(9:07 a.m.)
CHAIRMAN:
Q. What's the date? The date, it is the 7th? Is it? Okay, good morning. I think Mr. Johnson, if there's no preliminary matters, Mr. Johnson, I understand you are finished?
JOHNSON, Q.C.:
Q. I'm concluded, thank you, yes.
CHAIRMAN:
Q. So I'm over to Madam Greene I believe, or we are.
MR. JAMES COYNE (PREVIOUSLY SWORN) CROSS-EXAMINATION BY MAUREEN GREENE, Q.C.
GREENE, Q.C.:
Q. Yes, thank you, Mr. Chair. Good morning, Commissioners; good morning, Mr. Coyne.
MR. COYNE:
A. Good morning.
GREENE, Q.C.:
Q. I'd like to begin by talking about the process that you followed to come up with your recommendation with respect to the return on the equity for Newfoundland Power. And I understand from your evidence that one of the very first steps that you did was to

select the appropriate proxy groups, is that correct?
MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. And can you explain why that was the first step in your process and the significance of it?
MR. COYNE:
A. When you're establishing cost of capital, this all starts with the fair return standard, and there are three elements to the fair return standard, the first of which is that the return should be comparable to that that one could earn the like risk securities. So that really grounds our analysis around trying to find those that are like risk, and so we wouldn't want to use the universe of utilities or the universe of all stocks for that matter. So the idea is to narrow it down to those that look most like the target company for purposes of the cost of capital analysis.
GREENE, Q.C.:
Q. And in particular case you have determined

that there are three appropriate proxy groups, is that correct?
MR. COYNE:
A. Yes, three to provide perspective in cost of capital analysis. In the U.S. we typically use just a U.S. proxy group because you are able to do so and provide an appropriate sample. When we do the work in Canada, we like to use both the U.S. proxy group that's most representative and a Canadian group that comes as close as we can get, given the limitations on the capital, those that are publically traded in Canada that are regulated utility companies. And then for the first time here I presented what I'm characterizing as a North American proxy group because with all the work that we've done in Canada it appears to me that there's greater acceptance of using U.S. data, but there's also a desire to see it integrated so that it is as Canadian as possible so that we don't run the risk of setting a return that's not a perfectly grounded in the province and/or the country that we're attempting to set that cost of capital. So

here I've introduce the two companies that would pass the screens that I've used for the U.S. firms and combine them for the third. Of the three, the one that put the weight on is the North American proxy group for that reason.
GREENE, Q.C.:
Q. Okay. And I'd like to, just to refresh everyone's memory, turn to the actual composition of the group. If we could go to your report on capital—or on the recommended ROE at page 16? So here, Mr. Coyne, in Figure 5 we see the four Canadian companies. And there were only four that passed your screening criteria to determine the Canadian proxy group, is that correct?
MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. Okay. And if we could go to page 17, Figure 6? And here again using the screening criteria that you used, we see the seven American companies that you considered to be comparable to Newfoundland Power, is that correct?

MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. And if we scroll down a bit to Figure 7, we see the same seven U.S. companies, plus only two of the Canadian companies, is that correct?
MR. COYNE:
A. That's right.
GREENE, Q.C.:
Q. And why do the Canadian group reduce from four to two?
MR. COYNE:
A. I excluded Valener and Enbridge because they have substantial operations that are beyond those of regulated electric and/or gas utilities, and I felt as though they would be the least like Newfoundland Power for the purposes of this analysis.
GREENE, Q.C.:
Q. And you've already explained this morning that the purpose of doing that is to get a group that is as comparable as possible to Newfoundland Power, is that correct?
MR. COYNE:

A. That's correct, yes.
GREENE, Q.C.:
Q. There was a discussion with Mr. Johnson on April 4th with respect to your selection of the companies in the proxy group, and I can take you to the transcript if necessary. The discussion was whether you had selected a low-risk group of utility companies for the proxy group, and there was a discussion around whether they were low risk or not. And I wanted to clarify your position with respect that. In your selection of the proxy companies or the companies in each of the proxy groups were you looking for companies that you considered to be low-risk electric utilities?
MR. COYNE:
A. Not low risk per se. I was looking for those that high concentrations of electric—I was looking primarily for those that were primarily in the electric, regulated electric utility business. So in that sense you could define them as low risk compared to holding companies that have non-regulated subsidiaries and things of that nature, but

I wanted ones that like Newfoundland Power that were primarily in the business of regulated electric—the regulated electric business. And so in that sense they were comparable. They're low risk in the sense that they have strong investment credit ratings. So I would say of comparable risk was my desire from a first screening standpoint; not so much low or high per se, but the fact is that they are almost wholly regulated electric utilities. That makes them relatively low-risk companies.
GREENE, Q.C.:
Q. Right.
MR. COYNE:
A. Certainly from an investor perspective.
GREENE, Q.C.:
Q. Okay, thank you. That clarified that.
MR. COYNE:
A. Um-hm.
GREENE, Q.C.:
Q. I understand from your earlier testimony on what you've said this morning that it is important to get the comparable group to ensure that the recommendation with respect

to the ROE then can be considered to be comparable or to be appropriate rather. And I'd like to bring you to the transcript from April 4 on page 219.
MR. COYNE:
A. Um-hm.
(9:15 a.m.)
GREENE, Q.C.:
Q. Lines 8 to 25. And here, just to put it in context while you're reading it, there was a discussion around whether if you had used a different proxy group, your recommendation would have changed. So I'll give you a moment, page 219, lines 8 to 25, and then over to page 220, lines 1 to 13.
MR. COYNE:
A. Yeah.
GREENE, Q.C.:
Q. Okay.
MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. And I want—I found difficulty in understanding—I understood the importance of the proxy group and why you needed to ensure

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the return is appropriate, but then based on the discussion that you had Mr. Johnson and based on that transcript, your recommendation wouldn't have changed even if you had used all the companies, 30-odd companies that you used for FERC. The recommendation would have come out to be the same? So my question is if—why, instead of going through the agony of coming up with the appropriate proxy group, why don't you just use all of the utilities in the 20—the 30 that FERC uses, the much broader group?

MR. COYNE:

A. Right, right. Yes, okay. Good question. The--I don't know at all for certainty, and I hope I didn't convey that, that it would have been same, but when we look at these very broad samples of electric utilities, I don't know that it would have varied considerably, because this is a—I believe this is a fairly representative—when we do the FERC work, we also screen on credit ratings, and we have high credit companies, we have those that are classified by Value Line as electric utilities. So two of those

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screens are already there, but when we narrow it down further, we can make sure that we have those that are heavily concentrated in the electric. We have some that are a combination gas and electric utilities. Those can make it through the FERC screen if they're still classified as an electric utility even though some of them are almost as much as a gas company as they are an electric company. So by doing it this way we can refine the analysis, and as a practical matter when we do risk analysis as we do here, we like to do that risk analysis at the operating company level. And when I'm doing it 7 companies, I think we have 17 operating subsidiaries that we're looking at, and we can do detailed risk analysis all the way down to the regulatory treatment that they have in their various jurisdictions, we can look at the various operating characteristics and things of that nature. So it allows us to do a much more fine-turned analysis about how the risk of the target company compares to those we're using for the proxy company analysis. If we

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were to try to do that for 30 or so companies, it would be—there would be a much higher degree of effort, but I don't think it would provide any greater clarification or benefit in terms of setting the allowed return.

GREENE, Q.C.:

Q. Okay. Even –

MR. COYNE:

A. The nature of the risk analysis that we do here is much more detailed than for example we typically present in the U.S. because it's generally considered that when you screen on the--the types of screens that we've done here, that that's sufficient for cost of capital analysis. But we go to an extra level of risk analysis here because there is more concern about just how comparable—it started off with the concern about just how comparable the regulatory treatment is for these companies. That's why we do it at this detailed level, specifically for Canadian regulators.

GREENE, Q.C.:

Q. Now in your response that I took you

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through, you did say there would be no material difference. It would be essentially the same even if you had used all of those companies without doing that detailed analysis. Is that your position?

MR. COYNE:

A. That there would be no material difference?

GREENE, Q.C.:

Q. In the recommended ROE.

MR. COYNE:

A. Well, I mean, I go by the numbers. You know, so if the numbers came out differently, I would have to consider that, but the thing here is that the numbers are based on a much tighter band of companies that look more like Newfoundland Power. So if I did it on a broader group of companies, then I think I would have to say within that very broad group where does this company exist from a risk perspective? Here we've narrowed it down to something that's much more fine-tuned.

GREENE, Q.C.:

Q. Okay. Moving off the proxy group, once you have determined the appropriate proxy group,

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then in this particular case I understand you've used three different methodologies to determine the appropriate ROE for each of the proxy groups. Is that correct?

MR. COYNE:
A. Yes.

GREENE, Q.C.:
Q. And I'd like to talk a little bit about each of the methodologies, and perhaps if we could go to page 3 of your report?

MR. COYNE:
A. Um-hm.

GREENE, Q.C.:
Q. Where Figure 1, nicely summarizes each—the result for each of the methodologies. Okay. So as I understand your evidence, Mr. Coyne, you did use CAPM, the constant growth DCF and the multistage DCF methodology for each of the three proxy groups, and then you averaged the results for each of those three methodologies for each of the proxy groups?

MR. COYNE:
A. Yes.

GREENE, Q.C.:
Q. Okay. I wanted to talk first about CAPM. I understand that you're not a fan of CAPM?

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MR. COYNE:
A. I think CAPM is a very useful tool, and I think in all jurisdictions where I present cost of capital analysis with the exception of FERC, I present CAPM along with DCF. The problem that we're running into with CAPM is it has three inputs, and as we've seen just by the questioning over the past three days, those inputs could be subject to considerable controversy and differences of opinion between experts. And that's one issue. And the second issue is that with capital market conditions the way they are, it's affected the risk free rate significantly. I think Dr. Booth and I would certainly agree to that. And as a result of that, you end up overlaying a lot of judgment one way or the other with a CAPM low (phonetic). Even Dr. Booth does this with his analysis in order to get reasonable results. And what I dislike about that is that whenever you're using judgment as opposed to capital market information, you can get wide differences of opinion

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regarding those judgments. And I don't think that's the best position to put a regulatory body in, is to have to determine the judgment of expert A versus expert B when they can rely on something that I consider more objective, and I think many regulators do, and that is the more direct market information you get in order to use the DCF model. So that's why I prefer it, especially in current capital market conditions.

GREENE, Q.C.:
Q. What is the primary method used in American jurisdictions to determine the ROE?

MR. COYNE:
A. Most jurisdictions would put heavier weight on the DCF model and many look at the CAPM or what's called a bond-yield-plus-risk-premium estimate as being a corroborating method to see how it looks, vis-à-vis the DCF results.

GREENE, Q.C.:
Q. Okay.

MR. COYNE:
A. Some jurisdictions use the DCF exclusively.

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The FERC is one of those.

GREENE, Q.C.:
Q. Okay. Now you have just –

MR. COYNE:
A. And I should say I'm not aware of any jurisdiction that uses the CAPM exclusively in the U.S., yeah.

GREENE, Q.C.:
Q. You have outlined your concerns with respect to CAPM in the current market conditions, and you also did that in your report on page 34. In order to address what your concerns are because of the current market conditions, I understand that you have made adjustments, and if we could go to page 35 of your report, please? And there, at the top of the page in lines 1 to 5, you outline that you have attempted to address your concerns, that you've also outlined this morning by using forward-looking inputs including a forecasted Canadian risk-free rate, a market risk premium that combines both Canadian and U.S. market inputs, including historic and forward-looking estimates, and you have also adjusted the

beta coefficient for the proxy companies. I wonder now if we go to PUB-NP-064. So Mr. Coyne, those were the three adjustments you have stated that you made to what I will call the pure CAPM, and the adjustments were made to reflect the current market conditions. Is that correct?

MR. COYNE:
A. Yes. In the case of the first two, the adjusted beta coefficients are standard.

GREENE, Q.C.:
Q. Yes.

MR. COYNE:
A. So they're not anything that I've adjusted to try to reflect current market conditions. They're just those that we estimate with the standard—well, we pull with the standard adjustment mechanism to them.

GREENE, Q.C.:
Q. Yes.

MR. COYNE:
A. But I haven't adjusted them per se.

GREENE, Q.C.:
Q. Okay. You've anticipated one of my questions I was -

MR. COYNE:
A. Okay.

GREENE, Q.C.:
Q. If we could go through the response, and if you look at the question, the question was, "Please confirm that the adjustments to the CAPM model referred to are reflected in the 9 percent that you have recommended and state what the unadjusted CAPM would be." So here we're trying to get, similar to what the Board had done in its previous decision, what would be CAPM and what adjustments should be made to adjust or reflect for the abnormally-low Canada bond rates and for the current market conditions? So here, if we could just go through, you have acknowledged that if you used the risk-free rate instead of your adjusted risk-free rate, that would reduce it to 2.24, is that correct?

MR. COYNE:
A. Yes, as of August 29, yes.

GREENE, Q.C.:
Q. Right, as of that date. Now your adjustment is that instead of using that, and what was—that was the forecast for what period of

time? One year? Two years? Three years?

MR. COYNE:
A. That looks like that was a spot bond yield as of 8/29.

GREENE, Q.C.:
Q. Yes. And your current recommendation is that a three-year forecast of the risk-free rate be in effect during—that being the period of time you anticipate the rates from this application being in effect, is that correct?

MR. COYNE:
A. Yes, two reasons. That and also that investors take a forward-looking view from a cost of capital analysis perspective. So you capture both the forward-looking view in markets, what would they expect a normalized equilibrium risk-free rate to look at, in addition to the fact that rates are expected to be in over that period of time.

GREENE, Q.C.:
Q. Okay.

MR. COYNE:
A. Yeah.

GREENE, Q.C.:

Q. And we've already talked about your next one that you had said was an adjustment, the Bloomberg beta .64, but that is not an adjustment to reflect the market conditions. It's just a standard adjustment the way you do it, is that correct?

MR. COYNE:
A. Well, it's a standard adjustment the way Bloomberg does it.

GREENE, Q.C.:
Q. Adjustment.

MR. COYNE:
A. Yes.

GREENE, Q.C.:
Q. And that you would accept for the purposes of suggestion what the beta is?

MR. COYNE:
A. Yes.

GREENE, Q.C.:
Q. Okay. Now the market risk premium you have indicated here is 6.3 percent and instead of your 7.6 that you recommend in your opinion. And the difference being you're not using forward-looking estimates. That's one difference. Is that correct?

MR. COYNE:
A. I'm sorry?
GREENE, Q.C.:
Q. The market risk premium you have here –
MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. - is 6.3 percent. In your opinion you have recommended that market risk premium is 7.6 percent which includes not only the historic market risk premium, but a forward-looking market risk –
MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. Okay.
MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. So that is the difference there with the traditional way that has been accepted of doing the market risk premium, it's looking more at the historic and forward-looking? Is that –
MR. COYNE:

A. That's right. You know that was the way it was done for years. And when capital markets were more of an equilibrium state, then you had—if you had average bond yields, it reflected the history over which that historic market risk premium was calculated, then that was an appropriate relationship. But we now know that's clearly not the case, so as a result of that, the market—the market risk premium does vary. It varies with time, and it varies with capital market conditions, and importantly it varies with the level of the risk-free rate. So you're missing out on that -
GREENE, Q.C.:
Q. Yes.
MR. COYNE:
A. - is why we're trying to capture that with a forward-marketing—we do it two ways. We look at the forward implied market risk premium doing the DCF analysis, and we also did it using the regression analysis that looks at the historic relationship between market risk premiums and government bond yields.

