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(9:04 a.m.)
CHAIRMAN:
Q. Thank you and good morning. Anything before we get started? Good morning, Ms. Newman.
MS. NEWMAN:
Q. Good morning. No, Chair.
CHAIRMAN:
Q. Thank you very much. Good morning, Mr. Kelly. Would you like to introduce your witness, please?
KELLY, Q.C.:
Q. Yes, thank you, Chair. Chair, the witness this morning is Mr. Larry Brockman, President of Brockman Consulting of Atlanta, Georgia. The witness can be sworn.
CHAIRMAN:
Q. Good morning, Mr. Brockman. Welcome back. I think you've appeared before us before, have you not?
A. Yes, sir.
Q. Yes.
MR. LARRY BROCKMAN, SWORN
CHAIRMAN:
Q. When you're ready, Mr. Kelly.
KELLY, Q.C.:

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Q. Thank you, Chair. Mr. Brockman, you have pre-filed evidence in this matter dated September 2, 2003 and supplementary evidence of November 6th, 2003. Do you adopt that evidence as your testimony in this proceeding?
A. Yes, I do.
Q. Would you briefly explain your perspective on the wholesale electricity rate issue to the Board?
A. Yes, I think what the Board is weighing and has to weigh in this can be simplified into a perspective of you have an existing energy only rate. You have a proposed sample rate, which happens to be a demand energy rate. There are lots of different demand energy rates one could design, but that's the sample rate. Much of my testimony talks about the actual sample rate. And I think what needs to really be weighed by the Board is a few things really, if you kind of boil it down to its essence. Is the new rate that's been proposed more fair somehow, you know, is there some sort of fairness issue that's solved by adopting the proposed rate? And is it more efficient? And we've heard a lot of talk

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about efficiency and how we want to sort of signal the customers to do the right thing in the long run, and how that ties into marginal cost and so on and so forth. And then, I guess, the other thing that has to be weighed is the volatility. We've heard testimony about the volatility that the new rate will create. Is the volatility something that has to be dealt with by the Board and is that enough of a negative, if it has to be dealt with to outweigh any advantages we see, either in efficiency or fairness. And I suppose the other issue that, you know, will come up eventually is--that one of the Board members actually asked is, is it necessary to do this? Do we have to do it right now? So I think those are the things that the Board has to weigh.

In my opinion, the issue of fairness isn't really a major issue in this case. There are some--I suppose the Industrials have said they feel a bit unfairly treated because of the way the rate works in terms of if their demand goes up, they have to pay a little more, Newfoundland Power doesn't. But at the

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same time, everybody's treated fairly whenever we have a Cost of Service Study. All of the demands and energies are properly reflected and they'd throw off the costs as they are. So you know, that's what has to be weighed, and again, in terms of efficiency, I personally don't feel you can judge efficiency without looking at the long-run marginal costs on the system. That's what all the textbooks say, including Mr. Bonbright's text, and I quote a piece of that in my evidence as well. That's what I think the Board's weighing or has to weigh in this case.
Q. In your evidence, you indicated that a demand energy rate is not necessary. Why do you believe it is not necessary?
A. Well, I guess I touched on that just a little bit a few seconds ago, but obviously there's not one in place now. Newfoundland Power currently has demand rates on its customers in spite of the fact that there is no demand energy rate. There's also been a lot of argument in terms of is it necessary to make Newfoundland Power do some DSM and I had evidence filed in 1990 on that issue of

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MR. BROCKMAN:
clearly a demand energy rate might incent them a little more, but the real question is incent them to do what and at what price? So it's not necessary. The question is: is it wise?

KELLY, Q.C.:
Q. Okay. In 1990, Mr. Brockman, you testified in support of a demand energy wholesale rate. What has changed since 1990 that affects your views?
A. Well, quite a few things have changed. In 1990, we were talking about this thing from a conceptual basis. Newfoundland Power wanted to--they thought they saw a lot of DSM on the horizon that might be cost effective. They were still evaluating it, but they were looking at this effect that "well, if we shave a kilowatt off the peak, will we immediately save money?" They knew they would save money in the rate cases because of the Cost of Service Study. It does recognize demand reductions, but they wanted to say "will we save money this month if we do some DSM?" and they kind of wanted to see that. But at the same time, there was no specific rate that was

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proposed. It was sort of a conceptual idea. If we go to demand energy rates, you know, maybe it would be better. So it was a conceptual thing and the talk that was in most of the evidence talks about what should happen is Newfoundland Power and Hydro should get together and design a proper rate. You know, there's a lot of things that go into a rate design, more than just saying it's a demand energy rate or it's an energy only rate. You have to balance or tweak, I guess, as Mr. Greneman said. But it's a little more than tweaking. You have to balance the belt of energy and demand charges. If you're looking for efficiency, you have to balance them against the marginal cost, as I said. So anyway, that was what was on the table in 1990.

In 1990, Newfoundland Power was also facing and Hydro was also facing a fairly robust demand in energy growth on the Island. That energy growth sort of fell off the table, if you will. I think right now that growth is about one percent. So the energy growth that was being projected, there were gas turbines,

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run by oil in this province, but you know, combustion turbines that were only a couple of years out, and people were saying "oh my gosh, we really need to do something about the demand." Those gas turbines never were built. What was actually built was Granite Canal, and you know, I'll talk about Granite Canal and how that--what does that really mean in terms of what the costs were, and energy versus demand, if someone wants to talk about it.

So I think the load growth slowed. The feelings about what could be done changed, and I think perhaps one of the most important things was, to be frank about it, in 1990, I really don't think Newfoundland Power and many of the witnesses really thought enough about the volatility issue. It seemed like a good idea theoretically from a textbook situation, but once an actual rate was put on the table, rather than some sort of conceptual thing, we started thinking--well, the financial people started thinking about the volatility that it was going to create for Newfoundland Power and its customers and said, "we're not sure we can handle this volatility." And so that's

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something that's different today, and another thing that's pretty important to me, as a system planner, is that in 1990, the marginal running costs of Holyrood were about three cents a kilowatt hour. The rate that was being signalled to Newfoundland Power was somewhere around, best I remember was around four and a half cents. It was an energy only rate that was higher than the marginal running cost. Today, the marginal running costs of Holyrood is about 5.13 or something cents and the rate we're being signalled is pretty close to that. So in 1990, it looked like well, maybe we do need to reduce the energy charge to Newfoundland Power and one of the ways to do that would, of course, to put in a demand charge and put that money in there. And that's kind of different today because the relative magnitudes of demand and energy marginal costs versus embedded costs are quite different today than they were in 1990. So those are probably the major things that have changed.
Q. You recommend a Marginal Cost Study and a Retail Rate Design Study. Why are those

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KELLY, Q.C.:
important and how would that process proceed?
A. Well, they're important, as I alluded to earlier, in the sense that if you're going to talk about efficiency, you really can't talk about efficiency with respect to embedded costs. You have to look at marginal costs to really make any real claims on efficiency. That's the way economists and planners do that. The way a Marginal Cost Study is done, if it's done properly--there are a lot of ways to do a Marginal Cost Study, some are good, some are not. The way it's done, if it's done properly, is you look at what all the expansion options of the utility are that are on the horizon, what do they cost, what are their characteristics, what are they fuel costs and so on.

You model all the existing units and how they react and what their costs are and so on and so forth. And then what you do is you go in and you say, okay, let me change the load. Let me change the demands, for instance, on peak or off peak, or let me even take a load shape. Like maybe I'd take the residential

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load shape for Newfoundland Power or something, and let me change that load. Let me assume it grows or shrinks. And then what you do is you see what happens to the long-run cost of the system over time and you can present value that back, if you'd like, and eventually you can take that back and you say, if I do this, if I change the demand on peak, if I change the energy on or off peak or I change it in some certain way, some certain load shape, what's the cost of doing that over time? What will the customers see, you know, in the long run over time from doing that?

Then you take that and you compare that to whatever embedded rate design you might have and say well, okay, the long-run marginal cost of doing these things is this, and you know, the energy cost might be one number and the demand cost might be another number. Am I too high on energy? Am I too low on energy? Am I too high on demand? Am I too low on demand? And you can make judgments about how to modify your embedded rate so that you hope its more efficient.

Q. Okay. Is there a logical sequence in how the

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Board should deal with this wholesale rate issue?

(9:15 a.m.)

A. Well, in my mind, yes. The Board has been struggling with this issue, I guess, since 1990. I guess there was some evidence in 1989. I personally have only been struggling with it with the Board since 1990, but what's been missing in that whole time is a Marginal Cost Study from Hydro. Newfoundland Power tried to do one in 1997 and they really don't have all of these numbers that they need to do one properly. They did the best they could, and in fact, in 1997, because a turbine was sitting right on the horizon, what they did may have not been that bad, although what happened right after that shows that the number would have been way off and I can talk about that, but you first have to do a Marginal Cost Study if you want to claim efficiency for a rate.

After you do the Marginal Cost Study, you can look at some various embedded rate designs, innovative rates, if you will, demand energy rates, time of use rates, whatever kind

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of rates you want to look at. You have to somehow deal with things like weather normalization and so on and so forth. You get some of the weather variability out of it if you want to do some long-term planning. And then you have to look at what the effects of these rates would be on stability of revenues and what does it do to Newfoundland Power. What does it do to Newfoundland Power's customers? What does it do to the Industrials? So there is a progression in my mind that goes that way.

Q. Okay. After you do a Marginal Cost Study and a Rate Design Study, is it possible that the Board would end up with an energy only rate or with a demand set at zero?

A. Well, that's certainly possible. The NARUC manual that I referenced, the cost of service manual that I reference in my testimony talks about systems that have a lot of hydraulic tendency and they're adding units that are really saving fuel, essentially. And sometimes if you look at what the marginal cost of demand is on those systems, you find it's very close to zero. If that were to be

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MR. BROCKMAN:

the result of a study done by Hydro, then you might feel differently about the demand cost than you do just sort of guessing that it's whatever the embedded Cost of Service Study says it's worth.

I looked at Granite Canal, after one of the witnesses earlier talked about what was the sort of net cost of adding Granite Canal and it was very low or zero, and in fact if you escalated fuel at all, I think Granite Canal's levelized cost was only in the order of five something, 5.4 cents, somewhere in that neighbourhood. But it was very close to the energy cost that Newfoundland Power is currently being signalled. But it's also very close to the running costs at Holyrood. So that if you were to project fuel cost escalations at Holyrood at all, just because of, you know, escalation in fuel costs, not necessarily burning more, and you took that out over time for the life of Granite Canal, you might very well find that Granite Canal's net cost to the system was negative. You should have added it because it pays for

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itself. It pays for itself in fuel savings. If that happens on a system and you start trying to figure out how much of that unit cost, that $135 million at Granite Canal was demand related, what you normally do is net out the fuel savings from the capital costs and you might very well find that you end up with a number that's very close to zero. So if that were to happen from a true Marginal Cost Study in the future for Hydro, you might say, well, I don't know if the marginal long run demand costs are zero today without a study. I don't know if they're two dollars. I suspect they're not $28.00 because Hydro is saying well, the value of interruptible right now isn't $28.00. They're trying to do away with that. They're admitting that in the long run, it probably was something and I don't disagree with that, but I don't know the real number without a Marginal Cost Study. So I can't really judge it efficiently without that.

KELLY, Q.C.:

Q. Finally, Mr. Brockman, there's a question being raised about whether the Board should

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reopen the generation credit issue in relation to Newfoundland Power's thermal plant. Can you just explain briefly your views on that issue?

A. Yes. The Industrials have raised an issue. Mr. Greneman called it an anomaly. They went in and sort of calculated how much does their costs go up if you took out--or go down, I suppose, if you took out the credit that Newfoundland Power's receiving for its generation. The credit that Newfoundland Power is actually receiving isn't really a dollar figure, in essence, because what happens is if you look at the Cost of Service Study, what happens is Newfoundland Power is being forgiven demand for however much generation they have, and I think there's a credit for reserves as well. So what's happening there is that you're just reducing demand by the amount of generation that Newfoundland Power could run. Newfoundland Power currently doesn't necessarily run that because it's under the control of Hydro and I think the province has wisely decided that maybe they shouldn't have to run it. It may

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be better to signal it as a credit. I think that the Cost of Service Study numbers, the mathematics, if you will, that the Cost of Service Study comes up with, no one, I don't think, has questioned the accuracy of the mathematics and what's really happening, to some degree, in the Cost of Service Study is it's throwing off numbers by way of what it's told to do. The Board chose to use a load factor method for splitting demand and energy, for instance, costs on the units and the numbers are what they are.

You could just as easily argue, I think, if you wanted to open it up that maybe there's other places in the Cost of Service Study where other people are--whose other people's axes are being gored. For instance, if you were to look at the split on Granite Canal, you know, you'd find that just the split for Granite Canal, 60 percent load factor, you'd say that the demand portion of Granite Canal was 40 percent of its cost, and that's a pretty high number. It's more than $100 a kilowatt, I can tell you that. So I think if you're going to open up the cost of service

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MR. BROCKMAN:
study, you have to be a little careful about picking and choosing. I'm not saying I'm opposed to that. I mean, I argued in the generic cost of service docket that, you know, we should weigh these things, and the Board made a decision on it. So I just caution the Board against picking and choosing issues like that though in the Cost of Service Study because it's a complicated animal.

KELLY, Q.C.:
Q. Thank you, Mr. Brockman. Those are my questions, Chair.

CHAIRMAN:
Q. Thank you, Mr. Kelly. Good morning, Mr. Young.

