BRITISH COLUMBIA UTILITIES COMMISSION

IN THE MATTER OF THE UTILITIES COMMISSION ACT
R.S.B.C. 1996, CHAPTER 473

And

Re: British Columbia Utilities Commission
Project No. 3698659/G-20-12

Generic Cost of Capital Proceeding

Vancouver, B.C.
December 18, 2012

PROCEEDINGS

BEFORE:

D. Cote,	**Panel Chair / Commissioner**
M. Harle,	**Commissioner**
L. O'Hara,	**Commissioner**
R. Giammarino	**Commissioner**

VOLUME 6

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CAARS

VANCOUVER, B.C.

December 18th, 2012

(PROCEEDINGS RESUMING AT 8:35 A.M.)

THE CHAIRPERSON: Please be seated.

FBCU - PANEL 3, EXPERT OPINION ON CAPITAL MARKETS

AARON ENGEN, Resumed:

THE CHAIRPERSON: Good morning.

MR. GHIKAS: Good morning, Mr. Chairman, Commissioners. I have just a few matters to clear up before I turn the mike over to my friend, Mr. Fulton.

The first one is a reference to the transcript yesterday, Volume 5, page 847. And in this exchange, Mr. Wallace, starting at line 16, asked, "Okay, well, your graph, when you have the numbers, Figure 16, page 37." And he was asking,

> "You do set the issuance by ratings. Is it possible for you as an undertaking to come back and let me know what percentage of those ratings is done by each of the raters."

And then over on the following page, Mr. Engen, at line 8, says,

> "I seem to recall…I think this data was given in an IR."

And in fact it was provided in an IR, and I'll just

give you the reference, Mr. Chairman.

The Figure 16 data was provided in Exhibit B1-12. The response to B.C. Utility Customer IR 1.10.1, and 1.10.2. And attachment 10.2. That is the first one.

The second one is just a clarification from Mr. Engen. If you can turn to page 854, please. And starting at line 26, Mr. Wallace asked,

> "Okay. Can you confirm that you don't have any yield data indicating the cost of debt financing for Canadian utilities in your evidence?

And your response, Mr. Engen, was "Of course." I just want to make sure that we don't confuse what you're saying when you say, "Of course," whether or not you're going away to do that as an undertaking, or whether you have the answer now.

So perhaps you could just clarify.

MR. ENGEN: Well, the "of course" was to confirm that Mr. Wallace was correct. There are no references to the yields.

MR. GHIKAS: Thank you, Mr. Engen.

Finally, Mr. Chairman, just hot off the presses this morning. Yesterday, Ms. Braithwaite asked, and I'll just give you a transcript reference -- page 870, line 20, Ms. Braithwaite asked Mr. Engen

if he could update the graphs in his evidence. And Mr. Engen was able to put a fleet of people on it last night, and he has gotten about two-thirds of them, I think, done, roughly. So we have those available now, and they are being handed out, and Mr. Engen is going to -- still has the people working on the remainder of them. It's unlikely that they'll be done during the course of the next day. But he is having those done as well in response to Ms. Braithwaite, and we'll be filing those when they're done.

THE CHAIRPERSON: Good, thank you.

MR. GHIKAS: The exhibit number on that, B1-49, Mr. Chairman.

THE HEARING OFFICER: B1-49.

(DOCUMENT HEADED "TESTIMONY FIGURES UPDATE, FORTISBC, DECEMBER 17, 2012", MARKED EXHIBIT B1-49)

MR. GHIKAS: Those are my issues this morning. Thank you.

THE CHAIRPERSON: Thank you, Mr. Ghikas. Mr. Fulton? When you're ready.

MR. FULTON: Thank you, Mr. Chairman.

CROSS-EXAMINATION BY MR. FULTON (Continued):

MR. FULTON: Q: Good morning, Mr. Engen.

MR. ENGEN: A: Good morning.

MR. FULTON: Q: When we left off yesterday, I asked you about a speech that Tim Lane, the Deputy Governor of

the Bank of Canada, made to the Greater Moncton Chamber of Commerce on November 21st, 2012. You weren't aware of it. I provided your counsel with a copy of the presentation, and can I take it that you have had the opportunity to review that presentation over the evening?

Proceeding Time 8:40 a.m. T2

MR. ENGEN: A: I have, yes, thank you.

MR. FULTON: Mr. Chairman, could we mark that the next exhibit please? It'll be Exhibit A2-46 and it's entitled Weathering the Headwinds of Canada's Economic Growth. It's a presentation by Tim Lane, Deputy Governor of Bank of Canada to the Greater Moncton Chamber of Commerce on November the 21st, 2012.

THE HEARING OFFICER: Marked Exhibit A2-46.

(DOCUMENT HEADED "WEATHERING THE HEADWINDS TO CANADA'S ECONOMIC GROWTH…21 NOVEMBER 2012", MARKED EXHIBIT A2-46)

MR. FULTON: Q: Now, Mr. Engen, I'd like to take you to page 18 of Exhibit A2-46.

MR. ENGEN: A: I have it.

MR. FULTON: Q: And the page is entitled Real GDP is Expected to Grow at a Moderate Pace. Would you agree with me that that slide appears to suggest that real GDP growth between now and the end of 2014 will be approximately 2 percent?

MR. ENGEN: A: That's what the chart says, yes, correct.

MR. FULTON: Q: And is that an outlook that you can agree with?

MR. ENGEN: A: I would -- it sounds reasonable. The only issue I have with the chart is, like many of these things, I went back last night after I had seen this and went to the Bank of Canada's website to try and find the text, because although the bank provides the chart, it was in conjunction with a speech. And so unfortunately we don't have colour around what the risks are, the potential upsides or downsides to what this means. So it's very difficult to interpret that.

MR. FULTON: Q: But certainly from your experience that 2 percent sounds reasonable.

MR. ENGEN: A: I mean we've seen it in the past. It's a forecast.

MR. FULTON: Q: It looks to you like a reasonable forecast.

MR. ENGEN: A: Again, I have no context. I don't know what he was writing or what he said about it at the time.

MR. FULTON: Q: I see. Well, let's turn next to Exhibit A2-37, which is the long-term economic forecast of TD Economics. Do you have that before you?

MR. ENGEN: A: I do.
MR. FULTON: Q: Okay. And that document suggests growth for Canada's GDP ranging on an average annual basis from 1.8 to 2.5 percent for the period 2012 to 2016, correct?
MR. ENGEN: A: Yes.
MR. FULTON: Q: Okay. And would you agree with me that over those five years then, you're looking at a simple average growth rate of approximately 2.1 percent?
MR. ENGEN: A: I'll take your word for that. I haven't done the math, but yes.
MR. FULTON: Q: And subject to my math being correct, the TD Forecast is forecasting approximately 2.1 percent in average annual growth.
MR. ENGEN: A: Yeah.
MR. FULTON: Q: And that's pretty consistent with what Mr. Lane's chart suggests, isn't it?
MR. ENGEN: A: It would be, yes.
MR. FULTON: Q: Okay. So if I go back to my question, can you generally agree that the forecasts of economic growth in Canada from both the TD Bank and the Deputy Governor of the Bank of Canada are suggesting that growth is likely to be in the range of 2 percent over the next four to five years?
MR. ENGEN: A: That's correct.
MR. FULTON: Q: Okay. And can you generally agree with

those forecasts?

MR. ENGEN: A: Well, I'm not an economist and I wasn't asked to provide those kinds of outlooks. I do put the reference from one of our economists' outlook on GDP growth going forward. I don't really have a view as to whether they're appropriate or reasonable or likely to come. The one thing I do appreciate about the TD Report is it does discuss some of the risks of achieving the 2 percent growth. There's some discussion there about being vulnerable to global economic slowdowns. They talk about some of the downside.

That said, it is the Bank of Canada's TD. I have to assume they're reasonable.

Proceeding Time 8:46 a.m. T03

MR. FULTON: Q: Well, and just as you assumed that the experts in the U.S. were generally looking for their economy to grow at a modest 2.2 percent this year. At page 15 of your evidence.

MR. ENGEN: A: Oh, I'm sorry, say it again?

MR. FULTON: Q: Well, we started your cross-examination yesterday by referring you to page 15 of your evidence.

MR. ENGEN: A: Oh, yes. Mm-hmm.

MR. FULTON: Q: And at page 15, you referred -- you made the following statement.

"The U.S. economy expanded at a weak pace of 1.9 percent for the first three months of 2012. Experts are generally looking for the economy to grow at a modest 2.2 percent this year. As well, the U.S. job situation remains anemic."

So you would -- I take it you are deferring to the U.S. experts on the modest 2.2 percent growth a year?

MR. ENGEN: A: Yeah. What we've done is, generally speaking, the experts are calling 2.2 percent.

MR. FULTON: Q: Okay.

MR. ENGEN: A: I don't have a view on whether it's reasonable or not. That's generally what people are calling for.

MR. FULTON: Q: Okay.

MR. ENGEN: A: And you produce something like that for Canada, and as I said, it makes sense, is that -- do I believe that it's the case? I don't really have a view, but as I say, TD, Bank of Canada, it seems reasonable.

MR. FULTON: Q: And so do I take it from that is that you don't really have a view about what the experts in the U.S. are saying, either.

MR. ENGEN: A: Well, no. This is like taking an average or what's the consensus? Is it right, or is it wrong? Do I have a view on that? No.

MR. FULTON: Q: Okay, thank you. If you could turn to page 67 of your evidence, beginning at lines 16 and continuing over to line 2 on page 68, you express your conclusion. And you say:

> "In light of Canadian current prospective capital market conditions, market required returns on capital for energy infrastructure assets and opportunities for investments of comparable risk at attractive rates of return in Canada, the U.S. and elsewhere, I believe FEI's requested return on equity of 10.5 percent on a deemed equity component of 40 percent is consistent with current capital market conditions, would be viewed by the financial market as more representative of FEI's true costs of capital, and would be fair and reasonable in the context of such conditions."

Now, can you tell us how precise your numbers are in terms of return on equity? What -- and what I'm looking at is, what range around that 10.5 percent would you estimate that the market would consider fair and reasonable?

MR. ENGEN: A: Well, it's not a 1 basis point spread, plus or minus. It's wider than that. Realistically, as I have indicated in my evidence, investors, when

they look at these kinds of assets, these kinds of quality of assets, are typically looking for returns in the kind of 10 to 11, 10 to 12 percent range. I'm talking about levered returns, returns on equity. And with what -- and using what one pension fund recently characterized to me as reasonable leverage. And leverage with 65, 70 percent leverage in their view is too high. So when I kind of think of these numbers of 40 percent equity and a 10 and a half -- it's in that range.

MR. FULTON: Q: Okay. Well, you provided the number 10, and so at least -- is it your view that at least 10 percent return on equity would be considered fair and reasonable by the market?

MR. ENGEN: A: I'd have to have a look and see -- have a look at the evidence that the company has put forward in the context of asking for 10. If they've been asking for 10 and someone said, "Well, is that fair?" I'd have to see what the evidence was saying at the time. All they've asked for at this stage is ten and a half on 40, and it seems to be comfortable. If the circumstances are different and they were asking for 10, it might or might not work. But I'm not in that situation.

Proceeding Time 8:51 a.m. T4

MR. FULTON: Q: Okay, so in terms of any number other

than the 10.5 percent that the company is suggesting, you're not in a position to say without looking at all the evidence on that point.

MR. ENGEN: A: No, that's a bit extreme. If we were saying 10.4, 10.6 --

MR. FULTON: Q: Yeah.

MR. ENGEN: A: 10 and a quarter, 10 and three quarters, maybe. Now we're moving 50 basis points to 10, to 11. At that stage I'm assuming that the evidence will be different. So I'm not 10 and a half plus or minus 50 basis points. It's around 10 and a half.

MR. FULTON: Q: So from that answer I take it, in any event, that you would have to look at the evidence to determine as well whether something less than 9 and a half percent would be considered fair and reasonable by the market.

MR. ENGEN: A: Well, if I have to look at it if it's 10, then I would assume so, yes, if it was less than 9 and a half.

MR. FULTON: Q: I'd like to ask you to turn to Attachment 16.4 of Exhibit B1-20, and that was a document that was the BMO Capital Markets document, an extract of which I gave you yesterday.

MR. ENGEN: A: That's the research report by Ben Pham?

MR. FULTON: Q: Yes, it's headed Power & Utilities Research.

MR. ENGEN: A: Yes.

COMMISSIONER GIAMMARINO: Would you repeat the attachment number?

MR. FULTON: Pardon me?

COMMISSIONER GIAMMARINO: Just repeat the attachment number.

MR. FULTON: Q: Yes, the attachment is -- it's an electronic attachment, I believe it's 16.4.

If I could just have a minute. Thank you. I'll leave that one, Mr. Chairman, and come back to it.

If I could ask you to next turn to Exhibit B1-20, the Fortis response to BCUC IR No. 1, question 28.3 which is at page 80. And the question you were asked at page 79 was to describe the characteristics that would make a U.S. utility a desirable investment for a long-term pension investor and include a discussion of realized and allowed ROE, and I'll let you read your answer and then I'll ask you my question.

MR. ENGEN: A: So you want me to read the response to 28.3?

MR. FULTON: Q: Yes, to yourself and then I'll ask you my question.

MR. ENGEN: A: Oh, I've read it, I'm okay.

MR. FULTON: Q: Okay. Now, just focusing on the last

paragraph where you say:

> "Determining which is more attractive, a higher allowed ROE or a lower ROE as a matter of expected returns, higher allowed ROEs with greater achieved ROE variability are more attractive than lower allowed ROEs with lower achieved ROE variability, if the former produces a higher expected return than the latter."

Proceeding Time 8:56 a.m. T05

Now, I'd like to make sure that I understand what you're saying here. Do I understand your response to mean that in terms applicable to this proceeding, a utility would prefer annual cost of capital reviews if those generated higher ROEs on average than a formula-based ROE, even if the latter generated ROEs that were more stable?

MR. ENGEN: A: From an investor perspective, yes.

MR. FULTON: Q: Okay.

MR. ENGEN: A: So what I'm saying, for example, if your expected return was 12 percent and it varied from 11 to 13, but on average over the years I earned 12, as opposed to 10 percent with variability that goes from 10 and a quarter to 9 and three-quarters, the former is more attractive.

MR. FULTON: Q: Okay. Thank you. Page 67 of your evidence. And at lines 9 and 10, you mention that a pension -- that pension fund investment activity and energy infrastructure outside Canada demonstrates that competition for capital -- which demonstrates the competition which Canadian regulated energy infrastructure businesses face, and you offer the example of the 44 percent common equity and allowed ROE of 10.4 percent for both Puget Energy's electric and gas utilities, which was ordered at the time of their last rate case in 2007, correct?

MR. ENGEN: A: The Puget Energy transaction is one of the transactions I referred to. I also referred to Express/Platte, National Grid. There is a number of them on the chart -- or Table 5, rather, on pages 65 and 66.

MR. FULTON: Q: Okay. And are you familiar with Ms. McShane's evidence in the 2009 Terasen ROE proceeding?

MR. ENGEN: A: No, I am not.

MR. FULTON: Q: Okay. Would you agree with me that, in the U.S., many utilities, while they are granted higher ROEs than in Canada, do not necessarily achieve those higher ROEs?

MR. ENGEN: A: I understand that that is the case with some, and that there are others that tend to achieve their allowed ROEs.

MR. FULTON: Q: Okay. Now, yesterday I provided to your counsel a copy of attachment 47.2, to Exhibit B1-20, relating to Puget Sound Energy. Have you had a chance to review that attachment?

MR. ENGEN: A: I have, and again, thank you for giving us -- giving me that last night.

MR. FULTON: Mr. Chairman, if that might be marked the next exhibit, A2-47, I believe.

THE CHAIRPERSON: Okay.

THE HEARING OFFICER: A2-47.

(DOCUMENT HEADED "PUGET SOUND ENERGY INC.", MARKED EXHIBIT A2-47)

Proceeding Time 8:51 a.m. T6

MR. FULTON: Q: And just so that everyone is clear on the tables here, that beginning with Table 1, you will agree with me that the five columns with numbers on all the tables -- well, Tables 1 and 2, on this exhibit relate to Puget Energy Inc., being the first column of numbers, and then its peers Avista Corporation the second column, Portland General Electric Company the third column, Northwestern Corp the fourth column, and IDACORP the fifth column of numbers. Do you agree with that?

MR. ENGEN: A: That's correct.

MR. FULTON: Q: Now, if you turn to page 5 and the fourth row that relates to return on common equity,

you'll see that PGE's return -- or Puget Energy's return is 3.5 percent, Avista Corp 7.6 percent, Portland General Electric 5.4 percent, Northwestern Corp. 8.2 percent, and IDACORP 7.9 percent. Will you agree with me that those returns are much lower than the achieved returns of the majority of Canadian regulated utilities?

MR. ENGEN: A: Yes.

MR. FULTON: Q: And they are certainly lower than the achieved returns of Fortis Energy Inc.

MR. ENGEN: A: Yes.

MR. FULTON: Q: Now, do you know what the allowed return on equities are for Puget Energy Inc., Avista Corp., Portland General Electric, Northwestern Corp., and IDACORP?

MR. ENGEN: A: I don't for the last four. For Puget in my evidence I have a bit of a discussion of what the allowed ROE is when they made the acquisition. Unfortunately -- and my recollection is around 10 percent and change from my evidence. If I go back to page 60, I think it referred to it, 67.

MR. FULTON: Q: And that was at the time of the acquisition --

MR. ENGEN: A: Yes, that's correct.

MR. FULTON: Q: -- of the consortium that included McQuarrie Infrastructure Partners --

MR. ENGEN: A: Yeah, so they --

MR. FULTON: Q: -- the Canadian Pension Plan Investment Board et cetera.

MR. ENGEN: A: That's right. It's on page 67, lines 5, so had a bit of a discussion at the time. The last settled return that I was aware of was at 2007. There may have been one since them, I'm not aware. At the time they were given a return equity of 10.4 percent for the electric and gas utilities.

Unfortunately as I'd indicated in my response to the IR 28.2, the achieved ROE information is not available from 2002 to 2009. That was in response to one of the -- when I say -- it was in response to one of the IRs. That information is not public. We calculated the return or the achieved ROE a bit differently, 4.1 and 6.9 percent for those last two periods.

I did have a conversation actually with one of the owners and asked them about that, and I have a bit of a discussion as well on 28.2.1 about why it is where it is for the last couple of years. They've been investing a significant amount of capital in the business and there is apparently a regulatory lag of upwards of two years. The 2011 expenditure is about -- just shy of $500 million, which put downward pressure on the company's earnings, and they're not

recoverable apparently until after the regulatory proceedings have been held.

Which interesting, as I say, in my evidence as well, is one of the reasons they wanted to invest. The commitment the consortium made when they bought it was that they would invest upwards of $5 billion in the infrastructure, and that's one of the conditions on which the acquisition was approved. So understand from them as well that they expect that the time lag issue will be resolved and you'll see more normalized returns going forward reflective of what they've had in the past.

MR. FULTON: Q: Now, when you say reflective of what they've had in the past, what amount --

MR. ENGEN: A: Yes, in response to, again, 28.2.1, I was asked to comment on the years where they were lower allowed ROEs. And again, we don't have any data on them because you can't -- the disclosure is not there.

Proceeding Time 9:06 a.m. T07

MR. FULTON: Q: Yes.

MR. ENGEN: A: But the financial statements in their 2011 10K, and I quote, it says

> "The company has faced certain challenges which caused a significant reduction in the return on equity as compared to other

years."

And so we understand from that, that the returns were significantly higher and again anecdotally, from talking to the owners, that that's the case as well.

MR. FULTON: Q: All right. Well, Mr. Engen, given that answer, relating to TSE, can you as an undertaking provide information as to what the allowed return on equity numbers were for Avista Corp., Portland General Electric Company, Northwestern Corp., and IDACORP, for the period covered by Table 1?

MR. ENGEN: A: It's not an undertaking I'd be prepared to take. I don't have any evidence on Avista, PGE, Northwestern or IDACORP. I haven't done any work on them. I haven't gone through the regulatory filings. It's not part of my evidence. I'm not sure why I would accept that undertaking.

MR. FULTON: Q: All right. Page 9 of your evidence. At lines 8 to 10, you state:

"Some of the factors pushing government of Canada bond yields to currently very low levels are the very same factors which would tend to put upward pressure on the cost of equity."

Now, I want to come to the document that I didn't have marked, that we began to discuss earlier, and that is an extract from the BMO Capital Markets power and

utilities research document headed “The One-Two Punch: Growth Combined with Attractive Yield”.

If we could mark that the next exhibit, which would be A2-48, please.

