO as having the opportunity to look at the practices that have been implemented in other jurisdictions to deal with issues like that.

Q.10 - You are aware under the present power purchase agreement that DISCO contracts for capacity and basically it has access to all the heritage assets, and therefore it would have to give some consideration to a capacity requirement for the stand-by rate.

A. Unfortunately I'm not familiar with that level of detail.

MR. BARNETT: Thank you. We will leave it at that.

CHAIRMAN: Anything further from the Board? Any redirect?

MR. MACDOUGALL: No, Mr. Chair.

CHAIRMAN: Thank you, Mr. MacDougall. Thank you for your attendance, Mr Charleson. I am wondering if we have any

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2 other volunteers from the Intervenors to come forward and
3 present and their evidence today? As Dr. Sollows makes
4 his way down, Mr. Morrison, in the event that we finish
5 with the intervenors' evidence today, would it possible to
6 have the panel originally scheduled for Thursday attend
7 tomorrow?

8 MR. MORRISON: No -- well not entirely. Deloitte & Touche
9 are scheduled to be here on Thursday morning. That's the
10 only time that they are available, Thursday morning and
11 Monday. They can't be available tomorrow. Ms. MacFarlane
12 has to leave tomorrow about 11:00, 11:15 for a Board
13 meeting tomorrow afternoon at 1:00. So within those
14 constraints, I had thought -- and I hadn't had a chance to
15 canvass the other parties. I spoke briefly to Mr.
16 Theriault this morning about the possibility of putting
17 the non-Deloitte Touche deferral account panel up for a
18 couple of hours tomorrow morning, standing them down until
19 perhaps Deloitte Thursday. I don't know how the parties
20 are going to be with Deloitte & Touche. I have no idea.
21 And then recalling Ms. MacFarlane and that panel at that
22 time. It would essentially end up cutting up or
23 bifurcating that deferral account panel in a way. I am
24 happy to do that, but I don't want to cause any disruption
25 to the Intervenors and their -- you know the flow of their

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2 questioning and so on.

3 CHAIRMAN: No, fair enough. And quite frankly because we
4 are only doing half a day on Thursday, I was wondering
5 whether or not we might be able to do Thursday's work on
6 Wednesday was really just where I was coming from. So
7 perhaps we could have a break in a bit and we could
8 discuss -- the parties can discuss whether or not that
9 might be preferable to start tomorrow or just let it go
10 till next week as originally scheduled.

11 MR. MORRISON: The only concern I have with it, is when I
12 look at the schedule for next week, and I don't have a
13 crystal ball about how long this deferral account panel is
14 going to take, but I am a little nervous because we have
15 both the deferral account panel starting on Monday I
16 guess. We have Mr. Booth and we have Mr. Strunk and we
17 have final argument. So next week could be a tight fit.
18 So if there is anything that we could get done this week,
19 of course, we would be open to that, but again it may not
20 be feasible.

21 CHAIRMAN: Let me suggest that perhaps then since we would
22 have a very short day tomorrow, we could start earlier.
23 That might be helpful. So I think that if we -- instead
24 of starting at 9:30, for example, if we started at 9:00,
25 there is probably a pretty good chance that a fair amount

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2 of the cross examination would get covered tomorrow. If

3 anybody has any difficulties with that now is the time to

4 speak?

5 MR. ZED: Mr. Chair, who are we suggesting would be in

6 tomorrow morning? I sort of missed something.

7 MR. MORRISON: It would be I believe the deferral account

8 panel is going to be Sharon MacFarlane and John Dobson,

9 both NB Power people. And then, of course, Deloitte &

10 Touche will be coming on on Friday morning and again on

11 Monday if necessary --

12 ary CHAIRMAN: That would be --

13 MR. MORRISON: Thursday morning and then again on Monday if

14 necessary.

15 CHAIRMAN: And the only thing that could interfere is one of

16 the members of the Board here points out that there is a

17 storm coming, but you know we don't know that. That may

18 or may not materialize. But I think for the time being,

19 we could plan on attempting to start at 9:00 o'clock

20 tomorrow morning. We will see where we get today. It may

21 well be that there are a lot more questions for Dr.

22 Sollows than there have been for the other witnesses this

23 afternoon.

24 I will ask Board Counsel then to come forward and swear or

25 affirm Dr. Sollows.

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2 CHAIRMAN: For the record, the witness has been duly sworn.

3 MS. DESMOND: Mr. Chair, I believe Mr. Kidd was going to

4 perhaps do a direct of Dr. Sollows to start his evidence.

5 I think that was a proposal perhaps he had made to me on
6 a break.

7 CHAIRMAN: I think that's acceptable. Anybody have any
8 comments on that?

9 MR. MORRISON: Other than I am quite disappointed. I really
10 was looking forward to having Dr. Sollows going back and
11 forth around the table.

12 CHAIRMAN: We will have to save that for another day.

13 DR. SOLLOWS: You know me too well, Mr. Morrison.

14 CHAIRMAN: I just hope that Mr. Kidd doesn't object to
15 anything that he is attempting to do in direct. Mr. Kidd,
16 proceed.

17 MR. KIDD: Thank you, Mr. Chair.

18 DR. KEN SOLLOWS, sworn:

19 DIRECT EXAMINATION BY MR. KIDD:

20 Q.1 - Good afternoon, Dr. Sollows. Could you please state for
21 the record your full name?

22 A. My name is Kenneth Frank Sollows.

23 Q.2 - What is your occupation, Dr. Sollows?

24 A. I am a university professor at the University of New
25 Brunswick in Saint John for as long as it exists.

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2 Q.3 - Thank you. You filed various pieces of evidence with
3 this Board, was that evidence prepared by you?