MR. YOUNG:
Q. Good morning, Chair. Good morning, Mr. Brockman.
A. Good morning.
Q. I can't remember now how many times I've cross-examined you, we've had this pleasure, but I think it's fair to say we're regulars at this. To carry that a bit further, I think we're going to be serving up the usual this

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morning, which is the demand energy rate structure, something we've discussed before, and perhaps with a different twist today.
Mr. Brockman, I believe you were present in the room the last few days when the rate design relationship that Hydro has with Newfoundland Power at present, being the energy only rate, has been discussed. You probably heard Mr. Patrick Bowman describe demand energy rates as the norm. You probably heard Mr. Greneman refer to energy only rates as being an anomaly, and yesterday, Mr. Doug Bowman referred to the present situation of an energy only rate with Newfoundland Power as being an outlier, I think his term was. I'm just wondering what your sense of this is. How common are energy only rates between relatively large wholesale and distributing utilities, such as Hydro and Newfoundland Power?
A. Well, it is true that in that sense Newfoundland is an outlier. I think I even testified to that at some point in time over the last--I can't remember all the things I've said over the last 13 years, but you are a bit

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of an outlier. Most very large customers are on demand energy rates. I would point out that sometimes when people start counting the number of jurisdictions that that entails, in the US that's really only one jurisdiction. That's the FERC. They regulate all the wholesale power rates. It's not like all 50 states say well, we're going to have demand energy rates. They regulate their local utilities. The FERC regulates the wholesale rates. And you know, the local jurisdictions have to deal with the volatility. This particular jurisdiction is in the enviable or unenviable position of actually regulating both the wholesale rate and the retail rates. But yes, it's fairly common. Then again, Newfoundland Power is a lot different looking than most of the utilities in North America, in terms of its hydraulic mix and you know, in terms of being isolated and so on. But I certainly can't argue that it doesn't--it's not an outlier.
Q. One of the points you raise in your testimony that you pre-filed is that the--you have a concern relating to the fact that Newfoundland

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Power cannot control its customers' demands and so it's the end users' demands, and you raise that in relation to the price signal that may be getting from Hydro in the sampling rate. I'm just wondering if you could discuss that a bit further. Is that the issue?
A. Yes, that's really one of the issues. As I said earlier in my summary, there are really several issues the Board is wrestling with and that's the question of fairness, efficiency and volatility, if you will. In order for me to make any argument that the rate that would be put in was more efficient, as I said, I'd have to judge these relative demand and energy charges against marginal cost. I know the rate creates volatility, so if Newfoundland Power can't do anything about the rate, if they're not going to change their rate designs and when they say they're not going to change their rate designs, it's not that they're snubbing their nose at anyone. It's just that they look through--try to, as best as they can, look to the sort of marginal system cost. They're handicapped in that because they really can't judge everything that Hydro's

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MR. BROCKMAN:
doing. They don't have all of Hydro's numbers. But if they can't do anything about it, you know, and it creates volatility, I guess that's really the issue. What can they do about it? Can they do more DSM? I don't see any real evidence that they can. I don't see any evidence that they can't either, but there certainly isn't anybody that's showing there's a wonderful amount of things we can do for $84.00 a kilowatt. If they're not going to change their rate designs for valid reasons, in my mind, then I don't see that we're any better off. I'm not sure if I answered your question, Geoff. I may have gone off.

MR. YOUNG:
Q. Yes. Well, I guess the reason I asked the question is because I was wondering how different Newfoundland Power is from other distribution utilities which have, you know, a fair number of domestic customers and smaller general service customers -
A. Well, it's -
Q. - who don't have demand charges either.

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A. - it's probably not all that different, and the few that I looked at, many of them try to--what they do is they say, okay, how do we deal with it? That's really the issue and what they do is they put in clauses, you know, like fuel adjustment or RSP clauses. They say this sort of moving all over the place on demand, which is primarily caused by weather, is something we don't have any real control over. So they'll come to the Board and say you need to give us some sort of recovery clause. We need to set up another RSP to handle these demand fluctuations, if you will. So that's the way that most of them deal with it, but they do have to deal with this. Is it good or bad? I can't say unless I weigh all those other things.
Q. I'm not sure if you've answered my question. Is Newfoundland Power different than the other utilities in the particular circumstances of the customer demography, demographics?
A. Well a lot of distribution utilities are primarily residential, if that's where you're --
Q. And a lot of them have demand and energy

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rates?
A. Oh, yes.
Q. Does Newfoundland Power have--I understand from your answer, it doesn't have a great deal of control over its domestic customers and others, some others at least, but I think you probably agree with me, it can have some influence on a group of their customers. For example, Newfoundland Power had curtailable rates. It has demand and energy rates for some of its larger general service customers. I was just wondering, have those sorts of options given Newfoundland Power some measure of control on the peak and on the load growth?
A. Sure, and I believe they've put in as many as they think cost effective and justified by what they're doing. They've already done that, by the way, in the face of an energy only rate, which kind of goes back to is it necessary to have the demand energy rate.
Q. You said a moment ago that Newfoundland Power has indicated that it didn't intend to change its rates based upon the particular price signal from Hydro. The range of rates that it has for its customers now, to what extent is

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that a reflection of the rate that Hydro gives? Because I understand that a change to the sample rate, in your view, won't cause a change in rates. Is that correct?
A. Well, you have to--I don't know how many of Newfoundland Power's hearings you've sat through, but you have to kind of understand the way Newfoundland Power designs its rates. It does take the embedded cost from Hydro as a sort of starting point. But it also takes the demand energy splits from Hydro that comes straight out of the Cost of Service Study, and it applies those to its own rate designs in the classes that have demand, but it also weights all of those things with how they feel about the short-run marginal energy costs, the long-run demand costs, which again they really don't know, but Newfoundland Power attempts to look through the purchase power rate, if you will, and try to do what they think is good for society and so, that's why they say, I believe, that you know, to a large extent, the purchase power rate, other than creating volatility which they will have to deal with, is somewhat irrelevant in terms of how they

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MR. BROCKMAN:
would modify their own rate designs. I mean, obviously the revenue requirements are set by the embedded Cost of Service Study, but not necessarily the way they adjust their rate designs. So I don't know if I answered that or not.
MR. YOUNG:
Q. Well, I think perhaps you have. So there is a--I wouldn't say a disconnect between the two, but there is some level of independence between the rate that Newfoundland Power -
A. Exactly.
Q. - receives from Hydro and the final rate design. I do understand that Newfoundland Power does get its embedded cost information that it uses for rate design from the Cost of Service Study.
A. Yes.
Q. And further, I think you just indicated, and I just want you to confirm this, that I understood it correctly, that there some marginal costs principles that Newfoundland Power uses in designing its end-use rates for its customers?

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A. Insofar as they can, yes. Again, they're somewhat handicapped by not knowing along the marginal cost of demand, but insofar as they can, they attempt to use those.
Q. Aside from the end-use rates Newfoundland Power designs for its own customers, I'm just wondering, would you agree with me, as a basic premise, that between Hydro and Newfoundland Power, Hydro is providing Newfoundland Power with essentially two different products? One is capacity; the other is energy.
A. Yes.
Q. And is there any reason not to price them separately so Newfoundland Power gets a very clear indication of what the price is for each of those two components?
(9:30 a.m.)
A. Well, it depends on what signal you want to send for those separate components. As you said, do you want to signal the marginal price of those two products for efficiency? Is there some difference in the fairness if you don't signal them separately? There's a timing difference. Newfoundland Power already gets a demand energy signal in effect in

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every--every time you do a Cost of Service Study, as we just discussed, they look through there, through the rate that you give them and say "how much of that's demand and how much of it's energy?" and they apply that to their rate designs. So the Board has to decide what signal they want to send. Do they want to send just an embedded signal and in that embedded signal, is it the load factor split they want to send or do they want to send a marginal signal, or at least modified by a marginal signal? You can't really charge everybody the marginal cost every time. So I think, once again, it's a balancing act. What signal do you want to send and is it a better signal than the one you're currently sending?
Q. Talking about pricing just a little bit further, we were discussing a few moments ago of some of the limitations Newfoundland Power might experience with passing price signals on to, for example, its domestic customers, price signals that Hydro might give in its original. This strikes me as an issue that other similar utilities must have dealt with and in Mr. Greneman's evidence, he refers to things that

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can be done, and one of them is seasonal rates. Would you agree that that's an option that Newfoundland Power might consider in its -
A. It's an option, and in order to do that, you'd have to again decide what signals do you want to send in that seasonal rate? Do you want to place the embedded cost of demand on peak? Do you want to place something like the marginal cost of demand on peak? Do you want to signal less than the short-run marginal running costs of Holyrood as the sample rate does in the off-peak months? You have to make decisions even to do that. But you could do that, sure. That would be one of the things I would recommend that be studied in this marginal cost and innovative rate kind of study that I recommend that Hydro do.
Q. And I don't know if there's any strong disagreement amongst anyone who has testified yet as to the benefits of a Marginal Cost Study, but there does seem to be--well, perhaps I'll use the word, growing consensus that a Marginal Cost Study ought to be done in its own time, but it's not linked or it's not

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MR. YOUNG:
a prerequisite to a demand energy rate?
A. Well, I certainly don't--I mean, I don't agree with that, if you're going to claim any sort of efficiency benefits from the embedded rate. I think most of the witnesses have testified that marginal cost is required for efficiency, but at the same time, efficiency benefits are being claimed for the embedded rate. So I think there's a disconnect there. I don't agree with that at all.
Q. If the demand energy rate is based upon the embedded costs, and I think you'll probably agree with me that when it comes right down to it, almost all jurisdictions look to their embedded costs to ensure that their marginal costs aren't out of whack and they're collecting the right revenue, et cetera. But if the demand energy rates are based on an embedded cost study, to what extent is it a necessary thing to look at the marginal costs to set those embedded costs properly?
A. Well, I guess we've -
Q. Isn't--if I can just -
A. - we've talked about that four or five times,

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but -
Q. Yes, I know, I just--you're jumping in to answering my question and -
A. I'm sorry.
Q. - and I have just one further point on that, because you're right, I don't want to just come back on that point. I would suggest to you that, you know, the Marginal Cost Study does have a value and Newfoundland Power may use the outputs from the study. But it's a down-the-road thing that Newfoundland Power can do in its own rate design largely, is it not? And it's not necessarily an intrinsic issue with the demand energy rate study?
A. Well, you don't have to do a Marginal Cost Study to design an embedded rate and implement the rate. I mean, no one's arguing that. If you want to claim efficiency for the embedded rate, however, you have to compare it to marginal costs, you know. That's a simple fact. I don't know that anyone's taking issue with that.
Q. One of the things that Mr. Greneman spoke about is the role that the demand component in an embedded cost study and in the demand

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energy rate, the sample rate, the role that the demand component plays, and in his view, and you probably heard his testimony yesterday, and if I don't get it quite right, I'm sure he'll correct me on this, but in his view, it deals with the commitments that the utility has made to its bankers for debts it's incurred to build capacity. Would you agree that that's an important element for the generating utility to recover as essentially a given, given that it has to have that capacity to provide to its customers?
A. Well, absolutely, and the utility recovers that investment in both an energy only rate and a demand energy rate. The only thing that's actually guaranteeing Newfoundland Power any--or Newfoundland Hydro anything in the demand energy rate is the setting of the ratchet at 98 percent. They're guaranteed they'll collect 98 percent of whatever demand costs the embedded Cost of Service Study say are demand costs. That's all it does. Both rates recover the revenue requirements for Newfoundland and Labrador Hydro, and I believe that the demand energy rate would probably be

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more volatile on the down side, without the ratchet as it's currently been designed. There's no cap, so if Newfoundland Power uses more demand, Hydro will get more money. Their fixed costs won't really go up in the short run, but they'll get more money. So yes, I would see why they could--I mean, I would like that rate too perhaps in that sense, if I were you.
Q. There's a section in your evidence that deals with the level of study that Stone and Webster has done on the demand management potential and I think I'm probably paraphrasing you accurately if I was to say that in your view Stone and Webster have not provided persuasive evidence that demand management potential exists. Is that a fair characterization of your view?
A. Yes. I didn't see any studies, or you know, basically it's anecdotal.
Q. Hydro is primarily a generator and transmitter of capacity and energy in this jurisdiction. You'd agree with that?
A. Yes.
Q. And Newfoundland Power is the primary

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MR. YOUNG:
distributor of that capacity and energy to its own customers. Would you agree that it's Newfoundland Power's role primarily to know the kind of detail that would be required at the domestic general service level as to the options and the potential benefits or otherwise of different demand management potentials or is that Newfoundland and Labrador Hydro's prime role? Who's the expert on that particular issue?

A. Well, I think probably both. Hydro certainly knows the characteristics of their domestic rural customers, so perhaps they're more expert on that and Newfoundland Power probably knows more about its own domestic customers, which is why I think that they should both participate in any sort of provincial look at what's to be done if we're to achieve efficiency and perhaps try to avoid plants and so on and so forth. Whatever we're trying to do, I think both should participate. I really think this is a--again, this Board is in a very unique position in North America to some degree in regulating both utilities, but

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regulating both a wholesale and a retail rate. They have to worry about both Newfoundland Power's customers and your customers and where most--I mean, what we're really talking about there ultimately is sort of an integrated resource planning, is what we used to call it in the States until we sort of deregulated all of our markets and messed half of them up, but what was done there is you look at all of it as a whole. You don't look at it in isolation, and especially if you're going to claim that this embedded rate that you've designed is more efficient, you can't say that without looking at these other things.

Q. There is some discussion in relation to load management programs that you just related to that sort of permeates through this testimony, and I'm just wondering, just from the point of view of, I mean, Hydro has no problem in indicating to this Board or to anyone that it has a very good idea about its own customers, but I mean, to put it in perspective, Hydro's rural customers number around 22,000. I'm taking these numbers, because it's convenient to do so, from Mr. Perry and Mr. Henderson's

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evidence.

A. Um-hm.

Q. And Newfoundland Power's customers are about ten times that number, correct? And to a very large degree, the rates that Hydro charges those customers are in fact Newfoundland Power's rates? Do you agree with those characterizations I just gave?

A. Yes, in terms of the number of customers and the way the rate is set, sure. I would point out that in terms of, you know, what you can do about it, is you touched on earlier. I mean, one of the things we can do about it, one of the most cost effective types of demand management that is known some--that we do know something about is curtailable and interruptible load. You had 46 megawatts of curtailable interruptible load on your system. NP has, I think, around five or 4.6 or something megawatts. You're recommending that 46 megawatts of demand side management currently isn't needed, and I think it's priced at $28.00, which if I just simplistically look at it and say well, if I take $28.00 and divide it by 12, I get a

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little over $2.00 for what demand is worth to you in terms of efficiency. And so, yes, you do know something about it and the signal that you're sort of signalling me in doing away with that is that it's not worth much more than $2.00. But yet you want to say it's worth 7.00 as an efficiency signal. So I'm a bit confused by that, I suppose.

Q. Is that an apples to apples comparison?

A. Not to me.

Q. Is it an apples to apples comparison though to compare the $7.00 to the 2.00 -

A. Yes.

Q. - on the basis of where it comes from?

A. I think it is.

Q. One being the embedded cost of demand and the other being a particular program at a particular point in time?

A. If you signal Newfoundland Power that demand is worth $84.00 a kilowatt, it's signalled on the one CP. That's the way it works. That's the way it's being proposed. You're telling them if you shave a kilowatt off the peak, it's worth $84.00 a year. How are they to respond to that? Well, they could shave it

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MR. BROCKMAN:
possibly by doing curtailable load. I mean, there's been anecdotal evidence that maybe they could put in some water heater controllers. I don't think there's been any real engineering quality numbers put up to the Board on that, but the simple fact of the matter is if Newfoundland Power went out and if they could somehow steal those 46 megawatts of customers from you and offer them the interruptible rate at $28.00, they would save $84.00 a kilowatt year. So that's not--it is apples and apples in my mind. Why is it different? Well, I'm sorry, you're asking the questions.

MR. YOUNG:

Q. Yes, I know. I was just wondering, have you considered all the issues of that contract and the nature of the relationship?