THE HEARING OFFICER: Marked A2-48.

(DOCUMENT HEADED POWER & UTILITIES RESEARCH, "THE ONE-TWO PUNCH: GROWTH COMBINED WITH ATTRACTIVE YIELD", MARKED EXHIBIT A2-48)

MR. FULTON: Q: And while I’m at it, I’m not sure whether you received yesterday a copy of page 11 of that document. Did you receive a copy of page 11 as well?

MR. ENGEN: A: I did not.

MR. FULTON: Q: Okay. Well, I’ll provide you with a copy. It’s relatively short, but I’m just -- maybe what I should do is ask you whether you’re able to read this copy of page 11. And I’m focusing -- I’m going to ask my questions related to the last paragraph on page 11, and if you can’t read it, then I’ll just leave it and not have it marked.

MR. ENGEN: A: Thank you.

Proceeding Time 9:11 a.m. T8

MR. FULTON: Q: I’ve asked Mr. Ghikas to see whether they have a better version of --

MR. ENGEN: A: I can make out about half of it.

MR. FULTON: Q: Okay. So maybe what we’ll do is I’ll

come back to it. I'll put the words which I've got recorded as being in the document, and then you can take them subject to check. We'll do it that way.

I think it'll be more efficient if I likely do it that way, Mr. Chairman, and I will read what I believe the words to say when I get to the question and Mr. Engen can take them subject to check.

MR. ENGEN: A: I can read them fine now.

MR. FULTON: Q: Okay. So the document I am going to circulate is not as legible as what you're reading, but would you agree with me that what page 11 says beginning about halfway down the last paragraph:

> "In our view, the regulatory changes are so far working in favour of equity investors through improved earnings, but uncertainty still lingers over how regulators will establish allowed utility returns in the future, especially given that ten-year bond yields have compressed by close to 100 basis points since the beginning of 2011. Recently the Alberta Utilities Commission lowered the ROE to 8.75 percent from 9 percent. The British Columbia Utilities Commission has initiated a cost of capital hearing which could result in a reduction to the 2013 B.C. ROE given that it is currently

above 9.5 percent, one of the highest in Canada."

MR. ENGEN: A: That's correct, yes.

MR. FULTON: Perhaps then, Mr. Chairman, if we could market that extract from the BMO Report Exhibit A2-48-1.

THE HEARING OFFICER: A2-48-1.

(EXTRACT FROM BMO CAPITAL MARKETS, PAGE 11, HEADED "POWER & UTILITIES", MARKED EXHIBIT A2-48-1)

THE CHAIRPERSON: I'd say about half of it you can make out, but --

MR. FULTON: Right.

Q: So just staying with that document so that you can return the computer, would you agree with me that the last sentence seems to suggest that the markets anticipate that something less than 9.5 percent is a possibility based on current market conditions?

MR. ENGEN: A: I'd characterize it a bit different. I think the market recognizes there's a risk that it could fall below 9.5, yes.

Proceeding Time 9:16 a.m. T09

MR. FULTON: Q: All right. Then we'll go back to the legible document A2-48, so -- and there I want to take you to page 19, the second paragraph, halfway through, where it states:

"The British Columbia Utilities Commission

has initiated a cost of capital hearing which could result in the 2013 BCUC ROE given that it is above 9.5 percent -- which could result in a reduction to the 2013 B.C. ROE, given that it is above 9.5 percent, one of the highest in Canada."

And that's basically a repeat of what appears at page 11.

MR. ENGEN: A: Yes, it's a summary of what have been written in the prior number of pages.

MR. FULTON: Q: From your reading of the extracts that I've provided you from the BMO report, can I interpret that report as saying that in a low bond yield environment the pressure is on the allowed ROE to fall?

MR. ENGEN: A: Yes. And Ben Pham says that in the next paragraph. He says, "In a low bond yield environment, there will be pressure on ROEs." And actually this report had a discussion with him. Ben is a new equity analyst for us. He used to cover the debt capital market prior to doing his equity research. And it's just a recognition of the regulatory environment in which we live, where CAPM is an important element of determining cost of capital. When we're in a low bond yield environment, there is a risk that ROEs will fall.

MR. FULTON: Q: Yes. And do you agree with that statement?

MR. ENGEN: A: You kind of have to. Because as we watched over the years since kind of 1994, with the adoption of formulae, as the long bonds have fallen over the years, so too have ROEs.

MR. FULTON: Q: Okay. So doesn't that contradict your statement at page 9 of your evidence that I referred you to? That some of the factors pushing government of Canada bond yields to currently very low levels are the same factors which would tend to put upward pressure on the cost of equity?

MR. ENGEN: A: Well, no, because the comments on page 9 are a macro view of the capital market, not -- or the equity capital market. It's not a specific reference to allowed ROEs. So we recognize that ROEs, as I say, have demonstrated that as bonds have fallen, allowed ROEs have fallen. It doesn't mean that stock prices have fallen. And in fact the utility sector has performed well over the last 20 years. Compound average growth rate from quarter to quarter over the entire 20-year period has been over kind of 13 percent. It doesn't matter what period you pick. So, and for a variety of reasons. Sometimes because interest rates have been falling, the share prices have done well. More recently there has been a

disconnect between the interest rates and share price performance. More lately in the last number of years it's been driven by growth. So, no, they're not inconsistent at all.

One -- the one reference, of course, we're talking about allowed ROEs, and the other we're talking about capital market performance.

MR. FULTON: Q: Do you have the Concentric report close at hand? That's at tab I of Exhibit B1-9-6.

MR. ENGEN: A: I don't really expect I will.

MR. FULTON: Q: And if you could turn to page 4.

MR. ENGEN: A: August? Or --

Proceeding Time 9:22 a.m. T10

MR. FULTON: Q: Yes, the August report, thank you.

And if you look at the second paragraph below the bullet, and there is the discussion of the AUC decision, GCOC decision, and the second paragraph begins with:

> "When reflecting upon its rationale for discontinuing the formula, the Alberta Commission stated it had found that in times of adverse market conditions the expected relationship between interest rates and the required return on equities does not necessarily hold."

Do I take it from your evidence that you

believe that there is an inverse relationship?

MR. ENGEN: A: No. What I am saying is in the current market environment and during the crash, where there was tremendous investor uncertainty about the future of the financial system, the economy, that investors moved in out of fear, out of risk aversion into bonds, pushing those bond rates, Government of Canada bond rates low. And indeed bond rates around the world. And it's that same fear and loathing, if you will, in the equity capital market that drove people to the bond market that would push the cost of equity up.

So it's not -- it's a unique situation. It's not something that I would always expect to happen unless we're in serious financial trouble, and I think that that's what the board is essentially saying as well. That in times of adverse market conditions, and that's kind of my reference here, the 2008-2009 market crash, I'd characterize it as adverse market conditions, the expected relationship between interest rates and required return equity doesn't necessarily hold. And that's consistent with what I'm saying. Bonds are heading south. Ordinarily you might expect that the cost of equity would be coming down as well, but in that adverse market condition the opposite is happening.

MR. FULTON: Q: We return to your evidence then and

have some questions relating to market evidence of equity valuation and returns, and market evidence of equity valuations and returns is presented on pages 25 to 31 of your report.

MR. ENGEN: A: Do you need me to keep the Concentric report open?

MR. FULTON: Q: No.

MR. ENGEN: A: No?

MR. FULTON: Q: You can pass that on.

MR. ENGEN: A: I'm sorry, which pages did you want me to turn to?

MR. FULTON: Q: 25 to 31. Those pages discuss market evidence of equity valuations?

MR. ENGEN: A: Yes.

MR. FULTON: Q: Okay, and you used the price/earnings ratio as a measure of the value of the index relative to the earnings generated by the companies in the index?

MR. ENGEN: A: I'm sorry, you're going to have to say that again?

MR. FULTON: Q: As I understand your evidence, you used a price/earnings ratio as a measure of the value of the index relative to the earnings generated by the companies in the index.

MR. ENGEN: A: I'm not sure I do that. I'm not sure exactly what you mean. What I can tell you is I look

at the P/E ratio as a valuation of the earnings produced by members of the index.

I'm not sure, are we saying the same thing? I'm hopeful we are.

MR. FULTON: Q: Yes. Is it your view that a higher price/earnings ratio means that the market is paying more for each dollar of income, meaning each dollar of income is more valuable or more expensive, and all else equal, indicates a lower cost of equity environment?

MR. ENGEN: A: Yes, you've just read right out of my evidence, so yes, that's correct.

MR. FULTON: Q: And do you agree that the utilities sector has a higher price/earnings ratio than the broad market?

Proceeding Time 9:27 a.m. T11

MR. ENGEN: A: I did some IR work on that. I probably should turn to that first.

Yes. On BCUC IR No. 1, number 19. It's page 52. I apologize, that's probably not the right kind of referencing.

MR. FULTON: Q: That's fine.

MR. GHIKAS: Exhibit B1-20, Mr. Chair.

MR. ENGEN: A: And in that IR, I was asked to provide a chart of the P/E ratios of the utility sector in the same format as I had provided for the index. And as

you can see, at the -- since about the middle of 2011, there has been divergence. The utility sector valuations are currently higher on a P/E basis than the S&P/TSX.

MR. FULTON: And would you -- can I take it from that chart, though, that the utility sector has had a high -- historically high price/earnings ratio?

MR. ENGEN: A: No. From 2002 to 2005 it was lower. For a brief period in 2006 it was higher. For a number of years, kind of starting in 2007 till about mid-2008 it was the same. At the height of the crisis, it was a little -- it was higher. A couple of terms. And then coming out of mid-2009 through right to the middle of 2011 had been lower. And the jump that we see at the end, the big divergence, of course, was I think what caught people's attention and was also asked to discuss the trends by the BCUC. I hope I'm using the right description here. 19.3, and I have a discussion about why the ratios in particular in the last year or so have been rising so dramatically.

In response to 19.2, I show the specific P/Es for each one of the members I have of our utilities group. TransCanada, Enbridge, Valliner, Fortis, Canadian Utilities and Emera. And as you can see, one of them in particular has just gone sky high.

Enbridge is well over 50 times earnings. And Valliner jumped for a short period of time as well. Both of -- given we only have six people, who are members of that group, one of them can skew the group dramatically. So, early on in 2011, Valliner's valuations jumped. There had been a reorganization of the company, and its predecessor, the publicly-traded trust, that resulted in a drop in its returns. And it's since normalized. And then Enbridge's multiples are well over 50 times, and it's -- the market is really looking forward to substantial growth in its earnings. They just announced another six and a half billion dollars of projects last week. That's kind of why that's skewed up so high in the last year or so.

Proceeding Time 9:32 a.m. T12

That's kind of why that's skewed up so high in the last year or so.

I also give a bit of summary at the end, the last paragraph. Overall and through the ten-year period and currently, the group is traded in a band of 15 to 20 times, and the two notable exceptions, largely driven by the extraordinary performance of Enbridge, and if you pulled out that extraordinary performance of Enbridge over the last year and a half, the group would basically still be trading within that band.

MR. FULTON: Q: In the BMO report -- unfortunately this page has not been attached, but the one that's at A2-48 --

MR. ENGEN: A: I'm sorry, which report?

MR. FULTON: Q: The BMO Power & Utilities Research report.

MR. ENGEN: A: Okay.

MR. FULTON: Q: At page 395 of the electronic document, the following statement appears.

> "Price/earnings multiples sector-wide, continue to be at the high end of the historical range and the group is currently trading at a 56 percent premium to the TSX composite index."

Would you agree with that statement, subject to check?

MR. ENGEN: A: No, I disagree with -- oh, I'm sorry. You're talking about this first page? I think I have it.

MR. FULTON: Q: Yes, the first page on A2-48.

MR. ENGEN: A: Yes. I don't disagree with it. Of course, this is in April, and we should be mindful as well that as we think about what Ben is saying here, we are talking about a group of seven companies, four of whom are not regulated utilities. Boralex, Capital Power, Caribbean Utilities and TransAlta.

MR. FULTON: Q: Would you agree with me that the higher

level of P/E ratio for the utility sector may indicate a lower cost of equity capital, all else being equal?

MR. ENGEN: A: Ask me the question again, sorry?

MR. FULTON: Q: Yes. We've been referring to the third bullet on page 1 of A2-48. Correct?

MR. ENGEN: A: Ben's reference to P/E multiples --

MR. FULTON: Q: Yes.

MR. ENGEN: A: -- sector-wide. Yes, mm-hmm.

MR. FULTON: Q: Yes. And my question is, would you agree that this higher level of price/earnings ratio for the utility sector may indicate a lower cost of equity capital, all else being equal.

MR. ENGEN: A: Well, there is no "all else being equal" here. As I said, so, Ben's comments, we have seven companies here. Ben's comments apply to all seven as a group. Four of them aren't regulated utilities. I mean, obviously here we're trying to draw conclusions about rate-regulated LDCs. So the majority of these companies are not rate-regulated. And as I've said, while they trade at the high end of the historical range, it's within the kind of historical band -- well. Now I'm being apples-to-oranges myself.

When I look at the six entities that would be the most -- the closest Canadian comps for regulated entities, they do trade within their historical band of 15 to 20 times.

So I don't know that I can draw the conclusion you want out of what Ben is saying here.

MR. FULTON: Q: I see. Okay. Are you familiar with the Brattle report?

MR. ENGEN: A: Yes.

MR. FULTON: Q: Okay.

MR. ENGEN: A: That's the -- I'm assuming you're talking about the report that was done for these proceedings --

MR. FULTON: Q: Yes.

MR. ENGEN: A: -- where they canvassed returns across the country?

MR. FULTON: Q: Yes.

MR. ENGEN: A: Yes.

MR. FULTON: Q: And would you agree with me generally speaking that the Brattle report states that a multi-stage DCF model helps to keep long-term growth assumptions to a somewhat reasonable level?

MR. ENGEN: A: I don't recall that. It may be there, but I don't recall having read that. But --

MR. FULTON: Q: Are you familiar with Ms. McShane's evidence in this proceeding?

MR. ENGEN: A: I have read it, yes.

MR. FULTON: Q: Okay. Would you agree that she provided evidence of a multi-stage DCF calculation for the Canadian utility sector which showed earnings

growth assumptions initially at 7.5 percent, drifting down to 4.3 percent in the final stage?

Proceeding Time 9:37 a.m. T13

MR. ENGEN: A: I don't recall that. If you'd like to kind of quote and I confirm whether it's in her work, but --

MR. FULTON: Q: If you go to Schedule 23 of her evidence.

MR. GHIKAS: Exhibit B1-9, tab F.

THE CHAIRPERSON: On Schedule 23?

MR. FULTON: Yes.

Q: You could let me know when you're there, Mr. Engen.

MR. ENGEN: A: Sorry, what page did you want me to be at?

MR. FULTON: Q: It's Schedule 23 towards the back of the document.

MR. ENGEN: A: I have it.

MR. FULTON: Q: Okay. And if you look at the green row, would you agree with me that Ms. McShane's multi-stage DCF calculation for the Canadian utilities sector shows earnings growth assumptions, initially at 7 and a half percent and then trending down to 4.3 percent in the final stage?

MR. ENGEN: A: I'm afraid you got me there. You're talking about this Stage 1 Reuters Long-Term

Forecasts?

MR. FULTON: Q: Yes.

MR. ENGEN: A: Okay. And you're asking me to say --

MR. FULTON: Q: That that shows earning growth assumptions initially at 7.5 percent in Stage 1, and it trails down to 4.3 percent in Stage 3.

MR. ENGEN: A: I see those numbers. 7-5, 5-9 and 4-3.

MR. FULTON: Q: Okay. And that table does not show a similar calculation for U.S. data exclusively, does it? It's only Canadian companies.

MR. ENGEN: A: To be honest, I'm not that familiar with her schedule, but I'm presuming that the data must refer to the five utilities reference there. I don't see anything on there about U.S.

MR. FULTON: Q: Growth. Well, if we put aside the near-term growth of certain Canadian companies, if we assume that investors historically expect utility companies sector-wide to have the same steady, stable earnings growth over the long term in line with the GDP, all else being equal, would a rising price/earnings ratio indicate a lower cost of equity capital?

MR. ENGEN: A: I'm sorry, can you start off with the assumption again?

MR. FULTON: Q: Okay.

MR. ENGEN: A: Because I'm not sure I agree with it.

MR. FULTON: Q: The assumption is that investors historically expect utility companies sector-wide to have the same steady, stable earnings growth over the long term in line with GDP, all else being equal.

MR. ENGEN: A: That's not been the experience though. So I look at earnings growth, so for example like Canadian Utilities, year in year out there'd be closer to 10 percent over the last 10 or 15 years. The growth at Enbridge is expected to be -- their EPS growth now over the next five to six years is 10 percent plus. TransCanada is in that same range. So something growing in line with kind of GDP growth of something of 2 percent or less is not the case.

Proceeding Time 9:42 a.m. T14

MR. FULTON: Q: If you'd turn to Exhibit B1-20, question 1923 which is at page 53, and you -- and the question asked, describe the trend in P/E ratios for the companies mentioned above, and the previous response, and compare it to the trend P/E for the TSX composite. Have you had a chance to read the response?

MR. ENGEN: A: Well, that was the response I was just reading to you a few moments ago, where I talked about Valliner's valuations, Enbridge's valuations, where the group trades between 15 and 20 times. That's the response to BCUC 1.19.3.

MR. FULTON: Q: If we were to exclude the outlier effects of Enbridge Inc. and Valliner, how would the current price/earning ratios compare against mid-2009?

MR. ENGEN: A: I don't know. I can tell you that if we were to pull those out today -- again, this is -- I've already read it for you today, but if we pulled out Enbridge's P/E, the group P/E ratio in September 14th, and that's an average over the month, and I prefer to try and use averages rather than just a point in time, would be 19.6. The ten-year average is 17.3.

MR. FULTON: Q: And what about if you pulled out Valliner?

MR. ENGEN: A: Well, more recently Valliner is not an issue. It trades back in line. The blip from Valliner was kind of early 2011 to a little bit later in 2011. It now trades back in line with the others. Just under 20 times.

MR. FULTON: Q: Now, it's your view that bonded income funds have enjoyed strong inflows?

MR. ENGEN: A: Yes. And I -- that's part of my evidence earlier on. I think you'll go back to page -- I think you wanted to start at 25. So, pardon me, page 24. Figure 7, I show the mutual fund flows. So equity funds have been seeing outflows. We have talked about this a little bit yesterday. And significant inflows to bonded income funds. And

unfortunately this is one of the charts that's more painful to reproduce. It will take a day or two to have it ready, but we'll have that updated for you as well.

MR. FULTON: Q: Okay, thank you. And if you turn to page 50 of Exhibit B1-20, where you're responding to question 18.2, are you able to confirm that the BMO Income Fund includes utility common stock in their top ten holdings as of August the 31st, 2012?

MR. ENGEN: A: Well, I think I answered that in IR 18.2, so I have indicated it's a mix of fixed income securities, preferreds, commons, REITs, royalty trusts, yes.

MR. FULTON: Q: Okay.

MR. ENGEN: A: And I've listed the top ten.

MR. FULTON: Q: Okay. When we combined the fact of the rising price/earnings ratios of the utility sector with the strongly positive flows of bond and income funds, which are referenced at page 50, can we reasonably conclude that investors show a strong demand for the utility sector?

Proceeding Time 9:47 a.m. T15

MR. ENGEN: A: So you want to combine, I'm sorry, again the first part?

MR. FULTON: Q: The fact of the rising price/earning ratios of the utility sector with the strongly

positive flows of bond and income funds. And when we do that, can we conclude that investors show a strong demand for the utility sector?

MR. ENGEN: A: Well, you're right but for the wrong reasons. As I pointed out earlier, the rising P/E isn't really a rising P/E when you take out Enbridge. It's a unique phenomenon. So the P/E for the sector is pretty much where it has been historically. As I said earlier, it's trading just above its ten-year average. The positive flows we're talking about to the bond and income funds, as you can see, has been defined here. I gave a definition in response to 18.1 where I've identified how IFIC -- or pardon me, the I-F-I-C defines these funds. The bond and income fund is an aggregate of domestic fixed income or global high -- global and high yield -- global and high yield fixed income, sorry. And then I've given what the sub-categories are. So you can't say that the utilities fall into those funds.

But you are right though, notwithstanding that, that there is strong investor interest in utilities.

MR. FULTON: Q: Right, and do the facts suggest in addition, though, that the cost of equity may be falling? The combination of those two facts?

MR. ENGEN: A: No. Sorry, you're talking about P/Es

for the sector and these positive flows?

MR. FULTON: Q: Yes.