4 A. Yes, it was.

5 Q.4 - Any corrections that you want to make to that?

6 A. Well in reading it there are a few typos, but I don't
7 think we will bother with that.

8 Q.5 - In your evidence, you have done a number of -- you have
9 analyzed a fair amount of data and conducted a number of
10 statistical regression analysis. Could you explain to the
11 Board your expertise in that particular area?

12 A. As an engineer and a university teacher, I teach the
13 analysis of data to mechanical engineers, not electrical.

14 I have no particular expertise in utility management or
15 economics. My sole expertise is in the ability to analyze
16 data and inform design decisions based on those analyses.

17 MR. KIDD: Mr. Chairman, I would ask that Dr. Sollows be
18 declared as a witness -- or as an expert in the conducting
19 the type of analyses that he has done for his report?

20 CHAIRMAN: So you are looking for him to be qualified as an
21 expert witness in the field of technical data analysis?

22 MR. KIDD: Sure. Thank you.

23 CHAIRMAN: Any questions of Dr. Sollows with respect to him
24 being qualified as an expert?

25 MR. MORRISON: I have none.

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CHAIRMAN: No objections. He will be so qualified then.

MR. KIDD: Thank you, Mr. Chair.

Q.6 - Dr. Sollows, would you please describe in a step by step manner the method you used to analyze the rate design alternatives you discussed in your evidence?

A. Yes, I would be happy to. I started with the billing data that NB Power made available through the hearing process and took the most recent years billing data. The customers that took full year service in that year. So that was the set of customers that I used.

I computed the amount of the invoice under DISCO's proposed rate to -- for each of those customers in order to determine how much they would pay under the rate proposal. From that amount that they would pay under the rate proposal, I subtracted the amount of energy allocated costs under the approach to the rate design that is in evidence.

In my pre-filed evidence, I used 5.5 cents per kilowatt hour. In response to the interrogatories made by the Public Intervenor, the calculations are based on 6.5 cents per kilowatt hour. That being the key difference between the two. The result after I subtracted the amount of energy related costs is the contribution to customer and demand allocated costs under DISCO's proposed rate for

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each invoice. I summed all such contributions by customer to get each customers annual contribution to the customer and demand allocated costs. And then I took for each customer summed all of -- all of the demands for each customer, all of the cost for each customer to get the total contribution to demand and customer costs under DISCO's proposed rate.

So I started with the revenue coming -- that DISCO would earn on their proposed rate. I subtracted out energy allocated costs. Left over was the customer and demand allocated costs, which I computed on an annual basis for each customer and on a gross basis for all those customers.

In the pre-filed evidence, I then took that annual total cost that was with -- that was within the customer and demand components and allocated it to individual customers based on their peak coincident demand. So having estimated the peak coincident demand of the customers, I took that annual total cost that was going to be -- that annual total cost that was going to be recovered from the customers under DISCO's rate and reallocated it to individual customers based on their peak coincident demand or their estimated peak coincident demand.

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In response to Mr. Knecht's comments today, I made a slight change in the algorithm, but certainly the pre-filed evidence I then computed a regression analysis that took the demand allocated -- the costs that were allocated to each customer in each year, I then reallocated based on energy for each bill in the year. So that each invoice now had an allocated cost for demand and customer-related charges in my original evidence.

I then did a regression analysis to pick the rate design and I tried a variety of rate designs that appear in my evidence that would satisfy the requirement of providing adequate revenue, the same revenue that DISCO's provides, but minimize the difference -- the error or the difference between the cost allocated to the invoice and the actual price or amount of the invoice. That's the essential basis of my analyses.

Now in response to Mr. Knecht's comments today, I redid the analysis over lunchtime to allocate \$20 per invoice to customer costs and then allocate the residual which is purely demand under his approach to cost allocation in proportion to the monthly energy consumption. And then I again re-analyzed it to find the regression parameters. When I do that I find that we obtain typically

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2 depending on the choices we make is whether we want a flat
3 rate, a two-block rate, a three-block rate, we find that
4 if we want a --we accept the \$20 per month service charge
5 and we look for a rate design that will minimize the
6 error, the difference between the cost that is allocated
7 to the customer and the actual bill amount, I found -- I
8 find a first block size -- I find an inclining rate block
9 structure. And I find a first block size of about 750
10 kilowatt hours a month, priced at 7 1/2 cents a kilowatt
11 hour. I find a second block size of 5100 or about 5,100
12 kilowatt hours per month priced at about 10.3 cents a
13 kilowatt hour. And we find a runout rate based for all
14 the excess kilowatt hours at about 9.4 cents per kilowatt
15 hour. This is I would suggest is in reasonable agreement
16 with the evidence that I filed in my pre-filed analysis.
17 And I have done this to respond to the point that Mr.
18 Knecht has made that in his view, the customer costs
19 should have been fully allocated to customers.
20 So doing that, you still conclude that the optimal rate
21 design for customers that are of the typical residential
22 size between zero and 65,000 kilowatt hours per year, you
23 still conclude that the indicated rate design is an
24 inclining block design with a third block that is priced
25 lower for the largest of the customers.

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Now, I would highlight -- I want to acknowledge and highlight the point that Mr. Knecht made and I want to underline it that the basis of the allocation of the -- and under this -- of the demand related cost is on the basis of peak coincident demand. That is most applicable to generation costs and the cost of substations. As you move away from the substations and down the transmission lines, you are perfectly valid -- in my view, it would be most valid to allocate the cost based on the -- not the system peak coincident load, but the peak coincident load on that portion of the subsystem. And so that is a refinement that I would certainly acknowledge would be an improvement to the analysis that I have made.