A. Yes, I have, and what they said was it's a short-term thing. It was only for ten years. So what that tells me is today we don't need it. Today it's not worth $28.00 so is load to Newfoundland Power worth $84.00? We've just put in a unit, as I said, that you know,

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Granite Canal that if you really backed out the fuel savings from Granite Canal, you might find the demand cost of it was very low.

Q. A fair piece of your evidence deals with the increased earnings volatility that occurs with Newfoundland Power's earnings and in your view, if the Board moves away from the energy only rate and adopts a demand energy rate, I guess, in saying that, we really have to say that the energy only rate exists in its present form with the RSP -

A. Yes.

Q. - and Newfoundland Power's RSA, and we can't divorce the two. That does set up the present circumstances.

A. Yes.

Q. On page three of your evidence, I don't think we need to turn to it, but one of the principles you refer to, and there are a number of principles you were referencing from Bonbright's and you've chosen some of them and listed them for us, but number four on your list is stability. I'm just wondering if this concern about volatility is referencing that issue, and yesterday when I was discussing

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these issues with Mr. Doug Bowman, his indication was that when you're looking at Bonbright's principles, there's a--I may be putting words in his mouth, but a judicious balancing that goes on between these various attributes. Would you agree with that, that stability doesn't have sort of any independent value unless you compare it with the other values that you may be trading off in relation to it?

A. It's clearly a balancing act, as I've testified before, and I've seen various people, including myself at times say probably the fairness and the efficiency or perhaps the most two--the two that are most important, but you can't ignore the other ones. I happen to have worked for a Board in my former life, one of my former lives, where we did that a few times, and we put in rate designs. I remember one where we put a demand rate on some churches that were on a demand rate, but they were large enough to be on a demand rate, and no one really looked at what it did to those customers and I got to answer all the letters and the phone calls accusing me of being in

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league with the devil and about six months later, that Board said "maybe we should have thought more about the impact on the customers and the stability" and so I think you can't say that because some are sort of more important in general that you can ignore the others.

Q. No, I think as I've been listening to rates' experts in this room, that's a fairly common sort of synopsis, that you have to consider them with the each. So Mr. Greneman was talking about the other values that might be considered or other issues and other of Bonbright's principles that may be considered and one of the ones he referred to was dynamic efficiency and would you agree that if you're going to go with stability, to a great degree, you're going to be trading off that sort of an option also and what the Board has to do is strike a balance between the two?

A. Absolutely. I mean, Mr. Greneman, you know, expanded my summary. Mine was intended to be a summary and I sort of lumped all efficiency into the category of efficiency and he went back to Bonbright and talked about static and

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MR. BROCKMAN:
dynamic efficiency and I mean, you have to consider all of Bonbright's principles and the Board, this Board has to weigh is there more fairness, is there more efficiency, is there some more volatility and then all the other things as well. But I mean, it's a balancing act. That's why we have boards designing rates rather than just dropping them out of the Cost of Service Study.
(9:45 a.m.)
MR. YOUNG:
Q. When you look at other distribution utilities and you compare it to the one, the circumstances that Newfoundland Power finds itself in, and when I say that I mean, that you know, under the present regime, it has an energy only rate with the RSP. Would you characterize the Newfoundland Power circumstance as having very stable earnings or moderately so or, you know, compared to others that you viewed over the last few years, where does it fit in the range?
A. I probably should let Mr. Perry answer that question. I'm not a cost of capital expert or

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the CFO of the utility as he is.
Q. I understand that, but you did express concerns about volatility.
A. Well, my concerns came from conversations with Mr. Perry and others before him at Newfoundland Power saying, you know, I got all this earnings volatility, and he has evidence that's filed in the case which the Board can judge on its own as to whether he's accurate in his calculations or not. I'm simply saying yes, it's a concern to him. He's the CFO. I think we need to worry about it, if it's something real. But I personally can't judge its realness, but I think the Board can.
Q. Would you agree that moving from a rate form such as Newfoundland Power has at present towards a demand energy rate, anything of any of the sample rates that we have, has inherent with it or in it, I suppose, an element of additional volatility and it almost has to, in order to work the way it ought to?
A. Well, in my experience, most load forecasters, and I'm not a load forecaster, tell me that it's easier for them to forecast energy than it is to forecast demand. I suppose that has

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some--to some degree, that's probably because of weather, but they have a much more difficult time forecasting demand, so obviously if you put in a demand energy rate versus an energy only rate and you have to forecast what's going to happen in the cost of service studies, you're going to probably have less volatility with the energy only than you are with the demand energy. So I think, yes, they probably do go hand in hand.
Q. Can the impact of weather, though, that can be mitigated to a great degree, I think you'll agree with me, by normalization approach?
A. Well, I'm not sure that it can. There's two things going on in what's sort of commonly characterized as weather normalization. Two things caused Newfoundland Power, for instance, to be off on their forecast, one is strange weather events, you know, it gets really, really cold for one day or something. The other thing is, is the day type is sometimes--you know, does the peak occur on the weekend or does it occur on Monday night or, you know, Monday--when does the peak occur. And it's somewhat--and I think if you

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look at Mr. Henderson and Mr. Perry's evidence, you'll find that even after the proposed weather normalization the volatility is still there. Their calculations have been done after weather has supposedly been removed. So, I guess I conclude from that, that perhaps weather hasn't really been removed to as well a degree as it should be. And I guess that's one of the things that Mr. Greneman said would have to be looked at before, you know, the rate could be implemented. He said it could be solved in a month; I'm not so sure of that based upon what I've seen so far, but I haven't tried to weather normalize the load either.
Q. Do you have any suggestions or do you have any experience from other jurisdictions and other times, perhaps, that you could use and provide us with to date to help us understand the sorts of things Newfoundland Power might be able to do in order to deal with this perception of a volatility concern or are they sort of stuck with it and left without any options?
A. Well, I think that, I don't know, a handful of

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MR. BROCKMAN:
things have been proposed that Newfoundland Power could do to deal with that.
MR. YOUNG:
Q. Yeah. I'm just wondering do you have any aside from the ones that have been proposed to now, any ones from your other -
A. Have any new other ones?
Q. Yeah. Well, not necessarily new ones, but other ones you've seen.
A. No. I think most of them have been covered in the prior people's evidence.
Q. Okay. So the ones that have been covered are the sorts of ones that other jurisdictions have used and sort of tried and tested?
A. Yeah, I would say most people have probably done clauses and/or put in something like interruptible rates, or, I guess one that hasn't been mentioned in that way but has been mentioned is many people that, say, own generation would use that generation to reduce its demand. You've already sort of taken care of that, so--you're already taking that one into account.
Q. Yeah. That has its own nuances in this

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jurisdiction -
A. Yes.
Q. - of course, yeah. One of the comments that Mr. Greneman made, I think I'm paraphrasing him correctly, is that necessity is sort of the mother of invention when it comes to these things and if Newfoundland Power finds itself in a situation with what is, I think you'll agree with me, a fairly traditional kind of rate, a demand energy rate and it has trouble with that, it might become inventive and deal with that issue, if it does have a volatility concern and if the Board is moved to believe that the volatility concern is such that it ought to do something?
A. Well, they certainly would have to think about it quite a bit. Whether they would come up with, we just mentioned the five things everybody else in the world, I guess, does and whether they would come up with anything beyond that, I don't know whether Newfoundlanders are that creative or not, but perhaps they would. But, you know, again, the Board has to weigh whether or not that--so what you're sort of doing is saying, well,

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we'll just put this rate on you and see if you could come up with something. They could do that. Do you think that's going to be more fair, do you think it's going to be more efficient and is it going to outweigh the volatility things that they would have to deal with? I mean, to me that seems to be--I'd prefer, I guess, to sort of design rates in a more deliberate manner, than just throwing it out and saying now, try to do something like that. I guess I just wouldn't--I agree with the concept that, yeah, it could maybe make them think more about it, especially if you didn't ever give them the recovery on the volatility, if you just said, well, you'll have to live with it, you know, too bad. But, I think they'd be in before this Board.
Q. I'd like to perhaps thankfully change the topic from one tried and true matter to another one that's been discussed for awhile here before this Board.
A. Okay.
Q. Because there are a few issues of plant assignment which have arisen in this hearing. I don't know if you have views on this that

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you care to share, but it strikes me that these are matters which strike at the way that the Cost of Service deals with Newfoundland Power's transmission allocations in the Cost of Service. And the one that we've discussed a fair amount already is the one that the, the Burin Peninsula, lines TL-212 and 219. Do you have anything you'd like to share? And I'm just wondering what your view on that is because the Industrial Customers have suggested that there ought to be a change because at the very most I think I'm probably paraphrasing them correctly, one but not both of those lines can be properly assigned common and the other should be specifically assigned, if not both.
A. Well, I can't remember if I specifically commented on this in my current evidence or not, I don't -
Q. I don't believe you did. I'm just wondering if you have -
A. But yeah, I mean, I can certainly give you my general thoughts, I suppose, on it, if that's of use. In terms of generation, I think there are two things going on. First you have to

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MR. BROCKMAN:
sort of classify the generation as to whether it's common and then you can think maybe perhaps about the transmissions lines as well. But the way I look at the way your witnesses say they do their planning is they take all the load and they take all the generation and they make an LOLH, a loss of load hours calculation. And in that sense it really doesn't matter where the generation is. If I built 50 megawatts in the interior of the island or I build it off somewhere, as long as I'm connected by a transmission line so that I feel adequate in reflecting an LOLH calculation, then it counts the same. So most of the large generations on the island are being classified as common. I don't necessarily disagree with that, because that's the way you do it. The question arises, I guess that you're asking is what do we do about the transmission lines that go out to those areas. If the area is fairly isolated and, you know, it doesn't interconnect, for instance, with the rest of the island then clearly--or to any great degree, then clearly

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those lines ought to be assigned to probably serve that load. If we, however, have a significant amount of generation that's of benefit to the island on that--in that region, then we have to think about at least classifying some portion of those transmission lines to common. I think the peninsula that you're referring to, you have so many peninsulas on the island I sometimes get a bit confused, is one that's slated for this 25 megawatts of wind, is that, am I on the right plate?

MR. YOUNG:
Q. It's a possibility, yes.
A. So that being the case, that generation looks like it's being proposed to come into place probably during the time that these rates will be in place. And if that's the case, then they give a benefit to the island, which it appears they do, I think you'd say that some portion of those lines ought to be common. And I think the position that some of the witnesses took, maybe one ought to be common and the other one shouldn't be or something, I haven't looked at it in any great detail, but,

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you know, that seems like maybe it's a fair compromise.
Q. Yeah. And it's interesting that you use the word "compromise" because we had discussions about these sorts of issues back in '92 during the Cost of Service hearing and it strikes me that costs of service studies are not completely efficient or foul, they're not completely principle driven and they're not completely just exercises on compromise, but they're a bit of both. Isn't that correct? I'm just wondering if you have any -
A. Yeah, there's a lot of judgment and opinion in there.
Q. Yeah. And sometimes trade offs and you might assign a whole lot of things one way and then scratch your head and say, boy, it doesn't quite get the right balance that I expected and -
A. Especially if conditions change on you like what we were just talking about, you're building some more generation or you're building another line, you find sometimes things change.
Q. Right. And I suppose that comes back to the

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point also that you mentioned in your direct this morning about the thermal generation, and that's been a contentious issue in this proceeding. And you mentioned to me that there's a concern about sort of picking and choosing. I'm just wondering if you have any comments in relation to concerns as to picking into the middle of an Embedded Cost Study and choosing one item that appears to stand out without really understanding how it got there in the first place and looking at the whole as a sort of a balancing compromise with principles?
A. As I said earlier, I would caution against doing that to any great degree. I mean, obviously it's worthy of investigation. And when you find something like that that doesn't appear to add up and you've got to ask yourself as an expert why is that happening, but you also--again, as you say, there are many places in the Cost of Service Study where we make compromises. For instance, the Board's load factor split between demand and energy, it's a compromise. A lot of witnesses in the generic Cost of Service Study argued, I

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MR. BROCKMAN:
argued that the plants ought to be split based on their ratio of peakers versus base load. There were some problems with that, as the Board pointed out. I think the Board's own witness in this case is arguing something along those lines. That's not being opened up in this case, nor am I recommending that it be, but other people would say maybe there should be more energy weighting or maybe there should be more demand weighting. But again the Cost of Service Study in a complicated animal and there are a lot of interactions and judgments and decisions that are compromises that go into it. If you want to open it up, you probably should think about all of those, not just a particular pick and choose issue.
MR. YOUNG:
Q. Which is I think what you said in your direct -
A. Yeah.
Q. - I just want to illuminate that a bit further, yeah. If I could have just a moment, Mr. Chair? I think those are all our questions. Thank you, Mr. Brockman.

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CHAIRMAN:
Q. Thank you, Mr. Young. Thank you, Mr. Brockman. Good morning, Mr. Browne.
BROWNE, Q.C.:
Q. Mr. Chairman.
CHAIRMAN:
Q. Could I ask you, Mr. Browne, if you have any idea of how--I'm trying to decide in terms of the break, on a long day, a short day or a shorter day.
BROWNE, Q.C.:
Q. I'd say I'll be about an hour, Mr. Chairman.
CHAIRMAN:
Q. An hour. Mr. Hutchings, do you have any?
HUTCHINGS, Q.C.:
Q. Probably half an hour, Mr. Chair.
CHAIRMAN:
Q. An hour and a half.
MR. KENNEDY:
Q. About equal amount of time, half an hour, Chair.
CHAIRMAN:
Q. Half an hour. So a couple of hours. I think we'll look at our short day time, Mr. Browne, if that's okay. We'll go to 11:00 and we'll

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break then for half an hour and then we'll come back. Is that okay?
(10:00 a.m.)
BROWNE, Q.C.:
Q. Yeah. Thank you, Mr. Chairman. Good morning, Mr. Brockman.
A. Good morning.
Q. Mr. Brockman, yesterday we had delivered to Newfoundland Power a number of exhibits from previous hearings and we had them delivered to the Board as well. I want to refer to some of that now. Do you have those there?
A. Yes, I do.
Q. Okay. And, Ms. Blundon, do you have them there? I think we sent about ten copies or whatever is required by the rules. In any case, while we're waiting for those I can ask you, what exactly is your position on the Marginal Cost Study, are you stating a Marginal Cost Study is necessary prior to the implementation of a demand energy rate, is that your position?
A. My position is that it's necessary if you want to make claims for increased efficiency from a demand energy rate.

