



COMMISSION OF INQUIRY
RESPECTING THE MUSKRAT FALLS PROJECT

Transcript | Phase 1

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Commissioner: Honourable Justice Richard LeBlanc

Friday

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CLERK (Mulrooney): All rise. This Commission of Inquiry is now open. The Honourable Justice Richard LeBlanc presiding as Commissioner. Please be seated.

THE COMMISSIONER: Good morning.

Ms. O'Brien?

MS. O'BRIEN: Good morning, Commissioner. We have one witness today, Tom Garner. Mr. Garner is actually appearing on a Skype link, so I will be questioning him over that link.

Before we get to Mr. Garner, I'm asking that one exhibit be entered, that's Exhibit P-00725.

THE COMMISSIONER: All right. So that will be entered as marked.

MS. O'BRIEN: And so the next is we can go to the link and Madam Clerk can affirm Mr. Garner.

CLERK: Do you solemnly affirm that the evidence you shall give to this Inquiry shall be the truth, the whole truth and nothing but the truth?

MR. GARNER: I do.

CLERK: Please state your name for the record.

MR. GARNER: Tom Garner.

CLERK: Thank you.

MS. O'BRIEN: Thank you, Mr. Garner. Kate O'Brien here.

Present with you are legal counsel, is that right?

MR. MCKINNON: That is correct. Angus McKinnon, counsel (inaudible) witness. Lisa Malloy, in-house counsel at PricewaterhouseCoopers.

THE COMMISSIONER: Okay. So I'm sorry, I didn't hear that.

So we're going to have to – perhaps when you speak, if you could move the microphone towards you. I can certainly hear Mr. Garner, but I can't hear you.

MR. MCKINNON: I'm sorry, please speak up.

Angus McKinnon, counsel for the witness.

THE COMMISSIONER: Thank you.

MR. MCKINNON: Lisa Malloy, M-A-L-L-O-Y, in-house counsel, Pricewaterhouse.

THE COMMISSIONER: All right. Good. Thank you very much.

MS. O'BRIEN: Thank you, Mr. Garner.

I'm going to ask you to start by giving us a brief overview of your education and work history.

MR. GARNER: Education: undergraduate degree in economics, WLU. Masters in business administration from York University.

Work history since MBA: McKinsey and Company, the Molson Companies and subsidiaries, Itochu Corporation and PricewaterhouseCoopers from 2000. I retired from full-time employment at PricewaterhouseCoopers in January of 2014. I am currently a self-employed advisor. I continue to work with PwC under contract.

MS. O'BRIEN: Thank you.

PwC were financial advisors to Nalcor for the Lower Churchill Project, is that correct?

MR. GARNER: Correct.

MS. O'BRIEN: Okay.

We're going to hear more evidence, Commissioner, from Derrick Sturge who's the CFO and VP finance of Nalcor next week, with more detail about that engagement, but, Mr. Garner, for the purposes of your evidence today, is it fair to say that you were one of the people at PwC that worked on that scope of work for Nalcor?

MR. GARNER: Yes.

MS. O'BRIEN: And specifically, I understand that you were involved in creating and running the financial model used to calculate the income

the Muskrat Falls Project required in order to meet all of its financial obligations. Is that right?

MR. GARNER: Yes.

MS. O'BRIEN: Okay.

And so, essentially, the results of the model – I just want to make sure it's clear here – the results of the model, essentially, establish the supply price for Muskrat Falls that was needed to feed into the CPW analysis so, basically, how much we will need to charge for Muskrat Falls electricity in order to pay for the financing, the agreed upon rate of return, et cetera. Is that a fair summary?

MR. GARNER: Yes.

MS. O'BRIEN: Thank you.

Can we please bring up Exhibit P-00725? Mr. Garner, I understand you'll have a copy of this exhibit before you, and I understand that this is a presentation that you gave to Grant Thornton when they were conducting their pre-sanction investigation and audit for the Commission. Is that right?

MR. GARNER: That is correct.

MS. O'BRIEN: Okay.

So you prepared and presented this presentation to Grant Thornton in June of 2018?

MR. GARNER: Yes.

MS. O'BRIEN: Now, we're not going to go over the full presentation in detail. It is a very complex presentation. But at a high level, can you please describe for the Commissioner what the contents of the presentation are?

MR. GARNER: This presentation was created at the request of Nalcor. They requested assistance in explaining the DG3 financial modelling analysis to Grant Thornton pursuant to an information request from Grant Thornton. What the presentation lays out is the process and the analysis by which the supply price, to which you referred earlier, is determined under various scenarios.

MS. O'BRIEN: Okay.

And I understand that when you're – when you were working on these models for – we're going to specifically look at the DG3 model today. That's the one we care about. But I understand it wasn't just you who was doing those models, there would have been other people from PricewaterhouseCoopers, PwC, as well as people from Nalcor. Can you just explain that, how many people would have been working on this scope of work?

MR. GARNER: With respect to the DG3 financial model, there were two principal people from PricewaterhouseCoopers that were working on the model on an often basis.

So my role was to specify the architecture, functionality of the model and to do quality control. One my colleagues did the coding of the model and both of us ran scenarios with the model. I – so I was hands-on the model during the DG3 modelling campaign.

MS. O'BRIEN: Okay.

And who was your colleague at PwC who worked on it with you?

MR. GARNER: At that time, Mr. Vincent Rallon – R-A-L-L-O-N.

MS. O'BRIEN: All right.

Now, every model that – has to have some inputs and some assumptions that underlie it. In this case, who decided the – what the inputs and assumptions would be? Would that be PwC who made that decision or would that have been Nalcor?

MR. GARNER: The principle assumptions were provided to us by Nalcor.

MS. O'BRIEN: Okay.

MR. GARNER: The only exception was interest rates.

Nalcor proposed interest rates that they get from Conference Board of Canada. PwC, you know, consistent with our mandate, reviewed those inputs for reasonableness, and we concluded that

were fit for purpose, and so we used those as well. All of the other inputs, such as capital expenditures, operating costs, so forth, were provided to us by Nalcor.

MS. O'BRIEN: Okay. Thank you.

And specifically, who at Nalcor were you taking direction from?