(9:30 a.m.)
GREENE, Q.C.:
Q. Okay. So when you add on the floatation costs, it comes up to 6.8 percent. Without the floatation costs we are about 6.3 percent. So the adjustment that you're making for the current market conditions between--I'll call it a normal CAPM.
MR. COYNE:
A. Yeah.
GREENE, Q.C.:
Q. Not taking into account the market. And your recommendation of 9 percent, and so is the difference between your 9 and your 6.3, that is what you're saying is the appropriate adjustment to make to reflect the current market conditions?
MR. COYNE:
A. But with one exception, that both--the nine would include floatation costs.
GREENE, Q.C.:
Q. True, okay.
MR. COYNE:
A. And the 6.8 would.
GREENE, Q.C.:

Q. Okay.
MR. COYNE:
A. So the difference would be the 6.8 to the 9.
GREENE, Q.C.:
Q. Okay. So 220 basis points?
MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. Okay.
MR. COYNE:
A. That's the effective—the affect of those adjustments, yes.
GREENE, Q.C.:
Q. Okay. Now Dr. Booth in his opinion has also made adjustments to CAPM as he has determined it, and we will go through that with Dr. Booth. And his adjustment turns out to be about 175 basis points, a 50 percent of the credit spread and then the, what I'm calling the operation-twist adjustment for a total of about 175 basis points?
MR. COYNE:
A. That's right.
GREENE, Q.C.:

Q. Okay.
MR. COYNE:
A. But the difference is of course that in addition to that he's using a different beta.
GREENE, Q.C.:
Q. Yes.
MR. COYNE:
A. He's using his adjustments to that, and he's using a different market risk premium.
GREENE, Q.C.:
Q. Right.
MR. COYNE:
A. But that's the affect of this explicit adjustments, yes.
GREENE, Q.C.:
Q. Okay, and you have stated, and I believe your opinion is that that is understated? Is that correct?
MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. Okay.
MR. COYNE:
A. Yeah. He's also used—well, okay, and those adjustments are on top of the current risk-free rate. So I guess that's where he's—his operation-twist and credit-spread adjustments amount to the 175 that you mentioned.

GREENE, Q.C.:
Q. Yes, okay. The other method, if we could go back to Figure 1 on page 3, please, the second method that you used to determine the ROE is a constant growth DCF. Is that correct?
MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. Okay. And that is one of the methods that is included in your determination of the average at the bottom? Is that correct?
MR. COYNE:
A. It is.
GREENE, Q.C.:
Q. Okay. Both use analyst forecasts, and we've already had a lot of discussion about the –
MR. COYNE:
A. Um-hm.
GREENE, Q.C.:

Q. - whether analyst forecasts are biased or not. I'd like to go—well, I don't think we need to go there, but you did recall with Mr. Johnson that the Board in the last—its last order expressed concern with respect to the use of analysts particularly with respect to the constant growth model, would you agree?
MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. Okay.
MR. COYNE:
A. Yeah.
GREENE, Q.C.:
Q. So the constant growth model was specifically rejected by the Board in last previous order, is that correct?
MR. COYNE:
A. I know that the Board only—perhaps we're saying the same thing, but I believe that the Board only gave weight to the multi-stage and it mentioned also the sustainable growth rate model of Kathleen McShane.
GREENE, Q.C.:

Q. Yes.
MR. COYNE:
A. So maybe that gets to the same place.
GREENE, Q.C.:
Q. Okay.
MR. COYNE:
A. I don't recall if they explicitly said they rejected it or not, but -
GREENE, Q.C.:
Q. Well, they said they would only give some weight to the multi-stage DCF because of the use of--I can take you to the quote. Okay.
MR. COYNE:
A. I accept that.
GREENE, Q.C.:
Q. Okay, so -
MR. COYNE:
A. Yes, and that's—and I read that carefully, and that's one of the reasons why I included the multi-stage DCF in the analysis.
GREENE, Q.C.:
Q. But you still included the constant growth as well?
MR. COYNE:
A. I did. It's a standard approach to

estimating the DCF. It's a rarity to present it without presented both the constant growth version as the baseline. And if anything, it shows you the difference between moderating those assumptions.
GREENE, Q.C.:
Q. Okay.
MR. COYNE:
A. So you would typically not present it only without presenting the constant growth.
GREENE, Q.C.:
Q. Okay. And the multi-stage forecast, and I'm not going to go through each of these methods because you have gone through them with Mr. Johnson, also use analyst forecasts, but for different periods and with the theory being that the—one way of expressing it that the biases reduces the shorter period with the different rates. So of the ten years what you have used, so the likelihood of biases being less than in the Constant Growth model, if there is any bias, if there is, so it is moderated. Is that correct?
MR. COYNE:

A. Yes, and there's that, and also there's the—there is a belief that over time that these utilities that are tied so closely the economy are going to move with the economy over time.
GREENE, Q.C.:
Q. Okay. During the Request for Information process you were asked what has changed since 2013 to lay the Board's concerns that they had expressed with respect to the use of analyst forecasts. Could we go, please, to PUB-MP-056?
MR. COYNE:
A. And did you say 056?
GREENE, Q.C.:
Q. Yes, yes. And you've also had some discussion in this hearing with Mr. Johnson as to why the Board should not be concerned that analyst—that there is in fact analyst bias that influences the results. I just wanted you to confirm as I understood this answer and a similar one in PUB-MP-092 which I don't think we need to go to, is that there's nothing new—nothing has changed since 2013 when the Board issued its order

that would say "ah-ha." There is—we can—you can't turn to a change in the market or any other factor to show that there has been a change which demonstrates conclusively there's no bias. I read your answers to both and in fact your evidence during the hearing that the concern is not well grounded? And you have explained why you believe there's no basis for the concern. And I'm trying to determine if there's anything new that the Board could look to to say that since 2013 there—we are now totally satisfied there's no influence of bias from the analyst forecast?
MR. COYNE:
A. Yeah, I'm not sure that I can do that, and I'm not sure that things have changed materially between 2013 and today in the regard. I think what I hope would—the Board would consider is that utilities are different than Apple and Google and other companies that have volatile earnings. These are companies that are by and large very predictable. If there's one thing that we've learned through some of the exhibits

presented by Mr. Johnson is that Newfoundland Power, as are other utilities, are pretty predictable companies. Their earnings are based on a return on equity applied to rate base, and neither of those things are very volatile. So it doesn't take a rocket science for an analyst to sit down with their model and predict what earnings are going to be for these types of utilities. And they typically project earnings growth based on what's happening with rate base, and those projects are known well in advance. So they have a lot of transparency into utilities, and I think any analyst worth their salt can figure out that business model pretty readily. So I understand the general concern and--around that, but if that is the general concern, it should certainly be diminished for companies like utilities that operate in a very transparent way and have a pretty simple and straightforward business model compared to these more complex entities that are involved in multiple businesses and multiple geographies and countries doing business in

China and things of that nature. Those are going to present a lot of earning surprises and where analysts typically stumble, I think all would agree, most is with earning surprises. They're not able to project, and I think very few people were able to project exactly what's going to happen with the Chine economy for example, and the impact that that was going to have on world oil prices as a result and other factors. So those are factors that impact the broader economy and broader companies more so than they do directly a regulated utility. So as a result of that, if there is a concern for optimist bias, it should be less, whatever it is, when it comes to utility companies. And then, if that concern that still exists, then I hope that's even further moderated by using the multi-stage approach where we'll accept what they say for five years. We think they can figure that out, and after that we'll all agree that they can probably grow somewhere along the pace of the overall economy. This is what FERC has now accepted as we talked about for their methodology for

all electric transmission companies, oil pipelines and gas pipelines, and I think it's a reasonable approach.

GREENE, Q.C.:

Q. Another concern expressed by the Board in its last Order is with respect to using American data without any adjustment, and it's very clear your position is that the American and Canadian markets are fully integrated, and I wanted to bring you first to the Board Order – Mr. Johnson hasn't done this yet, but if we could go to Board Order #13 from 2013.

MR. COYNE:

A. And which page, please.

GREENE, Q.C.:

Q. Page 31, lines 1 to 11. I won't bother to read it out, but you can see that the Board has accepted that there should be an adjustment when considering U.S. data to reflect differences between the marketplaces, and in that particular case the Board found an adjustment of 50 to 100 basis points was appropriate. Your opinion is that no adjustment is required, I assume,

because you have used the American data for your U.S. electric utilities and your North American electric group without any adjustment?

MR. COYNE:

A. That's right. Two points on that. One is the BCUC has since reversed that position, so they now no longer make an explicit adjustment for U.S. data versus Canadian data, and secondly, as we talked about, there is a difference in the underlying risk free rate between the U.S. and Canada, and the temptation might be to look at that and say that's a basis for adjustment, and I think that was probably some of the thinking behind the BCUC at the time, but as we showed, that's only – if you're looking at that as an indication of the cost of capital for utility company, you need to look at what the credit risk spreads are on top of that, and as we showed, if you do that, it's only an 11 basis point differential right now between the cost of "A" rated utility debt in the U.S. versus Canada. In that sense, I feel as though we have it

addressed, so there's no need to make an explicit adjustment, or I suppose if one wanted to, one could look at 11 basis points and say I think that should be the adjustment, but I think that's fine tuning more than one really can. I think the second piece of data one could take in response to Mr. Johnson, as you recall, we reran the CAPM numbers using just U.S. data for all the proxy groups, and when we did so, that brought down our average for the North American proxies across all methods to 9.5 percent. So that didn't cause any change in the recommendation on that basis. The bottom line is, no, I don't think it's necessary to make an adjustment for U.S. data versus Canadian data, and if one wanted to use Canadian data only, one could look at the Canadian regulated utilities, but you can see there the average is much higher at 10.7 percent. So I don't think that's a better result, and I don't think that's more indicative of the fair return for Newfoundland Power. I think it's lower. I think it's the 9.5 percent that we recommended.

GREENE, Q.C.:

Q. And, of course, in order to make that comparison, you accept your adjusted CAPM and you accept your constant growth for the Canadian utilities, because that's how you come up with your 10.7, which is higher than the 9.5?

MR. COYNE:

A. That's correct, yes.

GREENE, Q.C.:

Q. I'll come back to that –

MR. COYNE:

A. And as I've talked about, I put even greater weight on the multi-stage, and you can see that that's 10.3 percent for the Canadian utilities, but I don't think that's a better result to use for these purposes because I don't think those companies are as much like Newfoundland Power as is the North American proxy group.

GREENE, Q.C.:

Q. If you'll go back to Figure 1, please, on page 3, because it's a very good summary of your opinion in numerical format, you will

recall that the Board in its last decision had said that, "It will continue to give primary weight to the results of CAPM", is that correct?

MR. COYNE:

A. Yes.

GREENE, Q.C.:

Q. As I understand how you did your methodology, you would be giving primary weight to the DCF method, is that correct?

MR. COYNE:

A. Yes.

GREENE, Q.C.:

Q. In the lines below your table, you are saying that your recommendation, if you look at 13, your recommendation is just below the average of 9.7, which is now 9.5 if you use the data Mr. Johnson has with respect to using the Canadian risk free rate for the U.S. utilities, the North American group, so you're saying that, "It's supported by all of the methods except Canadian CAPM". So if primary weighting is to be given to the CAPM, your recommendation would be lower, of course?

MR. COYNE:

A. If it were to the Canadian CAPM, yes, but I would really have concern about the proxy companies that we're using for those purposes and the aforementioned discussion around the challenges of all the inputs to the CAPM right now. The concern I have for the Board with the CAPM in a nutshell is that it puts the Board in a difficult position that they were in last time of having to look at evidence from different experts and deciding what it thinks the risk free rate should be, what it thinks beta should be, and what it thinks the market equity risk premium should be, and I think that's a difficult position to put a Board in, and that's why I believe that many more regulators put stock in the DCF because it takes them out of the business of trying to second guess these important capital market inputs, and it gives them a much more, I believe, objective model to be able to utilize.

(9:45 a.m.)

GREENE, Q.C.:

Q. With respect to the multi-stage DCF being objective, there are still significant inputs that go into the DCF where judgment is required with respect to the selection of the inputs, isn't it?

MR. COYNE:

A. Yes, but they're not – the thing is none of those – yes, we've selected those inputs, but the dividend yield in the stock price data is coming from the market, so there's no adjustments to those, those are just what they are, and the thing is if I show up here in two years, I'll still be using that methodology with those inputs. That's not going to change. So there are judgmental factors that are going to move that around. There are some commissions in the U.S., for example, that adopt a DCF model if they're looking to replicate what was done in Canada by way of a formula. The Pennsylvania Commission, which allows companies to put new infrastructure investments into rate base between rate cases, they've adopted a program where the company can file a five year rate plan and with that five year rate plan it can earn a return on those investments as they proceed. So they can stay out of rate cases, but still earn on the investments, and they've put in place a DCF model that the Commission calculates and every quarter it's updated by the staff, and it's mechanical, you don't have to second guess what I need to do with beta or MRP or the risk free rate. So it's objective, it's capital market information that I would compute the same way. It takes a lot of these debates off the table, which I think is a much better position in a board staff then. That's why, especially in current capital market conditions, I think it's a much more pragmatic approach for a regulatory body.

GREENE, Q.C.:

Q. And obviously that's not widely accepted because we still have rate hearings, especially in Canada where there's still a lot of debate, so even with what the right method is or using DCF, it's not as simple as saying two and two is four, is it? There's still judgment to be used with

respect to the inputs even using DCF?

MR. COYNE:

A. It does create some occupational security for people in my business or Dr. Booth's, but I would argue that I think a lot of the contention is because of the inputs to the CAPM model are so subject to judgment, and that doesn't have to be the case if you go to a more objective model.

GREENE, Q.C.:

Q. Turning now to the capital structure, I understand from your report and your evidence to date that you have determined that Newfoundland Power has higher business risk than the Canadian proxy group, but comparable financial risk, is that correct?

MR. COYNE:

A. Yes.

GREENE, Q.C.:

Q. Okay, so if we were to look back at the four companies in the Canadian proxy group, your conclusion is that Newfoundland Power is riskier than Emera with respect to business risk?

MR. COYNE:

A. Yes. Well, riskier than the group in total with respect to business risk.

GREENE, Q.C.:

Q. But you would have looked at it with respect to each of the individuals in the group, I assume?

MR. COYNE:

A. We did, right, we boiled it down to the various pieces that we looked at there, their operating, the volume risk, the regulatory protection that they had, things of that nature.