But my general overall insight from doing this number of analyses is that the conclusions are fairly robust in general in that the nature of DISCO's cost for residential customers are such that an inclining block rate is what would be the best fit of price to cost for residential customers.

Q.7 - Dr. Sollows, can you briefly explain regression analysis and why you use it in this particular -- or what benefit it was to you in doing this work or your work?

A. Regression analysis is a standard statistical technique that allows you to relate two variables to one

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2 another. In this case, the cost of serving a residential
3 customer in a given month and the price you are going to
4 charge them, the amount you are going to charge them with
5 where you have large amounts of data that are similar, but
6 somewhat contradictory, and they have -- in a sense they
7 have errors associated with them, we want a fairly simple
8 rate design. We don't want a single rate for every person
9 unless we are going into a real time metering environment.

10 So we necessarily have to classify customers by in some
11 method and DISCO chooses to classify them as residential
12 and General Service. And so in the residential class they
13 subdivide them as rural, urban and seasonal.

14 But each customer uses energy in a particular way. So
15 many kilowatt hours per month. And within the data, you
16 find that there are two or three main demarcations, three
17 main groups. There are groups of customers who are
18 broadly similar in that they use an increasing amount of
19 energy with temperature -- as temperature falls, which we
20 assume relates to them using electric space heating, but
21 we don't really know that. All we know is there is an
22 association, a statistical association.

23 A. There are those customers where you can find no such
24 association, may 30, 35 percent of those customers which
25 show no relationship to variation in their energy load

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2 with temperature. And there are a few customers, on the order
3 of 1 1/2 percent who show a positive relationship with
4 temperature, in that they tend to use very little energy
5 and have very little load in the winter but peak in the
6 summer.

7 So you have those basic groups of customers that you can
8 identify by basically correlation analysis within the data
9 set. And the problem really comes down to you have
10 280,000 customers multiplied by 12 invoices per customer.
11 And you have got to find the equation that amounts to it,
12 a service charge plus a price for so much energy plus
13 another price for the remaining energy that gives the best
14 fit for all of these customers, the best association
15 between the assigned cost and the amount you are charging
16 them.

17 And regressive techniques are a standard approach to do
18 that, to solve that problem. They allow you to solve it
19 without introducing any limiting assumptions.

20 Q.8 - Thank you. And as you discussed earlier, you looked at
21 a number or variety of pieces of DISCO billing data for
22 the past number of years.

23 And could you just discuss your general observations of
24 that billing data?

25 A. Yes. I make three general observations based on the

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work that I have done with the billing data. The first one is

that all classes except the large industrial class show significant correlation of load with temperature.

Load increases as the weather gets colder for small industrial customers, for rural and urban residential customers, for General Service customers and for wholesale customer classes. Load decreases as the weather gets colder for recreational lighting and seasonal residential class customers.

Those facts are I think acknowledged by everyone in this proceeding to be significant in terms of the costs of serving the customers.

Customers with higher loads during the wintertime have a much higher cost of service than those with peak loads during the summertime. The large industrial class shows no significant variation in load throughout the year with temperature. That would be the first observation.

With the second overall observation is that within each of the classes there always seems to be significant numbers of customers for whom the load and temperature are not correlated.

That is inside the residential class, inside the General Service class you find significant numbers, 20, 30, 40 percent of the customers have seasonal -- have a

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usage pattern that does not -- is not associated with temperature. In a statistical sense they are very similar to large industrial customers in their average peak load or their lack of association of load with temperature. They are distinctly different from large industrial customers in that their loads will typically vary substantially during the day and throughout the week. And large industrial customers' loads do not typically do that.

But that level of detail is not available in the billing data that has been provided. The billing data that has been provided is monthly total data. So we can't look at any variation on a daily or weekly basis. We can infer something about a daily average. But we can't do much better than that.

The third overall observation I would make is that urban and rural residential customers have significantly different average peak demands. This implies that they have different costs of service. And those different costs of service should be reflected in lower energy charges for rural customers.

To some extent this means that the costs that rural customers impose on DISCO -- I think everyone acknowledges that in terms of the customer component, the cost of

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2 running the wires and doing those sorts of things, the costs
3 that are recovered in the monthly service charge, everyone
4 acknowledges I think that charging a little more to rural
5 residential customers in the service charge is reasonable.

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7 But the data that is available in the invoice database
8 clearly indicates that there is an offsetting -- an offset
9 to this, that rural customers cannot have as high a peak
10 load. And since many of the costs are associated with
11 peak coincident load, it could well be that the overall
12 cost of service to rural residential customers is lower
13 than it is to urban customers.

14 And that throws into question the decision to charge an
15 increment or higher service charge to rural customers
16 without giving them credit for their lower peak demand
17 through a lower energy charge.

18 That's the extent of my overall observation.

19 MR. KIDD: Thank you, Dr. Sollows.

20 Mr. Chair, that concludes my direct examination. And Dr.
21 Sollows is available for cross examination.

22 CHAIRMAN: Thank you, Mr. Kidd. Mr. Lawson?

23 MR. LAWSON: No questions, Mr. Chair.

24 CHAIRMAN: Mr. Kidd, you have to put another hat on now.

25 MR. KIDD: No questions, Mr. Chair.

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2 CHAIRMAN: Mr. MacDougall?