MR. ENGEN: A: No. Again, the rising P/E, it continues to be within kind of a 10-year range, 17 and change times a multiple. We're a little over 19 now, so we're in the same range we've been in for the last 10 years or so. And the positive flows are away from common equity and into bond and income funds, which suggest the opposite. Investors are seeking the protection of bond and income funds and avoiding the more risky equity environment.

MR. FULTON: Q: Thank you. You will agree with me, however, that the income funds do include a lot of utility stocks.

MR. ENGEN: A: I don't have any evidence that that's the case, no. BMO has a monthly income fund and you've identified the top ten. IFAC, only -- IFIC for its bond and income funds only discloses Canadian fixed income that would tend to be preferred shares and bonds, corporate and government, Canadian inflation protected fixed income, Canadian long-term fixed income, short-term fixed income. We have named -- the BMO Group has named its monthly income fund that group of names, but I don't have any evidence it's part of the IFIC bond and income fund group.

MR. FULTON: Q: Thank you, Mr. Engen, those are my

questions.

COMMISSIONER GIAMMARINO: I just have a couple of -- one clarifying and one more substantive. On page 53 of your testimony.

MR. ENGEN: A: Sorry, page 52?

COMMISSIONER GIAMMARINO: 53, sorry.

MR. ENGEN: A: 53.

COMMISSIONER GIAMMARINO: I'm sorry. I'm sorry, I had the wrong page. 25. In general you're talking about the price/earnings ratio as being indicative of the cost of capital.

Proceeding Time 9:52 p.m. T16

MR. ENGEN: A: Yes.

COMMISIONER GIAMMARINO: And we've discussed -- I've heard you discuss since then the fact that in addition there is this growth that is important. So if we take the full characterization of the dividend growth model as sort of the inverse of the price/earnings plus some growth indicator. And you've talked about individual companies and how there is growth probably contributing, that is correct?

MR. ENGEN: A: Yes, yeah.

COMMISSIONER GIAMMARINO: Do you think the growth is of the regulated assets?

MR. ENGEN: A: It depends on which company we are talking about. So out of this six that we kind of

tend to think of as Canadian utilities and unfortunately we talked about this a little bit yesterday, a couple of them -- it's a bit of a stretch, because only a minority of their assets are actually regulated utilities. And I am thinking particularly here of TransCanada/Enbridge. Both of those companies have very, very large Cap-X programs, and as I said yesterday -- or said just a few minutes ago rather, Enbridge just announced another six and a half billion dollars of new projects.

They're regulated assets, crude oil pipelines, but they are not the cost of service rate regulated assets any longer. These are assets that are backstopped now by long-term contracts. So the companies will enter into open seasons. And that's really the model that we see developing over the last number of years. That rather than pursuing big pipe or big projects in rate regulated environments, the alternative has been to pursue negotiated settlements or agreements.

Alliance was kind of one of the break out assets to avoid the rate regulated environment and let's just sign long-term contracts. And that had become the model in the gas pipeline industry for some time and it is now moving across to the oil industry, and you've seen that in TransCanada's crude oil

pipeline, the Keystone pipeline. If they can ever get XL built, it will be the same model too, 18-year contracts. And so -- and then TransCanada has announced a number of projects as well as I say, Keystone XL which is notable, but they've got a number of projects now going on the pipeline side in the U.S. -- pardon me, in Mexico. And just long-term fixed price contracts. Some very large power plants in Ontario.

So the growth, the big driver is all coming from the non-rate regulated assets. And that isn't to say there isn't some growth around those as well, but the real driver here has been the non-regulated assets.

COMMISSIONER GIAMMARINO: Okay, thank you, that is my question.

COMMISSIONER HARLE: I have no questions.

COMMISSIONER O'HARE: May I still continue with this same thing, Mr. Engen, because you confused me by saying that these pipeline assets are not regulated. But then you say that they are regulated, and the only distinction you are making that they are not under cost of service rate regulated. So why do you keep on saying that they are not regulated when they are?

MR. ENGEN: A: They are all -- and we have had a bit of a discussion about this, how do you want to try and

distinguish between the various kinds of regulated assets. The LDCs like Fortis Energy, like AltaLink in Alberta, or Aqua-utilities, some of the Aqua-utilities, Ontario, Hydro One, the transmission line, I think of those as ones where you are in front of the regulator, the regulator determines what the cost of capital will be, the capital structure of the asset. The other assets are regulated, I still need to have a regulator approve the constructions. So Keystone, for example, had to have the approval of both the FERC and the NEB to build the pipeline. So in that sense it is regulated, but it is not a rate regulated asset.

The companies are able to negotiate with their customers the kinds of returns they are looking for on those assets, and typically those returns around those kinds of assets have been around frankly, and still are, around 11 percent. And that is kind of one of the things that helps me come to my view that a 10 and a half on 40 is reasonable. I see what people are negotiating. Many regulators aren't interested in hearing about that kind of evidence because they are part of a settlement package. You know, there is gives and takes on arriving at what those returns are. But that is typically the kinds of returns, and that is why I distinguished them.

It's those kinds of assets that have become

very, very interesting to investors, and unlike regulated returns, the companies that own those assets know what those returns are going to be for the next 20 years, because they have contracts that affect it. It is not open any longer to a regulator to say it is time to change either the capital structure or the allowed returns.

Proceeding Time 9:58 a.m. T17

COMMISSIONER O'HARA: That's good, thank you. But still, at the risk of repetition, I want to go back to the *Calgary Herald* quotes that Mr. Booth had in his evidence. And I read again what the former Enbridge CEO, Mr. Daniel, was quoted saying about the successful fund-raising, saying "I think that speaks to the low-risk, steady, predictable nature of our business. People don't really realize it until you get into tough times like this."

And then with that background, were you here yesterday when Ms. McShane was finishing her testimony?

MR. ENGEN: A: I wasn't sure when she was testifying, no.

COMMISSIONER O'HARA: Because first, Mr. Wallace started this ranking exercise with these various types of utilities and perhaps I can ask you to go to -- again to her evidence, which is in Appendix F of that B1-9.

I think that ranking exercise started on page 45, 46. By sector ranking. It starts page 45. Do you have that?

MR. ENGEN: A: Yes.

COMMISSIONER O'HARA: And so the lowest is the electricity transmission, then we have the electricity distribution, and then we have the next level, natural gas distribution. So that's FVI, we are dealing with in this proceeding, right?

MR. ENGEN: A: Yeah, okay.

COMMISSIONER O'HARA: And then we move on to vertically integrated electric utilities, and I think with both Mr. Wallace and myself, I think Ms. McShane -- I know it's not precise and it's not science, but risk-wise, she would put TransCanada Pipeline and Enbridge Liquids pipeline in the category of higher risk than these LDCs.

MR. ENGEN: A: Well, just set aside for a minute how people have ranked it here. I want to be careful that when the quote came out of the newspaper article, when -- I will tell you, I have met with Pat. I've known him -- well, he's now retired. I had very specific and direct conversations with him and the company about the attractiveness to the company and their investors, about the asset portfolio. And he had been very clear that the least attractive asset they have,

frankly, is the Enbridge gas distribution. And the reason is, it's very low return. Lower growth. The best thing about them was that, frankly, it keeps one of those other pipelines full. I can't remember which pipeline it is now. The focus of the company is on growing these other assets.

And true, they are rated assets. But they are assets that generate stronger returns, have much greater growth potential than the others. They're -- those are the assets that are contributing to the EPS growth. And when I see the reference to the newspaper article, and say, Mr. Daniels said all these wonderful things about pipelines, and I can now translate that to mean he's saying wonderful things about rated assets in Canada, he's not. It isn't to say that rated assets are terrible assets. I just want to be clear that what he is talking about is a very different class of assets.

COMMISSIONER O'HARA: But do you agree that this type of pipeline assets are riskier than these cost of service type of -- if these natural gas distribution companies have the cost of service regulation, which many experts say is one of the lowest, or safest forms of regulation and when you combine that with deferral accounts, you are in a fairly low risk category.

MR. ENGEN: A: Yes, there is no question that they are

low-risk. I have -- I take umbrage about the deferral account thing, because I think of it as just -- it's an IOU. And if the IOUs get large enough, sometimes they don't get paid. And in fact, Enbridge saw that in New Brunswick earlier this year. They actually had to write down an asset because deferral accounts were getting too large.

The kinds of assets again that we're talking about there, both for TransCanada and Enbridge in particular, these assets are assets that come with long-term contracts. They are very secure contracts, strong counterparties. Crude oil is going to move out of the basin. So, it's difficult to draw a generalization about all pipelines. But the growth that's being driven by both these companies are long-term contracted assets. The Oakville pipeline, which the contract was shut down by the Ontario government, has since been replaced with a 20-year contract.

Proceeding Time 10:03 a.m. T18

It's not a regu- -- well, yeah, it is a regulative asset. But it's not a cost of service rate regulated asset. And so those are very very attractive assets. Investors are quite keen to get those very strong returns. You can model out the returns for 20 years and then your really only guess

at data is what you think the world will look like after 20 years.

COMMISSIONER O'HARA: That's good clarification. Thank you, Mr. Engen. But then one more question before I move on to the other Panel members.

MR. ENGEN: A: Sure.

COMMISSIONER O'HARA: Now that you have seen Ms. McShane's testimony and you have provided yours, where you are supporting her evidence when it comes to the cost of equity, so in your view would FEI have difficulty raising new capital if it is not awarded this requested 10 and a half percent return on equity, in combination with the 40 percent equity thickness?

MR. ENGEN: A: It really depends on the kind of capital we're talking about here. I don't have any doubt that they would be able to raise capital in the debt capital market. Debt is well protected and we see that in the form of the regulation we see today.

On an equity return that's a different matter. That one's far more difficult to be able to address because it's entirely theoretical. The FEI BC is not a publicly traded entity. We don't have to answer -- it's very -- whether the parent would drop equity down, I'm assuming that in British Columbia that there is a cost of service -- no pardon, a service, an obligation to service -- or I had to think

about that for a minute -- as is is there is in Alberta, and so parents will often put the capital down into the subsidiary to finance that obligation to serve.

Were you to go to the public and ask, "I want you to take a direct interest in this," at a price I'm sure you could get something done, but I don't know what that would be.

COMMISSIONER O'HARA: Thank you, Mr. Engen. No further questions.

THE CHAIRPERSON: Mr. Engen, just one little area. Yesterday in your testimony you indicated that there's no much change and in some cases some of the key indicators have gone downward or gone against where they were when you're comparing 2009 to the present time. In my read of your report it seems to me anyway that you seemed to be pretty reliant on the comparison of the indicators as they stood, as they stand between those two years.

I'm wondering, in addition to indicators, what else you rely on.

MR. ENGEN: A: Well, there's a couple of things that come to mind. The market tone at the end of 2009 isn't much different than it is today, but for different reasons. So we have to bear in mind at the end of 2009 there was tremendous financing activity.

We all remember the end of 2008, the beginning of 2009 when markets shut down. Nobody was financing anything. The bottom -- market bottomed out in March of 2009. That was at its nadir. And unfortunately that was, as some may recall, that was -- and I'm reminded by a client in the form of ATCO that that was the day they chose to do a preferred share offering and it was quite expensive for them.

But shortly after that, as the market began to turn around, there was a true unleashing of financing activity both in the equity market and the bond market. Now there, the concern was fear in that period was we don't know how the financial market is going to look. Is it going to collapse? Is it going to be in any shape next year? There was a lot of risk aversion in the market at that time.

Now, at this time we still have fear and concern in the equity market and the bond market as well. But for a different reason. It isn't about whether we're concerned about financial market collapse. It's about what's going to happen as a result of the sovereign debt crisis in Europe and what does that mean for us? And we've seen that kind of translate into bank valuations and you've seen the bond spreads for generic A's. That's largely being driven by the financial institutions who are more

exposed to those kinds of risks. The fiscal cliff in the U.S. is figuring large in investors' minds.

So the concern, unease, in the marketplace is in the market much as it was in 2000, but for different reasons. And then as I say, the indices are some of the things we look to. And then frankly, conversations and discussions about market conditions with our sales and trading folk, with our research analysts, and then I meet with institutional investors around the world, more recently in North America. I just did a long tour across the U.S. where I was meeting with institutional investors in San Francisco, Victoria, Vancouver, Calgary, Toronto, Montreal, and New York. I have yet to see some more next month.

Proceeding Time 10:09 a.m. T19

And the message is the same. It's -- we're very concerned about where markets are going. We're unsure about where things are headed. And so consequently I'm favouring bonds over equity. And you see that in the mutual fund flows. So it's the indices, it's a combination of being involved in pricing deals. It's being involved -- it's in combination with companies that try to do equity deals, and bring them to us as a book runner, and then we tell them what we think they can do the deal at, and they withdraw.

So we see lots of success -- we see successful deals, as we did in the end of 2009. There was lots of bond deals that don't move ahead. We just did a transaction -- I can't tell you who it was, but wanted to bring a bond deal. And we couldn't get it done for them. A well-known Canadian company. And ultimately we ended up re-engineering and come back in with a completely different security altogether.

So the uncertainty is in the market today still, as I say, but for different reasons. And it kind of translates into the same tone. And when I say that, I'm really talking about the last part of 2009, when the proceedings were going on. Not the beginning of 2009. 2000 -- in the early 2009/late 2008, was a very unique environment. The latter half of the year, it was giddy-up, let's get these financings done in a very big way.

It was -- people were surprised at the financial institutions, the banks in particular, actually did very well in 2009, notwithstanding the crisis, because there was so much financing activity at the end of the year. Kind of last six months of 2009.

THE CHAIRPERSON: So what you're saying is, it's based upon your own personal observations of the things you've been involved in, and on conversations you've

had with investors around the world. Relative to that last group, would it be fair to say that's anecdotal?

MR. ENGEN: A: Oh, for sure.

THE CHAIRPERSON: Yeah.

MR. ENGEN: A: For sure. No question. And the -- when I -- when we're talking about general market conditions, it's not just my observations at that stage. It's -- and much of the language, as much as I'd like to take credit for some of the more elegant descriptions of the capital markets, those are drawn from materials that our equity capital markets teams put together, and the debt capital markets teams put together. I'm not that eloquent. I craft it and pull it together and kind of put it in a package that's easy to read for board members and for interveners and the applicant. But it's really the firm's view and not -- and of course I am part of that view, because I'm one of the inputs to reaching those views.

THE CHAIRPERSON: I understand. That's my questions.

Mr. Ghikas, do you have re-direct?

MR. GHIKAS: I do not, Mr. Chairman, thank you.

THE CHAIRPERSON: Yes. Mr. Engen, you are excused. And I'd like to thank you for joining us the last -- yesterday afternoon and this morning, and wish you well, and we really appreciate the effort you put into this.

MR. ENGEN: A: Thank you very much. I appreciate it.

(WITNESS ASIDE)

THE CHAIRPERSON: It's probably a good time to break. It's just about ten after. Why don't we come back at 10:25, and that will allow you time to set up your next witness?

(PROCEEDINGS ADJOURNED AT 10:12 A.M.)

(PROCEEDINGS RESUMED AT 10:34 A.M.) T20/21

THE CHAIRPERSON: Please be seated.

MR. GHIKAS: Mr. Chairman, Commissioners, I'd like to call the next witness panel, which is Dr. James Vander Weide. If Dr. Vander Weide could be sworn please.

FBCU - PANEL 4, EXPERT OPINION ON A BENCHMARK FAIR RETURN

JAMES VANDER WEIDE, Affirmed:

EXAMINATION IN CHIEF BY MR. GHIKAS:

MR. GHIKAS: Q: Dr. Vanderweide, do you have before you your prefiled direct testimony marked as Exhibit B1-31?

DR. VANDER WEIDE: A: Yes, I do.

MR. GHIKAS: Q: Okay. And this is the direct testimony of Dr. James Vanderweide, and are the contents of that true?

DR. VANDER WEIDE: A: Yes, they are.

MR. GHIKAS: Q: Okay. Now, your testimony and your qualifications and your professional experience were filed as part of Exhibit B1-9-6, Appendix G. And if

we can just go there for a moment, Dr. Vander Weide. So that's the evidence filing tab, tab G. If you turn to page 5 of that evidence, just spend a moment, Dr. Vander Weide, on your qualifications, first of all you are a research professor of finance and economics at Duke University, Fuqua School of Business, correct?

DR. VANDER WEIDE: A: Yes.

MR. GHIKAS: Q: And you have a Ph.D. in finance?

DR. VANDER WEIDE: A: Yes.

MR. GHIKAS: Q: And you've published research in the areas of finance and economics and taught courses in these fields at Duke University for more than 35 years, correct?

DR. VANDER WEIDE: A: Yes, I have.

MR. GHIKAS: Q: And I understand based at your evidence on line 21 that you've participated in more than 400 regulatory and legal proceedings before a variety of boards and tribunals in the United States and Canada, and courts and Congress as I understand it.

DR. VANDER WEIDE: A: Yes.

MR. GHIKAS: Q: Okay. Now, if we go to your CV at page 97 of your evidence, just very briefly, there is attached to it a lengthy list of publications and retainers. Just reducing that to its essence, sir, what is your level of experience with respect to public utility return and utility cost of capital

evidence.

DR. VANDER WEIDE: A: Well, I've been testifying on utility return and cost of capital for approximately 30 years. Of the 400 cases that I've been in, probably 300 of those have been related to rate of return and cost of capital.

MR. GHIKAS: Q: Thank you. And very briefly, Dr. Vander Weide, what is your conclusion regarding the fair return and capital structure for FEI?

DR. VANDER WEIDE: A: I conclude that FEI should have a fair ROE of 10.5 percent on a 40 percent equity ratio.

MR. GHIKAS: Q: Now, in addition to your written evidence at Exhibit B1-9-6, you provided responses to information request, Dr. Vander Weide?

DR. VANDER WEIDE: A: Yes, I did.

MR. GHIKAS: Q: And you also provided rebuttal evidence which for reference is marked as Exhibit B1-32, correct?

DR. VANDER WEIDE: A: Yes.

MR. GHIKAS: Q: Do you have any changes you wish to make to any of your evidence at this time?

DR. VANDER WEIDE: A: Yes, I have one change in my rebuttal evidence on page 8, line 21. It's in the question part and it says:

> "How do the U.S. utilities included in your costs of equity studies differ from the…"

and rather than "broader group of U.S." it should be:

"…Canadian utilities to which Dr. Booth referred."

So instead of "broader group of U.S." that should be "Canadian utilities". And that's all the corrections that I have.

MR. GHIKAS: Q: Thank you. And with that change, Dr. Vander Weide, do you adopt all of the evidence that you provided in this proceeding as your evidence in this proceeding?

DR. VANDER WEIDE: A: Yes, I do.

MR. GHIKAS: Thank you. Dr. Vander Weide is available for cross-examination, Mr. Chairman.

THE CHAIRPERSON: Thank you, Mr. Ghikas. Mr. Wallace.

Proceeding Time 10:34 a.m. T22

MR. WALLACE: Thank you, Mr. Chairman.

CROSS-EXAMINATION BY MR. WALLACE:

MR. WALLACE: Q: Dr. Vander Weide, I'd like to start with a discussion of your U.S. sample, and at roughly pages 15 to 20 you discuss your two samples of utilities, each consisting of two sets of companies.

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And were you -- have you reviewed the transcript at all, or were you present during the questioning of Ms. McShane?

DR. VANDER WEIDE: A: I was present only for about 15,

20 minutes in the morning, and I have not reviewed the transcript.

MR. WALLACE: Q: Okay. And are you familiar with her evidence?

DR. VANDER WEIDE: A: I have read it before I came here, but I'm not familiar with it to the extent of being able to testify to what she said, or to defend what she said. I believe it was correct as I read it, but I am not that familiar with it.

MR. WALLACE: Q: Okay. Well, then, I won't -- well, I will ask you just generally, are you aware that her position, at least as I understand it, is that the typical U.S. utility is riskier than the typical Canadian utility because in her judgment the U.S. utilities are typically integrated electric utilities, whereas in Canada they are almost all transmission and distribution utilities.

DR. VANDER WEIDE: A: Was your preface, am I familiar with that?

MR. WALLACE: Q: Or, yes, do you -- yeah, are you familiar with that, as her position?

DR. VANDER WEIDE: A: No, I'm not.

MR. WALLACE: Q: Okay. Well, then, I won't ask you further about her position.

In your case, you do not have a special U.S. sample of low U.S. risk utilities to compare to

Canadian utilities?

DR. VANDER WEIDE: A: I don't agree with that statement. My group -- my second group was a group that was -- had lower risk than my first group, and it included utilities that had at least 80 percent of assets devoted to regulated operations, and a bond rating of Triple-B or above. And on average, that group had 93 percent of assets devoted to regulated operations, and a Triple-B plus bond rating. So that I would consider to be a very safe group of utilities.