MR. GARNER: We took direction from Auburn Warren, who was at that time, and I believe still is, the head of the Investment Evaluation at Nalcor.

MS. O'BRIEN: Okay.

Can we please go to page 22 of Exhibit P-00725, Madam Clerk?

And this is the last page of your presentation, Mr. Garner, and I really understand it to be a summary of the various scenarios that you work through in the presentation – page 22.

And Madam Clerk, can you enlarge that a little, please? Okay.

Okay, yeah, I have the mouse here. All right.

So Mr. Garner, it's really – I understand – there's three steps here in the presentation that I'd really like you to focus on – what we're interested in here today. And what we're looking at, just generally, is how the supply price was arrived at. And we know from – I think we – Commissioner, we have a consent fact with Nalcor here that we can put forward that in the CPW calculation, the supply price that was used for Muskrat Falls was \$65.38. And I'll just ask Mr. Simmons to confirm that that's the case.

MR. SIMMONS: Yes, Commissioner, that's correct. We were asked to verify that. And the two of the gentleman who had appeared as part of the CPW panel when we were in Labrador, Mr. Warren and Mr. Moulton, have confirmed back to us that that was the number that was used in the DG3 CPW analysis for the Interconnected Option.

THE COMMISSIONER: Thank you.

MS. O'BRIEN: So, Madam Clerk, can I just ask you to make this slide a little bit bigger? And you can – yes, that's great.

So here, Mr. Garner, I'm just going to get you to go through steps 10, 11, and 12. But before you do, I just want to highlight for the Commissioner's purposes that this 65 – oh, sorry, I just got to grab the bar here. So the \$65.38, that was the supply price, appears here in the table that Mr. Garner's put together as in step 12.

So, Mr. Garner, I'd like you to work up to how you arrived at that \$65.38. And for the purposes of the information we need, I think it makes most sense if you start with step 10 of the process that you went through here and then take us through steps 10, 11 and 12.

MR. GARNER: Very well.

So, step 10 was a case that looked at the Muskrat Falls generating station. And the purpose of that analysis, as you described before, was to determine the buyer's supply price that enabled recovery of cost and made financial obligations.

So the assumption going into this – the principal assumption that distinguished this case is, first of all, this is a federal loan guarantee case. And so the interest rates that are in the model – which is not shown on that page – for a federal loan guarantee, the lower rates, that would be indicated by that guarantee.

Also, the capital (inaudible) from 65 per cent debt, 35 per cent equity, that is specific to federal loan guarantee cases. Step 10, the nature of this analysis; to answer the question, if the only volume that is sold is to the base block and the required part of equity, as measured by the internal rate of return, is 8.40 per cent, what supply price would accomplish the objective of recovering costs and meeting financial obligation? So that – the answer to that is the \$66.65 that you see – so that's just the base block, federal loan guarantee (inaudible) supply would be \$66.65.

MS. O'BRIEN: And just to clarify, Mr. Garner, that the base block here would be the power that is needed by the consumers of this province. So you'd be here – you'd only be looking at the

demand in Newfoundland and Labrador, is that right?

MR. GARNER: Correct.

MS. O'BRIEN: Okay. Thank you.

MR. GARNER: So that's step 10. The next step, step 11, starts with step 10 and adds in prospective export revenues that are available over existing transmission through Quebec. So this is not the Maritime Link for this modelling series and so this answers the question if you start the base block and you add in prospective net revenues from (inaudible) exports through existing transmission by Quebec, what does – what are the implications for charge to equity and for debt-service coverage?

And the answer is that the supply price we pulled (inaudible) at \$66.65, and then we add in export revenues and we observe that the internal rate of return goes to 9.86 per cent.

MS. O'BRIEN: Okay.

So I'm just going to stop you there and just make sure we have a clear understanding of that. So in this case what you did was you're assuming that – we know that there is a recall block booking through Quebec. So we do know that Nalcor does currently have a right to put some – transmit some power through Quebec to spot markets.

And I understand in this case what you did was you assumed that to the extent that there was extra room in that booking for Nalcor to export power and get money from it on spot markets, that any extra power available from Muskrat Falls in excess of what was needed from – by the – our provincial population was actually exported through that recall booking, sold and that the money made from that was then accounted here. But what it really does is it raises the rate of return here; in other words, we make more money.

MR. GARNER: Correct.

MS. O'BRIEN: Okay. So instead of making an internal rate of return of 8.4 per cent, assuming that we held the supply price the same – in other words, what we were getting from the

consumers in Newfoundland, the same – that what would happen is our rate of return will go up from 8.4 per cent to 9.86 per cent. Is that a fair summary?

MR. GARNER: That's correct.

MS. O'BRIEN: Thank you.

All right, can you please go on to the next step?

MR. GARNER: So the next and final step, that's step 12, responds to a direction that we got from Nalcor that (inaudible) of benefit. The federal loan guarantee must be conferred on the ratepayers of Newfoundland and Labrador.

So this actually, step 11, was not the case because the profitability, 9.86 per cent internal rate of return under the federal loan guarantee it exceeds the rate of return on the equivalent non-federal guarantee case. And I apologize but I have to refer you back to step 8.

MS. O'BRIEN: Okay.

MR. GARNER: So step 8 is the non-federal loan guarantee equivalent of step 11.

MS. O'BRIEN: Okay.

MR. GARNER: So without the federal loan guarantee export case – profitability 9.67 per cent without the federal guarantee, 9.86 per cent with the federal guarantee. So Nalcor without the export benefits was more profitable with the federal loan guarantee than without. And Nalcor's argument was that all the benefit of the federal loan guarantee would be conferred upon ratepayers.

That caused us to undertake step 12. So in step 12 what, we did was we started with the step-11 model and we reduced the supply price until the internal rate of return for step 12 equal to the internal rate of return in the non-federal loan guarantee analog, which is step 8. And so the supply price could be reduced from \$66.65 to \$65.38.

MS. O'BRIEN: All right, so I'm just going to summarize that again, Mr. Garner, just to make sure it's clear. So, obviously, without – you ran a case in step 8 that said, look, without the

federal loan guarantee; in other words, you're going to have higher interest rates because you don't have the benefit of the federal loan guarantee. Assuming you export power through the recall booking and you export the extra power available from Muskrat Falls, you would've had an internal rate of return of 9.671.