3 MR. MACDOUGALL: No questions, Mr. Chair.

4 CHAIRMAN: Mr. Wolfe?

5 MR. WOLFE: No questions, Mr. Chair.

6 CHAIRMAN: Mr. Zed?

7 MR. ZED: I have several brief questions. I promise not to
8 deal with multivariate progression analysis.

9 CROSS EXAMINATION BY MR. ZED:

10 Q.9 - Dr. Sollows, in your evidence, page 4, lines 11 to 13 --

11 I'm just going to read it brief. It says "My analysis
12 indicates that DISCO's forecast is materially higher than
13 historical records would indicate. And I therefore
14 recommend that the Board reduce DISCO's revenue
15 requirement accordingly."

16 Now you have already stated the analysis that you have
17 done -- I guess -- and I have looked at your
18 recommendations and much of your evidence. But did you --
19 and maybe I missed it. And if I did I apologize.

20 But did you actually quantify the reduction that you are
21 recommending using the same template that DISCO used?

22 In other words if you take it across -- you make a
23 statement that DISCO's revenue requirement should be
24 reduced.

25 A. Can you tell me exactly where we are in this?

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2 Q.10 - Yes. Sorry. Page 6.

3 A. Page 6.

4 Q.11 - Page 4, sorry.

5 A. Page 4?

6 Q.12 - Yes. SOL 6, page 4, lines 11, 13.

7 A. Yes.

8 Q.13 - And you have developed a number of approaches or a
9 different approach, in my opinion I guess, to that that
10 DISCO has taken.

11 Did you anyplace or at anytime doing your analysis
12 quantify what this reduction would mean --

13 A. In terms of --

14 Q.14 - -- in terms of a percentage increase across the board?

15 A. No, I did not. I simply -- just for clarity purposes,
16 just to be absolutely clear, the portion of this evidence
17 that is described in lines 9 through 13 is not the
18 evidence that I have just been questioned on and
19 described.

20 This analysis was based on the hourly system net load data
21 that was filed in response to an interrogatory. And it
22 again was a regression analysis of the average monthly
23 load against the average monthly temperature.

24 Now I did in my evidence, if I take you to page 12 of my
25 evidence, I did make an attempt to estimate the

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2 difference between the results of my analysis and DISCO's --
3 the implication to DISCO's forecast.

4 And I concluded that DISCO forecasts 96 gigawatt-hours or
5 96,000 megawatt-hours more seasonal energy use than I
6 would have concluded based on this analysis.

7 Q.15 - And you have taken me to my next question. What effect
8 on rates -- what is the effect on rates of the
9 overforecasting?

10 A. Well, I -- in order to determine that and quantify that
11 clearly, I indicated in a response to the interrogatory --
12 response to an interrogatory I think from Board Staff,
13 that you really have to look at the heat rate of the
14 Coleson Cove plant and the cost of fuel, both of which are
15 in the redacted record.

16 And therefore I was not willing -- I simply don't want to
17 look at that unless I absolutely have to and I have it.

18 Q.16 - So you have not done the calculation?

19 A. I did do estimates based on prices that were available in
20 the open literature, in the stuff that had been filed or
21 had been otherwise made public.

22 And those estimates are presented on page 12 of my
23 original evidence, which indicated roughly \$8.2 million
24 difference in the revenue requirement, and another
25 alternative formulation based on additional information

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2 that I found in the fuels management review summary June 27th

3 for NB Power Distribution and Customer Service

4 Corporation, which I reported in response to EUB IR 01.

5 There I found it would be about \$7.7 million.

6 Q.17 - And those results are subject to the limitations you

7 have just expressed?

8 A. That is correct. They could be higher or lower depending

9 upon what the true heat rate is of the plant and what the

10 actual fuel cost is.

11 Q.18 - Thank you. If you would turn to SOL 6, page 26, lines

12 4 to 6. And I will read it.

13 "The Board should appreciate that residential customers

14 subject to a revenue cost ratio above 100 percent are

15 being taxed in order to pay a subsidy to customers with a

16 revenue cost ratio less than 100 percent."

17 Do you agree with that statement?

18 A. Yes, I do.

19 Q.19 - And is this statement not applicable to all rate

20 classes?

21 A. It is in the context of the revenue cost ratios for the

22 class. In this case I'm referring to the revenue cost

23 ratios for individual customers based on the methodology

24 that I have described. And this particular statement was

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in reference only to residential customers, not a class.

But yes, I would certainly agree that the revenue cost ratio, to the extent that it departs from 1 for any class inherently requires someone to subsidize, either another class of customers or the owner, if we allow that revenue crossover, all revenue cost ratio could depart from 1, which I accept is not standard regulatory practice. But I would submit that in the circumstances in this province it may be an appropriate approach.

MR. ZED: Thank you. I have no further questions.

CHAIRMAN: Thank you, Mr. Zed. Mr. Peacock?

MR. PEACOCK: Thank you, Mr. Chair.

CROSS EXAMINATION BY MR. PEACOCK:

Q.20 - Dr. Sollows, your evidence in regards to the residential rate design offers I think some interesting rate proposals in which many more individual customers are able to approach unity in their revenue cost ratios. Can you explain how the revenue cost ratios of the small consumer in your three tier proposal differ from the revenue cost ratios of the small consumer under the applicant's rate proposal?

A. To do that I would take you to page 25 of SOL 6(1) which - and in particular refer to figure 9, the cost of service performance of DISCO's proposed residential rate

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design initially.

In this we see the revenue cost ratios for customers grouped by their size of annual cost. So small customers are on the left-hand side of the chart. The very large customers are on the right-hand side of the chart.

And customers have been further differentiated based on whether their peak is during the winter, during the summer or there is no discernable evidence of a winter or summer peak, it is a flat use customer.

So when you look at the data as it is applied and when you evaluate DISCO's proposed rate, which is what this is illustrating, we find that all customers with demands less than -- or with cost of service of \$1,200 per year or less or about \$100 per month, all customers, winter-peaking, flat use, summer-peaking customers are paying significantly more than their cost of service, more than 1.05 times their cost of service.