MR. WALLACE: Q: But they still include integrated utilities? And integrated electric utilities, for that matter.

DR. VANDER WEIDE: A: Well, there are some in there that are integrated electric utilities, but not all integrated electric utilities are riskier than non-integrated electric utilities. Specifically, even an integrated electric utility that's subject to cost of service regulation is regulated under a standard that they would be allowed to earn a fair rate of return on their investments in utility, plant, and service, and that obligation applies to their entire regulated business, including integrated -- including generational.

MR. WALLACE: Q: Can we turn to your table of your smaller sample, the one you're discussing at this

point?

DR. VANDER WEIDE: A: And what table are you referring to?

MR. WALLACE: Q: Seven.

DR. VANDER WEIDE: A: Are you referring to a table or an exhibit?

MR. WALLACE: Q: Exhibit 7. And it's the list of them. And can you tell me which of the companies on that list of 19 are integrated electricity companies?

Proceeding Time 10:39 a.m. T23

DR. VANDER WEIDE: A: I don't have that information in front of me. I'm generally familiar with it. But I wouldn't be precise in being able to say that every one of them -- which exact ones are integrated and which ones aren't.

MR. WALLACE: Q: Can you do it the other way, then? Which ones are gas transmission and distribution?

DR. VANDER WEIDE: A: Okay. Well, AGL Resources is gas distribution. Atmos Energy is gas distribution. Northwest Natural Gas is gas distribution. Piedmont Natural Gas is gas distribution. WGL Holdings is gas distribution and several others, I believe, have both gas and electric operations.

MR. WALLACE: Q: Okay, thank you. And that's -- we've been discussing your smaller group. With respect to your larger utility sample, you, I understand, screen

your U.S. sample but you -- by ruling out companies that have their dividend cut or gone through an acquisition, but other than that, it includes all publicly traded U.S. gas and electric companies?

DR. VANDER WEIDE: A: No, that's not correct. My -- they have to have an investment-grade bond rating. They have to have a Value Line rank of 1, 2, or 3. They have to have at least two analysts following them. I believe -- and they cannot be the subject of a merger.

MR. WALLACE: Q: Sir, as an undertaking, can you calculate the average DCF return of the companies you just referred to in Exhibit 7?

DR. VANDER WEIDE: A: I believe it's shown in Exhibit 7.

MR. WALLACE: Q: Well, no. You show all of them. I'm asking you to calculate the average of the gas transmission and distribution companies you just identified as an undertaking.

DR. VANDER WEIDE: A: And as I -- as you refer to that, I believe I stated earlier that for the Group 2 in Exhibit 7, that the average bond rating is Triple-B plus, I believe it's correctly as A-minus.

MR. WALLACE: Q: Okay. Thank you, sir, and when you say you believe -- does that mean you know? Otherwise, I just urge you to include that with your

response on the undertaking.

DR. VANDER WEIDE: A: Well, it's in my testimony, and I would -- I can identify where that is.

Yes. In answer 61, answers 60 and 61 on page 21, I note that the larger group has 83 percent regulated utility operations, and a bond rating of Triple-B plus, whereas the smaller group has 93 percent of total assets that are regulated, and a bond rating of A minus.

MR. WALLACE: Q: Okay. Thank you. And just to be clear on the undertaking that I have requested, is that you calculate the DCF, the average DCF for the companies that you have identified in Exhibit 7, as being natural gas transmission or distribution companies. And I would actually like to add to that, can you provide me the bond ratings for those companies also?

Sir, just for the record, you're agreeable to doing that?

DR. VANDER WEIDE: A: Yes.

Information Request

MR. WALLACE: Q: Thank you. Now, at page 29, paragraph A-55, you discuss the business risk of U.S. and Canadian utilities and state that it is basically the same.

Proceeding Time 10:45 a.m. T24

DR. VANDER WEIDE: A: Are you referring to a particular sentence on page 29?

MR. WALLACE: Q: Well, you state -- yes, I guess. The answer to question 55 is "The business risk of natural gas and electric utilities is approximately the same in the U.S. and Canada because", and you list three factors.

DR. VANDER WEIDE: A: Yes, the reason that I was --

MR. WALLACE: Q: Sorry?

DR. VANDER WEIDE: A: I'm asking you to provide an exact sentence as I had the word approximately there. I did not say they are the same.

MR. WALLACE: Q: Okay. Thank you.

MR. GHIKAS: Page 20, Mr. Chairman.

MR. WALLACE: Q: My apologies.

MR. GHIKAS: That's okay.

MR. WALLACE: It is paragraph A-55.

Q: And the basis of your judgment that they are simply the same as the three claims in A-55, you haven't done further analysis that I see in your evidence, for example looking at the betas or the ability of the utilities to earn their allowed return on equity?

DR. VANDER WEIDE: A: Well, I think there are two parts to that question. It's not -- the basis is not just 55. It's also answer 56 and 57. And I guess actually

answer 58 as well. It's also that business risk is reflected in the bond ratings among -- of my companies, and since those are rated as either A minus for my smaller group and Triple-B Plus for my larger group, those companies' business risk are reflected in those bond ratings.

MR. WALLACE: Q: Did you look at betas?

DR. VANDER WEIDE: A: No, I did not.

MR. WALLACE: Q: Did you look at the ability of the utilities to earn their allowed ROE?

DR. VANDER WEIDE: A: I did not specifically look at that. I have experience working for electrical utilities and natural gas utilities throughout the country. It's very difficult to obtain data on the regulated entity to determine whether they have earned their allowed ROE or not, because it depends on -- that regulated entity is not usually the sole part that's publicly traded or the regulated utilities that are publicly traded might be in several jurisdictions at one time. But nonetheless, over the years I'm aware that regulated utilities have generally earned close to their allowed ROEs, and their allowed ROEs are higher than the allowed ROEs in Canada.

MR. WALLACE: Q: At page 22, Table 1, you have the allowed ROEs and bond ratings for 172 U.S. utilities?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And are those S&P bond ratings or Moody's?

DR. VANDER WEIDE: A: Which exhibit again did you --

MR. WALLACE: Q: It is page 22 of your evidence, Table 1.

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And the question is, are these S&P bond ratings or Moody's?

DR. VANDER WEIDE: A: Those are S&P bond ratings.

MR. WALLACE: Q: Thank you. And how many of the 170 utilities are controlled subsidiaries and how many are independently public traded companies?

DR. VANDER WEIDE: A: Well, I got that information from the list of regulatory decisions, and I did not determine how many of those were publicly traded companies. From my knowledge of the industries there are not very many regulated utilities in the U.S. There are some, but many do not operate in only one state.

MR. WALLACE: Q: Okay. Now, are you aware that Standard & Poors will not give -- or is it your understanding that Standard & Poors will not give a higher rating to a subsidiary than its parents unless the subsidiary is ring-fenced?

DR. VANDER WEIDE: A: I am aware of that statement. I am also aware that the regulated subsidiary has first

claim on the revenues and the earnings of the regulated subsidiary. That is, if there is any -- all of the regulated subsidiaries, earnings and revenues have to first go to pay, by law, have to first go to pay the obligations of the regulated utility, and only then can they be used to pay the obligations of the parent company.

Proceeding Time 10:50 a.m. T25

MR. WALLACE: Q: Okay. That wasn't my question though. My question is, and I think you answered it first, that you will confirm that S&P will not give a higher rating to a subsidiary than its parent unless it is ring-fenced?

DR. VANDER WEIDE: A: I believe I answered that. I agreed with that statement. But I qualified my answer to say that in operations it's not a very big restriction.

MR. WALLACE: Q: Okay, but in terms of bond ratings, I suggest to you it is. And that if these are in fact largely controlled subsidiaries, then the rating -- and I think you've said their S&P bond ratings, and the rating is essentially the rating of their parent. And so the impact -- or the relationship to the rating and the ROE is not clear.

DR. VANDER WEIDE: A: Well, I disagree with that. I've already said that with regard to group 2, 93 percent

of their assets are devoted to regulated service and for group 1, 83 percent. Those are very high percentages of assets devoted to regulated service. The biggest issue is that they operate -- many of them operate in more than one state. And so, you don't necessarily have a bond rating just for that state, but you do have -- which are the ones for which the allowed ROEs shown in table 1 are included. To the extent that it's the parent company, which also has a lot of regulated assets, then it's the parent company's bond rating.

MR. WALLACE: Q: Sir, then, what I -- if that's the position you're taking, I'd like to ask you to provide the bond ratings of your 172 individual companies and their parent. By way of undertaking. And for the record, do you accept that undertaking?

DR. VANDER WEIDE: A: I will see -- yes, I will accept it.

Information Request

MR. WALLACE: Q: Thank you. I'd like to now turn to page 23. You reference the B.C. Utilities Commission discussion of utilities having to compete for capital in support of looking at U.S. utilities. Specifically, do you know whether or not Fortis, the parent of FEI, is listed in the U.S.?

DR. VANDER WEIDE: A: I don't recall.

MR. WALLACE: Q: Okay. Are you aware of FEI ever having had to issue U.S. -- or ever issuing U.S. financing or going outside Canada to raise money?
DR. VANDER WEIDE: A: I haven't investigated that.
MR. WALLACE: Q: Okay. And I take it you've had no discussions with FEI regarding issuing in the U.S.
DR. VANDER WEIDE: A: No.
MR. WALLACE: Q: Now, in your comments on page 24 regarding the OEB cost of capital decision, you note that the OEB comments about U.S. utilities and that only an analytical framework in which to apply judgment, and a system weighting are needed.
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: Can you point in your testimony where -- to where you have applied an analytical framework, and where the weighting is?
DR. VANDER WEIDE: A: Yes. I applied an analytical framework when I discussed the business risks and the financial risks of -- and the regulatory risks of U.S. and Canadian utilities.
MR. WALLACE: Q: And that was at paragraphs 55 and following?
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: Thank you.
DR. VANDER WEIDE: A: And I provided a system of weighting by the weighting that I gave to my various

cost of equity studies.

MR. WALLACE: Q: Okay, thank you.

And what was the weighting given to the U.S. estimates versus Canadian estimates?

Proceeding Time 10:56 a.m. T26

DR. VANDER WEIDE: A: Well, I had a DCF approach. I had an *ex post* risk premium approach. And I had an *ex ante* risk premium approach. And I gave each of those one-third weight, and the *ex post* risk premium method was based solely on Canadian utilities. And so that received a one-third weight, and the other, the DCF was for U.S. utilities and the *ex ante* risk premium was for U.S. utilities, and that received a two-thirds weight.

MR. WALLACE: Q: And do you discuss anywhere in your evidence the appropriateness of a one-third Canada versus two-third U.S. weighting?

DR. VANDER WEIDE: A: Well, I don't know if I discussed it explicitly. I don't think I highlighted the weights, but I think I discussed the advantages and disadvantages of U.S. and -- using U.S. and Canadian utilities at length, and among the reasons for giving two-thirds weighting to the U.S. utilities, is that there really only two or maybe three publicly traded Canadian utilities that have a high percentage of regulated assets. And a sample of two or three is not

really sufficient in my opinion to estimate the cost of equity.

MR. WALLACE: Q: Okay, but that sounds like a sample selection issue rather than a weighting of Canada versus U.S. But, I think have your answer, there is no discussion of weighting Canada versus U.S. in your evidence?

DR. VANDER WEIDE: A: Well, were you going to ask a question about whether that is a sample selection issue?

MR. WALLACE: Q: I am asking you just simply, is there any -- I want to confirm, any discussion of weighting, Canada versus U.S?

DR. VANDER WEIDE: A: Yes there is.

MR. WALLACE: Q: And that is where?

DR. VANDER WEIDE: A: That is where I discuss the advantages and disadvantages of using U.S. and Canadian utilities and I provide the percentage of regulated assets for the Canadian utilities and show that there are really only two at most, three Canadian publically traded Canadian utilities that have a high percentage of regulated assets. And so since all of the cost of equity methods require stock prices, there is -- one necessarily has to use companies that are publically traded, and there just aren't very many Canadian utilities that are publically trading.

MR. WALLACE: Q: And do you -- no, I am prepared to leave it at that. Thank you, I'll move on.

With respect to your DCF estimates, your first set of DCF tests applied to your U.S. utilities are at Exhibit 6 and 7?

DR. VANDER WEIDE: A: And what page is that on please?

MR. WALLACE: Q: Well, your Exhibits 6 and 7 --

DR. VANDER WEIDE: A: Oh, exhibits, okay.

MR. WALLACE: Q: -- are page 63 and 65.

DR. VANDER WEIDE: A: Okay.

MR. WALLACE: Q: And that's your first set, and your second set of estimates is a DCF risk premium analysis?

DR. VANDER WEIDE: A: This is just a DCF analysis.

MR. WALLACE: Q: Okay. In B.C. Utilities Exhibit B-1-14, pages 15 and 16, IRs 5.3 and 5.4, and you will probably remember the answers, they are not complex ones, but in 5.3 you were asked "For each firm in Exhibit 6, please provide the past five year growth experience and compare it to the forecast five year growth experience." In other words, compare the past to what you are expecting for the future. And your response was,

> "Dr. Vander Wiede did not examine historical dividend growth data for his proxy companies because the DCF model requires estimates of

investors future growth expectations, and Dr. Vander Wiede's studies indicate that analyst EPS Growth Forecaster the best proxy for investors future growth expectations."

And you recall that response?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And is that still your position?

DR. VANDER WEIDE: A: Yes it is.

MR. WALLACE: Q: And you were also asked in question 5.4, "Please provide the annual dividend and earnings per share for each firm in Exhibit 6 from 1990, or the latest period available." And the response was, "Dr. Vander Weide did not -- " And I am sorry sir, if I mispronounce your --

DR. VANDER WEIDE: A: It is Vander Weide.

MR. WALLACE: Q: Weide? Thank you, I will try and get that.

"Dr. Vander Wiede did not examine annual dividend and earnings per share data for his proxy company since 1990, because DCF model requires estimates of investors future growth expectations, and Dr. Vander Wiede studies indicate that the analyst EPS growth forecasts are the best proxy for investors future growth expectations."

Proceeding Time 11:01 a.m. T27

When we put those questions to you, we were asking for the data, so that we could access or assess whether the historic record is -- of your sample utilities, and your future experience, or future forecast, are growing at the same rate as the GDP, more or less. That's very difficult to do without that data. Can you provide the data in response to those questions by way of undertaking?

DR. VANDER WEIDE: A: I could. It is publicly available. I would have thought that it was available to you as well, but I will be happy to provide it for you.

Information Request

MR. WALLACE: Q: Okay. I would request that you answer both those questions, by way of undertaking.

Can you confirm that you are using a constant growth model -- that is, a model that assumes the short-term analyst growth forecasts are going to go on indefinitely?

DR. VANDER WEIDE: A: Yes, I am.

MR. WALLACE: Q: And if we look at Exhibit 6 to your evidence, you will see there, Great Plains Energy is -- has -- at line 12, you have a 9.75 growth rate, and what will happen if -- in the way you use the DCF model, Great Plains actually does grow at 9.7 forever, when the U.S. GDP is only forecast to grow at about 5

percent?

DR. VANDER WEIDE: A: Well, obviously they can't grow at 9.75 percent forever. On the other hand, there are some growth forecasts in here for the next five years that are less than GDP growth forecasts. And some of these estimates may be somewhat high, and some may be somewhat low. But I don't believe on average there is any problem with these growth forecasts. These are very reasonable growth forecasts for utilities.

MR. WALLACE: Q: Okay. Well, I thought you might say that, and other analysts -- and I specifically refer to Ms. McShane, uses a three-stage growth model where the growth rate gradually adjusts to the growth rate in the GDP. Why didn't you use that form of model?

DR. VANDER WEIDE: A: I guess I have several reasons for that. One is that it's hard to decide where you draw the dividing line about changing the growth rate and going to the long-term growth rate. Do you change it after five years, after ten years? However many years. I don't know where that is.

Secondly, I don't believe that one should place too much weight on any single DCF result, such as that for Great Plains. I believe that there -- that one ought to look at the average for the entire group of companies. And there are some companies here that are forecasted, they'll only grow in the 3

percent range. So, I don't think that on the whole it would provide, for my companies, much additional information to approach -- to do a multi-stage DCF model.

MR. WALLACE: Q: Okay. Now, Ms. McShane -- you mentioned averages. And again, in Ms. McShane's evidence, I noticed that she uses medians to eliminate outliers, where you use averages. Is there a reason for that?

DR. VANDER WEIDE: A: Yes. It's my personal opinion that the average is the best estimate of central tendency. Because in my opinion, the median relies -- focuses on the average result of two companies. Those two companies in the centre of the range, whereas the mean considers the information for all of the companies.

Proceeding Time 11:06 a.m. T28

MR. WALLACE: Q: But you will confirm that the median is not affected by outliers, and the average is?

DR. VANDER WEIDE: A: First of all, I don't understand what you mean by "outliers". I'm -- my purpose is to find what's a reasonable measure of the central tendency of the DCF results. And I believe the mean is the best measure of the central tenancy.

MR. WALLACE: Q: Okay, but you will agree that the median -- or the average or the mean is influenced by

the extreme results, whereas the median is not.

DR. VANDER WEIDE: A: I wouldn't say the median is not entirely. The median is less affected by it. The median could be affected by extreme results if they were -- if there's not an equal number of extreme results on either side of the middle point in the distribution.

MR. WALLACE: Q: Did you look at the distribution to decide whether to use mean or average, or do you just generally use average?

DR. VANDER WEIDE: A: It's my belief that the average is the best characterization of the distribution, and that's what I've always used.

MR. WALLACE: Q: In Exhibit 6 at page 63 of your evidence, the DCF estimate varies from 7.4 percent for Northwest Natural Gas to 14.6 percent for Great Plains Energy. Do you -- or in any way does it concern you that this is a large range for DCS [sic] estimates that the actual investor required returns vary by this much?

DR. VANDER WEIDE: A: It doesn't concern me because I don't focus on the individual results. I look at the average of the results. If one were to -- well, first of all let me say that estimating the costs of equity is not a precise science because all the numbers vary. If one were to say take a look at a capital asset

pricing model analysis, for example, one would consider the wide range of betas that one could possibly get for utilities, and there's been a lot of evidence in this proceeding of a wide range of betas, there would be an equally wide range of possible CAPM results.

But what tends to happen is people select an average beta or maybe they use judgment to select the beta. Whatever it is, they come up with a result, although there's a lot of uncertainty about that beta estimate, and so there's just as much uncertainty about CAPM estimates of the costs of equity as there are about DCF estimates.

MR. WALLACE: Q: In Exhibit 7, your smaller group of companies, the range is still 7.4 to 14.6 percent. Can you explain why your tougher screens focusing on utilities with 80 percent regulated operations hasn't made the DCF estimates any tighter?

DR. VANDER WEIDE: A: I didn't seek the answer to that question. I just -- but I do state in my testimony that I provide information for the second group to see what the impact might be of tougher screens. I myself don't see a major difference between Group 1 and Group 2, and Group 1 has the advantage of being a larger sample. But the impact of tougher screens is not particularly large.

MR. WALLACE: Q: But there is no impact at all on the range, is there?

DR. VANDER WEIDE: A: Well, again I don't look at the range. I look at the average. And the average including financial flexibility was 10.3 for the larger group and 10 for the smaller group.

MR. WALLACE: Q: Okay. For Exhibit 7 we note that the average is for 5 percent growth whereas the median is lower at 4.6 percent. As an undertaking can you provide the individual yield and expected growth for both Exhibits 6 and 7 and the average median values for both?

Proceeding Time 11:11 a.m. T29

DR. VANDER WEIDE: A: I want to be sure I understand the undertaking. You want me to take the dividend yield shown in the column labelled D-0 and P-0, divide the one by the other and calculate the mean and the median. And do the same thing for the growth rate.

MR. WALLACE: Q: Yes.

DR. VANDER WEIDE: A: I'd be happy to do that. I don't think it will be particularly helpful in this proceeding, but I'd be happy to do it.

Information Request

MR. WALLACE: Q: Thank you. I'd like to turn to the subject of experienced returns. The yield on Long Canada bond on the investors expected rate -- I'm

sorry. I'll start again. The yield on the Long Canada bond reflects the investors' expected rate of return in the sense of an internal rate of return based on expected cash flows if the bond is held to maturity, rather than if it is sold at an earlier date?

DR. VANDER WEIDE: A: I'm sorry. I was writing down the undertaking you wanted me to do.

MR. WALLACE: Q: Okay. Have you got that done? I'm sorry, sir, I should have left you time to do that.