And the fact of the matter is if you redo the model and you account for the federal loan guarantee and account for the lower interest rates that that's going to provide Nalcor, you're actually going to do – have a better rate of return, you're going to make more money.

And so you worked it out that, actually, you're going to make – instead of 9.671 per cent, you actually would make 9.86 per cent. So you're going to make more money over time.

And what I'm understanding you're saying is that the direction from Nalcor was to say, look, take that extra benefit that you're going to get on your exports because of having the federal loan guarantee and use that to reduce the supply price for the Muskrat Falls power; in other words, give it back to the ratepayers, reduce the supply price and by doing that you reduce the supply price to \$65.38.

That brings your – brought your rate of return back to what it would have been without the federal loan guarantee. And this is ultimately the supply price that was used in the CPW calculation. Is that right?

MR. GARNER: That's right, except the very last part –

MS. O'BRIEN: Okay.

MR. GARNER: – which is that we were not aware in 2012 which of the numbers from this page Nalcor was using in the CPW analysis, but your description of the \$65.38 is correct.

MS. O'BRIEN: Yes. Thank you, Mr. Garner.

And we actually just had agreement from Nalcor a few minutes ago that that was – that \$65.38 was the supply price used. So that's a consent fact that we're working with here at the Commission now.

Okay. So I just wanted, you know, to point out the reason why this evidence is of interest to us is because on September 25, Commissioner, we heard from a panel of people from Nalcor with respect to the CPW calculation. And in the course of the questioning on that date, one of the questions that I had actually put to Mr. Bob Moulton was that whether Nalcor had assumed, in doing the CPW calculation, that all the excess power from Muskrat Falls – excess to the needs of the customers in this province – was spilled; in other words, you know, had that been an underlying assumption, they assumed that all the water was spilled, it wasn't monetized in any way. Was that an underlying assumption of the CPW calculation?

And Mr. Moulton confirmed on that day – and I'm looking at page 51 of the transcript that's available online. He confirmed that that was correct; in other words, we had assumed that all water was spilled. But, Mr. Garner, I take it now from your evidence here that's not – would not be an accurate statement in that the assumption was not that all the power was spilled – there was an assumption that some of that excess power was in fact monetized, and the benefit of that monetization was fed into the CPW calculation as you've just described. Is that a fair summary?

MR. GARNER: The amount of the export revenue that was taken into account for the purpose of the CPW, the \$65.38, is not the entire export revenue. But the benefit included in the export revenue – that arises solely from the federal loan guarantee.

MS. O'BRIEN: I understand, but we – I understand it's not the full of the export revenue, but we couldn't get that – the money that – the amount you reduced the supply price for here in your – step 12 of your model, you couldn't – you wouldn't export that money if we were not exporting power.

MR. GARNER: Correct.

MS. O'BRIEN: Okay. And exporting power from Muskrat Falls.

MR. GARNER: Correct.

MS. O'BRIEN: Okay.

And just to give us a sense of, you know, how much money we're talking about here, I know that you did a net present value calculation and you included it on the previous slide, so I'm just going to take you there. So can you just tell us, in terms of what the net present value – so I think this might have been done in – I'm not sure if this was 2012 or 2010 dollars. Do you recall which?

MR. GARNER: Yes, that was – I was able to verify that that net present value is at – as at 2012.

MS. O'BRIEN: At 2012, okay.

MR. GARNER: Yeah.

MS. O'BRIEN: So if we were looking for the current value of the benefit that you fed in here because of the exports in 2012, can you tell us what that would be?

MR. GARNER: So the value as at mid-2012, the NPV to that date is \$69 million benefit.

MS. O'BRIEN: Okay.

So I know – so is it this number – you know, assuming that this was the supply price used and that's what Nalcor has told us – that would have affected the CPW calculation, is it fair to say by – I don't know if the net present value and the cumulative present worth are the exact same comparators, but is it fair to say it would be in the order of this \$69 million would have been the effect on the difference in the CPW calculation?

MR. GARNER: Yes.

MS. O'BRIEN: Okay.

Thank you, Mr. Garner; those are my questions for you.

Other counsel may have some further questions.

THE COMMISSIONER: All right, Government of Newfoundland and Labrador.

MR. RALPH: No questions.

THE COMMISSIONER: Nalcor Energy?

MR. SIMMONS: Thank you, Commissioner, and good morning, Mr. Garner.

MR. GARNER: Good morning.

MR. SIMMONS: I'm Dan Simmons, counsel for Nalcor Energy. A few questions for you arising out of the presentation and the questions asked by my friend, Ms. O'Brien, this morning.

First of all, you've given us a basic description of your background. And do I understand correctly that what you personally brought to the work that was done by PwC for Nalcor was a particular expertise in the type of financial modelling that you've described so far today?

MR. GARNER: That has been a specialty of mine over the years and was at the time.

MR. SIMMONS: Pardon me?

MR. GARNER: I say that has been a specialty of mine over the years and was during my time advising Nalcor.

MR. SIMMONS: Okay.

And the – what we've seen here today is a presentation that you prepared for Grant Thornton in the course of their investigation, which was to explain a particular – I think you call it a modelling campaign.

MR. GARNER: Yeah.

MR. SIMMONS: And was there other modelling work that you did for Nalcor, in addition to this, to address other factors that – other financial matters that were taken into account?

MR. GARNER: We undertook financial modelling prior to DG3.

MR. SIMMONS: Yes.

MR. GARNER: And with respect to Muskrat Falls –

MR. SIMMONS: Mm-hmm.

MR. GARNER: – that would've been modelling at DG2.

MR. SIMMONS: Mm-hmm.

MR. GARNER: And we took – undertook financial modelling after DG3 at the (inaudible) financial close –

MR. SIMMONS: Mm-hmm.

MR. GARNER: – which was in December of (inaudible).

MR. SIMMONS: Okay.

And this particular presentation describes how you arrived at a series of different supply prices for power. Is that the only point of financial data that you modelled? Or throughout the other work you've done was there a range of different financial inputs that had to be considered at different times?