GREENE, Q.C.:

Q. So would you disagree that your opinion would lead us to conclude that Newfoundland Power is riskier than Emera?

MR. COYNE:

A. I think based on its size and the economic prospects and the role that Muskrat Falls will play for the company on a going forward basis, I would say it is riskier than – well, Nova Scotia Power in this case, yes.

GREENE, Q.C.:

Q. In reviewing the risk for each of these companies in your proxy groups, you used six

factors, and I just wanted you to – they are listed on page 18 of your Appendix "A", your report on capital structure, is that correct, being power supply, risk, and prices, the macro-economics, and demographic conditions. Perhaps if we go to page 18 of Appendix "A", these are the six factors that you examined each of the proxy groups for, is that correct?

MR. COYNE:

A. Yes.

GREENE, Q.C.:

Q. Okay. In your evidence, you have drawn a conclusion that Newfoundland Power's business risk has increased since the last GRA, is that correct?

MR. COYNE:

A. Yes.

GREENE, Q.C.:

Q. If that risk had not increased, if it had remained the same as the last time, would your opinion – what would your opinion have been with respect to Newfoundland Power's business risk compared to the Canadian proxy group?

MR. COYNE:
A. I didn't evaluate it that way. I think the risks that either have emerged or that are on the horizon for the company have moved it towards the edge of that risk envelope, so it would have brought it back to be more like an average risk Canadian utility, and I think – I say that because of the sum total of its financial metrics and its operating characteristics, in addition to its equity ratio that I think compensates for some of the characteristics that make it riskier than its Canadian peers. So on balance, I think that would have brought it back to – it would have certainly lowered the risk without these new risk factors being primarily the economy and the role that Muskrat Falls is playing.
GREENE, Q.C.:
Q. Okay. So you're comfortable – would you agree that – I believe you would agree that they were an average risk at the time of the last hearing?
MR. COYNE:
A. Yes.

GREENE, Q.C.:
Q. So what's driving your opinion are the changes you have determined to have occurred since 2013?
MR. COYNE:
A. Yes, and I have to say, but I didn't do a detailed analysis of what its risk was in 2013, but my general sense of that is, yes.
GREENE, Q.C.:
Q. Okay, and, of course, in the past the Board has found Newfoundland Power to be an average risk utility, is that correct?
MR. COYNE:
A. Yes, I understand.
GREENE, Q.C.:
Q. And again Newfoundland Power has put forward the position in previous rate cases that it is an average risk utility, is that correct?
MR. COYNE:
A. Yes.
GREENE, Q.C.:
Q. Okay, so what's driving the change in the position is the changes being the economic outlook and the risk associated with Muskrat Falls, is that correct?

MR. COYNE:
A. Primarily, yes.
GREENE, Q.C.:
Q. So the economic outlook, we've talked a bit about that, and we understand what the uncertainty is that you're referring to for the economic outlook. My question is if that was the only risk that had changed, how would that have influenced your opinion if there was no Muskrat on the horizon?
MR. COYNE:
A. Well, the company is a very small one by virtue of the utility landscape. It's certainly one of the smaller ones in the proxy analysis companies. So that would be a factor, but I think it's the economy and Muskrat falls together that caused me to conclude that its above average risk. If it were not for Muskrat Falls is your question? I guess, I would say – I don't want to parse words with you, that's probably not even helping your question, but moderately higher because that's a pretty significant difference in the economic outlook in this province versus others, but I think it's

something that would be noted by an investor. When we work with investors that are looking at utility companies, one of the things that they look at very closely and we look at for them is what's the macro-economic outlook, and there's a reason why they want to look at companies that are in more rapidly growing areas because they feel like that represents opportunity for growth and earnings over time. So when we work with investors and they're looking at utilities that are in slow growing or no growing service areas, they consider that a negative factor, and that means they are less interested in those types of investments which drives up their required return on them.
GREENE, Q.C.:
Q. I know you have read some of the transcripts from before, the previous testimony. Are you familiar with the impact in the early 90s of the cod moratorium?
MR. COYNE:
A. Generally, yes.
GREENE, Q.C.:

Q. So you are aware that Newfoundland's economic outlook at that time was also negative, given the structural changes in the fishing industry?
MR. COYNE:
A. Yes, I understand there was a significant impact on the economy.
GREENE, Q.C.:
Q. What weight would investors consider the historic performance of Newfoundland Power when the economic outlook was also negative and the cost recovery mechanisms that Newfoundland Power has in place here in this jurisdiction?
MR. COYNE:
A. So what would their outlook have been during that period of time?
GREENE, Q.C.:
Q. No, the fact that we went through a historic period where there was an economic outlook that was negative, did not affect Newfoundland Power's performance or credit rating, would that be something investors would take into account in assessing the risk?

MR. COYNE:
A. I think –
GREENE, Q.C.:
Q. Now, the current -
MR. COYNE:
A. That was a long time ago, so I'm not sure how much stock investors would take in that piece of history because our economies are very different ones these days than they were then. I think labour is more mobile these days, and I think that's one of the things we're seeing in this province. It used to be that economies dealt with their blows as they came along, but these days we see capital is more mobile and labour is more mobile, so if times are bad in the oil industry, for example here, you may lose that labour and it may not come back; you may lose that capital and it may go to other places. So the adjustments to economic disruption are different today than they were then, so I'm not sure how much stock an investor would take in the fact that the company was able to navigate the difficult waters of the cod moratorium. What I think

an investor would look at is that it's not just a near term blip, you know, the long term economic outlook over the next decade and longer is for a pretty flat economy in the province, and that is not a positive attribute from a risk standpoint.
GREENE, Q.C.:
Q. And how would they take into account the supply cost recovery mechanisms Newfoundland Power has in place including, for example, there is a disallowance for bad debt that it gets included in Newfoundland Power's revenue requirement that gets recovered from the paying customers?
MR. COYNE:
A. Right, that's typical to have bad debt recovery allowance for utilities, so I don't think they would look at that as a mitigating factor for the significant increase in supply cost. Bad debt would be the tip of the iceberg. You know, the more fundamental issues associated with increasing power supply costs are how do consumers adjust; do they consume less electricity, do they decide that they're

going to consume more alternative fuels, or do they decide if they're a business that they're going to relocate elsewhere where they have a more favourable cost supply profile. So you get all those adjustments and some of those happen in the near term and some over the longer run, but as we talked about yesterday or was it the day before, I'm not aware of any company right now, any electric company, that's looking at such a dramatic increase in supply cost over such a foreseeable short period of time.
GREENE, Q.C.:
Q. Okay, so we've -
MR. COYNE:
A. The only one that comes close, as I mentioned, is OPG, but OPG is absorbed into the broader Ontario market with a project of that size.
GREENE, Q.C.:
Q. So now we've gone from the economic outlook, which gets exacerbated when we look at the increasing supply cost is what I take from -
MR. COYNE:
A. Those are the two key factors that we see

and it's distinguishing, yes.

GREENE, Q.C.:

Q. So let's turn to Muskrat Falls because it is significant in your opinion, and your opinion being that it's a significant contribution to why Newfoundland Power is now above average business risk. I really want to discuss with you and try to get some clarity around what the risk is, as you perceive it, and you did have some discussion with Mr. Johnson yesterday and it's at the transcript of yesterday, page 185, and it begins at line 19. It goes over to page 186 as well. I just wanted to refresh your memory, and then I'm going to tell you what I took from that to see if I'm on the same page as you are.

MR. COYNE:

A. Yes.

GREENE, Q.C.:

Q. One concern with respect to how significant the risk is for this GRA is the timing, and I believe you have acknowledged that how the Muskrat Falls costs will be determined and passed on to rate payers is most likely

beyond the horizon for this current rate case, is that correct?

MR. COYNE:

A. The only understanding I have is that its last schedule date for in-service was 2018, would be the last likely date that rates would be in effect in this GRA.

GREENE, Q.C.:

Q. Okay.

MR. COYNE:

A. But I also understand, as you mentioned, there could be some slippage in that date which wouldn't be surprising, given the large scale of the project. So it could be that the actual power doesn't flow until after this GRA, but the risk is there, you know. The credit rating agencies are already writing about it, so an investor would certainly be aware of it, and a consumer would be aware of it as well. So there's no reason to believe that the risk will not materialize the very date that the power starts to flow. Consumers will start making adjustments at least on the margin beforehand. If they think they're going to

see a 50 percent increase in power supply costs, I think they'll be concerned with that, and credit rating agencies are looking at it in terms of the credit rating for the company, and what it could mean in terms of its long term ability to fully recover its cost. That's why I think it's in this horizon, even though the megawatt hours are principally going to be probably in the next GRA.

(10:00 a.m.)

GREENE, Q.C.:

Q. I guess, that's what I wanted to talk to you about, what is in this near term horizon. So let's go back. We have a concern about the cost of Muskrat Falls?

MR. COYNE:

A. Yes.

GREENE, Q.C.:

Q. Because of the significance and how it relates to the current investment of both utilities in Newfoundland, so we know it's a significant cost that's going to be added to be recovered from customers. We don't know how much, is that correct?

MR. COYNE:

A. Not precisely. We know that it's estimated by Nalcor as being over 50 percent, but we don't know precisely. My guess is, though, with these projects, it's probably not going to go down, but there could be tools that the Board has to use that would help to mitigate that cost increase over time, stretching it out over time, but I certainly agree that the precise number is not known yet.

GREENE, Q.C.:

Q. So we know it's big, but we don't know how big at this point?

MR. COYNE:

A. Right, and not knowing how big is an uncertainty in and of itself.

GREENE, Q.C.:

Q. And then we don't know when customers are going to have to start paying for it. As you have indicated, it's supposed to be in service in 2018, but let's assume that it's not going to be, which right now seems to be a fairly realistic assumption that the earliest might be 2019, so that would be

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beyond – so let's assume for this discussion it will be beyond the time frame that rates from this GRA is in effect. When investors look at it and when you're looking at it to determine the risk, it is not the risk of actually starting to recover the cost that's a near term risk, is it?

MR. COYNE:

A. No, it's the long term outlook for the company. You know, utility investors typically take a long term outlook. These are buy and hold type stocks, so when they make an investment in a utility, they're typically looking at a longer term horizon because you can with these companies. You know what the projects are, you know what the cost profiles are going to be. People know a lot about energy markets these days, investors know a lot about energy markets, so they're looking at fuel costs. If they're looking at a company that's gas fuelled and gas prices are coming down, they're going to see that as a positive in terms of economic growth in the service area for an electric utility that's primarily

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relying on natural gas, for example, given all that's going on with Marcellus and Shell. So these are all things - if you look at an investment, an analyst report, just as we looked at the Moody's report, they're already factoring it into their analysis. So those do sway investor opinions even now, even before this impact has happened because you can anticipate what the impacts are going to be. Capital markets are pretty efficient in that regard and they get factored into stock prices today for events that are going to happen tomorrow.

GREENE, Q.C.:

Q. And based on what you had said yesterday, my understanding is that what the concern is, what the risk is, it's not that the cost will be recovered given the supply cost recovery mechanisms that are in place, and the additional regulatory tools that you just referred to that are available to the Board, so it's not a risk of recovery of cost, is it?

MR. COYNE:

A. Moody's characterizes it that way. I think,

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more practically speaking, what happens when a utility runs into a situation like that, is that the mechanisms are in place with the existing RSA mechanism for it to pass through in its power supply cost, but it does a couple of things. One is it creates – there are demand elasticities associated with it, so consumers will find a way to consume other fuels, which means that between rate cases if your demand is shrinking and your customer count is held flat, you typically have a harder time recovering your allowed rate of return. So you get attrition in your earnings as a result of that when you're facing those types of cost pressures.

GREENE, Q.C.:

Q. So that -

MR. COYNE:

A. But I would not see this Board walking away from its regulatory compact.

GREENE, Q.C.:

Q. Which is that the utility must recover its prudently incurred cost, plus an appropriate return?

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MR. COYNE:

A. Yes. So it's on the margin, it makes it harder for a company that's struggling under high power supply cost to keep its customer demand growth – customer consumption demand growth growing. It will have an impact on those, and on the margin, that puts pressure on earnings.

GREENE, Q.C.:

Q. You used that phrase yesterday, so when you say "on the margin", it's not the risk of recovery of the cost, you're really saying because it puts more pressure, it may affect Newfoundland Power's growth in revenue, and it will impact possibly what its net income would be?

MR. COYNE:

A. Yes, both those things.

GREENE, Q.C.:

Q. So if we come back, that's the real risk with Muskrat because even when you referred to the reliability risk, it's not the fact that the lines may come down and Newfoundland Power may have to go do additional repair work, it's the cost associated with it if there is a reliability issue, is that correct?

MR. COYNE:

A. Absolutely right, it's all about the cost.

GREENE, Q.C.:

Q. And again I gather you, in your discussion with Mr. Johnson yesterday, you did agree that there is more uncertainty about reliability than there might be on the timing for Muskrat, we don't know what impact there will be, is that correct?

MR. COYNE:

A. That is correct. I understand it's under study by the Board, and even though it's under study by the Board, I think it's a practical matter that'll take years of experience to see how the line operates in various types of weather and storm conditions, and whether or not outages are an issue or not.

GREENE, Q.C.:

Q. So in terms of your assessment of the business risk, it goes back again to reliability, affects cost, the cost could affect pressure on Newfoundland Power's customers, and its growth in its earnings,

its revenues, net income, not on its ability to actually recover its cost, is that -

MR. COYNE:

A. Yeah, in order for it to not recover its cost, it would have to get into a pretty dire circumstance, a so-called "death spiral" where its customers are leaving its system, they're installing backup generation, they're saying the heck with these power prices, I'm going to put in my own solar and wind facilities, and these days we have micro-grids that are being – in New York State, they're being encouraged by the regulator there in a program called "New York REV", to actually take groups of customers and take them off the system. So if you had regulatory policy changes like that, that are a response to Muskrat Falls to take large blocks of customers off the system, then I think you have a bigger problem.

GREENE, Q.C.:

Q. But that's not what you're concerned about at this point, that did not influence your risk assessment?

MR. COYNE:

A. Not at this point in time, no.

GREENE, Q.C.:

Q. So we know – I have a clear understanding of what you see the risk as, based on your oral evidence yesterday and today. My question is how do you assess the materiality of that? You say the risk has increased. The risk is the increased pressure for Newfoundland Power's revenue, the risk is not that it won't recover its prudently incurred cost. How do you assess how material that is?