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Q. So it's necessary conditionally, but it's not absolutely necessary, in your view?
A. No. You could implement any rate without any study if you really wanted to as long as you got the revenue requirements.
Q. In 1990, 1992 you gave evidence before this Board supporting a demand and energy rate. Now you come forward to the Board supporting an energy only rate. That leaves some of us somewhat puzzled. Are you at all concerned on the issue of your own credibility in presenting as an expert two different views over these couple of years?
A. Well, experts are always concerned about their credibility, and especially in the sense of when things change and when your opinion of something changes. I tried to describe in my summary as to why my opinion has changed to some degree on that. Although from a sort of a theoretical standpoint I haven't changed my opinion, but conditions have changed and the applicability of that theory is slightly different, in fact, more than slightly different today than it was in 1990. And if you read all of my evidence since 1990, you'll

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MR. BROCKMAN:
see that in 1992 and beyond we begin to discover things about the demand energy rate that--such as the volatility, that we really hadn't thought much about in 1990. And no specific rate was on the table to clearly analyze, and even after there was we began to see the volatility issue, we began to see that the load growth had fallen off, we began to question how much DSM really was out there and various other things that I've pointed out. It's not the theory that's changed so much as it is the conditions.

BROWNE, Q.C.:
Q. At what point did you come to the conclusion that you were wrong in 1990 and 1992, was it in 1994 and 1995 or -
A. It's been a lot of years between then and now. I think we began to come to that conclusion sometime after '92, I suppose, we began to really see once some real actual rate designs were talked about, we began to see what the volatility really looked like. And we began to see the load growth fall off. I don't--I'd have to look back at, you know, the filings to

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see when the load growth really began to taper off. And we also added that--I mean, in 1996 we thought that, you know, there were certain types of unit that were going to be added to the system, like gas turbine, for instance, and then that didn't get added. What go added instead was a base load plan. So, I mean, it's a progression. I can't point to you a specific date in which I said, ah, today I changed my mind. I mean, as you accumulate evidence and apply it to the theory, you begin to reach conclusions.
Q. Have you testified in any proceedings in the last number of years advocating a demand and energy rate?
A. I'm not sure I can even answer that question. Do you have something? I can't remember where I testified in the last few years. It's mostly been here, but in the last few years, but I don't know.
Q. I'm surprised if you can't say with certainty that you did or you didn't.
A. Well, it's a long time, 13 years. I mean, I've--in the last 13 years I've testified here and I believe I testified in Nova Scotia on

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some rate design issues. I don't know, it's in my resume, but. I mean, where the conditions fit and--I could very well have said a demand energy rate might make sense. If the conditions fit, you put it in, if they don't fit, you may choose a different rate design. You have to weigh all the evidence.
Q. But yet, there's no other jurisdiction in which you can point to with the exception of this jurisdiction where there is an energy only rate to a customer such as Newfoundland Power?
A. No, I haven't done an exhaustive, I mean, as I said, the FERC, the F-E-R-C, in the U.S. regulates wholesale rates for all of the states in the U.S. and they like demand energy rates, so I wouldn't even need to do a study there, that's what they do.
Q. But as part of your evidence and preparation of your evidence if you could come forward with a number of other jurisdictions, I'm sure you would have brought them to the attention of the Board. Is that a fair comment?
A. Sure. Yeah, if I had done a study and been able to find some, I probably would have.

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I've already said to Mr. Young that it's a bit of an outlier here.
Q. And it's a bit of an outlier for what reasons?
A. Well, I think it, for one thing, as I say, this is principally a hydraulic system. There aren't very many of those in the U.S., for instance, and there aren't very many jurisdictions that the FERC regulates that look like Newfoundland and Labrador Hydro and Newfoundland Power. They look like Newfoundland Power, as Geoff brought out in his questioning. I mean, they're domestic, primarily domestic customers. But the characteristics of the supply side, hydraulic generation, what are the marginal costs and so on might look quite different. This jurisdiction has some very interesting planning situations that a lot of other systems don't have.
Q. But this jurisdiction would be consistent with other jurisdictions if it had a demand and energy rate from the evidence we've had here?
A. It would no longer be an outlier then, it would look like everyone else if you put--or perhaps almost. I can't say everyone, because

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MR. BROCKMAN:
I haven't studied them all, but, you know, yeah, it would look more like everyone else. Its supply side wouldn't look more like everyone else, but its rates might.
BROWNE, Q.C.:
Q. Okay. If we can go to IC-7 and IC-8 in the documents that we presented to you yesterday? Do you have copies of those?
MS. NEWMAN:
Q. Yes, I can confirm that they were circulated yesterday afternoon to the parties.
BROWNE, Q.C.:
Q. Okay.
MS. NEWMAN:
Q. And the Board should have copies.
BROWNE, Q.C.:
Q. So everyone has them? Okay. In reference to IC-7, this takes you back to your evidence of 1990. And we go to the question "Propose rate structure". And the question at that time on line 24, 25, "Do you have any concerns about the rate structure proposed by Hydro in this proceeding?" And of course, we're talking about 1990. Can you read your answer there

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for the record, please?
A. I say, "Yes. Hydro proposes to continue its practice of serving Industrial Customers with a rate containing both a demand and energy component while offering an energy charge only rate to NLP. This is done in spit of the fact that the Cost of Service Study contains sufficient information to provide a demand and energy rate structure to NLP."
Q. And then is it still a fact, if you look at what you said there, is it still widely accepted that you would want to--that that is still true, what you're stating there?
A. Well, the Cost of Service Study contains sufficient information to design a demand energy rate. In fact, you could design a lot of different demand energy rates from the Cost of Service Study. Whether those are better than the rate you have--you can also design energy only rate is up to--is what's in question, I suppose, in this proceeding.
Q. And you continue on with your evidence there to page 14 and line 17. Can you just read that out for us, what you're stating there?
A. "This lack of proper rate design gives little

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incentive for NLP to engage in demand side management activities that reduce peak load. Peak load reduction programs are among the most common and cost effective demand side management programs in existence. With an energy only rate, however, there are no immediate savings to NLP and its customers for reducing its demand on the hydro system. As NLP applies demand charges to its large customers to control their demands, NLP will actually lose money if those customers respond properly."
Q. Now, NLP still applies demand charges to its large -
A. Yes, it does.
Q. - customers, does it not? And so that hasn't changed?
A. No, it hasn't.
Q. And what is the fear that NLP will actually lose money if these customers respond properly, what do you mean by "a proper response"?
A. By the word "properly" there I mean if they respond to the signal that would be giving them an--be giving them a demand energy rate.

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I don't imply it to mean in any way an efficient signal, but if they respond to the rate you give them, if they respond the way that economists think they would properly respond -
Q. How should they respond, what would economists say what way should they be responding?
A. Well, if you signal them that demand is worth, let's say $84 a kilowatt, which is what's been proposed, year, then they should do whatever they can do that's less than $84 to remove that demand from the system.
Q. And what effect would that have on the system overall if they responded properly?
A. In terms of the hydro supply, it would probably--well, we don't know, we don't know for sure. I mean, we would clearly reduce the overall demand and it perhaps would, at some point in time, avoid a peaker perhaps out in 2012 or 2015 or something like that. If all they did was shave demand, we probably wouldn't avoid any of the base load plants because--I mean, I'm saying "probably" now because I don't have a Marginal Cost Study, but you know, having done a few in my life.

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MR. BROCKMAN:
They probably wouldn't avoid the plants that are built because of the firm energy criteria and you probably wouldn't have avoided Granite Canal because Granite Canal pays for itself anyway. So, you know, that's the -

BROWNE, Q.C.:
Q. But all things being equal, it would be better for the system if people responded properly to a demand charge?
A. Well, again, "properly" as here was defined in terms of the rate signal they're being given. If it's an efficient signal and they respond properly, then the system would be better off. If it's not an efficient signal, if it's somehow inefficient, for instance, if I gave them a very high demand charge and a very low energy charge and they responded to that by using more energy but shaving their demand, the system would be worse off. So I have to weigh all those things together.
Q. Now, is -
A. At this particular time let me just add, again, as I said in my summary, at this particular time Newfoundland Power was looking

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at a marginal running cost of about three cents at Holyrood and the energy signal they were being given was four and a half cents, so those were kind of out of whack. And perhaps an embedded costed signal at that time, if it was properly designed, might have given them a better signal in terms of efficiency.
Q. You go on to state in line 25 and 26, can you read that out for the Board, please, at page 14?
A. "Another fact that the Board should consider is the effect of the Hydro energy only rate on NLP rates. It forces NLP to have energy rates that are too high and demand rates that are too low. If NLP is to achieve proper matching between the distinct cost causation effects of demand and energy, the Board should recommend that Hydro develop a rate structure that includes these components--important components."
Q. Why would that not be true today?
A. Well, as I've talked about, in terms of--this was really speaking in terms of sort of efficiency and in terms of marginal cost. Remember, why we were arguing for this was

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because we wanted to do efficient DSM activities. As I said, the energy rates at that time that was being signalled to Newfoundland Power was higher, quite a bit higher than the short-run marginal energy cost. It was sort of an inefficient energy signal, if you will. What we kind of wanted to do was see if we could get those two back into shape. And if what was done in this case was we had gotten an embedded demand and energy rate or any other kind of rate and it had been compared to the marginal cost and shown to be more efficient, then I would say that perhaps that would be a better rate. I don't see that in this case.
Q. And why does Newfoundland Power have demand charges for its large customers, what's the reason for that?
A. The main reason they have that is to ensure intra-class fairness. And I may have to describe what I mean by that. In many classes, well, almost all classes, if you want to talk about outliers, you have more than one customer. In most large demand energy classes you may have five or ten or 20 or even 100

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customers. The Cost of Service Study sends a demand energy signal through which is deemed to be fair, if you will, by people, and if you want to try to treat those customers fairly inside that class, if you signal them individually the demand costs versus the energy costs and some will have high load factors, some will have lower load factors, which means some use more demand relative to their energy than others in the class do.
(10:15 a.m.)
If you split the demand and energy costs separately and you believe that those costs are fair, the demand and energy costs that are coming out of the Cost of Service Study, then you can treat those customers more fairly because there's more than one of them in a class. That's the primary reason you do--one of the prime reasons you do a demand energy rate, just to ensure intra-class fairness, to ensure that if I have customers that look different in classes, I can treat both of them fairly with a demand energy rate. In Newfoundland Power's case, they're the only customer in the class. There is no intra-

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MR. BROCKMAN:
class fairness issue. The only fairness issue in this case is whether or not the Cost of Service Study is throwing the right demand and energy cost to Newfoundland Power and the Industrials, and it is.
BROWNE, Q.C.:
Q. Isn't it true that rates with demand charges better reflect cost of service?
A. What--in embedded cost of service?
Q. Yes.
A. Sure. You know, whatever you think the Cost of Service Study splits are, that's--and if you take those numbers right out of the Cost of Service Study, it better reflects the cost of service splits.
Q. And isn't that in fact why Newfoundland Power has demand rates for its large customers, because it better reflects the cost of service?
A. Well, it does it because they have a lot of customers in those classes and it better reflects what's thought to be fair. Now, they also do question how those demand and energy rates should be set. They're not just pegged

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to the Cost of Service Study. They do look at the energy charges in those classes beyond the Cost of Service Study. They say, well, what should the energy charge be, should it just drop out of the Cost of Service Study, and the answer is, no, it shouldn't. It should be set at least at the short-run marginal cost of Holyrood. And they try to do that; they don't always succeed, especially between rate cases, but they try to do that. They try to modify that Embedded Cost of Service Study rate design so that it's more efficient. They do not know most of the time the marginal cost of demand, so there's not a whole lot they can do there sometimes. I suspect that right now perhaps they're charging a little too much for demand, but that's only based on what's happened in the last few years on the system.
Q. So Newfoundland Power's seen some advantage in having demand charges for its large customers, but at the same time it doesn't see any advantage for Hydro in having a demand charge, demand energy rate for them?
A. Well, the primary advantage that you can see for a demand energy rate is efficiency and

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intra-class fairness. And there is no intra-class fairness issue and efficiency is open to the marginal cost look. So it's a different situation.
Q. Can we go to your evidence, page 19, lines 18 to 20?
A. That sort of starts in the middle of a thought, Mr. Browne. I'm not sure if I'm on the right page or not. Is there more than one page 19 in here? Go ahead.
Q. Page 19 in your September 2, 2003 evidence.
A. Oh, okay.
Q. Your pre-filed evidence. Line 18 you state, "The simple fact of the matter is that unless changing the wholesale rate results in changes to Newfoundland Power's rate designs and their customers' behaviour there was no good reason for imposing a demand energy rate."
A. Yes.
Q. Now, when you go back and look at some of Bonbright's principles, wouldn't you find within those principles several good reasons for imposing a demand energy rate?
A. Well, I think as I testified earlier, Bonbright's principles can be boiled down to

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fairness, efficiency and then all the other things like stability and practicality and so on and so forth. And I don't see any gain to fairness, I don't see any proven gain to efficiency and I do see a problem with volatility. So I don't think that there's any good reason based on Bonbright to impose a demand energy rate at this time. We don't really have enough information to judge all of it.
Q. But yet, you've heard other experts refer to Bonbright's principles in this proceeding?
A. Yes.
Q. And saying that Bonbright's principles would be consistent with a demand energy rate and an energy only rate is inconsistent with the Bonbright principles?
A. Don't necessarily agree with all of those other witnesses.
Q. So in all those jurisdictions which have a demand energy rate and we've already established Newfoundland Power seems to be the outlier here, you're saying that they are operating in violation of the Bonbright principles?