MR. GARNER: There were a range of financial inputs related to the cost of debt finance, and over the years of different internal rate-of-return targets.

MR. SIMMONS: Right.

MR. GARNER: And there were a number of different outputs that were financial in nature, and then we'll use debt-service coverage ratio as example (inaudible).

MR. SIMMONS: Okay.

Now, for this particular modelling that arrived at a supply price here which we've – which we know was a supply price that was eventually incorporated into a particular CPW analysis, you've said that with the exception of one interest rate figure, the inputs were provided to you by people from Nalcor's Investment evaluation department. Is that correct?

MR. GARNER: Correct.

MR. SIMMONS: And in determining what inputs were necessary, did they make the determination of what types of inputs were needed in order to do this analysis, or did you have some involvement in structuring the type of inputs that were needed?

MR. GARNER: We had input into the types of input that would be required –

MR. SIMMONS: Mm-hmm.

MR. GARNER: – and the formatting of those data.

MR. SIMMONS: All right.

So, would it be correct that you determined the things you needed to achieve the end result here, asked Nalcor for the data and the data was provided that you could then input into the model that you developed?

MR. GARNER: Yes.

MR. SIMMONS: Okay.

And the development of the actual model, we see 12 different steps described here. That was the work that PwC was contributing to this. The model development itself was done by you and others within PwC, is that correct?

MR. GARNER: The model was entirely developed by PwC.

MR. SIMMONS: Okay.

Now, can you describe for me what you understood the purpose, at the outset, of developing this model was? What it was to be – what was meant to be achieved by doing it?

MR. GARNER: The – at DG3, the principal purpose of the modelling analysis was to determine the required supply price –

MR. SIMMONS: Mm-hmm.

MR. GARNER: – under various input cost scenarios. So you've seen the 12-step process, so that was – that would be the modelling analysis that we did. And the part that was, to our knowledge, used was the (inaudible) – well, that was the principal focus of the model.

MR. SIMMONS: Okay.

So in the development of this model, was an important underlying assumption to that the fact that it was intended that it would be the

ratepayers who were consuming the electricity in the Province of Newfoundland and Labrador, who were to bear the cost of the project?

MR. GARNER: To the extent that they were consuming the electricity, that they would bear the cost, yes.

MR. SIMMONS: All right.

And that the export sales – any revenue from export sales was not to be in – was not intended to help pay for the cost of the project. The full cost of the project was to be paid for by the ratepayers.

MR. GARNER: With the exception of my description of step 12 –

MR. SIMMONS: Yes.

MR. GARNER: – yes.

MR. SIMMONS: Yes.

MR. GARNER: That's an important exception.

MR. SIMMONS: Okay, so the process, then – you've dealt with step 10 to 12 in your presentation, and you've also jumped back to step 8.

Can you give me, perhaps, a bit of a better description of how you progressed through this modelling in order to reach step 8? Because step 8, as I understand it, is where you were able to calculate a supply price for – that would be necessary to pay for the project if there were no federal loan guarantees, is that right?

MR. GARNER: No, that's not correct.

MR. SIMMONS: Okay, well you could – let's take a look at page 22 then of the Exhibit –

MR. GARNER: Okay.

MR. SIMMONS: – and maybe – if you prefer we can go to the previous pages where there's other steps and I can –

MR. GARNER: (Inaudible.)

MR. SIMMONS: – just get you to explain what was achieved by the time you reached step 8.

MR. GARNER: So I'm gonna step through from step 3 –

MR. SIMMONS: Yes.

MR. GARNER: – which is the first runs of the model.

MR. SIMMONS: Mm-hmm.

MR. GARNER: There are two models that we ran for each major step. There was a model for the Labrador Transmission Assets and (inaudible) I will refer to that as LTA. And that created the tariff (inaudible) that was borne by the Muskrat Falls generating plant. So for every equal cost scenario, we had to calculate the revenue requirement for the LTA and then that cost would be borne by the Muskrat Falls generating plant.

So step 3, there's an LTA version of that, which calculates their (inaudible) and that case assumed 100 per cent equity and no debt. And the companion Muskrat Falls (inaudible) step 3, also 100 per cent equity and no debt, and so you can see that there's an indicated supply price there of about \$82.

MR. SIMMONS: And if I stop – if we stop there for a second. If I understand correctly, the first column has the calculation of a supply price in order to recover the cost for the LTA part of the project; assuming that it's financed 100 per cent through equity with no debts.

And the second column does the same for the Muskrat Falls portion. The supply price of \$82.07, in that second column, does that include the \$15.70 from the LTA column? Or are those two to be added together to get the complete supply price?

MR. GARNER: The \$82.07 includes –

MR. SIMMONS: Yes.

MR. GARNER: – the cost of the LTA.

MR. SIMMONS: So if the project were to be financed on the basis described in the second

column, the supply price would've – that would've had to be charged to consumers, would've been \$82.07?

MR. GARNER: Yes.

MR. SIMMONS: Okay. Carry on.

MR. GARNER: So the steps 5A and 5B refer to the LTA; they are both non-federal loan guarantee basis. There is leverage or debt applied and the difference between the two is that 5A does not employ, something that we call, the liquidity reserve account. The liquidity reserve account is a reserve account that is used to support the debt-service coverage ratio in the early year after in service when revenues are at the low end. And it has the effect of enabling increased leverage and that, in turn, enables a reduced revenue requirement.

So 5A, without the LRA has lower leverage and a higher required stock value than the analogous 5B, which does include LRA, so that enables 60 per cent debt (inaudible) equity and a slightly lower revenue requirement.

MR. SIMMONS: Okay. So –

MR. GARNER: So then –

MR. SIMMONS: Carry on.

MR. GARNER: Go ahead.

MR. SIMMONS: I was going to say – so if I stop you there, then, the step 5A and B cases, am I correct that that – those address only what the supply price would be for the Labrador Transmission Assets, the LTA. But in this case, you are now considering that instead of it being financed through 100 per cent equity, it's partially financed through debt or borrowings. Still no federal loan guarantee and you're examining the difference between borrowing with the LRA and without the LRA. And if I understand correctly, the LRA is a kind of a financing option or a way of structuring the financing to give – to save some financing costs and reduce the supply price at this stage of the analysis.