MR. COYNE:

A. Well, it's hard, because we're doing a comparative analysis between a group of utilities and it's directional. So the directional nature of these risks don't lend themselves to quantification, so I can't say that one is a five and the other is a four per se. So we ask the question, are they an average risk utility, and the answer is, no, these are significant factors that place them at a distinct disadvantage vis-à-vis their Canadian and U.S. peers, because they

aren't looking at a 50 plus percent increase in power supply cost in the weakest economy in Canada, and one of the weakest in North America. Those are two pretty significant factors. So the regulatory protections are in place. This board has a good reputation as being a fair board over time as a regulator, so there's no reason to believe that the board is not going to attempt to work with the company during this period of time as it has in the past, but if you compare it to the universe utilities, it's like taking a group of students, you know, they're not all going to be average, some are going to be A+ students, and some are not, and if you look at that group of students and you say one clearly has characteristics that doesn't look like the other, you would say that's not an average student. So on that basis, you would distinguish it from its Canadian and U.S. peers, but I didn't look at it to the point where I made any adjustment to the recommended ROE. I'm just saying that this is a risk factor for the company that puts it to the upper edge of the risk spectrum, vis-à-vis average, but I didn't say it's beyond the point where this proxy group is no longer relevant. We still use the proxy group, and it's the average results from the proxy group that we're using to determine the allowed ROE, so I didn't make any adjustment. I'm just saying from a qualitative perspective, if you were to ask is it the middle of the road, or the low end of the risk spectrum, or the high end, you would say on that basis it's beyond average. So I didn't attempt to say that it's right at the very edge here, just beyond average. I could make that determination based on this data and analysis, but it's qualitative, and risk inevitably is, but investors would have to look at it the same way.

GREENE, Q.C.:

Q. And in your report, you described it as "somewhat above average", which ties into what you just said?

MR. COYNE:

A. Yes.

GREENE, Q.C.:

Q. It's not some – again, I guess, you would agree that it is a matter of opinion how that risk would get assessed and whether, in fact, other people would agree that it was above average risk?

MR. COYNE:

A. Yes, but again Moody's certainly points it out as well, so it's not just our conclusion in that regard.

GREENE, Q.C.:

Q. But at this point in time, Moody's has not in any way changed the credit rating for Newfoundland Power or taken any action as a result of that?

MR. COYNE:

A. No, it just indicates that they're watching it.

GREENE, Q.C.:

Q. Right. You've said that Newfoundland Power is above average business risk compared to the proxy group, and comparable financial risk?

MR. COYNE:

A. Yes.

GREENE, Q.C.:

Q. When you look at both of them together, how would you describe Newfoundland Power? The way I would have said, one is above average, one is average, so overall it makes them an above average risk utility overall?

MR. COYNE:

A. Well, I would come back to "somewhat". You add those two together, the operating or business risk is higher, the financial risk is the same, and that's why I think "somewhat" is probably a good word to use in that regard. It's the business risk that takes them off centre.

GREENE, Q.C.:

Q. And you said yesterday, and you just repeated it this morning, that your assessment of this risk did not affect your recommendation on the ROE?

MR. COYNE:

A. It did. It told me that I certainly didn't need to make any – well, it did, in the sense that it told me that these proxy group results are reasonable, if not conservative, for a company that's at the higher end of

the risk spectrum. If it were very different, then we might say you should make an adjustment to those ROE results to account for the fact that it has a very different risk profile, but I didn't take it to the point that it was that different enough to warrant that. In fact, I don't like to do that because if I were to give you my judgment that it's higher than average risk and that is 25 basis points, that becomes a very difficult number to defend on a qualitative basis. I would rather let the proxy group do the talking and say is it reasonably represented by that proxy group, and I would say, yes, it's a little bit above average, or somewhat above average, but it tells me that the proxy group at least is representative, if not conservatively so, of how an investor would look at that company.

GREENE, Q.C.:

Q. Did it influence your recommendation with respect to the capital structure?

MR. COYNE:

A. Well, I took it into account because that accounts for the comparable financial risk, so it is the capital structure that enables the company with its risk profile to be comparable to its Canadian peers, and I think given its business risk combined, the capital structure added up with its credit metrics in the business risk make it only somewhat above average.

GREENE, Q.C.:

Q. So I take from that answer, it did influence your recommendation on maintaining the 45 percent common equity?

MR. COYNE:

A. Yes, very much, yeah, explicitly.

GREENE, Q.C.:

Q. If Newfoundland Power were average the last time, what should I take from that with respect to its equity structure? It's been 45 percent for a long time now, which is the highest for any private investor run utility in Canada, and rate payers pay for that through the revenue requirement. Would I take from that, that because they're now above average risk, that 45 percent is required, but it may not have been before?

(10:15 a.m.)

MR. COYNE:

A. I'd say even more so now. It is at the higher end of its Canadian peers, but its 5 percent below its U.S. peers, and that's true even for the pure T & D companies that we looked at. So it has a – given its risk profile, vis-à-vis those companies, I think it's appropriate to have it at the higher end of the Canadian competitors or comparators, but I worry about still being 5 percent below its U.S. peers. There's a history in Canada of Canadian regulators allowing lower capital equity ratios than the U.S. peers, so I take that into account. That's why I'm not recommending a 5 percent increase to look like the U.S. proxy companies, but I think you have to acknowledge that gap. So that's why I recommended 45 stay in place. I think it serves as a counter-balance to these other risk factors. I would suggest to the Board that over time, as these risk factors play out, as we've talked about, it's something that should continue to be examined to see

if it's representative and appropriate for the company on a going forward basis. I understand that Canadian – I'm probably giving you a longer answer than you want, and I apologize, but I understand it is typically the case that Canadian regulators put in capital ratios and they leave them, and the same is true for U.S. regulators. They tend to put them in and leave them, and then they tend to adjust returns with the ROE that move with capital markets. I understand the track record of stability with this Commission in that regard, and I think it has been a good regulatory practice.

GREENE, Q.C.:

Q. Coming back to your assessment that Newfoundland Power is above average business risk, and you have acknowledged that this is the first time that either a consultant for Newfoundland Power or Newfoundland Power has taken the position that it is an above average risk Canadian utility, we view that as somewhat significant. In your discussions with Mr. Johnson, you did

respond to a question as to who you have met with with Newfoundland Power, and I was struck by the fact that given that the first time Newfoundland Power is saying its above average business risk, you had not met with the Chief Financial Officer, or the Chief Operating Officer, the Vice-President of Operations. Is that typical of your practice when looking at a risk, that you didn't do that?

MR. COYNE:

A. It varies, and it was – we typically rely on a lot of written information, which we did, so we pulled the reports, the various filings, we looked at past rate decisions, and also the issues before the Board in terms of its examination of Muskrat Falls and things of that nature, so we rely on a lot of data and a lot of information first and read all that, and then we ask questions about it, and we use the regulatory team at the company to answer questions that we had, that might be on that, so they served as a conduit for us to be able to gather the information we need, which is typical. There

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are times that companies will insist you have to talk to our gas supply guy, and you have to really talk to our transmission guy to really understand what's going on there, and if we have questions, we'll do that, but we felt as though we were able to get the information that we needed in that case here.

GREENE, Q.C.:

Q. And that would be your normal practice?

MR. COYNE:

A. The normal practice would be to take the written information and do the analysis on that basis, and work with regulatory teams to get information from the company that we would not have access to otherwise. The normal practice is not to interview operating personnel, but there are times that companies will insist on it, that you just have to meet with so and so, and so and so, in order to understand a certain aspect of the company that they think we really need to get, and we have people that work in gas supply, we have people that work in electric power markets, that are specialists

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in these very areas, and sometimes if we have to do a mind meld around that issue, we'll do that so that we can digest it appropriately.

GREENE, Q.C.:

Q. Now the last area that I wanted to talk to you about was with respect to a document that was filed as Undertaking #4, which is – I'll wait until we can get it up. This is where Newfoundland Power responded to a request that show what the credit metrics for Newfoundland Power would be at different ROEs and at different capital structures. Have you had the opportunity or have you see this exhibit?

MR. COYNE:

A. I glanced at it. I think I – yes, I glanced at it.

GREENE, Q.C.:

Q. Okay, so it does show what the impact on Newfoundland Power's credit metrics would be and on its interest coverage test required by the first mortgage bonds. My question is, subject to check, will you agree, this document shows that you could change

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Newfoundland Power's capital structure between 45 and 40, and that the evidence of Ms. Perry was that there would not be a significant impact on its credit metrics for all of Table 1, for all of Table 2, which these are the metrics that credit rating agencies review, and that when we came to Table 3, there had been some indication that while the credit rating agency would like to see that within the range of 15 to 17 percent and at the higher end of that range, so that she said the credit metrics would not be impacted until we probably hit around 16.5 percent in her opinion, and if you go to the next page, it does show – here it is highlighted to show you that the green would indicate no problem with the interest coverage test under the first mortgage, trust deed, yellow, may be caution, and red, you would violate the requirement, but what it does demonstrate is that there could be changes in Newfoundland Power's capital structure down to 40 percent at certain ROEs that would not impact the credit metrics or the first mortgage trust deed. I wanted you

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to comment on that. Yes, credit metrics is not the only thing that needs to be considered, but if Newfoundland Power's capital structure can be reduced without impairing its credit metrics, or its credit rating, what does that tell us?

MR. COYNE:

A. Well, I certainly would have no reason to question the company's analysis on these issues. It tells us that they have some margin within their projected – I'm wondering what period of time this is. Is this current or does it have any time dimension to it? Can we just look at the top of it -

GREENE, Q.C.:

Q. Can you go back, please?

MR. COYNE:

A. It looks like it's for 2017?

GREENE, Q.C.:

Q. Yes, that was – which was the first full year for this particular application that rates would be in effect.

MR. COYNE:

A. Well, it suggested under whatever its operating assumptions are for 2017, that it has some wiggle room before it would get up against a specific downgrade based on this metric.

GREENE, Q.C.:

Q. Could you go back, please, to the first page? Those are the credit metrics the credit rating agencies review, and as indicated, there's no yellow on that page, although there was a concern expressed, a possible concern once we hit 16.5 percent, the metric shown in Table 2. So to me, that indicates there is the opportunity to look at the capital structure without a negative impact on the financial integrity aspect for Newfoundland Power, that aspect of the ROE test. Would you agree?

MR. COYNE:

A. Do I agree that –

GREENE, Q.C.:

Q. The metrics demonstrate that there could be a change in Newfoundland Power's capital structure that would not negatively impact the financial integrity, which is one of the three things we need to be concerned about

when looking at the appropriate ROE? For example, if you go up to the first – if we just look at the 9.5 percent, which is your recommendation, we can see 40 percent capital structure, they're still quite happy – I shouldn't say "happy". They wouldn't be happy, but in terms of the credit metrics, the credit rating agencies might be quite happy.

MR. COYNE:

A. Well, I think what this shows is that there is some flexibility in these metrics at various capital structures, and even at lower capital structures, within the band of these projected allowed returns. I assume that's based on – you know, when you tend to get in trouble with credit metrics, it's not when its business as usual. I mean, you can get in trouble when it's business as usual. If you dip below those margins, that's when you get negative surprises, and that's what happened during the last financial crisis is those that were too close to the margin found that life was challenging in terms of raising capital. So utilities don't

typically like to be right on the margin in terms of these credit metrics for those reasons, and regulators don't typically like to have them there either because the consequences, as we looked at, the difference in cost between a BBB and an A rated bond rating in Canada is significant, and also the market for BBB debt in Canada is much more limited compared to the A rated market. So it's not a precipice, you want to be mindful of it, I agree with the analysis that the company has presented here, but you don't want to get so close to the edge that you're not providing yourself any cushion in case things don't work out exactly as you think it will, vis-à-vis your business plan. It also – I think any reduction in the equity ratio certainly sends a negative message to debt investors and, of course, to equity investors at a time when, as we've discussed, if it's a higher risk utility than its Canadian peer and a higher risk from a business risk standpoint, it certainly isn't an optimal time to be thinking about reducing the

equity ratio.

GREENE, Q.C.:

Q. And with respect to that, I assume that the bigger the change, the more concern there would be, but with a smaller change, for example, going from 45 to 43, if they were still well within the credit metrics that Moody's looks to for its credit ratings, there would be less concern?

MR. COYNE:

A. Less is better when it comes to risk, but it does signal a shift in policy from the Board that's been in place for over two decades, so I think agencies would ask what's the new policy, where are we going here with this company. It's been remarkably stable in that regard for a very long period of time.

GREENE, Q.C.:

Q. Thank you, Mr. Coyne. That concludes all of my questions.

MR. COYNE:

A. My pleasure.

CHAIRMAN:

Q. We're up here now, are we? Oh, Ian, I'm sorry, Mr. Kelly, do you have any -

KELLY Q.C.:
Q. No questions, Mr. Chairman.
CHAIRMAN:
Q. Okay, now back to us. I just got a couple of points to ask you about. With reference to you used the term "moderate" to describe economic conditions now. I think that's the term you used. So what's your scale, like, what else is on that scale besides moderate?
MR. COYNE:
A. When it comes to macroeconomic conditions? Was that the comment?
CHAIRMAN:
Q. Yeah, yeah.
MR. COYNE:
A. In terms of the province specifically or the broader -
CHAIRMAN:
Q. No, the world economy. I'm trying to understand – you started off with the world economy, and then did a U.S. economy, and a Canadian, then we're going to Newfoundland, and then we finally hit Newfoundland Power. So, it's a big world.
MR. COYNE:

A. The big world. It seems to be more complex all the time from a global economic integration standpoint. I think the world was probably surprised by just how co-dependent it had become on trade with our Asian trading partners in China specifically. Because China had been on a growth path it had been on for some period of time. Global markets really weren't use to downward adjustments, even though we've had prior disruptions in Asian economies. So, I think it's been a bit of wakeup call for to realize to how linked world economies are and world currencies are. So, that overlay has created more uncertainty because here you have the government of China making decisions that affect the Chinese economy and the government of China is difficult to predict. It's subject to significant policy changes over time. So as a result of that you have this new source of great uncertainty in terms of what the government will do to affect their economy and how that then flows through what's going on in Europe and North America. So there's that factor

and then on top of that you have these tremendous cycles that we're seeing in commodity prices in oil and gas specifically in this case. But for all resources, for copper, minerals, et cetera, it's having a tremendous impact on companies, lumber companies, mining companies that are dependent. So, I think that the global economy certainly is more evidently integrated right now. Global financial markets are integrated right now, but by and large it all seems to be moving along with moderate economic growth as long as some big factor in that puzzle doesn't fall out of place. We've already seen China do that, but they now seem to be resuming at least moderate growth and therefore, we have moderate global growth as a result of that. But I think it's one that is subject to disruption more than it ever has been in the past. And we can see that we have these global disruptions that filter all the way down to local economies, that's here in the province as a result.
CHAIRMAN:

Q. So, you see like the Chinese economy starting to sort itself out, do you?
MR. COYNE:
A. Yes, they're chugging along. I think they found new equilibrium in that economy, maybe a more sustainable growth rate and they've relaxed their currency policy around that a little bit so they're better integrated. Their currency is now exposed to foreign currency pressures. So, I think the government of China is a little bit more realistic these days about the world role that it plays, but they're also somewhat unpredictable.
CHAIRMAN:
Q. You don't see it as a, someone described it as a potemkin economy; it's totally false. There's nothing behind it but debt. You don't see that?
MR. COYNE:
A. Well, I'm not sure -
(10:30 a.m.)
CHAIRMAN:
Q. The Red Ponzi, you never heard that –
MR. COYNE:

A. The Red Ponzi, the source of –
CHAIRMAN:
Q. I have read some very respectable economists, well at least as far as I'm concerned and I'm no expert, I'm just curious, who described the Chinese economy as a gigantic Ponzi scheme.
MR. COYNE:
A. Where everybody is lending to each other, yes.
CHAIRMAN:
Q. Well, that's one of the problems with most economies where everyone is trying to live off everybody else nobody is producing much of any value. But I mean to look at the figures for the Chinese economy, I don't see how you can—the Shanghai Index is down 45 percent since last June.
MR. COYNE:
A. I had a son that was teaching there and I went to visit him a year and a half ago. I had been there two decades ago and I just could not believe –
CHAIRMAN:
Q. Boy, you're aging gracefully.