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MR. BROCKMAN:
A. I would have to examine all of those other jurisdictions' supply costs, I would have to examine their long-run marginal costs, I would have to decide whether or not there were more than one customer in the class that was being served. There are a lot of issues I would have to examine. And by the way, I should point out that in 1994 NARUC produced a study which this Board probably has which was called something like aligning rates with integrated resource planning, I have a copy of it if someone needs to get a copy of it, and in that particular document they surveyed a lot of the jurisdictions at least in NARUC and said, yeah, most of them have, you know, these embedded rate designs. But they didn't conclude it was a good idea. They, in fact, said that you should examine things like the marginal costs, you should try to see whether you can make your rates more efficient. Just because everybody does it doesn't mean it's a good idea.
BROWNE, Q.C.:
Q. But yet, there seems to--there are

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associations in effect such as NARUC and FERC and in Canada there are various associations and there seems to be common principles that Bonbright has espoused since 1960 which boards generally have been guided by. So, are you stating now that Bonbright's principles don't apply to the demand and energy rate, is that what you're telling us?
A. You can't say what the proper weighting of the demand and energy costs are without doing all the studies. In sofar a other jurisdictions have done it without the proper studies, what can I say, they're probably wrong. That's kind of what NARUC concluded in 1994. So I mean, they're not going against Bonbright's principles. Bonbright contains a lot of principles that in some cases overlap and in some cases are somewhat contradictory. One man's view of fairness may not be the same as another man's view of efficiency. You have to weigh these things and some jurisdictions weigh them differently than others. So I don't say you could say--use that to say that Bonbright's principles aren't appropriately--or aren't applied, but we have differences of

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opinion on what the result is, perhaps, or and we also have huge differences in the supply side that feeds these systems.
Q. So there seems to be a lot of people wrong. We had Mr. Greneman come forward stating that a demand energy rate is appropriate for this jurisdiction. Is Mr. Greneman wrong?
A. In my mind, yes.
Q. We had Mr. Doug Bowman come forward saying a demand energy rate is applicable in this jurisdiction. Is Mr. Doug Bowman wrong?
A. First of all, I guess, you know, you're sort of paraphrasing their evidence, and I don't want to go too far -
Q. Well, I think I'm being fair, though, I think they've said that.
A. Well, I don't know if you are. The main reason I bring -
Q. Well, you were here. Now, let's be fair on this. You were here listening.
A. Let me say why I'm saying this, okay. Again, there are a lot of comments about the sample demand energy rate versus sort of a generic demand energy rate and then, you know, versus the energy only rate, so I want to be a little

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careful when we're talking about a specific rate proposal versus this sort of all encompassing generic demand energy rate, whatever that is. But, in general and in chief I think the Board can read my evidence, they can see where I disagree with the other experts. I mean, you know, I disagree with them on some things. That's why this Board's here, to judge the--what they think. I tried to lay out the facts as I see them and we all compare everything to Bonbright. The Board has to decide.
Q. Okay. So you're saying Mr. Doug Bowman is wrong in advocating a demand energy rate for this jurisdiction, you're saying he's wrong?
A. He's wrong, I believe, in advocating the sample demand energy rate. If he proposes another rate, I'll look at that.
Q. Are you saying Mr. Patrick Bowman and Mr. Cam Osler were wrong in their evidence where they said a demand energy rate is appropriate for this jurisdiction?
A. If they're advocating the sample rate, yes.
Q. Are you saying the consultants at EES are wrong in their evidence which they're about to

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BROWNE, Q.C.:
give where they advocate a demand energy rate for this jurisdiction?
A. Well, they obviously disagree with me, so, yes, I don't think that the sample rate that's been proposed is better than the energy only rate we have.
Q. So we have Mr. Greneman, Mr. Doug Bowman, Mr. Pat Bowman and Mr. Cam Osler and EES all advocating a demand energy rate and you advocated the same in 1992, but you are, in fact, your evidence is the outlier in this particular -
A. Oh, there's no question about that. And I'm sure that you can put that in your brief. That's not new evidence.
Q. Can we go to IC-8, please?
A. Is that one of the ones that you sent out yesterday, Mr. Browne?
Q. Yeah, I sent that out yesterday.
A. Okay. Okay, I'm at it.
Q. Okay. And there at page 21 of IC-8 the question was posed to you in your 1992 evidence, it says on line 17, "Do you agree with Hydro's proposal to adopt a three-part NP

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rate with the energy charges set at marginal energy cost and a demand charge calculated as a residual?" Can you read your answer to that, please?
A. I say, "In concept, I do. The details may need some fine tuning, however. I think the proposed rates gives the movement to a demand energy rate that NP argued was important in the last Hydro referral. In addition, energy is given a high weight in this rate design. It should enable NP to get a good balance of peak shaving in conservation oriented DSM programs."
Q. And do you still agree with that, that premise?
A. In concept, I do. It's the fine tuning I think where it goes off the rails in terms of--especially in terms of what the relative marginal demand and energy costs were in '92 versus what they are today.
Q. And on page 22, you make reference to option 1 there, the energy only form rate is what we now have. Can you just read that out for us on line 10, please, page 22?
A. "The problems with option 1 were discussed

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extensively at the last hearing. An excellent summation of the arguments is contained in pages 76 through 79 of the Board's June 11, 1990 report to government. This rate form does not offer good tracking of costs because changes in the energy cause certain costs to change and changes in demand causes others to change. This rate therefore does not offer good price signals to NP. In addition, NP offers some of its customers demand rates. If these customers respond to NP's price signal by reducing demand, NP loses revenues without a corresponding drop in demand related costs from Hydro. The same effect occurs with respect to peak shaving, DSM equipment NP might wish to encourage its customers to install. For all these reasons, the Board recommended that Hydro submit at this hearing whatever information it might have with regard to a rate with a demand charge component. This is what Hydro has done here."
Q. Now, that option 1 that was the energy only rate that was there at that time, that's effectively the same rate that we have here now, isn't it, the energy only rate?

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A. Yeah, I think the energy--I mean, other than the fact the costs have changed some, sure, it's the same form of rate.
Q. I want to just move on and talk for a few moments about the Marginal Cost Study. Newfoundland Power in 1997 conducted its own Marginal Cost Study, is that correct?
A. Yes, it did.
Q. And were you involved in that?
A. I was involved somewhat, I mean, they ran it by me and said, what do you think about it? I gave some opinions and so on. I mean, they -
Q. Okay. So, they ran it by you. So, I gather that you charged them for your opinion?
A. Probably, I don't remember any more; it's been a long time, but if I spent any material time -
Q. You didn't do it for nothing.
A. If I spent any material -
Q. We all work for our Masters.
A. Well, if it's a 15 minute question, I might do it for free, but if it's four days or ten weeks or something, then I would charge for it.
Q. Okay. So, you had involvement in that

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BROWNE, Q.C.:
Marginal Cost Study?
A. Yes.
Q. And now are you coming forward and telling us that that Marginal Cost Study was flawed?
A. I think even the cover letter to that Marginal Cost Study, as well as the study itself tried to say that it was somewhat flawed. Newfoundland Power doesn't have the expansion plans, the costs, the characteristics of all the future units that are going to go on Hydro's system. Because of that, they had to do something which was, well, let's assume it's a turbine that's coming on line right away because at that time, I think there was a turbine being proposed. So, they decided to try and use a turbine, even if it were coming on line today, a gas turbine and said, let's call that the marginal cost of demand. That was flawed and I think they pointed that out in their cover letter. I don't have the cover letter in front of me, but in a certain sense, because--and what happened, by the way was we got Granite Canal instead of that turbine. And Granite Canal had a lot of fuel savings

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and, in fact, if we used the marginal cost out of that study, they would have been wrong because that's not what happened. They didn't build the gas turbine in 2000 or '99; they built a unit that saved a lot of fuel and, in fact, probably had a lower demand cost. So, the study was flawed and it was pointed out. But the position that Newfoundland Power was put in was they said, you have to do a marginal Cost of Service Study. They can't do it. Okay. They have to make guesses about it. Hydro, you know, we've talked about the need for a Hydro marginal Cost of Service Study which would have supplied that piece since 1990 and one hasn't been forthcoming. I mean, the piece has been missing since 1990.
(10:30 a.m.)
Q. So, in 1996, the Board ordered Newfoundland Power to submit a Marginal Cost Study. And you're telling us that Newfoundland Power has submitted a flawed Marginal Cost Study, is that your evidence?
A. I think if you read the cover letter to it, they say, we have some serious doubts about the marginal costs in this study. I think

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they felt okay about the T&D costs that they had, their own costs, but they just don't know the marginal cost of Hydro.
Q. But yet, they operated on the basis of that Marginal Cost Study, did they not?
A. What do you mean by "operated"?
Q. What happened? They submitted the Marginal Cost Study and they stood by these marginal costs, they didn't deny these were these marginal costs?
A. Well, I think the cover letter caveats it quite a bit, if you read the cover letter that was on it, as well as even just reading the study. They didn't do anything because of the study. Along came--there were a lot of things that happened. I mean, we had the Provincial Energy Act which came along or Energy Policy and Review I guess it's called which was going to look at how all these things in the province should be treated, demand and energy. One would hope they even looked at your favour thing, electric heat and all these other things. This all came along--I think at the time that that study was being pursued, as well, Newfoundland Power sincerely hoped that

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at some point, they would get together with Hydro and, sort of, get a co-operative Marginal Cost Study. Those things didn't happen. So, here we are at 2003 and we still don't have a Marginal Cost Study that, in my mind, is valid for this island.
Q. In reference to the Marginal Cost Study that was ordered, can we just go to the Board order of that time, PU-7, 1996-1997, I think we got copies of that to distribute in case it's note available on the monitor.
MS. NEWMAN:
Q. While we're doing that, can we label the last items as Information Item number 18, Information 18.
BROWNE, Q.C.:
Q. Okay. We have in front of us a copy of the Board of Commissioners of Public Utilities, PU-7, 1996-'97 and it says under "Rate Study", number 37, page 107, "a study shall be conducted by July 1, 1997 to evaluate rate design based upon marginal cost, time of use design principles and other innovative rate options. The Board allows an increase in revenue requirements of $150,000.00 to cover

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the cost of such a study". Are you telling us
BROWNE, Q.C.:
that the revenue requirement was increased by $150,000.00 of consumers' money to provide a Marginal Cost Study and that study, you're now telling us, was seriously flawed?
A. Well, insofar as calculating the marginal cost from Hydro, yes, Newfoundland Power did what they could to calculate their own marginal cost, the T&D cost and so on and tried to do Hydro, but they did what they could and their study was flawed. I don't know if they spent, I don't know what they spent. You'd have to ask another witness, but I didn't get 150,000, let's put it that way.
Q. Yes, it looks a bit steep, on reflection, particularly if it was done in-house, I guess. Maybe we'll put these questions and undertakings to another witness when they come forward. But in any case, they were given an allotment of $150,000 to carry out the study, and you're saying it was flawed, but it was flawed in only one respect? Is that what you're stating? It wasn't completely flawed, was it?

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A. No, it was flawed in the respect -
Q. It wasn't a white wash, was it?
A. It was flawed in the respect that they had to guess what Hydro's marginal costs were, if you will. Well, more than a guess, I mean, they used the gas turbine and tried to do it the best they could, but it certainly was not what I would consider the best Marginal Cost Study that could have been done had Hydro participated with it.
Q. Why are you suggesting now that Newfoundland Power be involved in Hydro's Marginal Cost Study if Hydro couldn't--if Newfoundland Power couldn't produce its own Marginal Cost Study, other than the flawed one that they submitted, why are you suggesting now that they would do any better job by getting involved with Newfoundland Hydro in reference to its?
A. Because, as I said in my summary, there are two things that you need to look at. It's not just a Marginal Cost Study that I'm recommending and I don't even think that's all that your witness is recommending, but you can't just do a Marginal Cost Study necessarily in isolation. You have to say the

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marginal cost of what. Am I looking at the marginal cost of shaving one kilowatt of peak demand for one hour of the year or am I looking at doing some kind of realistic changes in the load shape? And Newfoundland Power has the best ideas about what changes in load shape they might be able to do for their customers and Hydro has the best ideas about what the future expansion plans look like on the island. So it seems to be a good match to me for them to cooperate on this.
Q. Just on that last part you mention, Hydro would have a good idea of what's necessary coming up on the island. Wouldn't that, in fact, potentially put Newfoundland Power in a conflict of interest by getting involved in Newfoundland's Hydro Marginal Cost Study? Just think if there was some new generation needed and Hydro wanted--or Power wanted to bid on that work, wouldn't they have the inside track -
A. I think if -
Q. - by getting involved in Newfoundland Hydro's -
A. - if you don't set it--I'm sorry. I think if

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you don't set up -
Q. You got my gist.
A. Yes. I think if you don't set up appropriate safeguards, I mean, I've worked for large consulting firms before where we actually had consultants working both sides of the fence, if you will, and we had confidential information that we weren't allowed to share with each other. We solved those issues by putting up chinese walls, as they were called sometimes and I don't know if that term's used here, where we said these two staff can't work together. They can't share this confidential information. You can have people sign confidentiality agreements. I've signed a lot of those. Every time an IPP comes to me, has come to me in the last five years and said "can you analyze a certain plant for me? Should I build it here or there and will it make money?" I have to sign an agreement that says I'm not going to tell everybody, all my other clients, what those numbers are. So I think those can be handled appropriately with those kinds of devices.
Q. So you're admitting therefore that

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Newfoundland Power could have access to a
BROWNE, Q.C.:
certain proprietary information?
A. Oh, absolutely, and it has to be protected.
Q. But once the cat is out of the bag, how would it be protected? We have the customer, Newfoundland -
A. Well, I've just described how.
Q. - Power involved in the -
A. You have to have the agreements.
Q. - involved in Newfoundland Hydro's proprietary information. At what point would that stop?
A. Well again, you'd have to have the people who were privy to that, whatever part of that information that was proprietary, would have to sign confidentiality agreements, and if they violated -
Q. But wouldn't that involve -
A. - those confidentiality agreements, I suppose you'd have whatever remedies the law gives you on any other confidentiality agreement. You know, doing a Marginal Cost Study without sharing the information is somewhat meaningless. Other jurisdictions, you know, there's been a lot of talk about what everyone

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else does. Other jurisdictions commonly have published avoided cost numbers and that's what comes out of marginal cost studies. I mean, no one says "well, you shouldn't publish your avoided cost numbers." They say well, it could bias the IPP bidding. That's really what it's all about, you know, someone's going to bid to build generation instead of Hydro. IPPs aren't going to bid on anything if they don't know what the target is and what you try to do is you try to get them to bid lower than that number. I mean, if Hydro can build the expansion plan out for the next 20 years for, you know, a certain number of kilowatt, dollars per kilowatt and dollars per kilowatt hour and someone else can do it better, let's have them bid. But you know, you can't do things without information and there are ways to protect information. You're much more aware of that than I am, because I'm not a lawyer. What are the remedies, I don't know.
Q. Going back to the Board order on page 107, that order in 1996 also involved an energy and demand charge from Hydro, and Order No. 58 there states "the applicant shall follow the

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direction given in the Board's report to the Minister of Mines and Energy dated April 13, 1992, Recommendation 19," and reiterated, on page 62 of the Report to the Minister of Mines and Energy dated February 1993 to the effect that "the applicant," and the applicant here is Newfoundland Power, of course, "consult with Hydro and develop an acceptable rate form for review containing an appropriate division of demand and energy costs." Was that ever done, to your knowledge?
A. I don't know. I know there were some meetings. I wasn't involved in those meetings between Hydro and I guess, the applicant here was Newfoundland Power, and you know, for some reason, they never came together, probably for some of the reasons we have in this hearing, they never came together on what an appropriate demand energy rate design should look like. I mean, you know, maybe one wanted a higher demand charge and the other wanted a lower and maybe there were volatility issues. So I think they never came together, which is what this--it's hard to order people to agree. I mean, if they all get in a room and they

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can't agree, sort of like our negotiations we had where we all had high hopes we would all agree on something and we didn't. So at that point--I mean, I don't know--obviously it never happened, but whether that's a violation of this, I don't know.
Q. But Newfoundland Power is on record of stating that they don't want a demand and energy cost, so why would they agree?
A. Well, they're saying that--well, it's a good point. If the demand and energy rate has a zero demand, then I suppose you could say it's still a demand energy rate with a zero demand, they would be in agreement. So if it was a dollar, suppose Newfoundland Power had designed a demand energy rate and had done a long-run Marginal Cost Study and found out that "oh my gosh, because of all these energy plants riding the system, the long-run marginal demand cost is only $1.00" and put a dollar in, would Newfoundland Power have objected to that? I don't know. I mean, we haven't seen that rate. What we've seen is a rate that says demand is worth $7.00, at least in the rate design. It's not worth $28.00 on

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the interruptible design and so on. So I

MR. BROCKMAN:

mean, you have to look at a rate.