DR. VANDER WEIDE: A: I do have that, I believe.

MR. WALLACE: Q: Okay. Now the question I was putting to you is that the yield on the Long Canada bond reflects the investors' expected rate of return in the sense of -- or when it is based on the expected cash flows of the bond if held to maturity?

DR. VANDER WEIDE: A: Yes, it's the expected return. It's also what I would call a risk-free return, because the investor is virtually guaranteed to get that return, since it's the obligation of a government, and if one holds that bond to maturity, they will get the return that is the yield to maturity on the bond.

MR. WALLACE: Q: And yields can vary significantly from returns, particularly if the bond is not held to maturity?

DR. VANDER WEIDE: A: Yes, they can.
MR. WALLACE: Q: Or it isn't. And so if the interest rates increase and the bond is not held to maturity, the prices fall and the investors get lower returns?
DR. VANDER WEIDE: A: No. If they hold it to maturity they get what I call the risk-free return.
MR. WALLACE: Q: If they don't --
DR. VANDER WEIDE: A: That is they get the yield to maturity on the bond.
MR. WALLACE: Q: Yes. And I agree with that one. What happens to bond prices if interest rates increase?
DR. VANDER WEIDE: A: Bond prices will go down.
MR. WALLACE: Q: And the investors will get lower returns?
DR. VANDER WEIDE: A: No. Not if they hold it to maturity, they will not get a lower return.
MR. WALLACE: Q: I'm sorry. If they don't hold it to -- I'm now talking in my questions that follow are if they don't hold it until maturity, and I'll try and put that in every question, but that is the assumption. So bond prices fall if interest rates increase?
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: And the investors will get lower returns if they don't hold the bond till maturity.
DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And what happens to bond prices if interest rates fall and they don't hold the bond until maturity.

DR. VANDER WEIDE: A: The prices go up.

MR. WALLACE: Q: And they will get higher returns.

DR. VANDER WEIDE: A: Yes. But the important thing is they always have the choice to get the risk-free rate by holding it till maturity. That's the only rate that is risk free.

MR. WALLACE: Q: I understand that. But the fact is that if they don't hold it to maturity, they can have higher or lower returns on bonds.

DR. VANDER WEIDE: A: Under that assumption, yes.

MR. WALLACE: Q: And can we turn to your experienced return estimates and the date in Exhibits 8, 9 and 15, and I'd also like to hand up at this point an aid to cross-examination that we have prepared and was delivered to your counsel yesterday.

Mr. Chairman, I understand that's Exhibit C6-21.

Proceeding Time 11:16 a.m. T30

THE HEARING OFFICER: Marked C6-21.

("WITNESS AID PREPARED BY B.C. UTILITIES CUSTOMERS", MARKED EXHIBIT C6-21)

MR. WALLACE: Q: And you have received -- you received a copy of Exhibit C6-21, and have had an opportunity

to look at it?
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: Thank you. On page 1 we have simply graphed your average Long Canada yield, found in Exhibit 8, and can you confirm that that looks appropriate?
DR. VANDER WEIDE: A: Yes, it does.
MR. WALLACE: Q: And Long Canada bond yields peaked in 1981 and have been pretty much declining ever since?
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: So throughout this period, returns from Long Canada bonds have been better than expected?
DR. VANDER WEIDE: A: No. Again, it depends entirely on whether you hold it to maturity.
MR. WALLACE: Q: On a one-year holding period. Sorry, I should have qualified that.
DR. VANDER WEIDE: A: Yeah. On a one-year holding period, in general, there have been -- there are some times where you notice that it did go up, the interest rate, but in general they were -- the return was higher than the risk-free rate.
MR. WALLACE: Q: Thank you.
DR. VANDER WEIDE: A: If they held it for one year.
MR. WALLACE: Q: And I'd like -- do you have a copy of Ms. McShane's evidence?
DR. VANDER WEIDE: A: I do not. I can get one, though,

I believe.

MR. WALLACE: Q: That would be good. If you could turn to her testimony at page 93.

MR. GHIKAS: Exhibit B1-9, Appendix F.

MR. WALLACE: Thank you.

Q: Page 93. And you see there that she has calculated a regression of her TSX utility return against the TSX composite return, and the excess return on the Long Canada bond?

DR. VANDER WEIDE: A: I see that, yes.

MR. WALLACE: Q: And her -- the coefficient against the TSX return is 0.40?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And that would be a beta coefficient?

DR. VANDER WEIDE: A: Well, it would be if the only variable on the right-hand side were the composite return. It's a little more complicated when there is more than one variable on the right-hand side.

MR. WALLACE: Q: And the coefficient on the return on the Long Canada bond, would that be a measure of how sensitive utility returns are to interest rates?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: For example, when the Long Canada yield goes down, this return on the Long Canada bond over the treasury yield goes up?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And Ms. McShane estimates this sensitivity at 0.46?

DR. VANDER WEIDE: A: Yes. And maybe I didn't understand this correctly, but I see now, this isn't just the interest rate on the bond, it's the spread between the interest rate on the Long Canada bond and the interest rate on the T-bill.

MR. WALLACE: Q: I can confirm that, yes. And Ms. McShane estimates the sensitivity at 0.46, or almost half the sensitivity to interest rates as the Long Canada bond.

DR. VANDER WEIDE: A: I'm not sure on your interpretation of that. I don't follow it.

MR. WALLACE: Q: Okay. I'm sorry, I'm not sure where the difficulty is. She estimates the sensitivity at 0.46 -- or almost half, 0.46 is close to 0.5. The sensitivity to interest rates is the Long Canada bond, is that correct?

Proceeding Time 11:21 a.m. T31

DR. VANDER WEIDE: A: You've said -- what I don't understand is you've said, if I recall right, as the sensitivity to the Long Canada bond. It's not the sensitivity to the Long Canada bond, it's the sensitivity to the difference between the yield on Long Canada bond, and the yield on the t-bill.

MR. WALLACE: Q: We'll move on from that then, sir, at

the moment. Now, at the second page across, the aid to cross-examination or the witness aid, we've reproduced your data from Exhibits 8, 9 and 15. And we have also added the return from the Long Canada bond from the Canadian Institute of Actuaries. Can you confirm that the Canadian Institute of Actuaries was your source for the Long Canada yield data?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And would you be prepared to accept the bond returns from that source?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: Now, the reason we did this is that the utility return, as we would suggest to you, and I think you've agreed, Ms. McShane shows is sensitive to interest rates, and the graph clearly shows that as Long Canadian yield -- the graph and the data, I guess, clearly show that as Long Canadian yields have come down, the effect of that decline is that the return on the Canadian bond yield has gone -- on the Canadian bond has gone up, and would you agree with that?

DR. VANDER WEIDE: A: I would agree that it has gone up, yes. Yes, since early '80s.

MR. WALLACE: Q: And suggest to you that is reflected in the utility, or what -- this is reflected in the utility return. It is, however, not reflected in what

you report is the Long Canada yield?

DR. VANDER WEIDE: A: By this you mean the returns from 1980 on. I also have a study that goes from '56, and during that period, the opposite would have occurred. That is that interest rates were rising, and the returns would have been less. But more importantly, the risk premium is measured with regard to the risk free rate, that is what is used in the CAPM for example, and the risk free rate is the yield to maturity on the Long Canada bond, because that is the only interest rate or return that is risk free. One can achieve that return by holding the bond to maturity.

MR. WALLACE: Q: Well, I'd like to go directly to the table that is page 3. And this table corresponds with your Table 2 in your evidence of page 34, and I think it would be helpful if you had both of them in front of you?

DR. VANDER WEIDE: A: Okay.

MR. WALLACE: Q: Do you have them now? And have you had a chance to look at the calculations that are behind the revised VW Table 2?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And do you have any disagreement with those calculations as such?

DR. VANDER WEIDE: A: I don't have a disagreement with

the calculations, I have a disagreement with the relevance of those calculations.

MR. WALLACE: Q: Okay. We will get to that. First, can you see that in revised Table 2 the utility return from 1956 to 2011 is exactly the same as in your Table 2?

DR. VANDER WEIDE: A: Yes.

Proceeding Time 11:26 a.m. T32

MR. WALLACE: Q: And similarly so is the BMO utility return from 1983?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: Now, you do see that the average bond return is higher than the average bond yield?

DR. VANDER WEIDE: A: Yes. Particularly for the period '83 to 2011. It's fairly close for the period '56 to 2011.

MR. WALLACE: Q: And just looking at -- yes, the 19 -- I've got to get my tables comparisons going here properly. And I think you are quite correct. The bond return for the period 1983 is 11.1 percent, whereas in your table the bond yield for the same period for BMO is 7.24 percent?

DR. VANDER WEIDE: A: Yes. And that's again because it's the risk free rate that I was trying to measure.

MR. WALLACE: Q: Yes. Because we are comparing returns to yields.

DR. VANDER WEIDE: A: We are comparing returns to the risk free rate, just like do in the capital asset pricing models.

MR. WALLACE: Q: And the effect is to reduce the risk premium from 8.80 to 4.91 percent?

DR. VANDER WEIDE: A: I would disagree with that characterization. It would reduce the number but it wouldn't reduce the risk premium over the risk free rate. That would stay the same. What would change is if you erroneously wanted to calculate it with regard to the bond return, of course that would change the number.

MR. WALLACE: Q: Okay, and I think what I'm trying to get, I understand you have a point of view with respect to that, but you do agree that the risk premium over returns versus the risk premium over yields drops from the 8.80 to 4.91 percent. You agree with the mathematics.

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And you average your two risk premiums based on yields and come to an average of 6.7 percent?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And can you take, subject to the check, the average when you compare *ex post* returns, rather than yields, the average risk premium comes down to 4.747 percent, a drop of 2.23 percent?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And the fair return based on returns rather than yields drops from 10.20 percent to 7.92 percent. And again, can you accept the mathematics?

DR. VANDER WEIDE: A: I can't accept it unless you go through it with me.

MR. WALLACE: Q: Okay, well, the return, if you have 6 point -- sorry. Now, I've got to do arithmetic on the fly which is more difficult for me being a lawyer here. You get your 6.72 percent. When the average risk premium comes down to -- thank you.

It's the sum of 4.47 which is the lower risk premium using the returns plus 2.95 percent, being the consensus forecast of interest referred to in your paragraph 103, answer 103 on page 35, and a 50 basis point allowance for inflation. Or for floatation, not inflation. Sorry, I misspoke myself.

DR. VANDER WEIDE: A: So that would give you roughly a 7-92 with a 50 basis points. Is that what you are saying?

MR. WALLACE: Q: Yes, it is.

DR. VANDER WEIDE: A: I would accept that. Again, I don't believe that's a reasonable thing to do.

MR. WALLACE: Q: Yes, but you accept the mathematics.

DR. VANDER WEIDE: A: I accept the mathematics.

Proceeding Time 11:31 a.m. T33

MR. WALLACE: Q: Thank you. Now, you don't report on the return on the TSX composite, but that data is in your Exhibit 15? At page 83?
DR. VANDER WEIDE: A: Yes, it is.
MR. WALLACE: Q: And we have added that column to the witness aid. And you've seen that. On page 2.
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: And we have reported the *ex post* risk premium for the Toronto market over the return on the long bond. And --
DR. VANDER WEIDE: A: Are you looking at page 2 of --
MR. WALLACE: Q: Page 2, we have the TSX numbers.
DR. VANDER WEIDE: A: Yes, that's the last -- the second-to-the-last column?
MR. WALLACE: Q: That's correct. And do you accept that data, subject to check?
DR. VANDER WEIDE: A: Subject to check, yes.
MR. WALLACE: Q: And for the period 1956 to 2011, that *ex post* risk premium was 2.57 percent?
DR. VANDER WEIDE: A: Yes. Looking at page 3 now.
MR. WALLACE: Q: Yes. Or basically one and a half percent less than for the utilities?
DR. VANDER WEIDE: A: Yes. And -- yes.
MR. WALLACE: Q: And from 1983 it's been minus .50 percent?
DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And can you take that arithmetic again, subject to check?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: Now, you would agree in the normal case that the cost of equity is higher than the cost of debt? And both, of course, are expected returns?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: Looking at the revised table 2 of the witness aid, do you see any problems with the period since 1983 where the return on the Long Canada bond has been 11.1 percent? And been higher than the return on the TSX composite?

DR. VANDER WEIDE: A: Well, yeah. I see several problems. One, that if the -- I do see a problem that the bond return was higher than the stock return, but that's not a problem if one measures the risk-free rate as the corrected -- as the right estimate of the risk-free rate, using the yield to maturity on the bond.

In addition, I see another problem, and that is that the capital asset pricing model suggests that the risk premium on utilities -- well, the capital asset pricing model in conjunction with Dr. Booth's .5 estimate of the beta, suggests that the risk premium on the utilities should be only half the risk premium on the TSX composite and, in fact, it's

significantly higher than the risk premium on the TSX composite.

MR. WALLACE: Q: Sir, you're reading a lot more into my question than I was asking you. What I am asking you is, the normal practice -- the normal expectation is that bond returns will be lower than stock returns. And yet we're looking here at an *ex post* view that shows from 1983 to 2011 the bond returns were higher than the stock returns, by about 50 basis points.

DR. VANDER WEIDE: A: Yes. And --

MR. WALLACE: Q: Now, isn't that unusual? I'm not talking about CAPM at this point, I'm talking about in the market.

DR. VANDER WEIDE: A: It is unusual, in the sense that -- and it arises because you're looking at bond returns. You wouldn't have that inversion if you looked at the risk-free rate.

MR. WALLACE: Q: Well, investors invest to get a return, don't they?

DR. VANDER WEIDE: A: They do. But the risk -- the reason one expects there to be a differential is that one expects the bond to be low-risk. But if you're looking at bond returns, year by year, and in an environment where interest rates are changing, the bond is not a low-risk investment. It's a high-risk investment if you're going to trade it every year.

It's only when you hold it to maturity that it's a low-risk investment, and hence you expect the stock return to be higher than the yield to maturity on the bond, and that's what you find.

When you look at bond returns, you can't any longer say that the bond is a low-risk investment.

MR. WALLACE: Q: Sir --

DR. VANDER WEIDE: A: Anybody who trades bonds year by year speculated on interest rate changes is -- has a high risk investment, and that's what this shows.

MR. WALLACE: Q: Sir, the reason the bond return is high is because we have been in an unusual era of declining interest rates, isn't it?

Proceeding Time 11:36 a.m. T34

DR. VANDER WEIDE: A: I guess that's one way to characterize it, but I would say that it's high because the bond is not risk free as an investment any longer, and the individual bet -- by trading every year the individual was making a bet on the change in interest rates. It turned out they happened to be lucky that interest rates went down, but the risk that they experienced was high.

MR. WALLACE: Q: They were lucky for 18 years.

DR. VANDER WEIDE: A: Yeah, for the prior 18 years they were unlucky.

MR. WALLACE: Q: Absolutely, because interest rates

were rising at that period.

DR. VANDER WEIDE: A: And that shows exactly why this is not a risk-free investment any longer. It's a risky investment when you try to trade bonds for a one-year return.

MR. WALLACE: Q: Sir, you mentioned you've been testifying for almost 30 years I think it was, in 400 proceedings. Do you know if in 1981 you were using yields or returns?

DR. VANDER WEIDE: A: That's too long ago for me to remember what I was using. I do believe and I believe I answered that in an interrogatory, that whenever I was comparing the return on a stock to a risk-free rate, I was using bond yields -- I mean using the yield's maturity.

MR. WALLACE: Q: But I'd like to know if you were calculating returns. I suspect that there would not be any evidence hanging around from that period, do you know?

DR. VANDER WEIDE: A: There would not.

MR. WALLACE: Q: Okay. Thank you. Okay, with Long Canada yields at about 2.4 percent, would you agree there's little potential for interest rate declines going forward?

DR. VANDER WEIDE: A: There certainly is not as much potential in my mind as there is for an increase. I

agree with that. But there is potential.

MR. WALLACE: Q: Yeah, but -- okay. But not anywhere near the magnitude that we saw since 1983.

DR. VANDER WEIDE: A: Correct.

MR. WALLACE: Q: And the high -- and likewise the high bond returns, there isn't that same opportunity there was in 1983.

DR. VANDER WEIDE: A: Well, I don't think in 1983 was viewed as an opportunity to trade in bonds for a one-year -- as a one-year investment.

MR. WALLACE: Q: Probably --

DR. VANDER WEIDE: A: That was a highly risky investment.

MR. WALLACE: Q: I probably used the wrong word. There isn't the same potential for the high bond returns that we've seen since 1983.

DR. VANDER WEIDE: A: Well, there wouldn't be --

MR. WALLACE: Q: Due to interest rate changes.

DR. VANDER WEIDE: A: There wouldn't be as much potential for high bond returns and there wouldn't be as much potential for the high losses. Or there could have -- in 1983 investors did not know that interest rates were going to go down. In fact I do recall that period in the sense that the interest rates were at their highest level that we had experienced in the last century, and people were worried about inflation

being a chronic problem. So there was a lot of uncertainty. One wouldn't have expected to get an 11.10 percent return. One would have expected to get the bond yield if one purchased it and held it to maturity.

MR. WALLACE: Q: But there was a potential in 1983. That same potential isn't there today, is it, due to interest rate changes.

DR. VANDER WEIDE: A: There was a potential but it was a risky potential. It was highly uncertain.

MR. WALLACE: Q: Thank you. You participated in the Alberta 2011 generic ROE proceeding, did you?

DR. VANDER WEIDE: A: I get confused a little bit on the years.

MR. WALLACE: Q: Oh, sorry.

DR. VANDER WEIDE: A: I think -- and the one before that.

MR. WALLACE: Q: Okay, thank you. I would agree. Are you familiar with that decision?

DR. VANDER WEIDE: A: No, I'm not.

Proceeding Time 11:42 a.m. T35

MR. WALLACE: Q: Okay. I'd like to look to your -- I'd like to put part of that decision to you, and I'll give you an extract, or give you the decision.

MR. GHIKAS: Mr. Chairman, Dr. Vander Wiede has just indicated that he is not familiar with it. So if my

friend is going to be taking him through passages, my submission would be he should have an opportunity to familiarize himself generally.

MR. WALLACE: If I can put the question to Dr. Vander Wiede and he feels he'd like more time for that, that's fine. I will be going past the lunch break and the opportunity can definitely be made.

MR. GHIKAS: My preference would then be, Mr. Chairman, if my friend is going to be continuing beyond the lunch break that he defer this portion of cross until after lunch.

MR. WALLACE: I'll do that, and just to assist Dr. Vander Wiede, I will refer him to the paragraph that I am going to come back to after lunch so that he doesn't feel bound to read this entire decision.

Q: Paragraph 99, sir.

Sir, I'd like to turn to forward looking DCF estimates. Your third set of DCFs are based on an average monthly DCF estimate of a sample of U.S. utilities minus the U.S. long-term treasury yield.

DR. VANDER WEIDE: A: I'm very sorry. I started to read that paragraph.

MR. WALLACE: Q: Gee, I gave you lunch for a reason. Anyway I could start again, that's fine.

DR. VANDER WEIDE: A: Is it going to be about this paragraph?

MR. WALLACE: Q: Paragraph 99, yes.

DR. VANDER WEIDE: A: Okay. I'll pay attention this time.

MR. WALLACE: Q: We will save that discussion until after lunch. Unless you want to discuss it now.

DR. VANDER WEIDE: A: No.

MR. WALLACE: Q: Thank you. It is interesting though, isn't it?

Your third set of estimates are based on average monthly DCF estimate of a sample of U.S. utilities minus the U.S. long-term treasury yield, and you use this as an estimate of the risk premium required by investors for investing in U.S. utilities? Is that generally correct?

DR. VANDER WEIDE: A: It is generally, but one has to be careful. The number in each month is not an estimate of the risk premium, that's just a result for that particular month. I run it to get my estimate of the risk premium. I now look at -- I run a regression of that estimated risk premium versus interest rates.

MR. WALLACE: Q: Okay. And you use the 20-year U.S. Treasury yield, not the 30-year?

DR. VANDER WEIDE: A: Yes, and the reason for that is that there's a continuous data series from Ibbitson Associates for the 20-year treasury. The 30-year, my recall is there's some years where there wasn't a 30-

year, so there's a break in that data series.

MR. WALLACE: Q: If you did use a 30-year yield similar to what the Commission used in its ROE formula, would your DCF premium be higher or lower than your estimation on page 35?

DR. VANDER WEIDE: A: I can't state whether it would be or not. Generally the yields on the 30 and the 20 are very close to each other.

MR. WALLACE: Q: And generally the 30 is a higher yield than the 20 simply because somebody takes a lock in risk for a longer time?