MR. COYNE:
A. Thank you. And I could not believe how much had changed and it's one of those things like you get off the plane here and you have an impression right away of what this economy feels like. You get off the plane in Beijing and you have an impression of what that economy feels like. And these are just veracious consumers. And I guess the piece of faith I have in the Chinese economy is that desire for goods and services in that economy is very robust. So, I think if the government doesn't mess I up, I have faith that the Chinese economy is going to continue to be a global engine for some period of time. But that's a big if in terms of those government policies. But the citizens in China have somewhat of a greater voice in all that, but the primary voice is expressed in terms of what they consume and that's real impact on our collective global economy. I guess I have faith in that consumerism lasting for as long as we'll be watching it.
CHIARMAN:

Q. So, you wouldn't agree to the analysis of someone like Peter Shift or David Stockman or guys like that. You'd say this whole thing is house of cards that seems to question if not when, not if, but when it will collapse?
MR. COYNE:
A. I would like to offer perspective on that, but I don't understand the debt layers of the Chinese economy to give you anything that would be worthy.
CHAIMRAN:
Q. Okay. You mentioned 5 percent GDP growth, but I read that for every growth of GDP growth in the world economy there's an addition of $5.00 worth of debt. So, that GDP growth just seems to me it's not based on anything substantial. Again, it's an example of the house of cards, I mean, the huge amount of debt that's sloshing around the world, is that a threat as far as you're concerned or –
MR. COYNE:
A. Well, I think there was de-leveraging after the financial crisis. We certainly saw it

at the corporate level and we've also seen it at the consumer level as well. In many economies there was a wakeup call that less that was a good thing. That's not to say that we're not economies that don't still thrive on debt, but I think we have more collectively at risk to maintaining healthy balance sheets.
CHAIRMAN:
Q. But world debt is not less than it was in 2008.
MR. COYNE:
A. Yeah, I don't know. My guess is that it is growing. We've had economic growth since then and so in aggregate, I suspect, it is larger.
CHAIRMAN:
Q. Okay. And the U.S. unemployment rate, you mentioned that was about 5 percent.
MR. COYNE:
A. Heading towards 5, the last number I saw was something like 5.7 percent.
CHAIRMAN:
Q. But have you looked at U.S. participation rates? I mean, I have read that if you

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normalized the participation rate in 1950 for the U.S., you'd have an unemployment rate in the U.S. today of about 20 percent.

MR. COYNE:
A. Yeah, I don't recall that it's as high as 20, but I know it is certainly higher than the face value, the 5.7, I think where it stands now. The last number I recall –

CHAIRMAN:
Q. So, don't you think that number is very suspect?

MR. COYNE:
A. Well, like all numbers, you need to understand what it is. Those desiring to be in the workplace who aren't employed, but yeah, I think you need to look at that. You could also look at it as fair capacity in the economy as well. Because one of the things you can run into is the inability to put enough people to work and continue to grow the economy, if your population isn't growing fast enough for the jobs that you have. And then you get inflationary pressure. So, it can service as a buffer for wages. If there are people that are on

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the sidelines that say, alright, I'll come back, the economy is good enough for me to come to back, for those who have been working part time or under employed. So, it serves as an inflationary buffer in that way. Wages go up and as a result of that, you have those that are under employed and come back into the work force, but I don't see that as being a constraint on economic growth. If anything, I think it's a reserve.

CHAIRMAN:
Q. But again adjusted for inflation wages, have not grown, have they?

MR. COYNE:
A. They have just begun to turn around over the last year or so.

CHAIRMAN:
Q. Now with respect to the integration of the U.S. economy and Canadian economy, you're saying that there's a great degree of integration. So, if I'm a Canadian investor and I want to buy a stock in the TSE, I'm capturing the fact that, if I want to, I can also buy into the U.S. market.

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MR. COYNE:
A. Yes, you can buy exchange traded funds on the Toronto Stock Exchange that have U.S. securities in them or you can buy directly on the New York Stock Exchange if you have ab broker that can do so for you.

CHAIRMAN:
Q. So, if I wanted to look at, you know, making an investment or, sorry, trying to determine what would be the universe that I would start with in trying to understand Newfoundland Power, wouldn't I start with the TSE, would that be my universe?

MR. COYNE:
A. I suspect you would start there, yes.

CHAIRMAN:
Q. How many stocks—do you know how many stocks are traded on the TSE?

MR. COYNE:
A. I have it in one of our appendices because we do the –

CHAIRMAN:
Q. I'm going to ask—Dr. Booth may know.

MR. COYNE:
A. He may know.

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CHAIRMAN:
Q. So, I guess what you're saying is that you're cautiously optimistic about the future for the next, worldwide, for the next 24 – 36 months. That's what you're telling me.

MR. COYNE:
A. I am because I think on average, even though oil prices have been a big disruption, it lowers the costs for all businesses, inflationary pressures are still pretty low. And again, the role that China has played, I think at least for the near term, they're in a more sustainable growth rate. So, I don't see them as being the disruption.

CHAIRMAN:
Q. So, you see Chinese growth rates as sustainable?

MR. COYNE:
A. At a lower level than they were, you know, no longer double digits, but maybe in the 8 to 9 percent range which is still pretty robust.

CHAIRMAN:
Q. Eight to nine percent?

MR. COYNE:
A. Yes.
CHAIRMAN:
Q. In China, okay. Do you look at indexes? I mean on of the ones I've discovered that is most interesting, some call it the Baltic Dry Index, do you know that one?
MR. COYNE:
A. I don't believe I do. Is it a stock traded index?
CHAIRMAN:
Q. No, it's an indication of, I guess, prices for commodities and shipping prices.
MR. COYNE:
A. What's it called again?
CHAIRMAN:
Q. Baltic Dry Index. It's generally considered to be probably the most indicative, if you could pick one and the Baltic Dry Index has been on the go since 1985. It's now at its historic low; it's never been lower. So, it's very pessimistic for world economic out –
MR. COYNE:
A. Oh, it's a shipping index.

CHAIRMAN:
Q. Shipping index.
MR. COYNE:
A. I see, yes.
CHAIRMAN:
Q. So, you don't know that one?
MR. COYNE:
A. I do not focus on that index, no. But I recall hearing that there was a fair amount of spare shipping capacity out there.
CHAIRMAN:
Q. To get worse because China is still intent on constructing these very large container ships even though the market is totally flooded.
MR. COYNE:
A. It's a very cyclical industry where the industry overbuilds. They build a lot of spare capacity, prices collapse –
CHAIRMAN:
Q. The president of Maersk announced last week that deterioration in their earnings, Maersk containers. They're everywhere.
MR. COYNE:
A. I've been looking at them every day out the

window.
CHAIRMAN:
Q. Yes, I mean, if you think you're isolated, just go down to the harbour here and you'll see Maersk; they're everywhere.
MR. COYNE:
A. I've bene fascinated by watching that process.
CHAIRMAN:
Q. The president of Maersk has reported that severe deterioration in earnings and yet you think that—your take on it is that things are going to improve.
MR. COYNE:
A. I use a different index and as I call it, my tractor trailer index and I see how many I'm surrounded by on the highway when I go from point A to point B and I don't think I've ever seen more. So, that's certainly a casual observation.
CHAIRMAN:
Q. Well, we got pick-up trucks in Newfoundland that are 60,000 bucks, you know, always amazes me. I don't understand.
MR. COYNE:

A. But again, I think that—and there are people that study the global economy certainly more than I do, but the broad indicators are that we're going to muddle through this one with some sort of moderate growth.
CHAIRMAN:
Q. And where do you see interest rates going? I mean what's Janet Yellen going to do with interest rates?
MR. COYNE:
A. Well, I think she's smart enough to not jeopardize and economy that's not growing in leaps and bounds and she's under a lot of pressure to—I think probably political pressure during the election season, we're all watching with great entertainment and dismay—to hold the line on interest rates at least until we navigate through this election season, but as the economy continues to grow, she's going to be keeping a close eye on inflation. And if we do see wage growth that starts to exceed targets and inflationary growth that exceed targets, then I think she'll ratchet it up a quarter at a time. That's what the markets is

expecting, but probably nothing more this year.

CHAIRMAN:

Q. And you don't think that's going to pose any threat to the mountain of debt that's out there?

MR. COYNE:

A. No, but you know, the short term rates, no. I think the greater risk that we do have inflationary pressures that all of a sudden ratchet up debt costs significantly and that would have a big impact on consumers and it would have a very negative impact on the economy and businesses.

CHAIRMAN:

Q. Okay, I guess that's—is that it now?

MR. COYNE:

A. I certainly –

CHAIRMAN:

Q. Do you want to take a break now and change the scene?

MS. GLYNNE:

Q. We'll just take a short break we would like to get Mr. Booth's direct in today. So, ten minutes?

CHAIRMAN:

Q. Sure.

(RECESS – 10:44 A.M.)

(10:58 a.m.)

CHAIRMAN:

Q. So I think, Mr. Johnson, we're over to you and your witness.

JOHNSON, Q.C.:

Q. Yes, Mr. Chairman, Commissioners, on the stand is Dr. Lawrence Booth who is my first witness.

DR. LAWRENCE D. BOOTH (SWORN) EXAMINATION-IN-CHIEF BY THOMAS JOHNSON, Q.C.

JOHNSON, Q.C.:

Q. Dr. Booth, will you confirm that you have provided expert evidence and will testify in relation to Newfoundland Power's fair return and capital structure?

DR. BOOTH:

A. Yes.

JOHNSON, Q.C.:

Q. And Dr. Booth, you have in March—in February and in March prepared written evidence being your main evidence and surrebuttal evidence, is that correct?

DR. BOOTH:

A. That's correct.

JOHNSON, Q.C.:

Q. Dr. Booth, would you please provide the Board with a brief background as to your own background and experience and qualifications?

DR. BOOTH:

A. I'm a professor of finance at the University of Toronto where I hold the CIT Chair in Structured Finance and I've been at the University of Toronto since 1978. Before that I got my undergraduate at London School of Economics and I did graduate work in the United States where I gained three graduate degrees where I used to teach. Since coming to Canada, I've also won the Ernst & Young Financial Post Leader in Management Education Award. I was the chair of the finance department for basically 21 years. This past year I've been president of the Mid-West Finance Association, which is an American Regional Finance Association ascended in Chicago and I've written a variety of articles and three textbooks,

including one textbook which was an Americanization of our Canadian textbook, only Americans would not accept Americanizations of other textbooks, so we had to title it as a corporate finance book and hide the fact that it was a Canadian book, but that book came out two years ago, and I've taught a variety of courses, I've introduced about four different courses and ran the investment banking program at U of T for a number of years. So I've had extensive teaching experience in all levels, from undergraduate to MBA, to Masters in Finance, to Executive MBA and Doctoral program. So I'd just as a backdrop to that indicate that I'm extremely knowledgeable about what is standard in a finance textbook and what is in a standard finance course, both in the United States and in Canada. You can't write a textbook for the U.S. market without knowing what is standard and taught at U.S. universities. And I'll say here that when we Americanized our Canadian book, we had to dumb it down and that's because the market in the United States, particularly the university level and the college level, is a lower level than the Canadian market, so we actually had to—our American collaborator had to take a lot of things out of our Canadian textbook. So the basic level of undergraduate education in Canada is actually higher than in the United States.

JOHNSON, Q.C.:
Q. Dr. Booth, in addition to that summary, I take it you will confirm that the Commissioners will also find your full CV at Appendix A to your February report, is that correct?
DR. BOOTH:
A. That's correct.
JOHNSON, Q.C.:
Q. Dr. Booth, do you have any corrections or updates that you wish to make to your written testimony?
DR. BOOTH:
A. I'm sure there's some typos in there, I keep finding "form" instead of "from", that crops up all over the place, but apart from typos, there's nothing I picked up that I think is

material.
JOHNSON, Q.C.:
Q. Dr. Booth, will you confirm that you solely prepared the evidence that you have filed in this proceeding and that you adopt your evidence as filed in this proceeding, including all answers to Requests for Information directed to you, by either Newfoundland Power or the Board staff?
DR. BOOTH:
A. I do, everything was prepared by me; nothing was prepared under my direction.
JOHNSON, Q.C.:
Q. Dr. Booth, the first substantive question of the day to you, how would you judge the business risk of Newfoundland Power?
DR. BOOTH:
A. The business risk is extremely important and as I think I've said before this Board, because I said before all boards, there's two components. There's the return on capital which is the short-run risk, what's the rate of return that we can earn, and then there's return of capital which I'm almost certain that three years ago when I

was here in the height of the Euro crisis, I was saying that the most important thing in actually get your money back which was the big problem with the Euro crisis and the problem with the Portugal Island, Greece and Spain, the fact that people couldn't get their money back. So that's the long-run risk, can we get our money back as well as get a reasonable rate of return? So that's the business risk issue and I'll talk about capital markets because that has some implication for the capital structure but mainly capital market conditions affect the fair rate of return, so in terms of business risk where the rubber meets the road is can the utility earn its allowed ROE? So as long as the ROE is set to be fair, the ability of the utility to earn its ROE reflects the sum impact of everything that a utility is subject to, short-run business risks, financial risks and here we talk about financial risk as financial leverage, it magnifies business risk or we'll say financial risk is layered on top of the business risk of any firm, particularly for

a utility. So what we see here is the sum total, the impact of business risk, financial risk, regulatory risk, everything that affects the utility. Now it's absolutely true that good management can meliorate risks, but that's the job of good management and that applies to any company. What we observed with Newfoundland Power is a consistent ability to earn its allowed ROE. I asked them what causes any substantial deviations and the major factor for the significant under earning in the '90s and then the over earning in early 2000s was Canada Revenue Agency, basically a tax reassessment which I don't regard as fundamental to the business risk of the firm. So apart from the CRA, involvement with the CRA, I think there was another issue in the early '90s when there was a severe sleet storm that affected earnings, but apart from that, there was absolutely no evidence whatsoever of the inability of Newfoundland Power to earn its allowed return on equity. So for all intents and purposes, the shareholders have not actually experienced any business financial or regulatory risk over the last 25 years, and this is actually common to all Canadian regulated utilities. The vast bulk of the risk that shareholders are subject to is not business risk, it's not financial risk, it's not regulated risk, it's market risk. It's how does the market evaluate our investment in that company. So there's nothing unusual about this. I get exactly the same results when I ask FortisEnergy BC what's been their experience or the experience of ATCO Gas or ATCO Pipelines or Enbridge Gas or Uni Gas or Gaz Metro, it's absolutely common throughout Canadian utilities that the degree of regulatory protection means that they're very, very limited in terms of downside risk. Very rarely do they not earn their allowed ROE. They consistently over earn, so that's the other side to this. I did notice in questions put towards the chief financial officer, she pointed out that FortisAlberta over earns more. The reason for that is simply that FortisAlberta is on PBR, some performance based regulation, so