MR. GARNER: Yes.

MR. SIMMONS: Okay. So carry on then to the next step, please.

MR. GARNER: Steps 6 and 7 are companion cases with 5A and 5B. So they are Muskrat Falls cases incorporating the applicable costs from the Labrador Transmission Assets.

MR. SIMMONS: Yes.

MR. GARNER: And step 6 is without the LRA, and step 7 is with the LRA. And I will say that all the cases that we've discussed to date are simply base block cases, with no export being considered.

MR. SIMMONS: Right.

MR. GARNER: You will see that the required supply price for Muskrat Falls with the LRA is lower than without the LRA. So we were satisfied based on this analysis that the LRA was a benefit.

MR. SIMMONS: Okay.

So looking at the last column on the top row on the right – the one that says step 6, do I understand that to be the case developed for recovering the Muskrat Falls costs and the Labrador Transmission Asset costs from the ratepayers without a federal loan guarantee, and without the benefit of the LRA vehicle, and that the supply price to do that would have been \$78.90, I guess, that's per some unit of power.

MR. GARNER: Per megawatt hour.

MR. SIMMONS: Per megawatt hour. And then going to the step 7 column, which is on the bottom row on the far left, it's the same set of criteria but using the LRA vehicle and it reduces the supply price somewhat, to \$78 – basically, \$78.

MR. GARNER: Yes.

MR. SIMMONS: Okay. And at this stage of the analysis this is based on not monetizing anything from export sales.

MR. GARNER: That is correct.

MR. SIMMONS: Correct. Okay.

So, then, what happens then in step 8?

MR. GARNER: In step 8 we start with step 7.

MR. SIMMONS: Yes.

MR. GARNER: But we add in the net revenue from the potential export sales over the recall block.

MR. SIMMONS: Yes.

MR. GARNER: Over the recall booking.

MR. SIMMONS: Mm-hmm. So what was the purpose –?

MR. GARNER: We keep these –

MR. SIMMONS: So what was the purpose of doing that at this step in the process?

MR. GARNER: The purpose of doing this was to determine the impact – the benefit that the additional net export revenues would have on shareholder returns measured by internal rate of return.

MR. SIMMONS: Yes.

MR. GARNER: And also on the debt-service coverage ratio.

MR. SIMMONS: Okay, so let me stop you there for a moment.

The return to the shareholder, is that the row that's described as IRR?

MR. GARNER: Yes.

MR. SIMMONS: So that would be the – for want of a better word – profit that the owner – the shareholder is going to earn based on this set of assumptions.

MR. GARNER: Yes.

MR. SIMMONS: Or the rate of profit. Okay.

MR. GARNER: Yes.

MR. SIMMONS: And, the DSCR, what's that?

MR. GARNER: That is the debt-service coverage ratio.

MR. SIMMONS: Okay.

MR. GARNER: It's a measure of the safety factor of how much cash you have to pay debt versus how much cash you need to pay debt.

MR. SIMMONS: Okay. And what's the significance or the importance of calculating the DSCR value here?

MR. GARNER: The DSCR is probably the most significant metric that lenders and guarantors look at.

MR. SIMMONS: Yes. Okay.

So, do I understand then that these are values that need to be calculated for the purpose of assessing the acquisition of financing in order to carryout the project?

MR. GARNER: Yes.

MR. SIMMONS: Okay.

So, when you did step 8, I noticed that the supply price in step 8 is exactly the same as in step 7. Why is that?

MR. GARNER: The purpose of step 8 is to determine what the incremental effect of net export revenues –

MR. SIMMONS: Yeah.

MR. GARNER: – (inaudible) net export revenues would be if you start from the case in step 7.

MR. SIMMONS: Okay.

Was the purpose of step 8 to include the revenue from export sales in the determination of the supply price to be charged to the consumers of power in the province?

MR. GARNER: No.

MR. SIMMONS: No, and how was it determined that you needed to do step 8? How did you arrive at the point in this modelling

where you were going to take this step in your analysis?

MR. GARNER: Nalcor was interested in not just the ratepayer economics under an isolated or base block case.

MR. SIMMONS: Mm-hmm.

MR. GARNER: But as the investor, was also interested in the potential economics for investors itself should exports be realized.

MR. SIMMONS: Okay.

So when you ran this, this step 8 here in the analysis, what did you conclude, or what did you – what came out of running that that you would consider of any significance here?

MR. GARNER: We expected to observe, and did observe, that the return to the shareholder would increase if you –

MR. SIMMONS: Yeah.

MR. GARNER: – added in net revenues from exports.

MR. SIMMONS: Yes.

MR. GARNER: And that observed debt service coverage would also accrue.

MR. SIMMONS: Okay.

So including this analysis of export sales at step 8, resulted in learning what the return to the shareholder would be, but it did not result here in any change to the supply price that had previously been determined in step 7, which was done without considering export sales. Is that correct?

MR. GARNER: That's correct.

MR. SIMMONS: Okay.

So then carry on then with step 9, and explain to me, please, what's being done there.

MR. GARNER: So step 9 we're back to modelling the LTA.

MR. SIMMONS: Mm-hmm.

MR. GARNER: Every time we have a major change in the assumptions and, in this particular case, the major change is the application of the federal loan guarantee. We first have to calculate the required revenue for the LTA, so that this could be incorporated as a cost –

MR. SIMMONS: Mm-hmm.

MR. GARNER: – at the Muskrat Falls plant. So step 9 is incorporated into Step 10, which would be our review.

MR. SIMMONS: Mm-hmm.

Okay, and so step 9 and step 10, would they be – did they progress from step 8, which had included export revenue, or did they progress from the earlier steps which had not taken into account export revenue?

MR. GARNER: They progressed from the earlier steps which did not take into account export revenue.

MR. SIMMONS: Okay. So then step 9 is a case which calculates the supply price that would be necessary to obtain to pay for the Labrador Transmission Assets, have the ratepayers in the province pay for that without any consideration of what the effect of export power sales would be. Is that correct?

MR. GARNER: That's correct.