Those customers, in the case of the summer-peaking customers the situation is worse. They are paying 50 percent more than their cost of service.

And interestingly it isn't just the small customers. In the case of summer-peaking customers we see the largest of them is paying roughly 25 percent more than the cost of service. And that is a fairly large customer.

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2 That is a customer of probably \$50,000 a year of cost of
3 service and a \$75,000 a year or so, or 65' or \$70,000 a
4 year in billings, a fairly large customer. But all of
5 those customers are being charged more than their cost of
6 service if they are smaller.

7 If we look at the other point that is marked, the \$2,000
8 per year cost of service, we find that winter- peaking
9 customers, which we might commonly accept are electric
10 space-heating customers, we find that customers with bills
11 of \$2,000 per year or less roughly are paying -- either
12 paying their fair share of costs or paying more than their
13 costs. It's even the small electrically-heated customers.
14 It's only when we get to larger electrically-heated
15 customers, those with an annual electric bill -- or an
16 annual cost of service, pardon me, of more than \$2,000 do
17 we see that the revenue cost ratio falls significantly
18 below the .95 band or marker of the so-called band of
19 reasonableness.

20 And we find from there out larger winter-peaking
21 residential customers are charged much less than their
22 cost of service, down to the order of maybe 80 percent of
23 their cost of service, less than that in some instances.
24 I would caution the Board however that in this figure

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and in the other one that I may refer to, as we go further to the right there are fewer and fewer customers in the -- that represent that average number, to the point that the ones on the extreme right are just one customer.

So the data gets noisier. It doesn't make a nice smooth curve. It tends to go up and down depending upon the particular characteristics of the customer.

We find that DISCO's proposed rate is not too bad for flat use customers that are in the midsize range, from \$35,000 maybe to \$18,000 per year.

But for small residential customers I think there is a fairly robust conclusion to make, that DISCO's proposed rate truly disadvantages them.

Q.21 - Thank you. The customer service charge has been discussed a great deal, both on the urban and rural side of the equation.

And in your evidence you essentially arbitrarily set a few different sets of monthly service charges. I heard numbers ranging from 12 to 15 to the applicant's 19 being thrown around, certainly within the urban side of the equation.

And all of these service charges are presumably at least partly based on Bonbright principles.

Given that you are likely the only intervenor with a

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version of Bonbright found on your laptop, I would like to ask what customer service charge for the urban sector may be appropriate if you were to apply Bonbright's views literally?

A. Actually I asked a question in the interrogatory process.

I will take you again to the response to PI IR-1 on -- it was question number 4.

I did ask DISCO in the interrogatory process, the customer costs that Bonbright would describe as being acceptable.

And they were unable to do so.

On that basis, I was unwilling to try. I would say that it is fair to say that if you accept the reasoning that Bonbright proposes or provides, you really allocate to the customer component directly only the marginal costs of serving the customers. So if you have the costs -- the extra costs of serving a rural residential customer, if a meter reader is driving down the road, the extra costs of serving that customer is simply one more stop on the route. It's not the average. It's the marginal cost.

Certainly the cost of meters and service drops, he would include. But he would stop there and not include any allocation for transformer cost, poles, lines and many of the things that are customarily put in the customer designated set of costs.

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I go further than that in my response to the interrogatory. I think it is quite reasonable in the circumstances to make an allowance for its transformer costs, but it has to be an appropriately -- one that is estimated in an appropriate fashion. And I certainly have no dispute in principle that you should allocate -- that you could reasonably allocate to customer costs some portion of "a minimum system" of wires and poles. On the assumption -- with the provision that that has been done in a way that's fully consistent with the data and not based on a whole series of really approximate assumptions that are very difficult to test.

So the way Bonbright handles it is he limits the cost to the incremental cost of sending -- preparing and sending an invoice, reading the meter, cost of the meter, the cost of the service drop. Everything else he simply would argue should be allocated to customer, energy and demand based on the costs that are rigorously and acceptably allocated to those. And that effect would be very much less of the fixed costs would be allocated to the customer component. And the resulting monthly service charge would be very much smaller than we have in other proposals before this Board.

Q.22 - Thank you. I know in the bulk of your evidence you

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2 have I think a number of different rate proposals. Some of
3 them include the establishment of a runout rate or a third
4 rate for some of the larger consumers. I guess I curious
5 why you see merit in this. And one of the reasons I am
6 curious about that is that I had assumed that declining
7 block rates of any form were something that we were all
8 trying to get rid of?

9 A. Well again I don't approach it from that direction. I
10 simply analyze the data and see what it tells me. And
11 when I analyze the data in this way, it tells me that you
12 would place an undue hardship on the largest customers, if
13 you made them subject to a two block -- a two block
14 inclining block rate. That would tend to overcollect from
15 those largest customers -- it would begin treating the
16 largest customers the way the smallest customers have been
17 treated in the past and are treated under DISCO's proposed
18 rate.

19 Now I suppose you could make a case under the notion of
20 restorative justice or maybe retributinal justice, I
21 don't know as to whether or not you would want to that,
22 but I don't think that would be appropriate. And
23 therefore, the proposal to include a third block allows us
24 to keep reasonable revenue cost ratios for the small
25 customers and the big customers.