BROWNE, Q.C:

Q. In its most recent order, the Board ordered Newfoundland Power to form a peer group. Are you familiar with that order?

A. Yes. Well, I don't know if I'm familiar with the order. I'm familiar with the fact that it was ordered to do that, yes.

Q. And are you involved in -

A. I've been involved in doing some preliminary analysis for Newfoundland Power, just in terms of what are other people around the continent doing.

Q. And -

A. Then we kind of had this hearing, so you know, people have been busy.

Q. - so have you contacted other utilities and are you contacting -

A. Contacted some other Boards and some other utilities and reviewed a lot of reports and things like that.

Q. And when you contacted these other Boards and other utilities, did you find any of those

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that had other than a demand and energy charge?

A. Well, I didn't ask them whether they had a demand energy charge. You're talking--I'm sorry, I may have lost the thrust of your question somewhere. Are you talking about did I contact other boards to ask about a demand energy charge or did I contact -

Q. The other utilities you contacted.

A. The Peer group review had nothing to do with demand energy rates. It was not--that's not what it was designed to do. It's designed to look at things like, you know, how many employees per line mile do you have and how many dollars per kilowatt do you spend on O&M, and you know, things like that. That wasn't--that issue hasn't come up yet and it's not a question that's been asked, I don't think.

Q. But that's in the works, is it, the formation of the Peer group?

A. Teh formation is in the works. I don't know whether that question will ever come up or not. I'm having a hard time figuring out whether that even is relevant or not, but it's an interesting question, Mr. Browne, that I

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never really thought much about.

Q. When Newfoundland Power did its Marginal Cost Study, the one that we referred to in the Board Order in 1996, and submitted it, the Board then had its own consultant review that Marginal Cost Study, didn't it?

A. Dr. Wilson, I believe.

Q. Are you familiar with his comments in reference to that?

A. I'm sure at one point in time I read it. I have no idea, I remember--I mean, I can't remember. If you want to put it to me, I'll read it again, but I don't remember what he said. I have read it.

Q. But the fact that you submitted it and indicated on the cover sheet when you submitted it that you might have to have a discussion with Hydro in reference to one of the issues, no follow up was done by Newfoundland Power or yourself in reference to that aspect?

A. Not me personally. I wasn't involved in any of the negotiations with Hydro over the demand energy rate. You'd have to ask Newfoundland Power's client or their witnesses that

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question.

(10:45 a.m.)

Q. Okay. Thank you. These are our questions.

MS. NEWMAN:

Q. Chair, before we move on, I just should label the excerpt from the Order P.U. 7 (1997-97) page 107 and we'll call it Information No. 19.

CHAIRMAN:

Q. Thank you, Ms. Newman. Thank you, Mr. Browne, Mr. Brockman. We'll move now to cross by the Industrial Customers. Good morning, Mr. Hutchings.

HUTCHINGS, Q.C.:

Q. Good morning, Mr. Chair. Good morning, Mr. Brockman.

A. Good morning.

Q. I'd like to speak first of all with you about the LOLH criteria that has been discussed a little here and as I understand it, this is a tool that's used to measure the probability of loss of load and the numbers are actually produced by a consideration of the demands on the system and the resources available to meet them. Is that a generally accepted description?

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A. Yes. Generally what you'd do, I mean, there are different ways of doing it, but I suppose the most robust way of doing it is you look at every hour and you look at the load in that hour and then you look at the generation that's available and you look at that generation's forced outage rates, if you will, how often is that generation forced out in a random fashion, and then you make calculations on the probability for, you know, all those hours as to what's the probability of losing load in that hour and then you can sum them all up over a year and say well, over the year or over--I mean, there are various ways of doing it, but in general, you sum them up and say here's my loss of load hours for the year.

MR. BROCKMAN:

HUTCHINGS, Q.C.:

Q. And Newfoundland and Labrador Hydro, like I suspect most other utilities, whether or not they use LOLH, have a target that they use for planning purposes, correct?

A. Yes.

Q. Okay. And that's the 2.8 hours that we've talked about?

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A. Subject to check, I think that's right.

Q. Yes, okay. And that's intended to be a measure of the acceptable probability of lost load on the system? Is that fair?

A. Yes, that would be the minimum acceptable in the way that Hydro uses it.

Q. Yes, okay. So we're prepared to pay enough money to bring it down to that, but we don't want to pay the additional money it would take to bring it lower than that?

A. No. If you could keep it at that number every year, you would. You would never--I mean, you probably wouldn't want to go above it. Unfortunately the way we add generation is lumpy and sometimes it goes above it and there are even years where it might go below it. But you do the best you can to sort of fluctuate around it.

Q. Yes. And that all depends on the vagaries of the system you're faced with at any given point?

A. Exactly.

Q. We've heard that it's a policy of Hydro when they interconnect the previously isolated system that they generally decommission the

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local generation there. Were you aware of that?

A. I guess I hadn't--that one went by me. I'll accept it, but I mean, if that's true, but I -

Q. All right. I mean, but what we're getting to here, I would suggest, is that there is a decision to be made in respect of such an instance and just suggest to you that if at the time that interconnection was done, the loss of load probability target was not being met, let's say it was 2.9 instead of 2.8, one might choose to leave that generation on because, as you say, all the generation on the system, wherever it is, contributes to the LOLH, correct?

A. Yes. I think you--I mean, if you were going to do it, right, what you would probably do is you'd probably calculate the cost of keeping that. It would probably be mostly fixed O&M because you've already paid for the units or are still paying for them, but you can't get out of that, so you'd probably compare the fixed O&M cost of just keeping them around versus having to build something else potentially, and you'd make a decision.

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Q. Okay. But on the other hand, if at the time that you did this interconnection, your LOLH was 1.5 hours and your target was 2.8, you wouldn't really even think about keeping that old diesel plant, would you?

A. Well, I don't know if I would or not. Again, I would probably want to do, you know, that calculation. I mean, 1.1 is better than, you know, 2.8. I'd have to make some sort of decision as to whether or not the fixed cost of keeping those units around was worth any additional reliability. I mean, I would get additional reliability benefits. I might--I mean, again, as you said, it depends on the vagaries of the system, how long is my LOLH going to be 1.5 and, you know, it's a complicated issue, but it's something that you'd study. You'd see whether or not the cost outweighed the benefit.

Q. But the target of 2.8 is really your basic criteria and then -

A. I don't want -

Q. - and where that's going to move over time?

A. I don't want to go below 2.8.

Q. Yes.

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A. Or I guess I'm phrasing that wrong. I don't
MR. BROCKMAN:
want to go above it. You know, I don't want the loss of load hours to go above 2.8. If they get better, maybe it's good or maybe it's bad. It depends on what it costs me.
BROWNE, Q.C.:
Q. I mean, if you can get them to 1.5 without spending any money -
A. That's great.
Q. - that's a good thing, sure, okay. All right. And as regards, as we say and I think you said this in answer to earlier questions that as regards to LOLH, it doesn't really make any difference where that generation is on the system, correct?
A. As long as it's sufficiently interconnected, I mean, if you built it on an isolated system, then clearly it doesn't affect the LOLH of the Island Interconnected.
Q. All right. There is evidence before the Board that Newfoundland Power actually moved some of its thermal generation from Burin to Wesleyville, okay. So, in terms of the peninsulas, you're talking about the boot down

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on the bottom which is the Burin and Bonavista Peninsula being up the third little peninsula from the bottom right on the northern coast.
A. Okay.
Q. Okay. Why would it do that?
A. I haven't studied that particular issue. I don't know why they did that.
Q. Could I suggest to you that there may have been a need in that particular area to support local loads or have additional excess, yes -
A. Certainly possible, yeah.
Q. Yes, okay, additional excess capacity in the event that the line, there was a problem with the line or something like that.
A. There was obviously some need or they probably wouldn't have moved it. I don't really know what the need was.
Q. Okay. So, you'll agree with me that there are other reasons unrelated to LOLH that could cause generation to be put in a particular place?
A. Yes. I think there was testimony on the fact that well, when you build a hydraulic plant, you can't really decide where--I mean, you can decide where you're going to build it, but you

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only got one or, in certain places.
Q. Yes, exactly.
A. And so to some extent, that's the luck of the draw. You might also generation near load centres to make lower losses. I mean, there are a lot of reasons why you choose a particular site.
Q. Right. So, there is benefit to the people in Wesleyville of having that generation located there, that goes beyond the fact that it lowers the LOLH for the whole system.
A. Oh yeah, it's always better in terms of, you know, if you will, I suppose it's better in terms of reliability, to be right next to the generator.
Q. Okay, but from the point of view of the Industrial Customers of Newfoundland and Labrador Hydro, shall we says, makes no difference whether that generator is on Burin or in Bonavista?
A. Probably doesn't make any difference to them, no. As long as Hydro bases its planning on the fact that the generation is somewhere, you know, if the generation weren't there and Hydro had to build it, who knows where they

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would build it and you guys would see the same costs. So, I don't know that you care where they build it.
Q. So, at the very least, we can agree that the generation in Wesleyville is of greater value to the Newfoundland Power customers in Wesleyville than it is to the Industrial Customers?
A. Sure, just like the generation next to an Industrial plant is probably worth more to the Industrial Customers than it is to somebody in Wesleyville.
Q. You spoke in your direct evidence about the issue of the Newfoundland Power generation credit and indicated that the credit itself is not a dollar figure. And I think we're of the same mind on that. It's really megawatts, isn't it?
A. It's a forgiveness of demand and what's reflected in the Cost of Service Study.
Q. Okay, but you have agreed that the numbers, the mathematics that are reflected in the testimony of Mr. Osler and Mr. Bowman are accurate in terms of the effect that these dollars have?

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A. I certainly don't have any reason to question
MR. BROCKMAN:
Mr. Bowman's math. I've been convinced at this proceeding that he is good at math, but it's an anomaly, I guess, as you say, I just think if you're going to look at it, you have to look at it in the whole. There is--one would have to question why is that number different from what you might expect.
HUTCHINGS, Q.C.:
Q. And as appears in the evidence from Mr. Osler and Mr. Bowman, the Industrial Customers are paying a lot more per kilowatt hour for the peaking capacity provided by the generation credit than they are for Hydro's primary peaking capacity, isn't that correct?
A. Taken in isolation, the Cost of Service Study effect is more than, I guess, was more than that equivalent new gas turbine.
Q. Yes, and certainly a lot more than the existing gas turbines, in the range of like -
A. Yeah, again, taken in isolation, as I said, you could ask that question in other parts of the Cost of Service Study as well, and you might find a different effect.

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Q. Okay. And we're talking about a difference like, between $2.00 and $16.00 here, right?
A. Yeah, well, the numbers in the table, I guess, it's 6, 4 that you're talking about, I have a little bit of trouble with it, just because what he divides by in every case is sort of a total generation capacity as opposed to how much is being allocated to him. So, I'm a little cautious about the exact, you know, interpretation of those numbers, but the point is taken that he appears to show that he's paying more for that generation than, say, a new gas turbine.
Q. And your evidence while you seem to concede that there is an anomaly here, you're saying that this is just one element of the whole Cost of Service Study and you shouldn't pick and choose and deal with this one issue except in the context of the entire Cost of Service, is that fair?
A. That's correct.
Q. Okay. What issues within the Cost of Service did you identify that unfairly treated Newfoundland Power?
A. Well, I don't think that Newfoundland Power is

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arguing that they're being unfairly treated. I mean, they've accepted the Board's rulings on the generic Cost of Service Study, but if I look back, for instance, I just take a more recent unit that was added, a look at Granite Canal. And if I did a 60/40 load factor split on the capital cost of that plant and then said, 40 percent of that is related to demand. I believe that number is also higher than a gas turbine. So, insofar as Newfoundland Power--a new gas turbine--so, insofar as Newfoundland Power uses more load demand per kilowatt hour than the Industrials, they could say, well, we're unfairly treated by that. We're paying more for the peaking capacity of Granite Canal than a new gas turbine.
Q. And it's certainly open to Newfoundland Power to raise that issue before the Board, isn't it?
A. Oh yeah, there's hundreds of issues like that and Newfoundland Power has decided that you can't open one piece of the Cost of Service Study. Well, again, they don't want to pick and choose.
Q. Okay. And that--but any party here has the

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ability to raise a particular issue that may result in your words, in having -
A. Oh, I'm certainly not criticizing Mr. Bowman for -
Q. - their particular ox gored, isn't that correct?
A. I'm sorry -
Q. Excuse me, nobody is hearing neither one of us at this point.
A. I'm sorry.
Q. Would you agree with me that any party here before the Board has the ability to raise before the Board any particular issue arising out of the Cost of Service Study or otherwise that results in their particular ox, as you say, getting gored?
A. I think everyone has a right to raise the issue.
Q. Okay. And from a practical point of view and this regards cost to allocations, wouldn't you also agree with me that Newfoundland Power's ox never, in fact, gets gored because whatever costs are allocated to it, it passes on to its customers?
A. Well, its stockholders, I suppose you could

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argue, don't get gored, but its customers-
MR. BROCKMAN:
- they do care about what happens to their customers.
HUTCHINGS, Q.C.:
Q. No, I understand that and Mr. Browne is here to represent them in his usual good style. The other issue and this is very brief that I want to speak to you about relates to this notion of the incentive which is provided to Newfoundland Power by reason of the existence, among other things, of the generation credit and perhaps we could bring up here, IC 421. We asked here in the context of a demand energy rate whether Newfoundland Power would feel itself to, feel itself at liberty to act on an incentive which would run contrary to the directions of the EPCA. And looking at the answer, it confirms that Newfoundland Power now presumably operates its facilities in the best interest of the overall system in accordance with the Act. And then goes on to say that the sample rate provides an incentive for the management of generation facilities that is contrary to the Act and is therefore,

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inappropriate. The answer doesn't really address the question of which way Newfoundland Power would go which was actually the question. Do you have any knowledge of the intent of Newfoundland Power in this regard?
(11:00 a.m.)
A. I'm probably not the best guy to ask about Newfoundland Power's intent. I can certainly give you a view of economic signals and you know, how I think people would react, if that's what you want to ask me, but I don't what Newfoundland Power's intent is. I mean, you'd have to ask them.
Q. I mean, I guess my question is what's the significance of an incentive that runs contrary to what Newfoundland Power is bound by law to do anyway?
A. Well, I suppose you and I may even have some disagreement on what the law requires. I haven't really made a great study of this law, but my understanding of it, sort of, from a 50,000 foot level is that, you know, island generation is supposed to be operating, done in the best, what's best for the Island.
Q. Um-hm.