MR. SIMMONS: And the same for step 10, which would include not just the Muskrat Falls costs but would also include the LTA costs calculated in the previous column?

MR. GARNER: Yes.

MR. SIMMONS: So, in step 10 then, there is a supply price calculated of \$66.65. Now, am I correct that that excludes any consideration of the export power sales?

MR. GARNER: That is correct.

MR. SIMMONS: So, can we then compare the supply price calculated in step 7, which was no federal loan guarantee, and step 10, which is

federal loan guarantee, and say that the only difference between those two is the availability of the federal loan guarantee?

MR. GARNER: (Inaudible) yes, that is a valid comparison.

MR. SIMMONS: Right. So the difference in supply price of \$78 from step 7 and \$66.65 in step 10, that difference is wholly attributable to obtaining the federal loan guarantee.

MR. GARNER: That difference is wholly attributable to the federal loan guarantee.

MR. SIMMONS: Okay.

Now, then why did you go on and do – well let's go to step 11 now. So what happens then in step 11? What were you doing there?

MR. GARNER: Step 11 is analogous to step 8 in that we take base block case.

MR. SIMMONS: Mm-hmm.

MR. GARNER: We maintain the same supply price for the base block –

MR. SIMMONS: Mm-hmm.

MR. GARNER: – and then we add to that the prospective incremental net revenue from export sales.

MR. SIMMONS: Okay.

So, we know that back in – I think we've heard that back in step 8 that a purpose of doing the analysis in step 8 was to determine the effect of the return to the shareholder, on including export sales, and the effect on the debt service coverage ratio, which is important for the financing, the effect on that of including export sales.

Was that the same reason why step 11 was done, to answer those same questions now that the federal loan guarantee has been included in the model?

MR. GARNER: Yes.

MR. SIMMONS: Okay.

So then after step 11, we go to step 12. So what happened for you to get – to do step 12? Why was step 12 added to the modelling?

MR. GARNER: The step 12 was undertaken pursuant to a Nalcor directive that all of the benefit of the federal loan guarantee, whether that's on the base block or export block, would be resolved to the benefit of the ratepayers.

MR. SIMMONS: Okay.

Now –

MR. GARNER: And so the calculations – the logic of the calculations, I've described earlier, but I'd be happy to go through it again.

MR. SIMMONS: Okay. Sure, so we understand.

MR. GARNER: Okay.

So if you compare step 11 to step 8 –

MR. SIMMONS: Yes.

MR. GARNER: – we observe that the profitability with the export is higher in the export – the federal loan guarantee case – than it is without the federal loan guarantee –

MR. SIMMONS: Mm-hmm.

MR. GARNER: – even though the required internal rate of return for just the base block is held constant at 8.40.

MR. SIMMONS: Right.

MR. GARNER: So Nalcor observed that the profitability of the export business is greater under the federal loan guarantee than without the federal loan guarantee.

And so, having made this observation, Nalcor directed us to do an analysis whereby the incremental profitability to the export business of the federal loan guarantee was resolved to a reduction in the supply price facing the Newfoundland and Labrador ratepayer.

And so, analytically, we started with a step 11 model, and in step 12, we reduced the supply

price until the internal rate of return was equal to that in step 8.

MR. SIMMONS: Okay.

So one of the first things that I asked you about this morning was whether a, kind of, fundamental underlying assumption of this whole process was that the ratepayers of the province were to pay a supply price that paid the full cost of the project – the Muskrat Falls Project.

And that was something you understood was an underlying principle applicable to this modelling. Is that correct?

MR. GARNER: For the base block, yes.

MR. SIMMONS: For the base block, yes.

And the – once the federal loan guarantee was brought into play, did you have any understanding or knowledge of what the purpose of the federal loan guarantee was in the sense of to whose benefit was the federal loan guarantee to accrue?

MR. GARNER: We were advised by Nalcor –

MR. SIMMONS: Yes.

MR. GARNER: – that the purpose of the federal loan guarantee –

MR. SIMMONS: Yes.

MR. GARNER: – was to improve the economics faced by ratepayers of Newfoundland and Labrador.

MR. SIMMONS: Okay.

So would another way of saying that be that the purpose of the federal loan guarantee was to benefit the ratepayers and not to provide any additional benefit related to export power sales?

MR. GARNER: That's fair.

MR. SIMMONS: Okay.

So the process that you undertook in step 12 then, was that consistent with achieving that objective?

MR. GARNER: Yes.

MR. SIMMONS: Okay.

Now in order to decide how to meet that objective, the actual analysis that was applied in step 12, were you given direction about what exactly to do or were you told what the objective was and then you had to determine the means to achieve that objective?

MR. GARNER: It was actually neither of those two things.

MR. SIMMONS: Okay.

MR. GARNER: We were given direction by Nalcor as to what they were trying to achieve.

MR. SIMMONS: Yes.

MR. GARNER: We – I – drafted a proposal as to how the analysis would be undertaken.

MR. SIMMONS: Yes.

MR. GARNER: That was agreed by Nalcor.

MR. SIMMONS: Yes.

MR. GARNER: And then we executed on that.

MR. SIMMONS: Okay, good.

So the net effect of that then, if I understand it correctly, was if we look at the first line, which is the return to the shareholder, the amount of return that the shareholder – in this case the Province of Newfoundland and Labrador, which is ultimately the taxpayer – was going to achieve if the supply price was set at \$65.38 with the federal loan guarantee in place was, in fact, the same as the one that was described in step 8.

MR. GARNER: Yes.

MR. SIMMONS: Okay.

And the effect of that was to ensure that where the ratepayers in the province were to bear the

full cost of the project, they also got the full benefit of the federal loan guarantee. Is that fair to say?

MR. GARNER: Yes.

MR. SIMMONS: Okay.

And the only other point to reiterate is by the time we get to step 12, is there any revenue from export sales – aside from this adjustment for the profitability that the province gets out of export sales, the actual revenue from the export sales is not taken – is not included in that supply price – does not reduce their supply price.

MR. GARNER: That's correct.

MR. SIMMONS: Okay, good.

Thank you very much, Mr. Garner. I don't have any other questions.

THE COMMISSIONER: Okay, Concerned Citizens Coalition?