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Now would that problem be solved if the -- if the largest customers were removed from the rate class? Well again it depends on the assumptions you make in cost allocation. If you make the assumptions that I just outlined earlier following -- introducing the allocation to customer under the CCAS, then no. You would still require for the customers that have 65,000 kilowatt hours or less, you would still require a three block rate design in order to -- at reasonably allocate costs and invoiced amounts. So when I look at the data, I am simply forced to conclude that the three block rate design is likely to be necessary to be fair to customers across the range of sizes that are likely to remain in the residential class for the foreseeable future. And that is not the large farmers and churches. That is for the customers that you -- for the customers that have -- well 65,000 kilowatt hours or less per year consumption if we are going to follow a cost allocation study in the way that Mr. Knecht proposes. If you want to do it the way I did it in my original evidence, then you could argue that for the 65,000 customers and smaller, a two block inclining block rate would suffice.

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2 Q.23 - Okay.

3 A. But it really comes down to the anomaly that we have. We
4 have a rate class with remarkably dissimilar usage
5 patterns inside the class and that creates problems for
6 rate design.

7 Q.24 - Thank you. You did put forward, you know, as I say, a
8 number of different rate designs. One that wasn't
9 included was any sort of time of use pattern. And I know
10 that the new provincial government has introduced an
11 election pledge to introduce some sort of time of day
12 savings at some point in their mandate. And I just
13 thought I might ask you from your understanding of the
14 billing data, what challenges might there be in terms of
15 offering that sort of service?

16 A. I wouldn't -- first of all, the billing data is on a
17 monthly basis or longer than that in some circumstances.
18 So there really -- you can gain no insight as to the
19 appropriate design of a time of use rate based on that
20 monthly billing data. You require time of use data that
21 NB Power normally obtains through its load monitoring
22 program, it's load research program.

23 And I should maybe digress for a moment and point out one
24 other implication of this analysis that there are clearly
25 different strata of residential customers other

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than size. And its load research analysis, NB Power stratifies the customers based on size. To do it more appropriately based on the insights I gained from the billing data, you should stratify them on size and on the season of their peak use and that would increase the cost required for load research, but it would give better information as to cost allocations between the class. To stratify only on size and ignore an existing and obvious cost-related parameter by which you can stratify the data really is perhaps an oversimplification for data collection in experiment design.

Q.25 - In your appendix I believe of your main evidence, you included an academic paper that seems to imply that household energy usage rises with household income. I believe that the academic paper was -- that reference was based on Statistics Canada data. Would you be prepared to suggest that a similar observation could be made solely looking at New Brunswick data?

A. You certainly could look at New Brunswick data and apply the same technique and see what the outcome would be. I think there doesn't seem to be -- in my review of the literature, and I just put this one in because it was reasonably available, reasonably recent and work done in Canada at Dalhousie University, and I see the principal

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2 author who was at PhD student at Dal Tech is at this stage

3 employed by a metering company in Boston, a meter, Itron.

4 So certainly the conclusions reached in his -- that he

5 reaches in his paper are not awfully surprising in respect

6 of load increasing with customer income and whether or not

7 they are apartment or single unit homes. But I would

8 point out that the purpose of the paper was more to

9 describe a technique of data analysis that he illustrated

10 using that particular set of data. But certainly, yes, if

11 you take the data and go looking for it, you could make

12 some determination I am sure. It would require knowledge

13 of the -- it would require that you have some ability to

14 relate the billing data that NB Power has to these

15 parameters, whether or not they are apartments, or single

16 family dwellings and whether or not income distribution.

17 And I am assuming that NB Power would not have information

18 on income distribution. It would probably have

19 information in its database indicating whether it's an

20 apartment dwelling or not.

21 Q.26 - Finally the Applicant in their rate proposal

22 essentially offered one version of a rate design to be

23 accepted or refused by the Board.

24 You proposed a number of different nuance versions in

25 which you know say the monthly service charge would be

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slightly different.

Why did you feel that the Board would benefit from examining so many different potential rate proposals?

A. Well, I guess because of my particular history I'm somewhat sensitive to the notion as to who should decide.

And really it's not for me or anyone sitting here to decide what the rate design should be. It's up to the Board.

You have choices. And to the extent that you may choose something that's inconsistent with what I would put forward or any other person that's sitting here has put forward, it's not really that great a criticism.

As long as the rate design meets three -- Bonbright's three primary criteria, which is it has a reasonable expectation of providing the revenue that the utility requires, that it reasonably allocates the revenue that DISCO earns from customers based on the costs that customers impose, and that it -- the one that becomes a little more contentious, but I would certainly accept, that it sets -- meets the consumer rationing proposal that sets the rate at a level that discourages noneconomic use of electricity but encouraging all possible economic use of energy, then you can make any choices you wish. And arguably all of the rates that I have proposed

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2 meet those three criteria. So any of them could be on the
3 table given the choices that this Board decides to make.
4 Now all of them have problems associated with what we
5 commonly will call rate shock. But my evidence is that
6 there are other ways to deal with that other than
7 continuing to have small customers subsidize big customers
8 inside the residential class.

9 MR. PEACOCK: Thank you, Dr. Sollows.

10 CHAIRMAN: Thank you, Mr. Peacock. Mr. Theriault?

11 MR. THERIAULT: No questions, Mr. Chair.

12 CHAIRMAN: Mr. Morrison.

13 MR. MORRISON: Yes, I do, Mr. Chairman. Would you like to
14 take a short break.

15 CHAIRMAN: I was going to say give me a bit of an estimate.

16 MR. MORRISON: I will probably -- depending on the answers
17 it might be 15, 20 minutes.

18 CHAIRMAN: Okay. We will take a 15-minute break. Thank
19 you.

20 (Recess - 2:50 p.m. to 3:10 p.m.)