unfortunately we get for many utilities and the only way we can actually get their cost down, is to put them on PBR so they generate cost savings and as a result, those are shared within the—between the ratepayers and within the utility. But you can't really compare short-run PBR earnings which tend to be an attempt to get the cost down to lowest minimum cost, with a consistent cost of service utility earning its allowed ROE. So that just indicates the supportive nature of Canadian regulation. Long-run, this is really the risk that utilities in Canada will face, the same as anywhere else. The Board cannot protect a utility when its underlined demand disappears and we saw that with the TransCanada Mainline where there was a major hearing in 2011. We've seen it with Pacific Northern Gas, a small pipeline gas distributor in north-west BC and this comes down to how competitive is the commodity that the utility distributes to its customers. This is some information I got from the Canadian Gas Association, it's mainly in the context of how incredibly

competitive gas is in Canada, so obviously not relevant for Newfoundland Power from that point of view. It is relevant in terms of one of the major competitive fuels which the Canadian Gas Association put propane and heating oil, this is at the end of 2014 dollar costs per year for a typical consumer and electricity is generally competitive with alternative fuels right across Canada, which is why we do see extensive electricity use for space heating in Quebec and in many parts of Canada. How does this compare to Newfoundland Power? I discovered that one of the interesting features in Manitoba is they have an Act that basically says since 2014 an independent order that has to put together the cost of basic utility services right across Canada, so the Manitoba PUB can compare their costs relative to every other province in Canada, and that includes insurance costs, as well as water costs, electricity costs and everything else. That's in my testimony. What I put in here I thought was a little bit more informative because they cover more jurisdictions. It's

from Hydro Quebec and they basically say, well if somebody used a thousand kilowatt hours a month, what's the relative cost of electricity in Montreal versus elsewhere? Montreal is the lowest in Canada, huge hydro, cheap hydro power. Winnipeg is second, huge hydro power; Vancouver is third, huge hydro power. So those three jurisdictions have incredibly cheap electricity cost. Then we get into other jurisdictions and we see St. John's there, $161.00, it's more expensive than the jurisdictions with cheap hydro power, but it's not out of line with other sort of mid-level cost jurisdictions, and then you get up to Toronto and believe me, you don't want Toronto power costs and Moncton and Houston and then we've got New York which is off the map. But that's just to give you an idea of how expensive our power costs in St. John's, Newfoundland relative to elsewhere because that is certainly an issue that has popped up. How does this really affect it? When people replace one fuel source with another, they have to think about what the cost is and NP indicated 10 to 25,000 conversions from electricity to other fuels. In the 1990s they also indicated that oil, heating oil was 40 percent cheaper than electricity but only 3.7 percent of their customers switched from electricity to space heating, and incidentally, that had absolutely no impact on the ability of NP to earn its allowed ROE. So I'm mindful of the possibility of Muskrat Falls, but in the context of what has happened in the past and in the context of other fuel costs, that may not be material. The critical fact to consider there and this is, I follow the policy of the Ontario Energy Board, is if it's not within the test year, it's not something the OEB considers. Basically the OEB has said explicitly they will consider things outside the test year when they actually come up to be considered and they will deal with that when that happens. So as part of my testimony and I've actually said that for many, many years, here I've got a quote that I've put before the National Energy Board in 2004, that was when

problems with the TransCanada Mainline first surfaced and I said if problems—actually now this was McKenzie Valley hearing, that was a new pipeline, and I said if pipelines occurred and firms bring these problems to the regulator and frequently compromises are worked out. This is part of the regulatory bargain and only regulated firms have this capability. For example, if a competitive firm suffers a supply shock, then the stockholders are directly affected, but in contrast, a regulated firm can have losses put in a deferral account and allocated to future customers or apply to the regulator for other means to protecting the stockholders from loss; consequently, it's unreasonable to expect no action on the part of the regulator to the increased risk after Year 11 in the above example. And in that case, I was just looking at all of the cash flows from the McKenzie Valley Pipeline and I arbitrarily decided that Year 11 was the distinction between short-run and long-run, but when we look at that, the problem is simply that utilities--constantly I hear

witnesses coming in and saying the utility is exposed to this risk, the utility is exposed to this risk and yet when this risk, if it ever materializes, which rarely ever materializes, but if it materializes the Canadian regulatory bargain or compact or whatever, it comes before a hearing and invariably what happens is a compromise is worked out or special deferral account, so there's some ways the regulators seek to do the reasonable thing which is pass the cost on to ratepayers and they make policy changes to ensure that a utility continues to have an opportunity to earn its fair rate of return. So am I concerned about Muskrat Falls? I think I've read enough and I saw enough to realize that there may be problems. I was involved in the Maritime Link hearing, three years ago and that's to bring the electricity through Nova Scotia, so I'm certainly aware of the problems there and I'm aware that there may be electricity price shock, but I'm also very much aware that if there is a significant price shock, then this Board and the Provincial

Government would not sit idly by and let the utility be severely damaged. So I just don't think that that is a significant risk and it's certainly not a risk within the test year.

So in summary, I see no change in the business risk of Newfoundland Power. It remains a typical low risk Canadian utility. As primarily transmission and distribution, no significant generation. A little bit of generation from years ago, hydro plants, but I don't regard that as being significant. The only transmission and distribution utilities in Canada where we've got rates of return allowed by the regulators in recent years, Alberta, 8.3 percent ROE and that was on 36 percent for transmission, 38 percent for distribution, common equity; Quebec, 8.2 percent ROE on 30 percent transmission, 35 percent for distribution and that actually is my common recommendation, 30 percent common equity ratio for transmission, 35 percent for distribution. So those are the benchmarks, they are the benchmarks for Canadian transmission and distribution utilities. They're the benchmarks set by other reputable regulators in Canada that have satisfied the fair return standard. So I regard that as a benchmark in terms of what is fair and reasonable.

(11:15 a.m.)

JOHNSON, Q.C.:

Q. Dr. Booth, can you discuss your capital structure recommendations?

DR. BOOTH:

A. Apart from those regulatory standards one of the issues that I think sitting in the hearing room for the last three years I've heard over and over again, is we have to distinguish between the operating companies and the holding companies. We don't have market data on the operating companies, I wish we did, but they've all disappeared and as I've said to every regulator, they have to ask why they all disappeared. They're all now part of conglomerates, part of holding companies for good reason. When we look at that, it means that all we've got are the holding companies to look at and one of the holding companies that we look at is

Fortis. Mr. Coyne looked at Fortis out in BC as part of his sample and Fortis owns FortisEnergy, FortisBC Energy, FEI, and yet he didn't include it in the sample before this Board, even though it also owns Newfoundland Power, but it's obviously interesting to see how the parent company finances and what it regards as reasonable and what financial metrics fall out from its financing and what its bond rating is, and it is absolutely clear Fortis targets a 45 percent equity ratio. Of that 45 percent, 34, 35 percent is common equity, 9—it doesn't say that it's 10 percent is preferred but the residual 10 percent, preferred shares. So there's no question that Fortis finances its subsidiaries with 35 percent common equity, so we look at that and we say, well if Fortis finances Newfoundland Power with 35 percent equity and yet Newfoundland Power is saying it needs 45 percent common equity, the objective measure is that Newfoundland Power, its owner, finances it with 35 percent equity. Is there a preferred share

market? There is preferred share market. Is it a fluid deep market the way that the debt market is and the equity market is? No, it isn't. It's an episodic market, it's a market that periodically opens and closes. It's a market with a lot of hybrid features for different types of preferred shares, but Fortis has issued public preference shares, 600 million in 2014, 250 million in 2013 and I noted in my 2012 testimony that they just had a 200 million dollar preferred share issue. Fortis is a frequent issuer of preferred shares in the Canadian market. The other thing I draw your attention to is return on average book equity. Fortis earned 5.4 percent in 2014, 8.1 percent in 2013, these are their numbers and we went through the Standard and Poors' numbers for Fortis, it's barely earned, 7.5, 8 percent for the last five years. So we've got objective evidence of a company earning in the range of 7.5 percent with 35 percent common equity and you think, well, obviously it's not financeable, 7.5 percent ROE, 35 percent common equity and yet exactly the

opposite, Fortis has what they describe—and these are their words, not my words, strong credit ratings and DBRS A low, S&P A-. Newfoundland Power is rated A by DBRS, so if Fortis regards the parent of Newfoundland Power regards its rating as strong, we're left with the obvious conclusion that the bond rating for Newfoundland Power is very strong because it is stronger than the issue of its parent. Why is that? Well there are a number of issues. Holding companies, we call them Hold Cos rely upon the cash distributed from its operating subsidiaries to finance their own debt. So holding companies, all else constant, they are always regarded as riskier than operating companies because they're one layer, one level removed from the operating company and the cash that really drives everything. So this is called structural subordination, it's something that Moody's, Standard and Poors and all the rating agencies draw their attention to. All else constant, we would expect Fortis on exactly the same credit ratings, exactly the same financial metrics as Newfoundland Power that had weaker credit ratings, but in fact a much weaker financial metrics, it still has what it regards as a very strong credit rating. So when we look at that, it could be because Fortis has some subsidiaries that are off market, in terms of their financial metrics. This again is Fortis information. I like to rely upon information from the company because it's their data and their data is 45 percent equity for Newfoundland Power, FortisAlberta, 40 percent; FortisBC Energy, the gas company and FortisBC Electric, the electric company together, 38.5 percent is the gas company, 40 percent is the electric company, and then it's got U.S. companies and we know very well the U.S. companies generally have to have more common equity and a higher ROE in order to get inferior bond rates to the Canadian utilities and that's been established many, many times over the last 15 years. In terms of ROE, Newfoundland Power, 8.8 percent; FortisAlberta, 50 basis points less at 8.3 percent; FortisEnergy BC, 8.75 percent and

there was a hearing, as we know before the BCUC just a month ago into the BC utilities. And then the electric company, 9.15 percent and here it has to be pointed out that FortisBC Electric has about 60 percent internal generation. When I last appeared before the BCUC on that, they asked me what's the big risk of FortisBC Electric and I said, well the big risk is they've got a gap in their power and they go and hire some nuclear engineers and over the break, they come back and said we have no intention of hiring nuclear engineers, but when you look at this generation, it's the risk element and it depends how it's handled by the utility, but FortisBC Electric, it has a power gap, it buys from BC Hydro now, but at the time that was a significant risk, how it was going to meet its—generate its electricity needs. In terms of credit ratings, we have these three different ratings, all I'd say here, DBRS is a Canadian rating agency, it has rated Newfoundland Power and all the Canadian utilities for the last 25 years, at least,

and as far as I can see, there are very, very few rating changes by DBRS for Canadian utilities. It follows what it calls the stable rating criteria which is that it doesn't change its rating short term in response to economic conditions because economic conditions wax and wanes, we go through the sessions, we go through booms, bond holders realize this because they're holding 30, 40, 50 year debt and the rating agencies realize this. So when we look at this, I put a lot of faith on DBRS. S&P cane in about 12 years ago and bought the Canadian bond rating service. Moody's started coming into Canada about 10 years ago, that generally only rates Canadian firms that issue debt in the U.S. because its major market is the U.S., unless the company seeks a rating. But when we look at this, we've got Newfoundland Power and it's Moody's rating, A2 and there's no subsidiary of Fortis that has a higher rather than Newfoundland Power. Central Hudson has A2, and here these are Fortis' view of the ratings of its subsidiaries and these are

the ratings that they used to access the capital markets and the A2 rating for Newfoundland Power is what we call its issue rating. It's the rating on its issues of securities, which are first mortgage bonds. When we look at DBRS ratings, Newfoundland Power has been rated A and as far as I can tell, it's rated A all the way back until the early '90s when at one point it was rated A high, but again, it's unambiguously, no utility has a higher rating in the Fortis family than DBRS. It doesn't have a S&P rating. Generally, I look upon DBRS as close as to S&P. Moody's tends to be lower. The only qualification for that is S&P has this criteria that it will not right a subsidiary higher than its parent unless it's ring fenced. In the case of Newfoundland Power, we know it's pretty much ring fenced and I would hazard a guess that its ratings would be similar its DBRS ratings. So what can we say about this? NP low business risk, I don't think there is any question about that and that's nothing unusual. That's exactly the same across all

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the utilities in Canada. In fact, trying to make a difference in the business risk of Canadian utilities after you take into account regulation, is like splitting hairs. They all earn their ROE on a regular basis. Comparators, Alberta and Quebec, those are the obvious comparators in terms of recent decisions. And Fortis, you have to look at the parent because the parent basically accesses its capital market on the strength of its operating subsidiaries business risk and other companies within Fortis. I regard NP's 45 percent common equity ratio as being generous. I said that three years ago. I think even in 2009 I probably said it. At that point I said don't change it because we were so close to the financial crisis I didn't see that it was something that was prudent at that point in time. I recommended three years ago that a five percent common equity replaced with preferred shares. At this point in time, I'm actually a little bit milder than I was three years ago and milder in the sense that I recognize that there may be something

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happening in Muskrat Falls that will cause problems for the Board in the next test year, so I'm basically recommending the five percent preferred shares be deemed for the next—until the next rate hearing until the situation with power costs becomes clearer in the next rate hearing, and if there is a significant shock to power costs, then this Board is faced with significant increasing rates passed on to Newfoundland ratepayers, then I fully expect this Board to look at its regulatory tool kit and think about how can we ameliorate this? One of the things in its took kit is that it can look at the capital structure and answer the basic question which is what is a tax efficient capital structure for Newfoundland Power and what would it be financing with if it were a competitive firm? Here I like to remind boards that their basic responsibility is they're regulating these utilities because they're monopolists and yet they regulate them hopefully such that we get the parameters they would get if they were a competitive firm. So the critical question

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here is really not what it's done in the United States, it's not what's done in other Canadian jurisdictions, it's not what is done by its parent, is what do you really think if this firm was acting competitively what in fact it would finance with. And in my judgment, even a 40 percent common equity ratio is not aggressive, but I would suggest that in three years' time if there's significant problems as a result of Muskrat Falls, then at that point the Board can look at its regulatory tool kit and seriously think about a more efficient capital structure for Newfoundland Power. Until that happens, I would like to see the Board lay down a marker, that it revisited its decisions in the early '90s. The appropriate common equity ratio should be between 40 and 45 percent and the Board is deeming 5 percent preferred shares until anything around Muskrat Falls, the uncertainty becomes clarified. Deeming is absolutely common in Canada, well I wouldn't say it's actually common, it's the policy of the Regie that it deems preferred shares for

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Gaz Metro. Gaz Metro has 38.5 percent common shares and it deems a 7.5 percent common share layer. What this means is the preferred shares do not add any, regulate any risk as far as the common share holder is concerned because they're just deemed, they don't actually exist in a real sense, but they lower the overall cost of capital down to what would be an efficient cost, a more efficient cost of capital.

JOHNSON, Q.C.:

Q. Dr. Booth, next I'd like for you to turn to what the situation was in 2012.

(11:30 a.m.)

