

TAPE NO. 100

R.S.

GREENE I'd like to move on now, Mr. Hamilton, to another area. And that is the demand energy tariff that has been proposed and suggested for implementation in January 1, 1993. Am I correct in saying that Newfoundland Power initially requested that such a rate structure be designed, for Hydro to charge Newfoundland Power.

HAMILTON Yes, we did.

Q And would you advise the Board why that request was made?

A I believe it was done for several reasons. One reason was that it's, we have demand energy rates for a portion of our customers and it, we were having great difficulty getting those rates properly structured because with the purchase price being a flat energy rate, then block many of our general service rates, in effect became such that we were, had to sell it for less than we were paying for it on an incremental kilowatt hour basis. When you include demand charge component, it was okay. If that condition continued, it could force us to have to adopt a energy-only rates for large customers which meant there'd be no cost put on demand for those customers and that would clearly send bad price signals to our customers. That was one issue. And I guess that back in the time we first started working on it that was probably the only issue. Since that time, a big other issue that's come along is demand side management activities and the problem of Newfoundland Power attempting to implement programs to achieve some demand efficiency gains, if you would, reduce demand on the system, improve the efficiency of the overall system and these costs would be borne by the company. The impact of those changes or improvements would only flow through to the extent they're achievable through the Rate Stabilization Plan and back to customers. There's no offsetting revenue impact to offset that expense. So it's desirable to have a demand charge that therefore would more quickly react to those changes so that in effect we would get

HAMILTON           some reduced purchased power expense to offset the increased capital costs of being involved in such programs.

GREENE            Are those the two principal reasons?

A                 That's the lion's share of it, yes.

Q                 Now. The first reason that you mentioned was that your existing energy-only rates for your own customers sent the wrong price signal. There was no cost for demand. Am I correct in summarizing what you just said as your first point?

A                 My first point was that it made it very difficult for us to structure our rates correctly to our customers.

Q                 And you were concerned about that, I understood from your answer, because your price or your rates were not sending the proper price signal. Is that correct?

A                 The potential was there at the rate things were going that we would have to either absorb a significant risk factor on our revenues versus expenses or have to change our approach on the rate design.

Q                 What was the, what is the price signal that you want to send to your consumer?

A                 We want to clearly tell them that capacity has a cost.

Q                 And why are you concerned about that?

A                 So that they will use their plants more efficiently, that they will not just kind of, what the heck, turn on all the lights and leave them on. If there was no demand charge there would be no reason to worry about they used at a point in time. And therefore it could lead to severe needle peaks on the whole system.

Q                 We want to avoid that, don't we? Is one of the reasons that the plant is put in service to meet the forecast demand?

HAMILTON Yes.

GREENE So you're trying to constrain demand to delay expansion through plant additions, are you?

A In the DSM side, that's the purpose of the DSM programs. The idea ...

Q But isn't it, I'm sorry now, I'm still, I haven't come to your second reason.

A I realize that and that's why

Q We're still on your first one.

A Yes.

Q My understanding would be, would also be related to your first one, which is the wrong price signal. Because you're not recovering from the customer the cost that had been incurred to meet the load of the customer.

A If customers don't have the correct price, then they can't be expected to make correct decisions. They might not make correct decisions if they do have the right price. But they certainly can't if they don't have the right price.

Q And the hope is that they'll get the right price signal. They will conserve their energy and their demand on load and that will be taken into account in your rate design as well as the future system expansion?

A Presumably if customers have, they make conscious decisions and to the extent that they make those decisions, it obviously affects the load on the system and the growth rate of the system.

Q The second reason you advanced for your desire, or Newfoundland Power's desire, to have a demand energy rate is that it would assist in the implementation of Demand Side Management programs in Newfoundland. Is that correct?

A To assist Newfoundland Power in its implementation of its programs, yes.

GREENE           What are the objectives that have been identified for the DSM potential programs in Newfoundland?

HAMILTON        I'm not sure what you mean by, what are the objectives. Is it a specific capacity target?