DR. VANDER WEIDE: A: I don't want to speculate on that without looking at some data. And I don't have a continuous data series.

MR. WALLACE: Q: Now, if you could turn to Exhibit 10 in your evidence, and both Exhibits 10 and 11 are DCF estimates that you then subtract the 20-year U.S. treasury yield from to get the risk premium?

Proceeding Time 11:46 a.m. T36

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And we looked at your 2009 evidence, and the exhibit's equivalent to Exhibit 10 in your current evidence, and the DCF calculations for many years in Exhibit 10 -- many historic past years in Exhibit 10 have changed. I'm wondering if you can explain why that might happen.

DR. VANDER WEIDE: A: Well, I can't recall at this time. I just don't know.

MR. WALLACE: Q: Okay. It just seems strange. Can you -- strange that they -- or do you acknowledge that there has been a change? Do you go out and re-run them? I'm trying to figure out how that could happen.

DR. VANDER WEIDE: A: I can't recall. I would have to investigate it. But I don't recall while I'm -- right in this moment.

MR. WALLACE: Q: Okay. I would like to leave that as an undertaking for you to compare Exhibit 10 and 11 in this proceeding in the -- your 2009 evidence, and confirm or correct us if we're wrong that there is a difference between your DCF yields in the years up to 2009 and explain how this could have happened.

DR. VANDER WEIDE: A: Okay.

Information Request

MR. WALLACE: Q: And similarly for the BMO Utilities Index?

DR. VANDER WEIDE: A: I cannot investigate the BMO Utilities Index. I get that data directly from the Bank of Montreal Capital Markets. And they gave me the -- when I was preparing this testimony, they gave me their returns on the BMO index from '83 to the present. I --

MR. WALLACE: Q: Okay. And did you check to see if

they were similar, or if there had been changes in the BMO data?

DR. VANDER WEIDE: A: I did not.

MR. WALLACE: Q: Okay. Again, if you can, and you may not be able to, I would ask you to compare the BMO data, compare with yours in this -- that you had in 2009, had within this, and if you can, ascertain why there is a difference, I would ask you to do so.

And can you confirm you will do that?

DR. VANDER WEIDE: A: Yes.

Information Request

MR. WALLACE: Q: Thank you. It's just for the purpose of the transcript.

Now, taking your current projection in Exhibit 10, you show the DCF monthly, going through, and the last one you use -- showed in 2009 was February '09, which is line 114 on page 71 of 120 in your evidence.

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And would you agree with me that that was the same date that was the last one you used in your evidence in 2009? Or can you take that, subject to check?

DR. VANDER WEIDE: A: I can take it, subject to check.

MR. WALLACE: Q: Okay. And if we look at that, the DCF that you calculated in -- or showed there was 12.37

percent?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And in May, 2012 the DCF is, in line 153, 9.67 percent.

DR. VANDER WEIDE: A: For February -- no, for -- I'm sorry. You're comparing February of '09 to May of 2012?

MR. WALLACE: Q: Yes. And the reason I'm doing that is, February '09 was your last line in your previous evidence.

DR. VANDER WEIDE: A: Okay. Okay.

MR. WALLACE: Q: And I calculate that that -- between those two dates the DCF fell 2.7 percent. Would you agree with that?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And similarly if you look at the bond yield between those two dates, it was 3.83 percent to 2.53 percent, and I calculate it fell 1.3 percent. And would you agree with that?

DR. VANDER WEIDE: A: February of '09 --

MR. WALLACE: Q: To May, 2012. It goes from 3.83 percent to 2.53 percent, a drop of 1.3 percent.

Proceeding Time 11:51 a.m. T37

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: So while the utility DCF required return has dropped by 2.7 percent, the treasury yield

has only dropped by less than half -- or by half. Well, a little less than half, I guess. That amount.

DR. VANDER WEIDE: A: In this *ex ante* risk premium, I don't put weight on -- as much weight on the DCF result for a particular period. In my DCF test, my DCF numbers are for the latest date. In the *ex ante* risk premium, I don't treat the DCF result in each period as the cost of equity. I treat it as a result of a method of calculation that I then compare to the bond yield, and then take the difference, call it the risk premium and compare that to the change in interest rates. And that change in interest rates gives me a prediction of what the risk premium would be if everything fell on the regression line. And that's what my cost of equity is.

So I wouldn't say that the cost of equity went down by 300 basis points, I would say that the DCF result went down by 300 basis points over that time for this sample of utilities and that my *ex ante* risk premium estimate though did not go down by 300 basis points because I don't just look at the DCF result, I look at the relationship between the implied risk premium and the interest rate.

MR. WALLACE: Q: Sir, you've gone way beyond my question. My question was very simply what was happening during that period. And by your calculation

of the DCF, it went down 2.7 percent during the period February '09 to May 2012.

DR. VANDER WEIDE: A: If I recall the question, you asked me to explain the difference. Maybe my recall isn't correct.

MR. WALLACE: Q: That's fair enough. I'm not going to go and redo it or get the question read back. My question to you is, you can confirm that the DCF fell by your calculation from 12.37 to 9.67, a drop of 2.7 percent.

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And the treasury yield dropped by about half that amount, 1.3 percent.

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And if we look at the risk premiums, they dropped from 8.54 percent to 7.14 percent or a change of 1.4.

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: Thank you. And in this case there is no inverse relationship between the utility risk premium and the level of the long bond yield, is there?

DR. VANDER WEIDE: A: I don't really know how to answer that. If you pick two data points out of a whole data series there will always be points that don't fit on the regression line. In this case I'm looking at the

regression line and the individual results are not the cost of equity estimate.

MR. WALLACE: Q: Sir, I am not asking -- I picked two data points because they were the last data point on your last evidence and they are the last data point on this evidence. They are not random points. Between those two points, would you agree with me there is no inverse relationship between the utility risk premium and the level of the long bond deal?

DR. VANDER WEIDE: A: No.

MR. WALLACE: Q: You are agreeing or not?

DR. VANDER WEIDE: A: I am disagreeing with you.

MR. WALLACE: Q: You are disagreeing.

DR. VANDER WEIDE: A: Right.

MR. WALLACE: Q: Okay. You say there is -- between those two points there is an inverse relationship.

DR. VANDER WEIDE: A: There's an inverse relationship over the entire set of data and that's what I'm using as my estimate of the cost of equity. I would not give importance to picking two points out of the context of what the estimate is and saying that you could judge there is no inverse relationship by taking two data points out of several hundred data points.

MR. WALLACE: Q: Sir, I did not ask you for a generalization. I asked you a very specific question. Between those two data points there is no inverse

relationship between the utility risk premium and the level of the long bond yield, is there?

Proceeding Time 11:57 a.m. T38

DR. VANDER WEIDE: A: I don't know how to answer that question because I wouldn't call the result of those two numbers the utility risk premium. Those are only two data points in calculating the utility risk premium.

MR. WALLACE: Q: Yes. And between those two data points there is no inverse relationship, is there?

DR. VANDER WEIDE: A: If all you're asking is between those two data points, which are not a calculation of the risk premium as I calculated it, was there no relationship, I'd answer yes. But it has nothing to do with my method of calculating the cost of equity using the *ex ante* risk premium method.

MR. WALLACE: Q: Now, what then am I to take as the risk premium? You have a column going from September '99 through to May 2012 in your Exhibit 10 which has risk premiums on the right side all the way down.

DR. VANDER WEIDE: A: Right.

MR. WALLACE: Q: Are those not risk premiums?

DR. VANDER WEIDE: A: One would -- your first question was: What would you take to be the risk premium? The risk premium is the result of the regression relationship between the risk premium, the first

definition of the risk premium that's shown on that column, and the bond yield. From the data in the last two columns of Exhibit 10, I run a regression of the data in the last column with the data in the column before that. I then, having the regression coefficients, I put in the bond yield, the forecasted bond yield, and from that I get an estimate of the risk premium.

MR. WALLACE: Q: And, sir, I took it that this risk premium in this column, it's your estimate of the risk premium at that month.

DR. VANDER WEIDE: A: Then you'd be mistaken. That is not my estimate of the risk premium in that month. At any particular month I would still run the regression and I would estimate the risk premium from the regression coefficients by plugging in the current bond yield -- the forecasted bond yield.

MR. WALLACE: Q: What should we retitle that column?

DR. VANDER WEIDE: A: I don't know. I guess it's a -- I'm sorry that it caused confusion. I thought it was understandable.

MR. WALLACE: Q: Well, it's --

DR. VANDER WEIDE: A: But if it's not, then it's my error and I'll try to change the title of column, but it's not my estimate of the risk premium.

MR. WALLACE: Q: Well, I normally think when I see DCF

minus bond yield that you've got the risk premium, and you called it that. Sir, I'd like to know if it isn't that, what is it? It's your best estimate of the risk premium at that time, isn't it?

DR. VANDER WEIDE: A: No, it is not. It's a calculation that I use to -- that I would use along with the regression analysis to estimate -- to come up with my best estimate of the risk premium at any point in time.

MR. WALLACE: I think I'm going to come back to that after the noon break, Mr. Chairman. I don't think I can appropriately push it further at this time. I note that we're within two minutes of it and I'm about to move to a different area or come back to it after the break. Would this be a convenient time?

THE CHAIRPERSON: How long are you going to be with the next area? *ex post*

MR. WALLACE: Sorry? Oh, the next area? A while.

THE CHAIRPERSON: A while. Why don't we break now for lunch then?

MR. WALLACE: Okay. I think it'll also have the continuity because I'll be able to follow this issue and just carry right on.

THE CHAIRPERSON: Perfect. Okay, well, why don't we break till 1:00.

MR. WALLACE: Thank you.

(PROCEEDINGS ADJOURNED AT 12:02 P.M.)

(PROCEEDINGS RESUMED AT 1:00 P.M.) **T39/40**

THE CHAIRPERSON: Please be seated.

MR. WALLACE: Mr. Chairman, I think I'm refreshed and ready for another go at this. We'll summarize it and move on.

MR. WALLACE: Q: Dr. Vander Weide, could you go back to page 72 of your evidence, the last page of Exhibit 10, where we were --

DR. VANDER WEIDE: A: Page 72?

MR. WALLACE: Q: Yes, where we were stuck before the break. And you've indicated that that 7.14 percent at the risk premium column is not really a risk premium, I took was what you were saying.

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: Okay, and so when I heard that, or thinking about it over lunch, if that's not really a risk premium, because it looks like one being the difference between a DCF and a bond yield, are either the DCF or the bond yield not what they appear? I mean, isn't the bond yield a bond yield?

DR. VANDER WEIDE: A: No. Maybe I can try several cuts at explaining this perhaps, but let me try one. If you look at Exhibit 8, I also have a risk premium column like that. That's on the *ex post*. Our experience risk premiums that I call them. And you'll

notice if you have that, I'll wait until you're able to --

MR. WALLACE: Q: I have that, thank you.

DR. VANDER WEIDE: A: You'll notice that there's a return on the S&P/TSX utilities index, and there's a long-term bond yield in every year.

MR. WALLACE: Q: Right.

DR. VANDER WEIDE: A: And then there's a risk premium. In 1956 that risk premium was negative 3.44. I obviously don't intend for that negative 3.45, although I have a column that now in hindsight I wish I had found some other name for, although I still can't think of one. I don't believe that that's the risk premium for 1956. But if you get to page 67 you'll notice that at the bottom I have an average. It's only the average that's the risk premium. It's not the individual results for each year.

MR. WALLACE: Q: Well, surely the results are the achieved risk premium in that year, *ex post*.

DR. VANDER WEIDE: A: Right, and for Exhibit 11 the results better be thought of as the difference between the DCF and the bond yield in that year. But they're not the risk premium. And this is described at some length in Exhibit 24, Appendix 3, page 117 of 120, exactly how I used the data in this exhibit to develop a cost of equity estimate that's different from a DCF

estimate because it takes into consideration not only the DCF estimate at the time but also the relationship between the interest rate and the DCF result.

MR. WALLACE: Q: Are you complete?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: Okay, and I want to ask you again, that is an experienced risk premium -- or an experienced difference between the DCF and the bond yield.

DR. VANDER WEIDE: A: Yes, but it's not the risk premium that one ought to apply to a current interest rate in order to get a cost of equity.

MR. WALLACE: Q: I didn't ask if you were recommending it, but it is what was happening at that time. That is an individual DCF calculated at that time.

DR. VANDER WEIDE: A: But it's an individual -- one might call it the difference between an unconditional estimate and a conditional estimate. The unconditional estimate is just to use a DCF, and I did that. That's one of my methods. Another is to condition the information in the DCF on what interest rates were at that time. And that conditioned estimate is different than just taking a DCF itself. It says that we're going to look at the DCF result as part of our evidence for the cost of equity in the *ex ante* risk premium, but we are also going to take into

account the fact that the risk premium varies with the interest rate. And again that's described in that Appendix 3 at some length, and it's only the relationship, in the *ex ante* risk premium it's only the relationship between the risk premium and the interest rate that leads to the cost of equity estimate.

Proceeding Time 1:06 p.m. T41

MR. WALLACE: Q: Sir, I'm just going to go through the components of the three items, then I'm going to move on. The 9.67 percent is your calculation of DCF for May, 2012.

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And it falls dead in the middle of the DCFs that you have on Exhibit 6 of 9.8 and Exhibit 7 of 9.5, for your averages?

DR. VANDER WEIDE: A: I'm sorry. You're looking at the one for April, 2012, the 9.70?

MR. WALLACE: Q: No. I was looking at -- I'm comparing May, 2012, 9.67.

DR. VANDER WEIDE: A: May, 2012. I'll say --

MR. WALLACE: Q: Which is your Exhibit 11. And then I've turned to Exhibit 6, and I see you come up with a DCF of 9.8 percent on average in row 33.

DR. VANDER WEIDE: A: I'm sorry, I'm not following. You're looking at Exhibit 11 first.

MR. WALLACE: Q: Yeah. And do you see the number --
DR. VANDER WEIDE: A: And you're looking at May -- May, 2012.
MR. WALLACE: Q: And you see the number of 9.67 percent.
DR. VANDER WEIDE: A: I'm having a hard time. I see 10.48 there in Exhibit 11.
MR. WALLACE: Q: I'm on -- oh, no. I'm on 10.
DR. VANDER WEIDE: A: Oh, you're on 10.
MR. WALLACE: Q: Yes. I never made it to 11.
DR. VANDER WEIDE: A: I heard you say 11.
MR. WALLACE: Q: Sorry.
DR. VANDER WEIDE: A: Okay, 9.67. Okay, I see that.
MR. WALLACE: Q: Okay. And that is the DCF you calculated for May, 2012.
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: And if I look at Exhibit 6, line 33, I see your DCF calculation for that group at 9.8 percent.
DR. VANDER WEIDE: A: Exhibit 6. Yeah, that's just a happenstance. There is no -- well --
MR. WALLACE: Q: Well, first, you'll confirm the 9.8 percent.
DR. VANDER WEIDE: A: I will confirm that, yes.
MR. WALLACE: Q: Okay. And I'm going to point you to Exhibit 7, which is 9.5 percent.

DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: And if I take the average, and I know you like averages, I get 9.65 percent.
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: And you're saying that's just a happenstance, coincidence.
DR. VANDER WEIDE: A: Well, it's not -- that's a little bit of an overstatement. It is a DCF result, but it's -- in the one case I'm saying let's just look at the DCF result as an estimate of the cost of equity. In the other case, I'm saying let's look at the DCF result in relation to the interest rate, and see whether the risk premium varies with the interest rate, and use that additional information to develop a separate cost of equity estimate from the DCF itself. And what's separate about it is that I'm looking at the relationship between the implied risk premium and the interest rate.
MR. WALLACE: Q: I understand that. But you do agree with me -- I understand that's your position, anyway. You do agree with me that the 9.65 average of your two DSFs on Schedule 6 and 7 is remarkably close to your DCF analysis on May, 2012.
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: With the 9.67.
DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: Okay. And you agree that that's not just a coincidence. That is a calculation of the DCF.
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: And similarly your calculation in February, '09, of 12.37, was a calculation of the DCF.
DR. VANDER WEIDE: A: It was, yes.
MR. WALLACE: Q: And using similar methodology.
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: Okay. And if we look at the yield column, your yield, in May, 2012, is 2.53 percent. And that's an actual measured yield for that month.
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: And similarly your yield in February, '09, is a bond -- measured bond yield of 3.83 percent.
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: Thank you, sir. We'll leave what the difference is for argument.

I'd like to now change topics and go to page 4 of the witness aid that I've provided you, Exhibit C6-21. And you will recall that we discussed earlier that Ms. McShane calculated the coefficient on the electricity sector to long-term bond returns to be 0.46?

Proceeding Time 1:11 p.m. T42

DR. VANDER WEIDE: A: Do I recall that?
MR. WALLACE: Q: We had that discussion earlier. I had

you look at her evidence.

DR. VANDER WEIDE: A: Maybe you did, but it's slipped my mind.

MR. WALLACE: Q: Okay. We can go back to that. Oh, it's okay. We'll leave it. We're not testing hers.

In the cross-aid, we have a regression of the BMO utility return against the TSX composite return, and the long bond return since 1983. You see that?

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: And again, I'd ask you, take it subject to check, that the coefficient on the long bond return is 0.68, whereas the utility beta is 0.28. And that's the X variable down -- the X --

DR. VANDER WEIDE: A: Sorry -- yeah. I was a little confused in that. The second X variable is the Long Canada bond yield?

MR. WALLACE: Q: Is the Long Canada bond return.

DR. VANDER WEIDE: A: The bond return.

MR. WALLACE: Q: Since 1983.

DR. VANDER WEIDE: A: Okay, yeah. I was confused because in the title it was the other way around.

MR. WALLACE: Q: Okay. And can you take those subject to check?

DR. VANDER WEIDE: A: That the coefficient is .683? Yeah.

MR. WALLACE: Q: Yes.
DR. VANDER WEIDE: A: Yeah. Yes, I will.
MR. WALLACE: Q: And that the utility betas dropped -- or is at 276 -- .276?
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: And that's what you would expect, wouldn't you, with the poor equity markets of the last ten years? And -- well, high dividend paying stocks being supported by interest rate declines?
DR. VANDER WEIDE: A: No, I wouldn't expect that.
MR. WALLACE: Q: Oh.
DR. VANDER WEIDE: A: You know, if that were in fact reasonable, then it seems to me that that beta is so subjective that it's not a reasonable way to calculate the cost of equity. If the -- I don't know anybody who thinks that the real beta for a utility is .276.
MR. WALLACE: Q: Okay. And, sir, I haven't asked you to use it for that purpose. I've asked you, do you accept that that is what has happened historically, the calculation. And I gather you're taking that subject to check.
DR. VANDER WEIDE: A: Yes.
MR. WALLACE: Q: And I am asking, that is not surprising in the circumstances that happened since 1983. Whether those would ever repeat themselves and whether you would use it that way is a different

matter. But given those circumstances, it's not surprising, is it?

DR. VANDER WEIDE: A: It's surprising to me.

MR. WALLACE: Q: Okay. Leave it at that. Thank you. Now, I'd like to also take you back to Table 2 on the C6-21, the witness aid.

DR. VANDER WEIDE: A: Page 2?

MR. WALLACE: Q: It's page 3, the revised VW Table 2.

DR. VANDER WEIDE: A: Okay.

MR. WALLACE: Q: And you see there that the utilities have earned higher returns, either the TSX utilities or the BMO utilities, have earned higher returns than the TSX composite. No matter which time period you pick.

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: Yes. And I'd like to now take you to paragraph -- or, and is that surprising to you, by the way?

DR. VANDER WEIDE: A: Yes, it is.

MR. WALLACE: Q: Okay. But you accept that result, subject to check.

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: Now, in Alberta's generic hearing, which I gave you the transcript for --

DR. VANDER WEIDE: A: Yes.

MR. WALLACE: Q: The 2011 generic hearing, paragraph

99, there is the statement:

> "The Commission agrees with the UCA that part of the reason for higher returns may be that allowed returns have been above the actual ROE that investors expected and required for investments of comparable risk. The Commission finds that evidence on historic returns is inconclusive with respect to the return investors require on comparable investments."

And you accept that's a fair statement of the Commission's finding?

DR. VANDER WEIDE: A: I believe you read it correctly.

MR. WALLACE: Q: Okay. So, if the Commission in this case ruled out the use of utility historic returns as a factor they were going to consider, your evidence would be all U.S. evidence?

Proceeding Time 1:16 p.m. T43

DR. VANDER WEIDE: A: It would, yes.

MR. WALLACE: Q: Thank you.