DR. BOOTH:

A. I was struck by some of the comments that Mr. Coyne, a lot of the comments of Mr. Coyne, but one in particular about how similar he regards the situation that's in the United States and in Canada. Nothing could be further from the truth. So what struck me, as Mr. Kelly had kindly provided me with my 2012 testimony, so I went back and looked at my 2012 testimony and this was a chart that DBRS produced at that time which was in my 2012 testimony. And at that time, Canada had fully recovered from the recession. We fully recovered all of the jobs lost during the recession by 2010, let alone 2012; whereas the United States was in desperate straits in 2012. So this is just a reminder that Canada and the United States have not experienced the same economic history over the last six years. For the best of my recollection, it was not Canada that plunged the global economy into crisis as a result of the sub mortgage, sub prime mortgage crisis and the bankruptcy of that banking system. That was the United States. The second time in 80 years the United States has thrown the global economy into depression. It was not Canada. And in 2010, we had completely recovered and in 2012, we had some other experiences that I'll talk about, but I've been characterizing the situation since 2012 as waiting for Godot. Canada recovered and would be waiting for everybody else in the world to recover, not just the Americans but the European community and the UK. Now

we've got some other problems, but it's like Canada, five, six years ago, there was no real problems in either the Canadian financial system or the Canadian economy, but we are a small open economy and we're buffered by events around the rest of the world. The big events, the elephant in the room is bond buying. I call this "Operation Twist" because the objective of the bond buying further in the United States was twisting the yield curve to bring down long-term bond yields in order to allow people to refinance their mortgages, given the desperate straits of the housing market in the United States. This is from the Federal Reserve Bank of Chicago—sorry, Cleveland, it shows the size of the U.S. Fed's balance sheet and what the Fed basically does is really simple, all they do is they buy bonds and they give people cash and what this graph shows you is the known normal security holdings of the Fed. The Fed does not normally buy long-term treasury securities, it does not normally buy mortgage bank securities, it buys treasury bills, no

monetary policy, just acts with the Fed buying treasury bills and manipulating the short-term interest rate. The U.S. has had to engage in a massive bond buying program. Conservatively at the end of 2014, there was three and a half trillion dollars' worth of securities that the Fed had taken off the U.S. capital market. Now it's not three and a half billion, it's three and a half trillion dollars' worth of securities. If those securities had been in the U.S. capital market, the extra supply would have pushed down prices and pushed up interest rates. The Feds stepped in to buy those securities to increase bond prices in the U.S. and to lower interest rates. That's the deliberate aim of the Fed. That was what I was talking about in 2012 and I actually looked in my summary again from 2012 and I thought, wow, I wouldn't change anything that I said three years ago. As I said, waiting for Godot. My executive summary at that time, the actions of the U.S. Federal Reserve in implementing "Operation Twist" and its commitment to

keeping the federal funds right at 0 to 0.25 percent until the end of 2014, brought down global interest rates. This has let to a precipitous drop in long Canada bond yields, so corporate spreads of the government bond yields remain high at 180 basis points. So that's a little bit lower than where they are now, which is about 190 basis points. This is mainly due to unusually low government bond yields, since all the standard stress indicators show normal capital market conditions. "Furthermore, Canadian utilities have started to issue 40 and in some cases 50 year bonds at extremely low interest rates." I wouldn't change a word of that compared to 2012. We are still in a situation where we have abnormally low bond yields. We're still in a situation where Canadian utilities can issue very long term debt at incredibly low interest rates. So that was what I said in 2012. I also, at that point, stated the opinions of then Governor of the Bank of Canada, Mark Carney and I reported on statements that he made. Reuters reported Governor Mark Carney as saying we're in a very different place in a major crisis economy such as the UK and the crisis economy is obviously included the U.S. and the Europe zone countries. Our economy is always back and forth capacity, the labour market has been growing, we're growing above or we had been growing above trend. The extent to which we continue to grow above trend, we may withdraw some of the monetary stimulus. This is 2012. We had already seen the Bank of Canada push up interest rates twice in 2010 and in 2012, the Governor of the Bank of Canada is saying, well, we might withdraw some more stimulus, push up interest rates again. And this is a critical thing that I said at the time, when we have a financial system that's firing on all cylinders and so we will have to adjust, we will adjust if it's appropriate. Now I emphasise those words "firing on all cylinders" because at that time the credit spreads, the spreads between low rated bonds and long-term Canada bonds, we're 180 basis points. They're a little bit higher now, 190 basis points, but the

financial system when we add 180 basis points credit spread, the Governor of the Bank of Canada said "we are firing on all cylinders". There were no problems whatsoever in the Canadian capital market in 2012. Reuters went on to report Governor Carney as saying that the country's relatively strong economic fundamentals helped push the Canadian dollar to parody with the U.S. dollar on Friday for the first time since May and a currency value reflected a safe haven premium. As Governor Carney said, there are relatively few places in the advanced world that investors can put their money with a degree of certainty that something catastrophic is not going to happen. Canada was then rated AAA is still rated AAA. The United States has got a S&P bond rating of AA high and you probably remember in 2011, the U.S. lost its AAA rating because of wrangling in Congress. They could not get their act together to reduce the value of the deficit and there was even talk at that time of Republicans voting not to increase the debt limit and

actually seeing the U.S. default on some of its obligations. That is not a similar situation to Canada. There's actually no comparison between what went on in the United States and what's been happening in Canada. It goes without saying that a financial system firing on all cylinders while it describes Canada is not an accurate statement of conditions in the United States. What's the impact of this? We are a small open economy. The total Canadian government bond markets is about 660 billion dollars. It only takes a tiny shift in the portfolio allocation by China, by Japan, by major countries to have an impact on the Canadian bond market and this is a Bank of Canada graphic that just shows that the Canadian bond market is now about 30 percent owned by, mainly sovereign reserve funds where the China and Japan put their foreign exchange reserves. So 30 percent sounds like a lot, but it's only 150, 200 billion dollars. Compared to the amount of capital in the world, it's tiny, but it's had a significant impact on the Canadian bond

market.

JOHNSON, Q.C.:

Q. Dr. Booth, what, if you could please describe what's happened since 2012?

DR. BOOTH:

A. Well, waiting for Godot, we're still waiting. We're still waiting for the Americans. The Americans have actually picked up the speed. In terms of a ranking of global economies around the world, we recovered in 2010. The U.K. stopped its bond purchase program in 2012. The U.S. actually stopped in 2014, but in 2012 we were waiting for the rest of the world. In the intervening three years, there has been a slow down in China and here I just correct Mr. Coyne, the target for growth in China was 7.5 percent by the Chinese government. They've just lowered that to 6.5 percent and what's happening in China is they're changing from an industrial investment led economy to try to move to a consumer led economy. An industrial led economy, until a few years ago, they were adding the electrical capacity of the U.K. every year in China. Huge demand for copper, huge demand for steel. Now they're moving towards or trying to move towards a consumer led economy, which has lowered the demand for commodities, and has led to actually outright dumping of Chinese steel in the U.K. and in Europe, where there are currently issues before Parliament to stop the dumping of steel in the European community, and particularly the U.K., but in 2012 we were at an overnight rate of 1 percent, and we waited, and waited, and waited, and then China has caught up with us in weak commodity prices, and starting in 2015, Stephen Poloz, the Governor of the Bank of Canada, surprised the capital markets with two cuts in the overnight rate. So we've now got an overnight rate of half a percent, which is basically similar to the United States. How significant is this? China is incredibly significant to the Canadian economy. Commodity prices were obviously significant. This is just the Bank of Canada's commodity price index going back from the starting date, just to show that

when China basically opened up to international trade in the early 2000s, we see this dramatic run up in commodity prices, drop during the financial crisis, they rebounded, and then starting in late 2014 we've seen this weakness in commodity prices, and Canada, obviously, is commodity price sensitive due to the nature of our economy. How does this affect what goes on? The other signature that I always look at is capacity utilization. If we look at 2012, we were sort of on this upper trajectory and Mark Carney was predicting that we would use up all the capacity within the next year or 18 months. That hasn't happened, we've basically been in this "Waiting for Godot" situation for the last few years, and we started to see a little bit of a pickup as the U.S. economy started to grow again, and in a little bit of weakness, basically we had a technical recession in the first half of 2015 mainly due to the commodity impact in Alberta. We do have a two-speed economy. This again is a Bank of Canada graphic. I think it was Bill Downe of the Bank of

Montreal complained about the 24-hour sound byte that was so – we get so much news, that we tend to focus on certain events, and we ignore the underlying things that are going on. We are very much attuned to what's happening in the regional sector. So when we look at the red line in oil and gas related, 3.1 percent decline in economic activity, that's mainly Alberta, Saskatchewan, but obviously also hits Newfoundland. The non-resource sector, the non-energy sector, this is the mining sector has also been hit because copper and zinc prices are being affected. They're down 1.6 percent, but they are only 17 percent of the economy; 83 percent of the economy is chugging along at 1.4 percent growth. So we had this two-speed, and, in fact, house prices in Ontario went up 16.9 percent, single family detached houses went up 16.9 percent last year. Why; because the Canadian dollar has dropped and because people are still coming to central Canada, and central Canada the manufacturing industry is sensitive to exchange rates. So actually

this is a good time for Ontario and it's a good time for Quebec. It's not a good time, obviously, for western Canada and it's not a good time for Newfoundland, but we do have a reversion to an economy of more like five or ten years ago.

JOHNSON, Q.C.:

Q. Dr. Booth, my next question would be how would you assess presently the capital markets?

DR. BOOTH:

A. The key in all of this is interest rates, and the elephant in the room is the impact of bond buying on Government bond rates. As I said when I was here in 2012, we were expecting interest rates to increase dramatically. In 2011, there was an RBC forecast projecting absolute back to normality, 4.5, 5 percent long Canada rates within a short period of time. Quantitative easing, bond buying in the U.S. stopped all of that, and we can see, however, in looking at 2013/2014, we were all looking, when does the U.S. end its bond buying, when do we end up this massive buying of Government bonds that keeps the prices up and interest rates down. The U.S. announced a roadmap to get out of quantitative easing, interest rates popped up, and then, unfortunately, the U.S. is no longer the only capital market in the world. The European community and Japan have got huge capital markets. The Bank of Japan initiated this bond buying program. It's now buying 55 billion dollars' worth of Government securities every month. By 2017, the will own 50 percent of the Japanese bond market. The European Central Bank, the ECB, is now buying 80 billion dollars a month, and they only kicked off their bond buying program about two years ago. To put things in perspective, French and Government bonds have not negative interest rates out to five years. This is not normal. We are not in a situation where Government interest rates are, by any stretch of the imagination, normal. So even though, as I said, Canada was back to normal in 2010, the U.K. 2012, the U.S. ended its bond buying program in 2014, I don't know when Europe is going to get its act together, and Japan has embarked

on this – they're even thinking of increasing their bond buying program, but when they actually get their capital markets back to normal is anybody's guess. Predicting what's going to happen in interest rates right now is not a question of predicting economic fundamentals; it's a question of predicting the actions of Central bankers. When we look at interest rates, this is RBC's forecast. First quarter 2016, I draw your attention to two things; interest rates in Canada, the 30 year bond yield 2.25, 30 year in the U.S. 3.3. Is it unusual that U.S. interest rates are 60, 50, 100 basis points higher than Canada; no, it's been that way for the last four years and it's forecast to be that way for at least the next two years. So we have to grapple with the problem that Canadian interest rates are significantly lower than those in the United States, and it's an impact in terms of the global capital markets. Long term spreads, utilities often like to look at the spreads as an indicator rather than the absolute cost of borrowing

money. Absolutely no question that spreads have remained stable and above normal for the last six years in Canada. We can see this, the pink line, that's the "A" spreads. It's been around about 150 to 180/200 basis points at least since about 2010. Is that because of high risk aversion or some problems in the capital markets in Canada; no, it's because long Canada bond yields are so low, and that was the situation that I spoke to in 2012, it's the situation that Mark Carney addressed. There has been a slight pickup in credit spreads over the last six months, and that is due to the slowdown in the economy and the weakened equity markets, but that has picked up in the normal credit spread adjustment that I recommend. When we look at the U.S. versus Canada, these are "A" spreads. I look to use publicly available data. This is the American data, it's Merrill Lynch "A" credit spread.

(11:45 a.m.)

It's from the Federal Reserve Bank of St. Louis that maintains FRED, the Federal

Reserve Economic Databank. So this is free data to download and academics love getting free data. The "A" spread is the Scotia Capital, "A" spread of their "A" rated bonds of Government of Canada bonds. The striking thing when we look at that is not just how much severe was the U.S. financial crisis, but the fact that "A" spreads in Canada have been higher than those in the United States since 2010. There was that little hiatus in 2011 when we seriously were thinking the U.S. is going to default on its debt for voluntary reasons, simply for political gain, and as a result spreads in the U.S. popped up. Apart from that, "A" spreads have been persistently 50 basis points or so lower in the United States than in Canada, not because of risk aversion. If that was risk aversion, it wouldn't have lasted for five years when the Canadian economy has been performing so well, and particularly when Mark Carney was saying that we were firing on all four cylinders. What other indicators are there? Canadian financial stress, Canadian financial conditions index, we can see again the financial crisis, but we've had loose conditions well into 2015. The Bank of Canada now stresses the results from its Senior Loan Officers Survey. Again we see the tightening during the financial crisis, loose conditions up until very recently, a tiny little above normal, indicating mainly, I would suggest, problems in loan offices looking at firms exposed to the oil and gas sector, but no indication whatsoever of credit concerns. So what we have are unreasonably low long term Canada yields, no signs of unusual stress in the financial system, slight pickup in credit spreads about 15 basis points, loan conditions around normal, level of interest rates very low, and this is where I'd like to stress utilities or nobody borrows spreads. If you went to the bank to renew your mortgage and they said, well, don't worry about what the rate is, it's only 50 basis points over the five year rate, then you say, well, excuse me, what is the five year rate, what am I actually borrowing my money at. What matters is the absolute

borrowing cost of the utility. Spreads, you don't borrow spreads. So this is the utility and the non-utility "A's". I like to look at this because we have a long experience in Canada that during times of financial crisis, utility debt does not experience the flight to quality and the problems of non-utility debt. We don't see that over the last two or three years because we haven't had a significant flight to quality or any significant problems. We have interest rates now for "A" rated utility debt that's about 20/25 basis points less than what I was using in 2012.