MR. BUDDEN: Good day, Mr. Garner.

My name is Geoff Budden; I'm the lawyer for the Concerned Citizens Coalition which is a group of individuals who, for a number of years, have been critics of the Muskrat Falls Project.

I have a – I don't have a lot for you today but I do have some questions. If I understand you correctly, in your evidence you've said here this morning that the interest rate assumptions provided by Nalcor were reviewed for reasonableness. Did I understand you correctly on that point?

MR. GARNER: Yes.

MR. BUDDEN: Okay.

What in this context does reasonableness mean? Is it a term of art or are you using it in a different way?

MR. GARNER: We reviewed the interest rate assumptions that were provided to us and in turn sourced by Nalcor from the Conference Board of Canada. We reviewed them internally at PwC for consistency with what our experience in

financing – financial market expectations, both where interest rates were and were expected to be over the coming years.

MR. BUDDEN: Okay and they were found – the Nalcor assumptions were found to be unreasonable.

MR. GARNER: They were found – excuse me, could you repeat the question?

MR. BUDDEN: Sure. And I take it that the Nalcor assumptions on interest rates were found to be unreasonable.

MR. GARNER: No.

MR. BUDDEN: Okay, they're reviewed for reasonableness and rejected. Doesn't that follow that they were then, therefore, unreasonable assumptions?

MR. GARNER: They were reviewed and we found to be reasonable and we used them. We would – did not reject.

MR. BUDDEN: Okay.

Did you not say, though, that the – in your direct evidence, that the assumptions were provided by Mr. Warren of Nalcor, and in the respect of interest rates that they were reviewed for reasonableness and other interest rates were used in their place by PwC?

MR. GARNER: No. No, that's not true.

MR. BUDDEN: Okay.

The – so were all the assumptions provided by Nalcor reviewed for reasonableness in a similar fashion?

MR. GARNER: No, only the interest rates.

MR. BUDDEN: Okay.

And, again, to make sure I understand you – because apparently I did not – the interest rates provided by Nalcor were reviewed for reasonableness and were used as they were provided?

MR. GARNER: Yes.

MR. BUDDEN: Okay.

So I take it that as a basic principle of modelling, you work with the information that's provided and if the information is accurate, then the model itself works and what comes out the other side is appropriate. But if the information that you're modelling is in any way inaccurate, then the end result is possibly inaccurate as well.

It's – you know, it's a colloquial expression, garbage in –

MR. GARNER: I would –

MR. BUDDEN: – garbage out.

MR. GARNER: I agree with that.

MR. BUDDEN: Pardon?

MR. GARNER: Yes.

MR. BUDDEN: Okay.

To what degree – with respect to the 8.4 per cent rate of return, to what degree did the possible elasticity of demand – was that factored into its possible impact on that rate of return?

MR. GARNER: The 8.4 per cent is an administered value that was assigned to us by Nalcor.

MR. BUDDEN: Okay.

And did your model, in any respect, input for possible elasticity of demand?

MR. GARNER: We used –

MR. BUDDEN: And how that might affect –

MR. GARNER: Pardon?

MR. BUDDEN: No, you go ahead.

MR. GARNER: We used the base block demand series that was provided to us by Nalcor.

MR. BUDDEN: Okay.

In your transcript, I believe you indicated that you were aware that strategic risks had not been included in the assumptions that were provided by Nalcor. Am I correct on that as well?

MR. GARNER: You are not correct.

MR. BUDDEN: Okay – well, what is the circumstance with respect to strategic risk?

MR. GARNER: We had no awareness of the inclusion or exclusion of strategic risk from the capital cost series that we were provided.

MR. BUDDEN: Okay, so simply a non-factor, as far as you're concerned, or at least not a factor that you knowingly engaged with.

MR. GARNER: That is correct.

MR. BUDDEN: Okay.

Your modelling, obviously, is for an extended period of time. What would be the impact on the accuracy of your model as one extends into the far future?

MR. GARNER: Stepping away from the Nalcor model, the further out you get you'd have to take uncertainty into account. But we – the assumptions that we had, we – for example, the demand series – we took those as read from Nalcor.

MR. BUDDEN: Okay.

So, again, if the assumption about the price of oil in 2038 was flawed, then the model will produce a result that will not accurately predict what happens.

MR. GARNER: The price of oil was not a factor in our calculations.

MR. BUDDEN: Okay. That's it.

Okay, nothing further. Thank you.

THE COMMISSIONER: Thank you.

Ed Martin?

MR. SMITH: No questions, Mr. Commissioner.

THE COMMISSIONER: Kathy Dunderdale?

MS. E. BEST: No questions.

THE COMMISSIONER: Provincial Government Officials '03-'15?

MR. J. KING: No questions, Commissioner.

THE COMMISSIONER: Julia Mullaley, Charles Bown?

MR. FITZGERALD: No questions, Commissioner.

THE COMMISSIONER: Robert Thompson?

MR. COFFEY: No questions.

THE COMMISSIONER: Terry Paddon – Todd Stanley, Terry Paddon?

MS. VAN DRIEL: No questions, Commissioner.

THE COMMISSIONER: Consumer Advocate?

MR. HOGAN: Mr. Garner, my name is John Hogan; I'm counsel for the Consumer Advocate, the Consumer Advocate that represents the ratepayers of the province.

And you've been talking a little bit, specifically with Mr. Simmons, about the effect that this model has on the ratepayers. So, I just want to follow up with a couple of questions on that.

I assume you still have page 22 of the presentation in front of you. I just want to ask a question about step 12. So, the supply price is \$65.38. The rate of return: 9.67.

Is there – am I missing something or is there a number for step 12 that shows what the supply price is if the rate of return is 8.4 per cent?

MR. GARNER: No.

MR. HOGAN: Why not?

MR. GARNER: That's not a case that we were asked to run by Nalcor.

MR. HOGAN: So, the steps here are the 12 specific steps you were asked to run by Nalcor?

MR. GARNER: The end result of the modelling analysis, which is represented by the 12 steps, was specified by Nalcor. The technical methodology was proposed by us and accepted by Nalcor.