DR. VANDER WEIDE: A: And I don't see any way could that be U.S. evidence because there aren't but two Canadian utilities that have market traded stocks. The description of the companies, I have it early in my testimony, I show the percentage regulated business and there just aren't -- there isn't data for Canadian

utilities if you don't accept that.

MR. WALLACE: Q: If you don't accept historic returns of Canadian -- the historic --

DR. VANDER WEIDE: A: Well, if you don't accept historic returns for these companies, then you can't calculate betas either because betas are calculated based on historic returns.

MR. WALLACE: Q: Thank you, sir, that completes my questions. Thank you.

THE CHAIRPERSON: Thank you, Mr. Wallace.

CROSS-EXAMINATION BY MS. WORTH:

MS. WORTH: Q: I've been practicing this all morning so I'm going to start off by saying your name. Dr. Vander Weide.

DR. VANDER WEIDE: A: Correct.

MS. WORTH: Q: Excellent. Okay. Starting off on a good note. On page 17 of your evidence you outlined what you believe to be the primary disadvantages of the BMO capital market or CM basket in that two have significant investments in unregulated activities, and some have investments that are pipelines rather than electric or natural gas operations, correct?

DR. VANDER WEIDE: A: Yes.

MS. WORTH: Q: Okay. Then you went on to discuss the primary disadvantages of the S&P/TSX utilities, and that being six of the ten do not have significant

assets devoted to regulated utility service, and the financial statements of two reflect essentially the same information, effectively introducing duplication into the sample.

DR. VANDER WEIDE: A: Yes.

MS. WORTH: Q: Okay. Now, however I note that when you were actually going on to discuss the U.S. utilities groups, you didn't follow the same format. You spoke of the advantages associated with this group but you didn't discuss a single disadvantage, primary or otherwise. Can you explain to us why that was the case?

DR. VANDER WEIDE: A: I didn't have any intention in mind. I really don't -- I don't see the disadvantage. In fact I see it's a necessity because, as I mentioned a few minutes ago, and as is obvious from these two, there are not very many publicly traded Canadian utilities with regulated utility operations.

MS. WORTH: Q: But there were none of the same disadvantages that you found with the individual utilities within those two Canadian groups, within the U.S. group?

DR. VANDER WEIDE: A: Well, let's look at it. In answer 46 I say:

> "The primary disadvantage of the BMO Utilities is that two of the five also have

significant investments in unregulated operations."

Well, of my two U.S. utility groups, the large utility group has 83 percent of their assets devoted to regulated utility operations, and the second group has 93 percent of their assets devoted to regulated utility operations.

If we look at answer 44 where I have the five Canadian utilities that are in the BMO utility index, Canadian utilities has just 68 percent, Emera has 56 percent of regulated assets in Nova Scotia, and they do have 26 percent regulated elsewhere but those are in other areas. But they would certainly be a candidate. Enbridge has a small -- has only 25 percent of their assets are associated with gas distribution. Fortis has 85 and TransCanada is also at best 48. And so you essentially would have -- that wouldn't be a disadvantage of U.S. utilities because they do have a high percentage of regulated assets. So they're publicly traded. They have over 80 percent of assets and my smaller group has 93 percent of assets, so say with regulated operations, and they're a large group.

MS. WORTH: Q: And did you turn your mind to any other possible disadvantages to using a large U.S. group?

DR. VANDER WEIDE: A: Well, I did. I also looked at

the risks of those companies and discussed those risks in my testimony.

Proceeding Time 1:21 p.m. T44

MS. WORTH: Q: If we're going to continue the discussion about your reliance upon U.S. utilities, I'm going to refer you to page 23 of your evidence where you cited the B.C. Utilities Commission's decision in the 2009 Terasen ROE process to indicate the Commission's support of the use of U.S. utility data as a useful proxy to come to an ROE. You are, I presume, aware that this Panel is not bound by that past decision to accept evidence based on U.S. utilities, or to accept evidence that is too heavily weighted to data generated by using U.S. data rather than comparable Canadian utilities, particularly when those Canadian comparators exist?

MR. GHIKAS: Mr. Chairman, I think my friend is asking for a legal, straight-up legal interpretation, and so I would object on that basis.

MS. WORTH: Mr. Vander Weide did cite that process and the decision that was made in that process as support for his use of the U.S. data, so I'm asking him to simply comment on whether he was at all aware of the possibility that that would not be binding on this Commission Panel.

MR. GHIKAS: Mr. Chairman, the company accepts that the

Commission is not bound by prior decisions of the Commission. I believe that's a well accepted principle.

THE CHAIRPERSON: Do you still want to ask the question?

MS. WORTH: At this point it's I guess rather irrelevant whether Dr. Vander Weide was aware of it.

MS. WORTH: Q: I put to you that a sample pool that has the potential to be a useful proxy at one time may not remain an acceptable one indefinitely, particularly should certain conditions change on either or both sides of the border. Would you agree with that?

DR. VANDER WEIDE: A: Yes, I believe one ought to examine the set of proxy companies in the context of the current environment.

MS. WORTH: Q: Okay. I think it's pretty clear from your evidence as well as your testimony today that you used only U.S. utilities in your DCF modelling, correct?

DR. VANDER WEIDE: A: Yes.

MS. WORTH: Q: Okay. And your response to question 84 on page 29 of your evidence is somewhat ambiguous to me. You said that the difficulty with using Canadian utilities is that there are very few if any analysts' growth forecasts available for them, and there are fewer publicly traded Canadian utilities than U.S. utilities. Can you please clarify on the record

whether there are few or no Canadian utilities with analysts' growth forecasts?

DR. VANDER WEIDE: A: Well, from the data source that I have, which I believe I responded in an interrogatory but -- I did not have analysts' forecasts for Canadian utilities. The data source that I have doesn't -- every once in a while one will pop up but it's not consistent, doesn't consistently have those.

MS. WORTH: Q: Did you active seek out any further sources of analysts' forecasts for Canadian utilities?

DR. VANDER WEIDE: A: I sought out whether there were -- first of all, I require that there be two analysts as one of my criteria. And I did not know of any Canadian utilities that had two analysts.

MS. WORTH: Q: Okay, if we can move on to your evidence about *ex post* risk premium methods. Your calculation here yielded a risk premium for BMO Capital Market or CM Utilities at 8.8, while the S&P/TSX utilities yielded a risk premium of 4.7, correct?

DR. VANDER WEIDE: A: Yes.

MS. WORTH: Q: That's a pretty significant difference, isn't it?

DR. VANDER WEIDE: A: Yes.

MS. WORTH: Q: And how do you account for that?

DR. VANDER WEIDE: A: I don't know how to account for it. They both used the data for the longest period of

time, and I don't believe that there is any one method that provides a perfect estimate of the costs of equity. It's always an estimate. Every method, the *ex post* risk premium, *ex ante* risk premium, CAPM, DCF, all require estimates of unknown quantities. So the best you can do is look at all the -- look at the available evidence.

So in the *ex post* risk premium method I looked at the evidence for the two utilities indices that there are, and took them back as far as the data exists. And I had no reason to say that one would be better than another. I noted, I believe, in my discussion that the S&P/TSX utilities at first blush might have some preference, and that the data is available for a longer period of time. But on the other hand, you have the quite considerable disadvantage that none of the companies in the S&P utilities, except for two out of ten, have a significant percentage of assets devoted to regulated operations.

Proceeding Time 1:26 p.m. T45

So, the BMO has a shorter period of time but the companies all have a higher percentage of regulated operations. Still not as much as the U.S. utilities, but more than the S&P/TSX utilities. And so I don't see any reason for preferring one data set

or another. They provide different results and so I chose to take the average of the two.

MS. WORTH: Q: Okay. So we can move on now to your capital asset pricing model, or CAPM evidence. Your CAPM modeling relies on the forecasted yield to maturity on Long Canada bonds, a beta, and a market risk premium and plus 50 points -- sorry, 50 basis points of inflation.

DR. VANDER WEIDE: A: Yes. No. Not of inflation.

MS. WORTH: Q: No, sorry. 50 basis points inflater is what I meant. Basically you say that was --

DR. VANDER WEIDE: A: It's for flotation costs.

MS. WORTH: Q: Yeah.

DR. VANDER WEIDE: A: And I forget the other word right this instance, but we can call it flotation costs.

MS. WORTH: Q: Okay. Was the beta that you used in your CAPM evidence one specific to Fortis? Or the average value line beta generated by using the large proxy group?

DR. VANDER WEIDE: A: I look at different betas in my testimony, and direct and rebuttal, and in my direct testimony I used the 0.73 beta on page 39, which is the average for my comparable group of U.S. utilities. In my rebuttal evidence, I look at the betas that Dr. Booth and Mr. Safir recommend -- that they estimate, and I test the reasonableness of those, and find him

to be unreasonable.

MS. WORTH: Q: Okay. Back to your evidence. You then used the Ibbitsen SBBI risk premium generated using the S&P 500 and the income return on the 20-year treasury bond, generating a U.S.-centric risk premium.

DR. VANDER WEIDE: A: Yes.

MS. WORTH: Q: Okay. And then you apply that to Fortis, a Canadian utility.

DR. VANDER WEIDE: A: Yes.

MS. WORTH: Q: And you make no adjustments to that risk premium to reflect any Canadian market conditions or considerations?

DR. VANDER WEIDE: A: Well, I assess whether there are differences. But I don't find any. So I believe that it's a reasonable estimate.

MS. WORTH: Q: Okay. So that's your opinion.

DR. VANDER WEIDE: A: Well, it's my opinion as an expert.

MS. WORTH: Q: Okay.

DR. VANDER WEIDE: A: And I discuss the reasons why.

MS. WORTH: Q: Okay. We've heard again today, and in your evidence, that based on your analysis of the DCF *ex post* risk premium, *ex ante* risk premium, and the CAPM methods that the appropriate ROE for Fortis is 10.5 with a 40 percent equity thickness. Is that correct?

DR. VANDER WEIDE: A: Yes.
MS. WORTH: Q: Okay. And the ROE of 10.5 percent was again a straight average of the DCF analysis, the *ex post* and the *ex ante*.
DR. VANDER WEIDE: A: Yes.
MS. WORTH: Q: Okay. But you decided not to give any weight to the CAPM whether it was modeled using the 0.73 beta or the 0.92 one.
DR. VANDER WEIDE: A: Yes. And I go to great length in both my direct and my rebuttal to explain why that is, and I provide a lot of evidence to support that conclusion.
MS. WORTH: Q: But earlier today, you said there was just as much uncertainty regarding the CAPM as DCF. So why, then, prefer one over the other?
DR. VANDER WEIDE: A: Because not only is there -- with the CAPM, not only is there uncertainty, but one gets a totally illogical result which makes one question whether the CAPM really applies to the Canadian market. That is, the CAPM would suggest that utilities ought to be -- that the risk premium for utilities ought to be less than the risk premium for the market as a whole. And over periods of -- let's see, '83 to the present is maybe -- what, 30 years? And '56 to the present is maybe 60 years. Over periods of 30 and 60 years, we find out that in fact

the risk premium on utilities, on Canadian utilities is higher than the risk premium on the market as a whole, as measured by the S&P/TSX composite.

Proceeding Time 1:31 p.m. T46

Now, there are only two conclusions one can draw from there, or maybe there is three, but one would be that the S&P/TSX composite is not a reasonable measure of the market index, but we don't know what else there is, because this is the index that is reported in Canada. Two, is that the CAPM doesn't apply to Canadian data, because it doesn't explain the fact that the utility risk premium over 30 to 60 years has been higher than the index for the market as a whole. And three, we could conclude that maybe the Canadian market is not efficient in the sense that it generates the highest return for a given level of standard deviation. But all of those would suggest that we don't give a lot of weight, or any, to the CAPM at this time.

MS. WORTH: Q: And again, that is your opinion?

DR. VANDER WEIDE: A: Well, it is my opinion, but backed up by a whole lot of evidence that I presented in my testimony.

MS. WORTH: Q: Can you explain why when it came to your *ex post* risk premium, you were content to average two widely ranging results from imperfect comparators, but

when it comes to the cost of equity calculation, you unilaterally decided to exclude the result that varied too widely from Fortis shareholders' interests in yielding a high cost of equity?

DR. VANDER WEIDE: A: I'm sorry, which -- what -- I am not sure about the specifics of your question. Which ones did include and which ones did I exclude?

MS. WORTH: Q: Well, in the rest of your evidence, particularly when we were looking at your *ex post* risk premium, we had two widely ranging results which I think were covering a 4.1 spread. You were content to average them.

DR. VANDER WEIDE: A: Yes.

MS. WORTH: Q: Even though there was, by your own testimony, a really wide swath in between the two figures. But when the CAPM result came up, and you weren't pleased with that, you thought that it varied too widely from the rest of your tests, you excluded it. It seems rather inconsistent, wouldn't you agree?

DR. VANDER WEIDE: A: No, and I disagree with the premise of what my reasoning was. I didn't say that I wouldn't give way to the CAPM because it differed from my other tests. That wasn't it at all. I didn't give weight to the CAPM because I had evidence, and very strong evidence, that the CAPM doesn't apply to the Canadian market, in the sense that the risk premiums

for the Canadian utilities are higher, over 30 to 60 year periods than the risk premium for the S&P/TSX composite which goes counter to the CAPM.

MS. WORTH: Q: Okay, I think we can move on. I note that in your discussion of the ROE and equity ratio starting on page 44 of your evidence, you again decline to examine any Canadian utilities, relying instead solely on U.S. utilities. Was there any reason not to include those Canadian utilities that are broadly comparable in the sample group?

DR. VANDER WEIDE: A: Let's see here. I am just checking whether I answered that question in my testimony.

MS. WORTH: Q: I think it was page 44 through 45, I believe it was towards the bottom of page 44 there is a question and answer which indicates you relied solely on U.S. utilities for ROE.

DR. VANDER WEIDE: A: Right, and the question is why do you examine data on allowed rates return on equity for U.S. utilities rather than Canadian utilities, and I explain the answer in answer 127.

MS. WORTH: Q: Yes, but in that you didn’t say that there were no Canadian utilities that are broadly comparable. Instead, you said that you didn’t rely on them for another reason. I am asking whether there was any reason you decided not to rely on those that

are out there, that are broadly comparable, in addition to other samples from the U.S.?

DR. VANDER WEIDE: A: Well, by number three in answer 127, where I said provide an independent test. And my estimate of the cost of equity isn't based on these allowed ROEs. Let me emphasize, these are just the tests of reasonableness. It is an independent test in the sense that from my experience in Canada, the ROEs have traditionally been set by formulas that are very similar, and so they have had similar type ROEs, and I also thought that the evidence for Canadian utilities was well-known in Canada. So that this would be an independent test to have data from a different source than is widely available in Canada.

Proceeding Time 1:37 p.m. T47

MS. WORTH: Q: Okay. So if we were to take the ROEs from Canada and from the U.S. group, between January, 2010 to June, 2012, and compare them, how would you characterize the difference as between the two?

DR. VANDER WEIDE: A: I didn't do -- I didn't explicitly do such a comparison, but my general feeling is that the ROEs in Canada are less than in the U.S.

MS. WORTH: Thank you. Those are all my questions.

THE CHAIRPERSON: Thank you, Ms. Worth.

CROSS-EXAMINATION BY MR. HOBBS:

MR. HOBBS: Q: Dr. Vander Weide, Mr. Chair and Commissioners.

THE CHAIRPERSON: Good afternoon.

MR. HOBBS: Q: I would like to take you to your evidence on page 34, Dr. Vander Weide, and first deal with the issue of the *ex post* risk premium results. I guess my first point -- or my first question to you is if you had used instead of the S&P/TSX utilities, if you had used the S&P/TSX composite --

DR. VANDER WEIDE: A: I'm sorry, I didn't hear that.

MR. HOBBS: Q: If you had used instead of this in this *ex post* risk premium results, if you had used the S&P composite instead of the S&P/TSX utilities --

DR. VANDER WEIDE: A: Yes?

MR. HOBBS: Q: -- and you then had followed through on that table to come up with a risk premium, what would you have done then?

DR. VANDER WEIDE: A: I don't know. I didn't even consider that, because the S&P/TSX composite is not composed of utilities. And so it seemed to me that the composite was thought to be riskier than the utilities. And so it didn't seem to be a reasonable test.

MR. HOBBS: Q: All right. Will you agree with me when you use utilities that you're including diversifiable and non-diversifiable risks?

DR. VANDER WEIDE: A: I'm not sure. I'd have to think about that one for a little longer.
MR. HOBBS: Q: Isn't it an important question? Because eventually you take your 6.7, add to it your flotation costs, and come up with a return on equity for FEI.
DR. VANDER WEIDE: A: Right.
MR. HOBBS: Q: Don't you need to, before you do that, need to turn to your mind to the issue of diversifiable and non-diversifiable risks?
DR. VANDER WEIDE: A: Well, any time -- I don't think so. Any time one looks at a proxy group of companies, one believes that they are comparable in business risk, or in total risk. Either they have comparable business and financial risk, or one has higher business risk but lower financial risk, or vice versa. And so one has already considered comparability not in terms of diversification but in terms of the risk of investing in those companies.
MR. HOBBS: Q: So is it your underlying assumption that the risk of the S&P/TSX utilities matches that of FEI?
DR. VANDER WEIDE: A: I didn't explicitly compare the risks. I looked at the only utility -- only data that I had on utility -- on Canadian utility returns. There were two that -- two sources of Canadian returns that seemed to be at all close. One was the BMO CM utility stock index. Those companies I have already

discussed the advantages and disadvantages of them, but there are only five of them. And some of them are not -- don't have as high a percentage of regulated assets as I would like.

But the problem with the BMO CM is it only goes back to '83. So, to provide a fair and complete record of returns for Canadian utilities, I also took the S&P/TSX utilities, even though I knew from the get-go that there weren't very many of them that one would classify as pure utilities. But at least they were close enough to being utilities that it might give us some information about returns for -- required returns for utilities. I don't know any other sources of data for Canadian utilities.

Proceeding Time 1:42 p.m. T48

MR. HOBBS: Q: Right. But my question is not about the nature of the utilities. My question is, can you, from that sector, reach any conclusions with respect to whether not it includes diversifiable and non-diversifiable risks?

DR. VANDER WEIDE: A: I'm really having a hard time --

MR. HOBBS: Q: Aside from the issue of whether or not they're regulated, pure-play utilities or not --

DR. VANDER WEIDE: A: Right.

MR. HOBBS: Q: -- in the sense of systematic risk, can you not --

DR. VANDER WEIDE: A: To the -- I'm having -- I guess I'm having a hard time relating -- putting systematic and non-systematic risk in this context. I've been involved in utility regulation for over 30 years. And I've never seen testimony that didn't take a look at companies that were comparable in risk, based primarily on the fact that they were in the same line of business, or similar lines of business. I've never seen somebody criticize the proxy companies that are in the same line of business, because they might have unsystematic risk.

MR. HOBBS: Q: Would you agree with me that the purpose of a beta is to distinguish systematic from non-systematic risk?

DR. VANDER WEIDE: A: Yes. But what I've presented extensive evidence on is that the beta estimate doesn't make sense. That the beta estimates that one gets from this data would say that the utilities have greater risk, because they have a higher realized risk premium than the Canadian market as a whole. And that doesn't make any sense, no matter whether you measure it on systematic or non-systematic, or however you do it, it doesn't make sense.

MR. HOBBS: Q: And that was the reason why you did not put any weight on CAPM.

DR. VANDER WEIDE: A: Yes, because I believe that the

-- I fundamentally believe that the CAPM does not adequately describe the generation of returns for utilities in Canada.

MR. HOBBS: Q: Right. And would you agree with me that one of the underlying premises of CAPM is that it's an -- is the efficient market hypothesis?

DR. VANDER WEIDE: A: Yes.

MR. HOBBS: Q: And are you then suggesting that Canada, the Canadian markets, do not hold to the efficient market hypothesis?

DR. VANDER WEIDE: A: No. I am not at all. All I'm saying is that the CAPM is a model that's forward looking, and it's perfectly -- I agree that it's a very reasonable model with regard to theory. However, we test whether a model is reasonable or not by whether it predicts the relationship between risk and return in practice. In my evidence, I show that it doesn't predict anywhere close -- if the results for the utilities were -- the risk premiums were within a percent or two of the market as a whole, I might say, "Well, that's a statistical variation." That when over 30 or 60 years is such a wide difference between the returns for the utilities and the market, I have to conclude that the CAPM just doesn't adequately predict.

I also find that the betas that are

calculated looking -- the only betas that are presented in this proceeding other than my beta for U.S. utilities, look at historical returns also by month. And those betas are in the low -- like, .2 or .3. That's also ridiculous, as I explained in my rebuttal, because it implies a cost of equity that's in the range 3 to 6 percent. And nobody that I know of believes that the cost of equity for a utility is in the range 3 to 6 percent.