21 CHAIRMAN: Ready, Mr. Morrison.

22 CROSS EXAMINATION BY MR. MORRISON:

23 Q.27 - Thank you, Mr. Chair. Dr. Sollows, you talked a little
24 bit about restorative justice and retribution, but now I
25 get to ask you some questions for a change. Just joking

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2 of course.

3 A. Fair enough.

4 Q.28 - In response to some questions this afternoon, first of
5 all, Dr. Sollows, would you agree with me that there is no
6 such thing as a perfect class cost allocation study?

7 A. Absolutely.

8 Q.29 - And would you also agree with me that because of the
9 imperfections, that regulators have adopted the 95, 105
10 zone of reasonableness as a proxy for unity?

11 A. I'm not sure why regulators have adopted the 95, 105 zone
12 of reasonableness because I haven't researched that. I
13 understand why it is reasonable to allow uncertainty
14 intervals around a outcome. I'm not clear -- it's not
15 clear in my mind that there is any justification to allow
16 a uncertainty interval around the proposal the way it is
17 handled.

18 Q.30 - The only reason I raise it is because I think in
19 response to a question by Mr. Zed you indicated that
20 anything that deviates from one in a revenue cost ratio or
21 unity you would consider as a subsidization issue, whereas
22 we have taken the view that anything that deviates outside
23 the 95, 105 reasonableness band would constitute a
24 subsidization.

25 A. I understand the distinction you are making. I

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2 guess -- I think I dealt with that in response to an
3 interrogatory, again I think the PI -- I'm trying to
4 remember which one. I was asked just that question or
5 something related to it. It was close enough that it may
6 be relevant to your question. Just hold on a moment.

7 I think I dealt with that issue in PI IR-3, question 4, do
8 I also recommend all non-residential rate classes have
9 rates to cover the full cost of service to that class? If
10 you go there, I think -- I accept -- fully accept that my
11 view of the world is maybe a little different than most,
12 but I take the view that anything that is provided from
13 here or from the Applicant or from any other intervenor is
14 advice to the Board. And the Board having made up its
15 mind as to what revenue it will allow the utility to earn
16 from a particular class of customers, that is the revenue,
17 that is the cost, and that becomes the determinant as to
18 whether it's above or below.

19 So in a sense I sort of define myself out of the problem
20 or the conundrum you are dealing with.

21 Q.31 - That's fair enough. And while we are on that issue in
22 terms of your uniqueness, Dr. Sollows, when I look at your
23 report -- and I'm looking at pages 25, 26 and 28, there is
24 a number of graphs there that depict revenue to cost
25 ratios. And would you agree with me that the revenue to

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2 cost ratios that you have displayed in your report aren't

3 really comparable to the revenue to cost ratios that are

4 derived from DISCO's CCAS because you are using a

5 methodology which I believe Mr. Knecht said was

6 interesting but is unique, is that fair?

7 A. It is perfectly fair to say that these graphs would be

8 different, the points would be in different places if I

9 displayed the revenue cost ratio that I just put on -- for

10 the rates that I just put on the record earlier on in

11 responding to Mr. Knecht's criticism.

12 Overall would they be substantially different in terms of

13 the overall trends? No. The conclusions are robust

14 enough that you will find that smaller customers, even

15 electrically heated residential customers, will be paying

16 more than their fair share of the cost for the smallest,

17 the larger ones, at least the winter peaking ones,

18 subsidized intra-class, and the summer peaking customers,

19 overcharged pretty much uniformly. So it will shift

20 things but it wouldn't affect my overall conclusions.

21 Q.32 - Okay. And that's fair enough. And I didn't really

22 have a full comprehension of what it was you did with the

23 data -- the billing data -- until you explained it today,

24 Dr. Sollows. But as I understand it, you took the billing

25 data that was provided to you, you analyzed it in -- as I

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understand it, analyzed it with a view to temperature sensitivity, is that -- am I being too simplistic?

A. No. That's -- actually my evidence relates to -- I mean there are a whole series of rates that don't take into account the temperature sensitivity of all, the first seven or eight or nine rates there I think -- seven I think -- are just based on lumped customers -- all residential customers.

The second half -- the second set of rates are temperature sensitive, and the temperature sensitivity does derive from the data in the billing records that was provided.

Q.33 - And I understand if I look at page 14 of your report, you have chosen or you have -- I will say chosen -- a temperature sensitive point which is different from that used by DISCO. DISCO uses 18 degrees celsius and I believe you have -- your analysis indicates that the temperature sensitivity is around 13.5 degrees celsius.

A. Just to clarify, the page 14 does not refer to the analysis related to the billing records of residential customers.

Q.34 - No. I understand that.

A. It relates to the analysis of the system that load records. Completely different data sets.

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2 Q.35 - Okay.

3 A. Now I have analyzed the data for residential customers

4 since filing this, and it does indicate temperatures of

5 around 14 -- I think it was 14 for urban customers and

6 14.7 for -- going by memory -- for rural customers. But

7 that is not -- does not form a basis -- it's not relevant

8 to the conclusions raised in the rate design portion.

9 Q.36 - So whatever -- just so I understand -- so that you know

10 that DISCO has used 18 degrees, and that's pretty much the

11 utility standard, I understand, you have used 13.5 or it

12 may be 14 or 14.7 for rural, are you saying that that --

13 A. I didn't use it in the analysis for the rate design.

14 Q.37 - That's what I was getting at.

15 A. No.

16 Q.38 - So the analysis of the billing data, when you say there

17 is some temperature sensitivity, that's completely

18 divorced from this --

19 A. That basis point temperature. So that you are clear, what

20 I did to eliminate any possibility of conflict, I took all

21 of the invoices below I think it was 13 degrees celsius,

22 and said I will analyze only them. We all agree that

23 there is space heating load below 13 degrees. So I looked

24 only at the invoices with temperatures below 13 degrees

25 for each customer to develop my correlation

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2 coefficient. So that eliminates completely the question as to
3 what the basis temperature is.