Q                No, alright. Let's go step by step then. Are you familiar with the SRC report? That was a joint report prepared by Newfoundland Power and Newfoundland Hydro.

A                Only in a cursory way.

Q                I'd like to refer you to it then, please. It's JKB 61. JKB 61, page 1-2?

A                Well, unfortunately the binder here only says page 1, see attached. It's only page 1 of 1. The actual report is not here.

Q                I will tell you what the objectives are from it if you'll agree with me, Mr. Hamilton. They maybe we all don't have to search for it.

A                Okay.

Q                I thought that you were familiar with the report. One of the principal objectives and is stated on page 1-2 of the SRC report which is Exhibit JK-, or attached to Answer to the Demand for Particular JKB 61, was that one of the key objectives, and it was the first objective, was to explore-, and I'm reading from that, it's to explore the potential for DSM particularly as it may impact the winter usage and peak demand contributions. I understand that one of the principal objectives of the SRC report was to identify programs that would have potential in Newfoundland to reduce the winter peak and peak demand requirements. Is that correct?

A                The reference, you've quoted potential for DSM particularly as it may impact winter usage indicates that there is a leaning towards concentrating on winter-related items but it's not exclusively winter related loads.

GREENE But it would be one of the objectives, to reduce. For any DSM program, is it one of the objectives to reduce the peak on the system?

HAMILTON I guess, a combination of reduce the peak or at least the rate growth of the peak.

Q Okay, so it is related to the peak on the system?

A Certainly.

Q When does Newfoundland have its peak?

A In the winter.

Q Alright.

A December, January or February.

Q So that was why it was one of the prime objectives of the DSM study prepared by SRC.

A That's right.

Q Was the winter peak reduction. You would agree with that?

A Yes.

Q And it's the winter peak that plant is designed, or the system is designed to meet, isn't it? In Newfoundland? We don't have a summer peak, we don't have an air-conditioning problem, unfortunately. We have a problem in the winter with the cold temperatures. Isn't that correct, Mr. Hamilton? We can look at your, the exhibits you attached to your evidence, where you show that our peak is always December, January.

A Um hmm.

Q In 1990, it happened to be February, but generally in the winter. Always in the winter.

A Not meaning to overqualify my answer or to avoid anything, because I'm not, never been involved in generation system planning, but presumably our capacity additions and stuff are structured around two

HAMILTON things. One is the actual size of it as a function of the peak capacity and presumably the type of plants that we actually build as a relationship to the, I guess, the load factor so therefore the summer has impact on the kind of plant we build but the absolute size, yes, I would assume it's a function of the winter peak, yes.

GREENE Okay, now, thank you. Now I'd like to move to the Newfoundland Power proposal for the demand energy split tariff to be introduced with the suggestion of the no-ratchet clause. Am I correct in saying that you agree with Newfoundland Hydro's proposal of the demand energy split tariff with the exception of how the billing demand, or how it would be billed, and whether, and the principal difference relates to whether or not there will be a minimum amount to be billed to Newfoundland Power.

A So, conceptually we agree on the programs of the demand energy rate targ-, rate form.

Q Do you agree that if the Newfoundland Power load materializes exactly as had been forecast, then Newfoundland Hydro would receive the same amount of revenue from your, from the Newfoundland Power proposal as it would from Newfoundland Hydro's proposal? All other things being equal.

A Yes, that's correct.

Q So, the problem arises for Hydro, the risk to Hydro arises when the actual load differs from that which is forecast. Is that correct?

A Yes, that's correct.

Q And I believe you were here when Mr. Evans testified and we saw from Consent 19 that the Newfoundland Power forecast load and its actual load has differed over the last ten years and the variance is in the order of 9.6 per cent? It's Consent 19 if you'd like to look at it.

A Yes, on average the monthly, the line I'm reading, the monthly annual variance is 9.5 per cent, yes.

GREENE So, but going to the demand energy tariff creates a risk for Hydro that it does not have with the existing energy only rate, you would agree with me then, I take it?

HAMILTON Yes, that's correct.