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A. Right now, Newfoundland and Labrador Hydro counts Newfoundland Power's generation as integral part of its generation plan and they give them a credit for that. They don't have to run that generation. They just say, okay, we'll take whatever the demand is off the top, okay, fine. That seem to be a good thing for the Island. If, on the other hand, we say we're going to charge you $84.00 a kilowatt year for a demand rate, but not give you a generation credit and not allow you to run the generation, you've kind of removed, you know, you've removed by legislative fiat, the signal. You're saying, well, is demand worth $84.00 a kilowatt or isn't it and can you use your own generation. And as well, in the long run, the Island is better off for Newfoundland Power to have had that generation. If you want to make them run it, then fine, I suppose you could take the view that in the long run, if you make them run, if you send them a signal that's makes them run it on an economic basis, then the Province is sending in the signal that in the long run, its cheaper for you to run this generation. And I guess I'm,

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maybe I'm confusing the issue, but I don't see -
Q. The policy and the Act is a valid economic policy that the whole system should be run in the most efficient manner, correct?
A. Well, I can't disagree with that. I mean, how could you ever disagree with that.
Q. Okay. So, the only issue then is whether the ability of Newfoundland Power to run this generation is properly and reasonably reflected in the costs that are allocated under the Cost of Service Study.
A. Yeah, I don't think the Board should send a signal to Newfoundland Power that's inappropriate under any conditions that would violate the Act.
Q. Nor, I think, could it send one that was contrary to the Act.
A. Yeah.
Q. Thank you, Mr. Bowman. Those are all my questions, Mr. Chair.
CHAIRMAN:
Q. Thank you, Mr. Hutchings, Mr. Bowman. It is 11:00. It would appear we're ahead of the indicated schedule and likely to finish within

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an hour after the break. So, unless anybody
CHAIRMAN:
has any vehement objections, we'll break just for 15 minutes or so and we'll return, if that's okay, at twenty after.
(BREAK AT 11:03 A.M.)
(RESUME 11:24 A.M.)
CHAIRMAN:
Q. Thank you. Ready to begin Mr. Brockman?
A. Yes.
Q. Good morning Mr. Kennedy?
MR. KENNEDY:
Q. Good morning, Chair. Mr. Brockman, I just have two topic areas. One is triggered by a comment you made concerning integrated resource planning, which was an area that we were going to cover, in any event. And the other one is just some questioning concerning Newfoundland Power's generation credits.
A. Okay.
Q. First I'd like to just deal with the integrated resource planning. And just as a precursor to that, and this is something you also alluded to in response to a question on cross there just a few minutes ago, it's at

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page 17 of your original pre-filed? And it's in a discussion there under 5.8 Newfoundland Power retail rate designs, line 11, "Stone and Webster offer two major arguments for the sample rate to Newfoundland Power. The first is a suggestion that Newfoundland Power may be able to do some additional demand management. There is no current evidence to support that suggestion." So, am I taking it correctly that what you're indicating there is that there's no, as you said, engineering quality information concerning what kind of demand side management responses Newfoundland Power could undertake?
A. Beyond the Interruptible and Curtailable rates, which are in fact a way of doing demand side management, I haven't seen it, I mean, I don't know that there aren't any, but I haven't seen any in this proceeding, you know, that I would consider to be of the quality that I would want to have to do anything about it.
Q. Sure. And as I understand it, the issue on demand side management is not that you can't effect your demand, it's at what cost that

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effect is acquired at?
A. That's correct.
Q. And that it makes no sense to spend more money than you save?
A. Absolutely.
Q. Now, as far as you're aware, is anyone actually at Newfoundland Power looking at demand side management to generate engineering quality data?
A. I don't know if there is anyone today, you probably could ask Mr. Henderson, but I mean, I know at one time there was because, like I say, in 1990, they actually were saying can we do something and I really don't know--I don't think there's a department, I'm really speaking hearsay now, I suppose, but I don't know if anyone is actually assigned to that. If they knew something, they might look at it, but I don't know. I don't think there is, but Mr. Henderson probably could answer that much better than me. I don't think there's anyone dedicated to it today, or certainly not a department.
Q. Who should do or who is it among all the stakeholders that is ultimately responsible or

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in a best position to generate those engineering quality level demand side management data or analysis?
A. Well, in most of the jurisdictions where I've been associated with any great resource planning, it's sort of a combination and a lot of times it's done as a joint venture, if you will, I mean, the utility would have data on it and experts on it and maybe they hire consultants, maybe they don't. The Consumer Advocate might have a view on it. They may have some devices and costs that they want to contribute. Hydro may have things on it, the Board might chose to have their own or even an expert or what have you. It's usually--because there are a lot of stakeholders in integrated least cost planning, there are a lot of people who have different views, but I guess the best people would be, you know, engineers who study the, you know, how do you control the water heater, how do you do ceramic storage, how do you do all of these things and how much does it cost. And then after figure how much it costs, what are the characteristics of the resulting demand

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management? I mean, do I save a kilowatt for

MR. BROCKMAN:

every kilowatt of water heater or is it something less than that, so there are a lot of people who can do it, but it's, in terms of who is best to do it here, in terms of the stakeholders, probably for the individual customers, Newfoundland Power probably knows more about its individual customers. But I wouldn't want to preclude other parties who are very interested in this from participating and contributing even, not just participating, in many cases they contribute.

MR. KENNEDY:

Q. Sure. But just to use a metaphor that Newfoundland Power would be in the driver's seat, the other people who are other stakeholders would be passengers in that effort?

A. Well Newfoundland Power would be in the driver seat perhaps with respect to what they can do with their individual customers. Hydro might be in the driver seat with respect to the avoided supply side cost, you know, and then there are a lot of tests that have to be done

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and there's a lot of fairness issues, who has to pay for all of this and who benefits and the Board usually gets involved in that sort of issue. What test do we use? Do we say that we want to minimize rates over time or do we want to minimize sort of revenue requirements over time and those two can often times quite differ, so it's a process that's sort of, everyone needs to participate in.

(11:30 a.m.)

Q. And is my understanding correct that under demand side management that you would look at chiefly two different things. One would be conservation aimed initiatives and the other one would be, more to do with the peak or the load?

A. Demand management without the demand side.

Q. Right.

A. Yeah, the term and unfortunately it's kind of sometimes confusing because we use the term demand side management and we often times don't make the distinction that you're making. There are various kinds of load shape objectives that were identified when people were doing a lot of this in the States, things

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like is your load shape objective to shave the peaks, you just want to remove demand off the peaks and something like an Interruptible program might do that. Or do you want to accomplish conservation? Do you want to save--give you an example, if I put a wrap on a water heater with more insulation, which I think Newfoundland Power even has a program like that, but if you wrap a water heater with insulation, that saves kilowatt hours. It not only shaves some off the peak, but it saves a kilowatt hour every hour of the year, practically. That's something that's called a conservation program because it's designed to, mostly to save energy, not necessarily just to shave demand. Those kinds of programs can be best incented or more effectively incented by giving people fairly high energy charges because that's what they're saving. The savings they would see on their bill, for the most part, would be cents per kilowatt hour off the bill; whereas if you really try to incent them to just shave the peak, then maybe something like an Interruptible program where you could give them, if you had a demand

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control that could control water heaters, for instance, you could--you might give a different signal, you might rather have a higher demand charge to promote that. How high would, of course, depend on what the awarded costs were, so -

Q. So on the demand side, you would have potentially you would look at initiatives that would peak shave, you would look at initiatives that might change load shape and you would also look at initiatives that have as their overall objective of conservation, both energy and demand?

A. Yes, let's say it was very common when we were doing a lot of this in the States to go through the sort of characteristics of the system to decide what is we're trying to do with the system? How can we save money? And then we might even assign those kinds of goals. Sometimes I get a little nervous about those just because sometimes they overlap so much that I worry when a utility just picks one or the other, but that's a different issue.

Q. Is my understanding also correct that under an

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Integrated Resource Plan that in addition to
MR. KENNEDY:
looking at DSM, you would also look at the supply side?
A. Oh, absolutely, that goes--that's why we call it integrated resource planning.
Q. And would a third aspect of an integrated resource plan involve looking at rate design issues?
A. Yes, I think if it's done properly and is truly integrated, it ought to look at innovative rates, I mean, all of these things are ways of affecting change in the load, change in the demand, change in the kilowatt hours or the energy changes during the summer, changes during the winter. Anything that you can do, be it a device such as a water heater controller or some signal that you send, such as a rate, all of those things really can be viewed as part of integrated resource planning and they're all to be weighed against whatever is on the horizon for the expansion plan, you know, are we trying to--I mean, what's our sort of target that's setting our avoided costs? Is it a hydraulic unit, is it, you

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know, a thermal unit, what is it and how much is it worth?
Q. And the supply side aspect of an integrated resource plan, for Newfoundland, given the dynamic in the industry, is it fair to say that Hydro would be in the driver's seat for those aspects of an integrated resource plan -
A. Yes.
Q. The supply side consideration of that.
A. Yes, if you look at the 1999, I guess, study that Hydro provided in this proceeding, looking at, well Granite Canal, for instance, you'll see that they looked at all of their alternatives and what they cost and ran some computer programs to see what if I mix or move this one here or that one there and that's the kind of information you need.
Q. So Hydro is behind the wheel at some aspects and Newfoundland Power is behind the wheel in other aspects?
A. Yes.
Q. And hopefully everyone is trying to drive in the same direction or achieve the same objective which is to get an integrated resource plan for the Province of Newfoundland

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and Labrador?
A. That's the goal of integrated resource planning.
Q. And let's say we actually achieve this integrated resource plan, what is it that you would do with it then? That depends on the plan, I presume, and what the outcome of it is.
A. Well I would hopefully implement whatever came out of that as being cost effective, if I did in fact find, for instance, that water heater demand controllers saved a lot of money for customers in the future, I probably would want to implement those. The Board would have to deal with a lot of other issues at that point which is who is going to pay for it and how do we roll it into the rates and so on and so forth, but what I would hope would come out of it was we would try to do some of those things.
Q. How long would you suspect it would take to complete that whole process of an integrated resource plan?
A. It would realistically, probably be a multi-year effort because there's a lot of data that

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has to be gathered, there's a lot of issues that have to be talked about and a lot of analysis that has to be done. The good news is we're in somewhat of a situation right now where, you know, perhaps we don't need a unit next year, so we have some time, we don't have an infinite amount of time if we're going to grapple with these issues.
Q. If under your recommendation then, am I gathering correctly that in order for Newfoundland Power to be comfortable with a wholesale demand rate, that it would require an integrated resource plan and that would require a multi-year effort?
A. Well in order for Newfoundland Power to be comfortable that the rate that they were getting was signalling more efficiency, they would at least want to know the Marginal Cost Study part of that integrated resource plan and what they could do about it, that's the piece that they need. And I, you know, how long it would take to do just a Marginal Cost Study? I guess, Hydro, I don't know how long they said, I think it was an estimate they put on the table of $300,000.00 or something, but

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I would point out that about half of that

MR. BROCKMAN:

study has probably already been done in the Granite Canal Study because they looked at all their options and on a supply side, what's coming on, what it's going to cost, what's it do to the rest of the system. They can probably update that and they're halfway there. The piece that is missing that would take some time, it probably would take a year or two, would be what can we do about it? What are the demand side options that are available? There is some help on that, the Board is not completely out on their own on that, I mean, there are tons and tons of documents that were published in the States and even in Canada on things that were available. Some of those are old so they would have to be updated, but there are consultants who specialized in just looking at the demand side and how much does it cost to do certain things. I'm not one of those consultants, but there are consultants, I mean, I'm sort of a generic, you know, look at both sides, but there are consultants if

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they're still around. One of the problems is a lot of these people have gone away because when we deregulated a lot of things in the States, a lot of the emphasis on demand side management went away, and so we quit studying it as hard as we were studying and unfortunately, I think -

MR. KENNEDY:

Q. So, Mr. Brockman in light of all of that, as I described it in order for Newfoundland Power to feel comfortable with the wholesale demand rate, what would be required? The converse of that, the sample rate that's being proposed -

A. Yes.

Q. Are we also dealing with then levels of comfort or is it a case of, as I asked Mr. Bowman, that you consider it to be fatally flawed, the proposal that has been put forward by Stone and Webster?

A. Well the design--I suppose it depends on what's really being proposed and I sympathize with Mr. Bowman when he was on the stand saying he wasn't completely clear what was being proposed because we have an energy only rate that was proposed in the original filing

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and then, somewhere along the way, in an RFI, I suppose, Hydro adopted the sample--what was called at that time the sample rate as sort of their proposed rate. Mr. Greneman, when he was on the stand, talked with Mr. Kelly about, well, you know, I suppose if you guys were really concerned about it, I could fool around with the energy charge and make sure that it was marginal cost in all the months, you know, short-run marginal cost. So I guess in order to feel comfortable about it, I mean, one of the things that is required--well there are several things that are required. Number one, I probably would design a different rate designed than that, even if I was just going for a straight-up embedded rate, just as Mr. Bowman said he would probably design a different rate design and I don't--my own mind it's not a very good rate design because it completely ignores the short-run marginal cost in some months. I believe it weights demand too highly because it says demands were $7.00 on the province per kilowatt month or $84.00 a year, but the Interruptible rate isn't worth that much, it's worth less than 28. And I

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have looked at the expansion plans and they seem to be telling me that, well, there's an awful lot of going on in terms of saving on fuel, but which might tend to reduce that $7.00. So we would probably want to look at the design of the rate and think about moving some of the charges around. The other thing that would have to be solved, I think, before Newfoundland Power would feel comfortable was how's the Board going to allow them to deal with the volatility that any demand energy rate creates.

Q. Okay, just on that point, on the volatility, would you agree with me that that's a financial issue, not a -

A. That's a financial issue.

Q. Right, and so the minute it becomes a financial issue, it sort of steps outside of your area of expertise.

A. It's outside my expertise, that's correct.

Q. Sure. And in regards to the $7.00 kilowatt of billing demand, well first I just want to make sure we're dealing with the same sample rate. I wonder if we could go to Chart 1 on page 15 of the RDG No. 2, Mr. O'Reilly. Towards the

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bottom. Okay, so we have, as I understand it,

MR. KENNEDY:

is this your understanding as well that the rate that's proposed at the bottom there on page 15 with the two energy blocks and then a demand charge of $7.00 a kilowatt is the sample rate that's being proposed by Hydro, that as you indicated was subsequently adopted through an RFI?

A. I think that's the one that's currently being proposed now, yes.

Q. Okay, and the $7.00 a kilowatt, that's a monthly, so that works out to be $84.00 a kilowatt year.

A. $84.00, yes, that's right.

Q. And I just wondered if you could just comment on, if we could go to JRH No. 3, page 13? This was a discussion on the estimated value of the generation assets, Mr. Brockman. And the bottom paragraph, "However, it is possible to get an indication of the value that these assets bring to the Island Interconnected System through an examination of the costs that would be incurred if Hydro were required to purchase a similar amount of peaking

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capacity today, based on cost estimates for a new simple cycle combustion turbine, the levelized annual cost for new peaking capacity coming on line in 2004 is on the order of $100.00 per kilowatt per year."