MR. HOGAN: Okay. I think what Mr. Simmons said to you was that – and correct me if I'm wrong, I'm not trying to misquote him here obviously – that the effect of the loan guarantee was that there would be no effect on the ratepayer there in step 12. Is that what you recollect you guys talked about?

MR. GARNER: No.

MR. HOGAN: Okay. Can you confirm what that was then, that statement?

MR. GARNER: The directive that we were given by Nalcor was that the benefit of the federal loan guarantee of whether it's on base block or on the export business that that benefit all be resolved as a benefit to the Newfoundland and Labrador ratepayers.

MR. HOGAN: Okay. If the – they gave you that number 8.4 per cent as the rate of return. Is there any magic in that number that you're aware of?

MR. GARNER: That's an administered guide that was given to us by Nalcor. It originated before DG3.

MR. HOGAN: So, I'm just – theoretically, if you were to use IRR of 8.4 per cent in step 12, wouldn't the supply price be less?

MR. GARNER: The math of it is, if you had run such a case, the supply price would be low.

MR. HOGAN: Okay. So, that would mean then that the full benefit of the federal loan guarantee, at a rate of 8.4 per cent, would actually – the full benefit would be better than 65.38 per cent, is that correct?

MR. GARNER: No, that's not correct.

MR. HOGAN: Why not? I think that's what you just said, isn't it?

MR. GARNER: No, that's not what I said.

MR. HOGAN: Okay, go ahead then.

MR. GARNER: What I said was that the benefit of the federal loan guarantee would be all be resolved to the benefit of the ratepayer, but the case that you're describing, which we did not run, had the benefit of export sales.

MR. HOGAN: Okay, but let's just look –

MR. GARNER: And those –

MR. HOGAN: Let's just look at step 12, which is the benefit of the federal loan guarantee, the benefit of the export sales, right? Maybe I'll just try and simplify it. Is that – that's right isn't it?

MR. GARNER: The case – case 12 is an export case and there are benefits to the shareholder of the exports, but the benefit of the federal loan guarantee on those exports is returned to the ratepayer.

MR. HOGAN: Okay. So let me just ask this: If that IRR number is not a constant, we can change that IRR number in the model, is that correct or not?

MR. GARNER: The IRR is its input to the model, for models that calculate supply prices based on the base block, you can change that type –

MR. HOGAN: Right.

MR. GARNER: – you can change number.

MR. HOGAN: So, if we change that IRR number, which means we can increase it or decrease it, which means the shareholder is either getting more benefits or less benefits, then would the inverse happen for the ratepayer?

MR. GARNER: Try me again.

MR. HOGAN: If you decrease the IRR –

MR. GARNER: Yes.

MR. HOGAN: – will that decrease the supply price?

MR. GARNER: Yes. So that would be a different case.

MR. HOGAN: Yes, it would be a different case.

MR. GARNER: (Inaudible.)

MR. HOGAN: Okay. So the lower the IRR, the lower the supply price.

MR. GARNER: That's the math of it. I would concur with that.

MR. HOGAN: Okay. Thank you.

So, explain to me then why the ratepayer is not getting the – is getting the full benefit of the full guarantee when we could've run a scenario where the IRR was 8.4 per cent? Or is your answer, you just weren't asked to do that?

MR. GARNER: That's a Nalcor (inaudible).

MR. HOGAN: Okay.

I just want to clarify, the export input that's been included is just the recall from the Churchill, right? Is that correct?

MR. GARNER: It's the capacity over the recall booking not already used.

MR. HOGAN: Not already used. And that had to be included in order to get the federal loan guarantee?

THE COMMISSIONER: Just a minute.

But my understanding is, is that the exports that we're talking about are exports from Muskrat Falls. Correct?

MR. GARNER: Correct.

MR. HOGAN: Yes. Okay, thank you. That answers my question then.

I just – my understanding is that some of the assets were done in a cost-of-service basis and some were done with a PPA. Is that correct?

MR. GARNER: We did the analysis for the Muskrat Falls generating station and the associated Labrador Transmission Assets and those assets were (inaudible) and financing were recovered through a PPA for Muskrat Falls generating station and a generation interconnection agreement for the Labrador Transmission Assets.

We understand that there was a cost-of-service recovery or the Labrador-Island Link.

MR. HOGAN: So can you –

MR. GARNER: But we did not undertake the modelling for that.

MR. HOGAN: Okay, so you can't answer why the distinction was made and what effect it would've had on your model?

MR. GARNER: No, that's a – that was a decision by Nalcor that preceded our engagement.

MR. HOGAN: If the model had been – your model had been done, the reverse of what you were asked to do, can you comment on what effect that would've had, or is that too much to ask?

MR. GARNER: Sorry, that's too much ask.

MR. HOGAN: Yeah, okay.

The last question I have is on the PPA. We've heard evidence that the payments get higher as we move forward in time.

Can you just explain why it was done this way using the PPA? Do you have any information about that?

MR. GARNER: The direction that we were given was that the PPA would be based on a supply price per megawatt hour, which would be fixed in real terms and escalate at 2 per cent, which is where CPI was expected to be, and that that supply price would be applied to the base block volume, which rises over time.

So, the overall revenue would increase, in nominal dollars, would increase first because of

the escalating supply price and second because of the increase of the base block volume.

MR. HOGAN: Okay, and any assumptions made with regards to population, demand, elasticity that would've all been factored into the information Nalcor gave you, or would you have taken that into account in the model?

MR. GARNER: The former.

MR. HOGAN: The former, okay.

That's all the questions I have.

Thank you.

THE COMMISSIONER: Former Nalcor Board Members?

MS. G. BEST: No questions, Mr. Commissioner.

THE COMMISSIONER: No questions?

Redirect.

MS. O'BRIEN: Nothing on redirect.

THE COMMISSIONER: All right.

Thank you, Sir. I appreciate your time this morning, and we'll call off now, or cancel the call at this stage in time.

All right. I believe that's the only witness for today.

Can I have about five minutes just to get my stuff together, and then we're gonna come down and have a meeting with counsel here. It will be a meeting with counsel only. It's going to be just a meeting to discuss water management and the process only, and the public will be informed as to what the result of this meeting is subsequently.

So we'll just adjourn for a few minutes.

CLERK: All rise.