4 Q.39 - I just wanted to understand, Dr. Sollows.

5 A. Yes.

6 Q.40 - Now if I turn to page 15 of your report, as I
7 understand it, you have come to the conclusion that DISCO
8 is basically over-forecasting its energy requirement by 96
9 gigawatt hours, is that correct?

10 A. In comparison to the analysis that I have done, yes, it
11 would suggest that it is about 96 gigawatt hours high on
12 the seasonal load component.

13 Q.41 - So would you agree to me that -- agree with me that if
14 DISCO reduced its load by 96 gigawatt hours, the DISCO
15 cost to purchase power would also be reduced?

16 A. We are not talking -- we are talking energy. Energy
17 purchase is not a reduction in the nominated capacity or
18 load.

19 Q.42 - No. That's correct.

20 A. So if they have reduced their purchased energy, yes, it
21 should reduce whatever bill is finally settled with GENCO.

22 Q.43 - Okay. And you would also agree with me that if it
23 reduced its load by 96 gigawatt hours that DISCO's revenue
24 would also be reduced?

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2 A. That's absolutely true.

3 Q.44 - And if you assume or -- if DISCO's revenue will be

4 reduced by more than its reduction in its purchased power

5 costs, then there would have to be a rate increase,

6 wouldn't there?

7 A. Give me that one more time, so that I'm clear on it.

8 Q.45 - If DISCO's revenue -- we know that DISCO's revenue is

9 going to be reduced because of the reduction of the 96

10 gigawatt hours -- if its revenue is reduced more than the

11 reduction in its purchased power costs, then in order to

12 make up the difference, the delta between those two, a

13 rate increase would be required?

14 A. Yes.

15 Q.46 - And just to finish off, Dr. Sollows, I was going to ask

16 you the question about the 15 different rate designs that

17 you had in your evidence. And I understand today that you

18 are not recommending any particular rate design. You are

19 putting all before the Board for its consideration, is

20 that fair?

21 A. That and explicitly so in response to interrogatories. I

22 have made an effort not to argue that any one is better

23 than another. I will do that from down there based on

24 what I see overall. I don't think anyone should infer

25 that I would go -- that I favour any one of these by what

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2 I have written so far or said so far.

3 I think the indication clearly is that on a long term go
4 forward basis you need an inclining block rate and you may
5 need a smaller -- maybe even a three block rate. How you
6 get there, when you get there, I haven't -- and I have
7 made an effort not to argue from here.

8 MR. MORRISON: Those are all my questions. Thank you.

9 CHAIRMAN: Thank you, Mr. Morrison. Ms. Desmond any
10 questions from Board Staff?

11 MS. DESMOND: No questions, Mr. Chair.

12 CHAIRMAN: Any questions from the Board? No questions from
13 the Board. Mr. Kidd any redirect?

14 MR. KIDD: No. Thank you, Mr. Chair.

15 CHAIRMAN: Thank you, Dr. Sollows, for attending and giving
16 evidence today.

17 DR. SOLLOWS: Thank you.

18 CHAIRMAN: Well I think we have about run out of time today.

19 Mr. Morrison, I am not sure, we had a little bit of an
20 exchange about what we might be able to use tomorrow. I
21 understand Mr. Peacock still has to give evidence, but is
22 it your preference to bring Ms. MacFarlane tomorrow?

23 MR. MORRISON: I don't anticipate that Mr. Peacock will be a
24 lengthy witness. It would be a shame to lose the entire
25 day, Mr. Chairman.

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So it would be my intention to bring Ms. MacFarlane and Mr. Dobson forward for the deferral account panel.

CHAIRMAN: And how long would they be available if we start at 9:00? What would you see as --

MR. MORRISON: I would say that Ms. MacFarlane would have leave no later than about 11:15 or 11:20, because she does have a Board meeting at 1:00 in Fredericton.

CHAIRMAN: Well that would certainly be a productive use of that time. And Mr. Peacock, perhaps we could have you give your evidence following Ms. MacFarlane in the morning would that be acceptable?

MR. PEACOCK: As long as the Intervenors are gentle with me, I am quite fine with that.

CHAIRMAN: Maybe they have saved it all for you. All right. The other issue that I would like to discuss has to do with Thursday morning. And you have Deloitte & Touche. I understand that there may not be a lot of questions for them, but do I see them twice on your draft schedule?

MR. MORRISON: I had them twice on the schedule, Mr. Chairman, because at the time I looked at that I knew we only had a half day on Thursday. I have no idea how long they may be and I still really don't. So I have them available on Thursday morning and if necessary on Monday as well.

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Discussing it at the break or looking at it at the break,
I see the possibility of putting Ms. MacFarlane on
tomorrow morning for two hours or two hours and 15
minutes. If that isn't sufficient to deal with that panel,
we can go into Thursday morning with that panel, finish
them up, start with Deloitte on Thursday if necessary, if
possible. If they are not finished on Thursday, then they
are available to come back on Monday. So I think it's
probably the most efficient use of the time we have.

CHAIRMAN: All right. Then I think we can carry this
discussion on a little bit further tomorrow depending on
how far we go with them, Ms. MacFarlane.
So we will adjourn and -- excuse me, one moment. All
right. So we will adjourn until 9:00 o'clock tomorrow
morning.

(Adjourned)

Certified to be a true transcript of
the proceedings of this hearing,
as recorded by me, to the best of
my ability.

Reporter