A. Uh-hm.

Q. So do you agree with me that 84 is at least in the same range as this estimate for a new simple cycle combustion turbine to add -

A. 84 is clearly less than a hundred. The simple fact of the matter is we don't need a combustion turbine this year, but--so that would tend to bias my opinion of that. The real question is when do we need a combustion turbine, if at all, and if we don't build a combustion turbine, as in '97 we were thinking we were going to build--or they were going to build a combustion turbine and it didn't happen, and they built a base load unit which in effect had a much lower cost than $100.00 per kilowatt year for demand. So what's what I would have to weigh, but yes, $84.00 is less than $100.00.

Q. Okay, I just wanted to turn to that second topic, the Newfoundland Power generation

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credit. You comment in your Supplementary Evidence at page 6, Mr. O'Reilly, line 15, this is where you make a comment concerning a statement made by EES in its report on Newfoundland Power's generating units being located in Hydro's service territory, as you quote it, and I don't know if that's exactly the same language that was used by EES, but I guess am I surmising correctly that what you're trying to point out is you feel that EES were mistaken in their understanding about the physical arrangements, if you will, or arrangement of Newfoundland Power's plants and in the overall system?

A. Yes and, you know, I sympathize with them as well, it's a complicated system and, you know, I don't know how they got that idea, but because that was done true, I wasn't sure how to take the rest of their recommendations.

Q. Sure. Now the generation credit, it's provided, as I understand it, in a form of a megawatt reduction that then goes to their cost of service allocation?

A. Yes.

Q. All right. Do they get generation and

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transmission credit in that generation credit?

A. Yes, insofar as whatever portion of transmission is classified as demand, they would get credit for that, plus the generation. Some of that generation, by the way, is associated directly with the generation, for whatever that's worth.

Q. Right, and I was going to ask you, sort of, I guess conceptually, why is it that you would provide a transmission related credit inside that generation credit? What would be the rationale for doing so?

A. The rationale would be that, you know, you have to sort of think about what does Hydro not have to build because the generation exists, insofar as they don't have to increase the transmission capacity of their system because the generation exists somewhere, well then, you know, it's probably fair to give them credit for it. But it's a fairly complicated issue in terms of what the splits are.

Q. So in the case of, for instance, Burin Peninsula and that's the one shaped like a boot.

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A. Okay, right.
MR. KENNEDY:
Q. And we know that Newfoundland Power has generation down at the bottom of that Peninsula, and there's been lots of discussion about the assignment of the respective transmission lines owned by Hydro.
A. Right.
Q. And Newfoundland Power receives a generation credit for that generation on the Peninsula, correct?
A. Yes.
Q. All right, so does Newfoundland Power need to use Hydro's transmission in order to get their generation up to the common good of everybody, is that the sort of rationale for why you provided gener -
A. Yes, I guess I'd phrase it the other way, Hydro needs to use the transmission to get it back up.
Q. Right. And so, is that related then to the transmission credit that's provided to Newfoundland Power inside the gen. credit?
A. Yes.
Q. And what's the connection?

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A. Well the connection is, as I said, you sort of have to think about what does Hydro have to build or not build in order to take advantage of the credit or the generation, which is what you're saying, if they're going to access the generation, they have to be able to get it back into the system. Had Hydro built that generation and there were no customers down there, they would have still had to build the transmission line to get it back. So that's how they're related and I think the numbers break down, I don't know, there's some sixty some odd dollars in there for generation and I guess the rest is transmission. Of the total $84.00, I can't remember the exact number, but -
Q. Yeah, there's some split there between the two and there's an undertaking outstanding to Hydro to provide us with the actual split. So could I just ask then, in light of all that, could you just give me your views on then the--and we know the transmission lines are assigned common on the Burin Peninsula, at least that's the proposal?
A. Right.

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Q. The Great Northern Peninsula, the other one -
A. Okay.
Q. So in the case of the Great Northern Peninsula, we have generation plant up on the top of the Great Northern Peninsula owned by Hydro this time?
A. Right.
Q. And that's being proposed to be assigned common.
A. Yes.
Q. The transmission, however, is to be assigned specific.
A. Okay.
Q. As proposed by Hydro. Could you tell me does the treatment of the gen. credit for Newfoundland Power and the rationale for providing a transmission credit inside the gen. credit, does that have any implications for how this Board should look at the Great Northern Peninsula's transmission and generation assets?
A. Well yes, in so far as possible, I mean I think the Board should try to be consistent in their thinking on that, so obviously the two are interrelated. I don't know but I've

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commented on that way in awhile, so I might have to refresh my memory as to what, how much load is there and whose it is and how much generation, but it's philosophical since the Board ought to try to use consistent philosophy in the assignment of both.
Q. That's all the questions I have, Chair. Thank you, Mr. Brockman.
CHAIRMAN:
Q. Thank you, Mr. Kennedy. Do you have any re-direct Mr. Kelly?
KELLY, Q.C.:
Q. No further questions, Chair.
CHAIRMAN:
Q. Okay. Commissioner Saunders, do you have any?
COMMISSIONER SAUNDERS:
Q. No questions, Mr. Chair.
CHAIRMAN:
Q. Commissioner Whalen?
COMMISSIONER WHALEN:
Q. Good morning, Mr. Brockman.
A. Good morning.
Q. I take it from your evidence that your summary position is that the sample rate that's been proposed at some point along the way by Hydro,

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should not be implemented? That's your -
MR. BROCKMAN:
A. That's correct.
COMMISSIONER WHALEN:
Q. I don't get the distinct impression, though, that you're opposed to a demand energy rate for Newfoundland Power, it's the sample rate that you don't -
A. If the rate were properly designed with taking account of marginal costs and you could solve the volatility problem, I mean, I would take the same position, I think as I took in 1990 that perhaps it was a good idea.
Q. So your position is based on the fact that we have a sample rate that's being proposed for Newfoundland Power and it's the sample rate itself and the design of that rate that you -
A. It's the sample rate and the fact that it creates volatility and I don't see any hugh advantages, either for fairness or efficiency coming out of it. So it's creating a problem and it's not solving any, so that's kind of my--but I mean, that's not to say that if you redesigned it completely and solved all of my problems, I probably would say okay, it's okay

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now.
Q. So if we had the appropriate Marginal Cost Study before us today, do I take it that the demand energy rate would be something that you would be--you would support?
A. Well I would certainly look at it and see how much I needed to, say, adjust the demand and the energy charges that might come out of an embedded design. I would probably also ask the Board to think about how they're going to deal with the volatility that even a redesigned rate would do, but then at that point, you know, you probably would have the support.
Q. Okay. If the Board were to say that, what the effect from this order that it wants a demand energy rate for Newfoundland Power and didn't make any order on what that rate would be, but told Newfoundland Power and Hydro to go away and come up with such a rate -
A. Yes.
Q. And assuming that you would be involved in such a process and appreciating you just made a comment to Mr. Kennedy that you would probably design a different rate. I

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understood Mr. Bowman to say yesterday he would probably design a different rate and certainly ten different experts, such as yourself, would come up with ten different rates. Is there enough information before us today or in the current Cost of Service certainly for that rate to be designed as an embedded cost rate?
A. You could design a rate, I personally believe that $7.00 would probably be too high for the demand charge. I don't know if that number should--in terms of efficiency, I don't know if that number should be zero. I don't know if it should be two. Hydro is telling me in essence that it's not 28 divided by 12, what they're saying the Interruptible is not worth, so it's probably somewhere between zero and $2.35 or something might be that sort of appropriate signal. You could design such a rate, I don't know that there's any huge hurry to do that or as you had asked a question earlier, the necessity to do that, to sort of know the answer. And I know that people sometimes, I mean, this issue has been going on a long time, so--and a lot of us are

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frustrated, I suppose to some degree and what do we do with it and when are we going to get a marginal cost and when can we judge this rate, so, but yeah, you can design one. Would it be a good rate? I can't really tell you at this point. It would be a rate, it would be a demand energy rate and would it accomplish anything? Maybe, maybe not. Would it cause other problems? Yes, so -
Q. How would you measure whether it's a good rate?
A. Well I would measure whether it's a better rate by saying--in my mind, as I said, it really isn't a huge question of fairness here, the Cost of Service Study is taking care of that, so I would have to judge whether or not it sent a more efficient price signal to Newfoundland Power and that would be what I would judge against marginal cost. And then I would say is that increase--what can they do about it? Can they do some DSM? Can they change their rate designs even more than they already have and is that gain that would be there because of the increased efficiency is outweighed by whatever cost Newfoundland Power

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coming in and asking for some sort of recovery
MR. BROCKMAN:
clause for this volatility would be, that's what the Board would have to struggle, I mean, I'd have to look at those issues. Whether or not you--if you just ordered Newfoundland Power and Hydro to get together and solve all those issues in a month, given the history, without the things, I'm not sure where that would really go.
COMMISSIONER WHALEN:
Q. Would you agree that we've sort of been there and done that and -
A. Well I don't think you've ever had, I mean, what's really been missing in this picture for a long, lone time since I've been testifying for it, is what are the marginal costs of Hydro? I mean, I really respectfully to the Board I think perhaps the wrong people were ordered to do the Marginal Cost Study. I mean, they could only do the part for T & D, they couldn't really do the Hydro piece of it and I think the hope was, I know in talking with the guys in Newfoundland Power was they would somehow get together and Hydro would

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provide that, but it just hasn't happened. So I think that piece has been missing for a long, long time, but I share your frustration.
Q. I just want to pick up on something that I think Mr. Browne raised with you referring back to page 19 of your evidence, and I think your statement was unless changing the wholesale rate results in changes in Newfoundland Power's rate designs and their customer's behaviour, there is no good reason for imposing a demand energy rate?
A. That's right.
Q. Are there any changes that the Board, separate from a demand energy rate, are there--what kinds of changes to the wholesale rate would actually result in changes to or actually incent Newfoundland Power to change their rate design, short of a demand energy rate? Is there anything that's actually going to create that--those changes on the other end to the end-user customer?
A. Well, I suppose that, you know, the Board if--let's say we went down the road that Mr. Kennedy was taking me down and we had a lot of information about the long-run supply side,

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marginal cost and demand side and the Board, as other Boards have done, looked at that and said, well, we think Newfoundland Power should be moving demand off the peak or we think Newfoundland Power should be encouraging summer load or something like that, the Board could just order Newfoundland Power to do those things. I believe, under most acts, I haven't really looked at yours lately, but you could say this is good for the Province, it's good for your customers, we're going to order you to do it and we'll allow you to recover whatever it costs to do that. And you could do that without a demand energy rate. You could just make them do it if you thought it was a good idea. You could--I mean, certainly if you set up a rate, like a demand energy rate with a $7.00 charge and told Newfoundland Power we're not going to allow you to recover the money for these fluctuations in demand, we don't care--we'll raise your cost of capital or something, whatever that--we don't care, then who knows, maybe you'd incent them to do something. Whether it's a good idea or not, I doubt, but there, you know, at this point in

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time I don't see any real realistic things that you can do. I mean, Newfoundland Power already looks through the purchase power rate and tries their best to see what the long-run marginal costs are. They know what the embedded costs are, they don't necessarily think that the embedded costs are efficient price signals for a lot of reasons that I talked about. And so they do the best they can and I think what's really needed is to know what the marginal costs are, the long-run marginal costs. That would probably incent Newfoundland Power to have to think about what they should really do.
Q. So the price signal to the end-user customer is still an important -
A. Well it's the most important thing in terms of the end-user customer being Newfoundland Power's customer and that's the most important thing. The question is how do you make Newfoundland Power send the signal to them, how should you? Right now they look through the rate and they try to judge the sort of long-run marginal cost versus the embedded cost and they can only do half of that. So to

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me, the best solution is, look, let's get on
MR. BROCKMAN:
with the marginal cost from the right people, the ones who know it.
COMMISSIONER WHALEN:
Q. That's all my questions, thank you very much, Mr. Bowman.
CHAIRMAN:
Q. Thank you, Ms. Whalen. I have no questions Mr. Brockman. Ms. Whalen is our panel's resident cost of service expert.
(12:00 p.m.)
MR. YOUNG:
Q. I have a few questions arising, Mr. Chair.
CHAIRMAN:
Q. Questions? I'm sorry, yes, absolutely.
MR. YOUNG:
Q. Mr. Brockman, you just mentioned to Ms. Whalen and I'm trying to understand exactly what it was you said in your response, if it was in relation to the Embedded Cost Study. But she asked you, I think, if you could have designed a rate because it appears you're not categorically opposing a demand energy rate, it's just the structure of the sample rate,

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and she asked you what you needed. Could you have designed an alternative rate from the embedded cost that would be a demand energy rate structure?
A. I could design an infinite number of alternative rate designs from the Embedded Cost of Service Study.
Q. Did you consider proposing one here in relation to the short-comings you saw in the sample rate?
A. No, because I really don't know how high I should put the demand charge. It's not what the Cost of Service Study tells me, I know that, so how much do I--do I make it zero, do I make it $2.00, do I make it $28.00 divided by 12? I don't know the answer to that, so I didn't propose one.
Q. So in your mind, I just want to clarify this for sure, in your mind it's the Marginal Cost Study doesn't necessarily drive a demand energy rate structure, but contrary to what other witnesses say, you think there is a link between the two?
A. There's a clear link between the efficiency of a rate and marginal costs, the long-run

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marginal costs and in the short-run marginal costs.
Q. Okay, I just wanted to understand where you dispute the other experts. Thank you.
CHAIRMAN:
Q. Other matters or Board questions? No. Once again, thank you for your testimony, Mr. Brockman. This brings to a conclusion today's proceedings and I guess tomorrow we have Ms. Tabone and Mr. Chymko, I hope I've done justice to those names, scheduled from EES Consulting. And it's my understanding as well, Ms. Newman, that Mr. Hearn is showing tomorrow from Labrador City, Wabush?
MS. NEWMAN:
Q. Yes, that's my understanding as well.
CHAIRMAN:
Q. Thank you very much and we'll see you 9:00 tomorrow morning.

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CERTIFICATE

I, Judy Moss Lauzon, hereby certify that the foregoing is a true and correct transcript in the matter of Newfoundland and Labrador Hydro's 2003 General Rate Application for approval of, among other things, its rates commencing January, 2004, heard on the 18th day of November, AD., 2003 before the Board of Commissioners of Public Utilities, Prince Charles Building, St. John's, Newfoundland and Labrador and was transcribed by me to the best of my ability by means of a sound apparatus.
Dated at St. John's, Newfoundland and Labrador this 18th day of November, A.D., 2003
Judy Moss Lauzon