JOHNSON, Q.C.:

Q. Dr. Booth, would you please present to the Board your risk premium perspective?

DR. BOOTH:

A. This board, like most boards in Canada, put primary interest on risk premium models. That's at the heart of the automatic adjustment models that almost every board in Canada use, so Canada has been a CAPM or a risk premium jurisdiction for the last 20 years. The risk premium just looks at the

time value of money, the risk free rate, the market risk, which is the market risk premium times the beta, the relative risk coefficient. So the board has accepted this. Every board in Canada has accepted this. The big problem at the moment is the risk free rate, and there's absolutely no shying around the fact that it's incredibly difficult to think what is the proper risk free rate to use in a risk premium model. I told the Board three years ago that interest rates at that time were not the sort of interest rates that investors use when they work out an equity cost. I continue to hold that and I've noted that since then, more and more people have been using what they call a normalized risk free rate. Duff & Phelps reference a normalized risk free rate. The AON Hewitt talked about a normal risk free rate for the long Canada bond yield, and normal is about 3.8, 4, 4.2 percent. It is not the rate we've got at the moment. It's what we tend to think of as what we should have or what is normal, a normalized rate, but other than that, the

rest of it is absolutely standard. The CAPM is still overwhelmingly the most popular model in finance because it captures the three basic principles; time valued money, risk valued money, tax valued money. Other models, the second most popular model apart from looking at actual rates of return is multi-beta, or this survey referred to it as "multi-beta CAPM" or "multi-factor models", and I included in my testimony this time the most common multi-factor model just to illustrate what, in fact, people look at as the competitor to the CAPM. They don't look at the dividend discount model, or the discounted cash flow model, as a competitor. The reason being that it's only appropriate for a subset of firms. It's not something you can use for all firms because the assumptions of the model aren't satisfied, whereas multi-beta CAPM or CAPM multi-factor models are appropriate for all firms. So what have we got? I like to do my own historic estimate, and my Appendix "B" says 5 to 6 percent, I'm comfortable with that, even though the actual historic evidence in

Canada is lower than that. There are structural changes in the markets that tend me to believe that 5 or 6 percent is reasonable. Fernandez surveys thousands of people, and as I've said to this Board in 2009 and 2012, you can take my opinion, you can take Ms. McShane's opinion, or you can take the opinion of thousands of people responding to surveys, and I don't think it's possible to discount all of that survey response. U.S., the evidence, the median, 5.3 percent; Canada 6 percent. That's interesting because up until a couple of years ago the U.S. market risk premium was higher than Canada. The reason is that the risk premium is applied to the risk free rate, and the risk free rate is lower in Canada. The long Canada bond yield is lower. The overall capital market return, the expected return on the equity market, U.S. median 8 percent, Spain 7.8, Germany 6.4, France 7 percent, U.K. 7.1, Italy 6.7, Canada 8 percent. You go through all of them, it's incredibly difficult to get out of a 6 to 8 percent range when you start

talking to market participants about what they think a reasonable expected return on the overall equity market is, and as the Alberta Utility Commission has mentioned, and several utility commissions have mentioned, utilities are less risky; as a result, they should get less than the overall equity market. So 8 percent for the equity market, I've been trying to bring in as many objective external estimates as possible. TD Economics, this is the same one I put to the Board three years ago, they said 2 percent for cash, 3 percent for bonds, 7 percent for equities. Those are compound ten year returns, you have to bump them up a little bit to get arithmetic returns, so they understate the equity market return, 8.5 percent looks more reasonable. This is old, so let's look at some more recent data. AON Hewitt, this was January of this year, AON Hewitt is a major provider of data to capital markets for funds doing asset allocation, where they expect to put their money, and this is again – they do the conversion from a compound

return to an arithmetic return. You look down, 8.3, 9.3, 7.1, 7.6, 8 – the reporter will get all of this, but it's difficult to see high numbers. It's looking at the overall equity market, 7, 8 percent. Duff & Phelps, just as I was putting my surrebuttal together, in my inbox, I got this note from Duff & Phelps. I talked to Roger Grabowski about ten years ago because he wanted to know where I got my data from – they've got a business now of estimating the cost of capital. Duff & Phelps, using its own data, is recommending 5.5 percent market risk premium in the United States, over interestingly a 4 percent long term U.S. normalized yield. That's incredibly similar to what I'm recommending. I don't know how many external reports I can get, but, I mean, Duff & Phelps, AON Hewitt, TD Economics, thousands of people responding to surveys, as well as my own evidence, indicates 5 to 6 percent for the market risk premium over some form of normalized risk free rate. How do we adjust this to the risk of a utility? I heard Mr. Coyne, I

started counting how many times he said standard, standard to adjust to market. It is not standard and it is not a standard thing in a basic finance textbook. At least it's not in ours. That was work done by Marshall Blume in 1970, updated in 1975. After that, there's been a huge mushroom of industry to get better betas. Barr Rosenberg of University of California set up a consortium firm called BARRA to come up with better betas, and this is actually the foundation for a lot of the factor models, but before the AUC 2009, the AUC said, "The Commission is persuaded by the empirical analysis of Drs. Kryzanowski and Roberts". Note, I'm saying, they said, "Kryzanowski and Roberts", they did not say me, I'm not the only one saying you shouldn't adjust towards 1, this is sort of standard stuff. "The commission is persuaded by the empirical evidence of Drs. Kryzanowski and Roberts that there is insufficient evidence to support the use of adjusted betas for Canadian utilities if the purpose of the adjustment is to adjust the betas towards 1.

Therefore, betas should not be adjusted towards 1. Therefore, the Commission rejects Mr. Coyne's beta results as unreasonably high because he adjusted beta estimates on the assumption that they would revert to 1. In other words, his analysis assumes that in time utilities would be as risky as the market as a whole". I don't think there's anybody in the world who believes that Newfoundland Power will eventually be as risky as the overall stock market. Having said that, statistical betas are a statistical estimate. I've said to this Board and I've said to every other board, betas estimate what happened during that time period, and I use a bit of Zen philosophy, "If a tree falls in the forest and there's no one there to witness it, does it make any noise". This is the problem with statistical estimates; if nothing happened during the period, you don't estimate it. If something dramatic happens in the period, you estimate it. So, when we look at the actual betas of Canadian Utilities we see this huge U shape when we

look at the pattern of the betas going back the last 15/20 years. We see this huge U shape in the middle; why is that? Well, any Canadian will tell you what happened in the 2000s; Nortel, JDS Uniphase, internet bubble. They took the Canadian market up and they took the Canadian market down. Did you utility shares go up? No. Did they go down? No. So, the estimated beta coefficient, the extent to which utility share moves with the markets went to very low points. As soon as that five year period passed out of the estimation window, betas for utilities reverted to the normal sort of range. So, statistical estimates cannot be used without judgment.

I tell every board that the statistics constrains judgment, but you have to understand what goes on. If you want someone to count a bunch a numbers, go and hire a statistician. If you want somebody to tell you what the numbers mean or what happened in the economy to generate those numbers, go and talk to a professor of Economics or a professor of Finance. The

other way of looking at this is to look at index betas because we have a utility index. Great advantage of looking at the index because we have all this M&A activity. One utility buys up another utility, but they're still in the index.

So we look at this we know there's two things; first of all, we get the same U shape which is obvious. The second thing is I estimated the beta with and without the impact of interest rate changes. Utilities are high dividends yielding stocks. They are defensive stocks. What happens is that when the market collapses utility stocks trade on a high dividend yields. And when the economy gets stronger, they trade on their earnings and less on their bond like characteristics. So, interest sensitivity of utility stocks is incredibly important.

And you can see the green line is their interest sensitivity, it goes up and down with their betas; only opposite. Because when the betas of utility stocks are low, it's generally because the market is collapsing and is generally because interest

rates have come down. And as a result, investors buys defensive utility stocks. This is not just my opinion.

(12:00 p.m.)

Maureen Howe, used to be the best senior utility analyst at RBC and I love this group because it says exactly what I just said. Like convertible bonds when interest rates are low as they currently are, the companies trade on their bond value. Which is you look at utilities and say, well, they've got a nice fat dividend yield, I'm going to buy them just like I'm going to buy a bond when things are bad. And are supported by tax efficient dividend yields and that's the third message in finance, the impact of taxes. When the ten year GIC yield rises above 66 ½ percent, the Canadian companies trade on the basis of their underlying earnings and P/Es.

So, when you look at utility stocks, you have to take into account if the betas are low, why are they low? At the moment they're a little bit low because they're trading based upon their interest rates, their bond like characteristics. How do those compare with the U.S.? This is exactly the same data, standard estimates of betas over the preceding five years of monthly returns. Going back December '94, so that's data going back to January 1990, so that's 25 years, sorry 24 years' worth of capital market history. We see the same U shape in the United States because they had exactly the same problems, only less severe than we are. The striking thing is how much higher are the electric stocks, the betas for electric stocks in the United States?

For the last 15 years the beta estimates which means the last 20 years of data indicates significantly higher beta coefficients for electric stocks in the United States. So, there's actually no question in my mind the U.S. investors look— the U.S. gas companies as being lower risk than U.S. electric companies because nearly all of the electric companies in the U.S do have generation and they're viewed as inherently riskier. I wouldn't go in through a lot comparisons of A against B. I

would at what the capital market tells us and the capital market tells us that electric companies in the U.S. are riskier. Can versus U.S., Mr. Coyne kept saying standard, standard, standard.

Well, any members of the Commission or any member in this audience can go to the Globe and Mail and they can—the Globe and Mail's website and they can get the beta for Canadian Utilities; they're not adjusted. They can go to Financial Post; they're not adjusted. They can go to Yahoo; they're not adjusted. They can go to Google and they're not adjusted. I use RBC because I'm an RBC client and I can get them off their website easily. So, I've got my estimates as of the end of 2014. All of these estimates are different because they use different estimation periods. I use the academic standard five years of monthly data. Some of the other ones use weekly data; some of them use three years' worth of data. Because what we're trying to do is just estimate the future risk. But when we look at these, the average in Canada, .25, .53,

.19, .25; average in the U.S., .34, .5, .38, .51. The bets for these utility stocks and these are the latest ones are all higher than they are in Canada.

So, I look at the fair ROE, long term Canada yield for the 2016 test year 2.81 percent, market risk premium 5 - 6 percent; beta, .45 - .55; issue costs; credit spread adjustment that I introduced three years ago, currently 190 basis points, that adds 50 percent of that; 45 basis points, 6 – 7 percent. It's incredibly difficult to get above 6 – 7 percent for using the capital asset pricing model. When we look at U.S. utilities I do a DCF for the U.S. utilities. I look at the growth estimates. I put something in that is not normally put in which is the past five year growth rates for these U.S. utilities which is the first column, Vectren, 10.44; WGL, -17.1; Piedmont, 3.37; Northwest, -18.3; New Jersey, 7.1; Laclede, -5.6; ATMOS, 14.6; Southwest Gas, -13.7. Huge volatility in the past five years of earnings growth for these stable U.S. utilities and they're

pretty much the same for the electrics, although not quite the big negative ones.

If you accept those estimates for the growth rates going forward from the analysts and I've got down the analysts here from where I got the data, we're basically relying upon here, estimates of growth. You can plug them all in and you get 8 ½ to 8.9 percent for the fair Rate of Return. Is that reasonable? Academics accept that analysts are optimistic, most of the research shows that they're optimistic. Not because of anything fraudulent, but because they're human. They tend to look at these things in a rosey light and they get information from the company, they tend to be optimistic. Is the growth rate sustainable? Growth has to come for a utility from increases in the rate base and the rate of return they own on that rate base. So that depends upon their retention rate, how much of their earnings are plowed back into the company, and the rate of return they own on those earnings. Taken that sustainable growth rate, you end up with 3.43 to 3.77 for the gas; 2.7 to 2.4 for the electrics; not to dissimilar from Oliver Wyman long run growth forecast for U.S. utilities. So that would indicate fair return of 6.8, 6.6, 6.2 something like that.

How optimistic are analysts? I put information towards the Board three years ago from that article from Mackenzie reported in the newspaper, literally as I was putting this together RBC gave me their playbook. They circulate it quarterly and they had a similar graph to Mackenzie. And in addition they had this graph, predicted v. actual earnings growth for the U.S. 2011 predicted 11 percent earnings growth; actual 6 percent. Predicted 10 percent, 2012; actual 7 percent. Predicted 2013, 10 percent; actual, 7 percent. Predicted 2014, 9 percent; actual 7 percent. There's absolutely no question, analysts are optimistic. If we were dealing with pure play, regulated utilities, I would agree with Mr. Coyne, the range of optimism for the analysts is relatively small. We're not doing that. We're dealing with utility

holding companies and if we look at the data for utility holding companies, we see a huge variability in their rates of return. And periodically we see significant losses. So, we're looking at utility holding companies for implications for regulated utility and I'm under, no doubt whatsoever, that the DCF estimates are optimistic. I need somebody to prove to me that they're not optimistic when all the evidence seems to indicate that they are.

Finally, I looked at these U.S. companies and I did a simple regression analysis of their return on equity against the market to book ratio. I don't think anyone would doubt the proposition that more is better; higher return on equity makes people happy, and they're willing to pay more for the stock. Market to book ratios go up. So, I ran a regression of their return on equity against the market to book ratio, that's the pink blocks. If the rates, actual return on equities are very low, as they are for those first two observations, investors are going to look at

that and say well, we don't expect that to continue. Those are abnormally low rates of return, and they're below the line. Similarly, when we get very high return on equity, I think that was Southwest Gas, 17 percent, investors look at that and say well, I don't think that's going to continue. That was just a ridiculously high rate of return. There is a basic relationship; the higher the return on equity; the higher the market to book ratio. If you believe that the market to book ratio should be around 1.1 for regulated utility, Ms. McShane testified to that effect for many year before this Board and before most boards in Canada. If you plug 1.15, you end up with a 7.15 percent ROE. So, I have no doubt whatsoever that the actual rates of return earned by these utility holding companies are regarded as very good as far as the investors are concerned. So, overall my recommendation, risk premium, DCF, I put a lot more weight on DCF than I did, say, five years ago. I tend to look for the DCF more at the overall capital market than I do

for individual companies. For individual companies, the constant growth rate model is hazardous in using it for individual companies. You have to sort of take into account the optimism of the analysts and you have to work out a growth rate that is sustainable. Once you do that, you end up with results that are consistent with what we would expect.

JOHNSON, Q.C.:
Q. Does that conclude your perspective for the Board today, Dr. Booth?
DR. BOOTH:
A. It does and I'm very sorry for going over the 12:00.
CHAIRMAN:
Q. When is Godot going to arrive?
DR. BOOTH:
A. I wish I knew. I think the person who ask that is the person running the ECB, the guy running the Bank of Japan and the guy running FED. And honestly, I was asked before the BCUC the similar question, "there's a lot of judgment this time, Mr. Booth"? And I said yes, we can't get away

from that. We're basically looking at what the central banks are doing.

GREENE, Q.C.:

Q. Excuse me, Mr. Chairman, for the record we have to mark the presentation slides, so it will be Information Item No. 20.

CHAIRMAN:

Q. So, we're adjourned until tomorrow morning at 9:00.

GREENE, Q.C.:

Q. yes, I just wanted to make sure that that was noted for the record.

CHAIRMAN:

Q. Okay.

Upon conclusion at 12:15 p.m.

CERTIFICATE

I, Judy Moss, do hereby certify that the foregoing is a true and correct transcript of a hearing in the matter of a General Rate Application by Newfoundland Power Inc. to establish customer electricity rates for 2016 and 2017 heard on the 7th day of April, 2016 at the Public Utilities Commission office, 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, NL this
7th day of April, 2016

Judy Moss
Discoveries Unlimited Inc.

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