Q And I guess where we differ now is how we are going to address the risk that Hydro faces. You would agree with that as well. That that's where we come to our point of difference.

A Yes, oh yes, that's true.

Q I'd like now to turn to your additional evidence that you filed. I'd like to look first at PRH 5, which sets out the basis of the calculation of the demand charge. I'd like to look at page 2 of 4 of PRH 5. Am I correct in stating that this is identical to the method of Dr. Sarikas on his method 1 in Exhibit RS1 with the exception, of course, that you used the monthly demand as opposed to the annual demand to calculate the demand charge?

A That's similar to one of his methods. I can't remember if it was 1 or number 2, but I know he did one of the methods based on a 12 month calculation and basically that's the exact same calculation except that it used, like you said, monthly demand as opposed to 12 times the peak demand forecast.

Q Alright. So your 6.25 that you used on the bottom of page 2 is the same, it would produce the same result as the 4.51 of Sarikas in his RS1.

A Yes, give or take a couple thousand dollars, yes.

Q But approximately the same result?

A Yes.

Q Can you explain why there would be a different demand charge on your method?

A The different demand charge relates to the fact that you don't have the same demand in each of the 12 months. So to collect that same demand cost and

HAMILTON through a demand charge, and if we want to get the same demand revenue, you have to apply it to a smaller number of kilowatts, in effect. So by summing up the monthly demand forecasted items, that gives you a total expected billing demands for the year, dividing that into the total dollar requirement, will get you the unit rate. Basically, the difference is that in Dr. Sarikas, he used 12 times the highest month and so what you're really seeing then is, I guess, the shifting old pattern, the seasonal effects over the year.

GREENE And so, I think you've already agreed with me that your 6.25 per kilowatt would produce the same amount of revenue as Hydro's 4.51 as a demand charge if your actual load materialized as you had forecasted.

A Yes.

Q Does Newfoundland Power believe that Hydro should be revenue neutral to the implementation of the demand energy rate?

A Yes.

Q So Hydro should not be prejudiced because of the fact the demand energy rate is being implemented on January 1?

A That's correct.

Q And Dr. Sarikas has given evidence that the way to do that is his proposed method 1 which is your method 2?

A Both make them revenue neutral, yes.

Q Okay. So this, Newfoundland Power would agree then with the use of what you've called method 2 in PRH-5 and Dr. Sarikas has called method 1 on RS1.

A Yes, I guess the, that there's a little difference I guess between the sensitivity if you would between the two kinds of calculations. In Dr. Sarikas' approach because of 12 month ratches, very time-sensitive as to when it's implemented. And in his case when he used the partial year 1992, that it left him significantly revenue short in 1993. There is one sub-



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C. M.

GREENE: But in the context of the present rate referral, I take it that Newfoundland Power agrees with the proposal of Dr. Sarikas as to how Hydro would remain revenue neutral by the implementation of the demand energy rate.

HAMILTON: I agree that you can reconcile it based on a 1993 test--obviously, test year--1993 sales level to make it revenue neutral.

Q. Now, I would like to turn to PRH-6. I'm going to state the Newfoundland Power proposal, Mr. Hamilton, because I need to do that to take you through this table. Feel free to correct me if I mis-state you. Newfoundland Power has identified the same risk as Hydro has that Hydro will face by going to a demand energy rate, a risk that's not there now with the energy only rate. Your proposal of addressing that risk is to put a demand charge element in the rate stabilization plan, is that correct?

A. There'd be a demand component in Hydro's rate stabilization plan and in Newfoundland Power's rate stabilization account clause.

Q. Okay, now we're going to go through that step by step so everyone will see what the impact of that will be.

A. Okay.

Q. You've chosen 1990 probably because it's the highest peak we've had on our system to date.

A. No, it's the most recent year that we had the full data on.

Q. Well, it works out fine because it also establishes with respect to the highest peak. But if you look at January and you do this by month and your proposal is that each month this is what would occur. You wouldn't be concerned about the annual peak on the system. You, in your proposal, are concerned about the monthly load.