MR. HOBBS: Q: But isn't it true that that's the raw beta, and then adjustments are made to that raw beta?

DR. VANDER WEIDE: A: Based on pure judgment. I haven't seen any adjustments that are made based on a reasoned approach. And when you combine that with the evidence that with the long-run data, that the actual risk premiums have far exceeded for utilities that of the market as a whole, I just can't accept that the CAPM applies to the Canadian market.

MR. HOBBS: Q: So because you're concerned about utility returns compared to the market as a whole, you have focused on utility returns in your *ex post* premium test.

Proceeding Time 1:37 p.m. T49

DR. VANDER WEIDE: A: I focused on utility returns because we're regulating the utility and I'm talking about the costs of equity for a utility.

MR. HOBBS: Q: But I thought the reason why you didn't like the CAPM model in Canada was because you were seeing some what you perceived to be anomalies with respect to returns for utilities.

DR. VANDER WEIDE: A: Right, but I found that out after I did the *ex post* risk premium test. I didn't do the *ex post* risk premium test because of the anomalies. I first did the *ex post* risk premium test and then I thought about doing a CAPM and I realized that it just doesn't seem to apply because it's inconsistent by a wide margin with the returns that are generated by utilities in the market index in Canada.

MR. HOBBS: Q: Why didn't you abandon an *ex post* test as well, at the same time that you were abandoning the CAPM?

DR. VANDER WEIDE: A: Because the *ex post* risk premiums are actual returns.

MR. HOBBS: Q: Which you don't trust.

DR. VANDER WEIDE: A: Why are you saying that?

MR. HOBBS: Q: Because you have already said that utility returns were higher than the composite so you thought, well, we can't apply the CAPM. Why do you then go on to apply this *ex post* risk premium cap?

DR. VANDER WEIDE: A: Because these are factual returns. These are the actual returns that existed. And if a cost of equity model, which is usually based

-- which is necessarily based on simplifying assumptions, is so far out of mesh with reality, then I have to say either the -- in reality I can't change. It is what it is. So my only choice, as I say, that the CAPM doesn't explain reality, not even close, and so I've lost faith in the CAPM when applied to the Canadian market.

MR. HOBBS: Q: If you hadn't had that concern about the CAPM model, would you have used the CAPM model instead of your *ex post* --

DR. VANDER WEIDE: A: No. I would have used them both.

MR. HOBBS: Q: And which would you have given more weight to?

DR. VANDER WEIDE: A: Well, it's such a hypothetical that it's hard to judge because I never thought about that. Once I knew that the CAPM didn't apply, it was hard for me to even consider giving it any weight.

MR. HOBBS: Q: All right. Let's turn to your *ex ante* risk premium test, and I want to discuss this in the context of Exhibit 10, which you have already discussed with Mr. Wallace at some length. And I want to -- I think this is clear but I'll ask you just in case I misunderstand it. So Exhibit 10, page 69. I'll wait till you're there, sir.

DR. VANDER WEIDE: A: Yes.

MR. HOBBS: Q: My understanding is that in Appendix 3

you have regressed your bond yield and your risk premium.

DR. VANDER WEIDE: A: Yes.

MR. HOBBS: Q: And in order to do that, you needed to calculate the risk premium and you relied on the DCF test in order to do the regression.

DR. VANDER WEIDE: A: Yes.

MR. HOBBS: Q: And the DCF numbers that we're seeing here include a growth forecast.

DR. VANDER WEIDE: A: They do.

MR. HOBBS: Q: Okay. Have you provided somewhere your calculation of those numbers?

DR. VANDER WEIDE: A: I describe my method in Appendix 3, page -- starting at 117 and going to the end of my test.

MR. HOBBS: Q: That's the regression, but is it the calculation of the DCF?

DR. VANDER WEIDE: A: There's a DCF in each month of over 13 years of data. I did not supply the data for the DCF in every one of those periods, no.

MR. HOBBS: Q: No, that's fair enough. Did you supply the methodology? I should have been clearer. Did you supply the method?

DR. VANDER WEIDE: A: Yes, I did in Appendix 3.

MR. HOBBS: Q: Can you show it to me? What I'm looking for -- I should be really specific here. What I'm

looking for is your methodology for calculating that column in Exhibit 10, do you see, that's marked DCF.

DR. VANDER WEIDE: A: Yeah, I use the same methodology that I would have used for my direct DCF method.

MR. HOBBS: Q: All right. It's not here in Appendix 3 but that's what you did.

DR. VANDER WEIDE: A: Yes.

Proceeding Time 1:52 p.m. T50

MR. HOBBS: Q: Thank you. When you regressed those two columns, you calculated the R square number with the T statistic which is shown on the next page, and your R square number is 29.7 percent.

DR. VANDER WEIDE: A: Yes.

MR. HOBBS: Q: Does that suggest to you that there is variability that's not explained by your linear equation?

DR. VANDER WEIDE: A: I suggest that there is variability. It -- yeah, for -- it's not easy to come up with high R-squares in data on stock returns, because they're so highly variable. And it's hard to explain what they are. And the regressions that I was questioned about this morning -- for example, the R squared was less than what I have in that regression. That is, it was the adjusted R squared was .17. So it's -- what one really has to look at is the statistic that's right below the coefficient on the

interest rate variable. That is, right below the .889, to determine whether that variable has a statistically significant effect on the risk premium. And that --

MR. HOBBS: Q: Which is your T statistic, isn't it?

DR. VANDER WEIDE: A: Right.

MR. HOBBS: Q: Yes.

DR. VANDER WEIDE: A: And that is -- that's a very significant T statistic. Any number that's higher in absolute value than 2, that is either is more negative than minus 2 or more positive than plus 2, is a very significant statistic. And this one is 7.96.

MR. HOBBS: Q: Right. And if I had introduced another variable into your equation, I might have anticipated that the R squared value would go up, but this T statistic might very well have gone down. Is that correct?

DR. VANDER WEIDE: A: I don't know about the T statistic on the interest rate variable, but I feel fairly confident that it would be difficult to find another variable that would have improved the ability to predict the results. That is, would have had a statistically significant impact.

MR. HOBBS: Q: And is that because, in your view, there is just too much noise in the system for you to come up with a reduction analysis that's providing you with

more explanation as to the outcome, than the 29.7 suggests?

DR. VANDER WEIDE: A: There is noise in all estimates of the cost of equity, whether you're looking at DCF, risk premium, *ex post* risk premium, CAPM. All of them involve estimates of unknown quantities, such as betas and risk premiums on the market. And the only way around that is to provide several estimates and look at the reasonableness of the results, and then say, "Well, if we have to base our decision on evidence, let's use the best evidence that we have." And that's what I've tried to do.

MR. HOBBS: Q: Right. And that then takes us to the comparison to the decisions of other utilities. Pardon me, of other jurisdictions. And that, I believe, is on page 45. And having taken you there, not very much turns on your -- you really don't need to look, but you have -- despite the fact that there is a lot of noise in the system, you have not looked to Canadian jurisdictions and their other Canadian decisions with respect to their allowed ROEs. And you've spoken to that at some length already today, and I won't ask you to do that.

But given the noise in the system, wouldn't that suggest that it's all the more important for you look at what's happening in other jurisdictions in

Canada?

DR. VANDER WEIDE: A: Oh, I certainly wasn't trying to hide it. I'm aware of what's happening in other jurisdictions in Canada.

MR. HOBBS: Q: Right.

DR. VANDER WEIDE: A: For one, though, there aren't nearly as many allowed ROEs in Canada as there are in the U.S.

MR. HOBBS: Q: Yeah.

DR. VANDER WEIDE: A: And for two, the U.S. utilities are comparable in risk, and total risk, it's for sure, and it's an independent test. I would think -- I didn't base my estimate on these allowed returns. But I thought it was information that wasn't readily available to this Commission. That the Commission would be well aware of Canadian allowed ROEs, but they might not be as familiar with this wide range of data on U.S. allowed ROEs.

MR. HOBBS: Q: Thank you.

Proceeding Time 1:58 p.m. T51

MR. HOBBS: Q: I have no further questions, thank you. Thank you Dr. Vander Weide.

THE CHAIRPERSON: Thank you Mr. Hobbs.

CROSS-EXAMINATION BY MR. FULTON:

MR. FULTON: Q: Good Afternoon, Dr. Vander Weide.

DR. VANDER WEIDE: A: Good afternoon.

MR. FULTON: Q: Could you also have before you Exhibit C6-15 which are the responses of the AMPC and B.C. Utility Customers to BCUC IR 1-4.1.2?

DR. VANDER WEIDE: A: I hope I will shortly. @@@

MS. JENKINS: I'm sorry, would you repeat that please?

MR. FULTON: Yes, Exhibit C6-15, IR 4.1.2, page 6.

MS. JENKINS: C6-15?

MR. FULTON: Yes. IR 4.1.2, page 6.

MS. JENKINS: Thank you.

MR. FULTON: Q: And if we could begin, Dr. Vander Weide, with you going to page 20 of your evidence, and your answer number 55. And I will let you read that answer, and then I will ask you my question.

DR. VANDER WEIDE: A: Okay.

MR. FULTON: Q: And there you are talking about the business risk of natural gas and electric utilities, and you say it is approximately the same in the U.S. in Canada, and you provide three reasons for that, correct?

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: Now, when you were assessing the comparative business risk for U.S. and Canadian natural gas and electric utilities, did you review the actual achieved ROEs for those two groups to see if there was any noticeable difference between Canadian and U.S. utilities?

DR. VANDER WEIDE: A: I did not. I was -- I am aware generally because I am involved in proceedings on a regular basis, what achieved returns are. And it is also quite difficult to gather information with there being 50 state jurisdictions on what a utility achieved in a particular jurisdiction. Or an example if a utility is regulated in South Dakota, it's not easy to find out exactly what the utility earned in South Dakota, because although they would have to -- they might have to provide an information filing with the utility commission, they don't have to -- I don't know of a source that would have exactly that information.

But, it is my feeling that at least over time, maybe not all the time, but over time, they are able to achieve fairly close to their allowed returns.

Proceeding Time 2:03 p.m. T52

MR. FULTON: Q: I see. So, if you look at Exhibit C6-15, and I take it you've reviewed that exhibit prior to today?

DR. VANDER WEIDE: A: I have not.

MR. FULTON: Q: Okay.

DR. VANDER WEIDE: A: This is -- you're looking at 3.1?

MR. FULTON: Q: I'm looking at 4.1.2.

DR. VANDER WEIDE: A: 4.1.2.

THE CHAIRPERSON: It's actually page 5.

DR. VANDER WEIDE: A: Okay, yes. Thank you.
MR. FULTON: And it carries on to page 6, Mr. Chairman. There is a table on page 6.
DR. VANDER WEIDE: A: Okay, I've had a chance to skim it.
MR. FULTON: Q: Yes. And in the response to the question, 4.1.2, Dr. Booth provided a table which shows the standard deviation of ten-year returns for Nova Scotia Power and Newfoundland Power compared to a sample of U.S. utilities. And if you look at the table, you'll see in the last three lines what the standard deviation appears to be. So for the U.S. average it's 3.50. For Nova Scotia Power, .54. And for Newfoundland Power, .64. Do you see that?
DR. VANDER WEIDE: A: Yes.
MR. FULTON: Q: Okay. And that suggests that there is a higher standard of deviation of the actual returns for the U.S. utility sample, relative to those of Canadian utilities. Correct?
DR. VANDER WEIDE: A: No. Well, yes, there is a higher standard deviation. But if you have a higher standard deviation, and the results are in many cases higher for U.S. utilities, and some of the ones that are not higher are due to unregulated operations that no longer exist, then it's not clear to me that -- well, I don't feel the standard deviation is a relevant

measure of risk. In this case.

MR. FULTON: Q: I see. Well, doesn't -- are you suggesting, then, that the higher volatility of earnings -- that the higher standard deviation does not suggest a higher volatility of earnings, and therefore higher business risk?

DR. VANDER WEIDE: A: Well, first of all, if you look at -- it's just as a general point, if you look at two data series of returns, and if one were higher in every case but more volatile, that doesn't mean the one that is more volatile is more risky, because risk isn't just measured by variability, it's the probability of earning less than your required return. And if you always earn more than your required return, but it's volatile, that to me that's not risk, because you had very little chance of earning less than your required return.

To look at it the other side, suppose that your required return was 10, to pick a number, and every year you earned 9. Consistently, every single year. You would have zero standard deviation, but you had a probability of 1 of not earning your required return. That's risk to me. It's not just the volatility, it's the likelihood of earning less than your required return that's important.

Secondly, there are cases, for instance,

for a public servant -- P&M Resources, where there are zero returns in there, and I feel quite confident that those weren't the returns for the regulated utility operation.

Proceeding Time 9:11 a.m. T8

MR. FULTON: Q: But you don't know.

DR. VANDER WEIDE: A: I don't know for sure but I said I was confident.

MR. FULTON: Q: Yes. And the confidence is based upon what?

DR. VANDER WEIDE: A: The fact that I -- it's very very rare that a utility would have a zero ROE. It has to be a very very unusual event for that to occur. But at any rate, I don't -- I wouldn't look at the standard deviation here as a measure of the relative risk.

MR. FULTON: Q: Okay. Did you look at the number of utility bankruptcies in Canada versus the U.S. over the past 10 to 20 years?

DR. VANDER WEIDE: A: I did.

MR. FULTON: Q: And what was the result of that review?

DR. VANDER WEIDE: A: The result was that there were U.S. utility bankruptcies but they all were associated with events that have either changed or that the likelihood of recurring is close to zero.

MR. FULTON: Q: And what did you find in terms of

numbers of bankruptcies?

DR. VANDER WEIDE: A: I forget whether it was six or seven, but of those two were in California, which was associated in the early 2000s with a failed attempt to introduce competition into the market for electricity, consumer choice. Not only was that attempt abandoned because it wasn't well designed, but many other states abandoned their attempts to introduce competition, or they redesigned them so they wouldn't have those effects.

Two of them were associated with nuclear power projects in the 1990s that are totally different. First of all there are only several, one or two nuclear power plants being built right now, and those all have clauses that protect them from non-recovery of their capital expenditures as a result of the experiences in the '80s and '90s with nuclear power plants. So regulators and companies learned from that. The companies said, "We won't build any nuclear power plants unless we have protection," and the Utility Commission said, "Well, we hate to be all dependent on one source, so in order to encourage electricity in the state we'll give you those protections."

Others were associated with deregulated investments that again have no bearing on the

utilities today.

MR. FULTON: Q: And I believe you gave this evidence to Mr. Wallace, but just to confirm, you did not do any review of your sample of U.S. utilities, either your sample of large utilities or the smaller sample, to determine how the achieved earnings compared to the allowed ROE, did you?

DR. VANDER WEIDE: A: No, but what I did do was to make sure that they had a high percentage of regulated assets, and for my second group that they have a very sound bond rating. In fact for the smaller group it was an A Minus. And for Moody's, if they thought that -- although business risk and the ability to earn the allowed return is one among several factors in their ratings, if they thought that the utility had no ability to earn its allowed return, it wouldn't give them an A Minus rating. Those would be companies in the Triple-B Minus or below bond rating categories.

Proceeding Time 2:13 p.m. T54

MR. FULTON: Q: Let's move on to page 27 of your evidence. And we will begin with answer 72. There you say that "The DCF model assumes that a company's stock price is equal to the present discounted value of all expected future dividends." And that answer is followed by the question "How do you estimate the dividend component of the DCF model?" And you explain

-- you provide an explanation in your answer in question 73, correct?

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: Now, just so that we are clear on this, and what you are saying in your answer, does the DCF model as you apply it, only estimate the discounted value of expected dividends over the next four quarters, or does it estimate the value of the expected dividends in perpetuity?

DR. VANDER WEIDE: A: It estimates them in perpetuity, and this answer only relates to the first period of that perpetuity -- the first year of that perpetuity. The rest of the perpetuity proceeds in the same way.

MR. FULTON: Q: Can I presume from that then, that the growth rate is applied over the same period as well?

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: Page 28 of your evidence. The answer to question 4 -- or 74 I should say, at lines one and two of the answer, you were asked "How do you estimate the growth component of the quarterly DCF model?" And your answer was that you use analysts' assessments of future earnings per share, growth reported by IBES Thompson Reuters.

Now, did you review Ms. McShane's rebuttal evidence?

DR. VANDER WEIDE: A: Very briefly. I didn't study it

in detail.

MR. FULTON: Q: Okay, well if I can take you to page 12 of her rebuttal evidence, which is in exhibit B1-32, at lines 314 to 350. And for context, I'll let you read the question at 307, and the answer that it ends at line 327, and then I will ask my question on one part of the answer.

DR. VANDER WEIDE: A: Okay, I've read it.

MR. FULTON: Q: Okay, let's focus on that part of her answer that appears at lines 314 and 315 where she says,

> "Investor return expectations are likely to be formed by the returns that they have achieved historically."

Is that an opinion that you agree with, Dr. Vander Weide?

Proceeding Time 2:18 p.m. T55

DR. VANDER WEIDE: A: I wouldn't believe it in the context of the discounted cash flow model. I would believe it in the context of a CAPM or an *ex post* risk premium model. In the context of the DCF, one isn't looking at returns achieved, they're looking at expected future returns based on growth and dividend yield. And so there is no lead to look at what returns were achieved historically.

In the CAPM or the *ex post* risk premium,

there is no independent source like analysts who will tell us what the future risk premiums are. Analysts provide earnings growth forecasts which are used in the DCF. They don't provide risk premium forecasts, or they don't provide forecasts with regard that will be relevant for the CAPM and the risk premium. So in that case, it's at least helpful to be -- to look at return expectations and one would, as Ms. McShane well points out, one would expect the models' predictions to be consistent with what happened. It doesn't mean that one would use exactly the historical risk premium, but at least the historical risk premium results ought to be consistent with the models' predictions. That is, that utility returns ought to be less than the market returns, not higher, as the historical results suggest.

MR. FULTON: Q: Still on page 28 of your evidence --

DR. VANDER WEIDE: A: Are we through with Ms. McShane's evidence?

MR. FULTON: Q: Yes, we are.

DR. VANDER WEIDE: A: Okay.

MR. FULTON: Q: Actually, we'll move away from page 28, and we'll go to page 29 of your evidence.

Question -- at lines 10 through 23 -- and actually 8 through 23 in your questions and answers to questions 82 and 83, would you agree with my summary

of your evidence there, that you applied the DCF model to two groups of U.S. utilities, what you referred to on that page as your larger comparable group of U.S. utilities and your smaller group of U.S. utilities. Those are the two groups we've been talking -- you've been talking about through most of your evidence today.

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: And those are the same as the comprehensive group of U.S. utilities in Exhibit 6 of your evidence, and the smaller group of utilities shown in Exhibit 7 of your evidence?

DR. VANDER WEIDE: A: Yes, they are.

MR. FULTON: Q: Okay. Now, when you say that you applied the DCF model to the two groups of U.S. utilities, can you clarify if you applied the DCF model to each of the utilities in the group and averaged the result, or if you averaged the inputs for the utilities as shown -- that are shown in Exhibits 6 and 7, and then applied the results to the average of the inputs.

DR. VANDER WEIDE: A: As shown in Exhibits 6 and 7, I applied the results to each company individually. That's why I have a model result column at the far right, and then the average is underneath that model result column, which was the average of all the

results for the individual companies.

MR. FULTON: Q: If you could turn to Exhibit 5 of your evidence, the Standard & Poor's bond ratings comprehensive U.S. utility group --

DR. VANDER WEIDE: A: Yes.

Proceeding Time 2:23 p.m. T56

MR. FULTON: Q: -- exhibit. So can you explain the relationship between the Value Line safety rank, the S&P bond rating, and the S&P bond rating numerical?

DR. VANDER WEIDE: A: Well, let me start with the last two. The last two are exactly the same. What I did to get that bond rating numerical is I assigned a -- in order to get an average you need to have numbers. You can't average letters. So I took a -- I assigned a 1 to a Double-A, and then a 2 to a Double-A Minus, I assigned a 3 to an A Plus, a 4 to an A, a 5 to an A Minus and so on. Each time it went down a grade I increased the number by 1, so that I could get a numerical average that could then give me an average letter bond rating. So those provide the same information.

For the safety rank, that's a number that's produced by Value Line as a measure of business and financial risk, and they assign numbers from 1 through 5 and they suggest that conservative investors invest only in companies that are ranked 1, 2 or 3, that

conservative investors not invest in 4 or 5 safety ranked companies.

MR. FULTON: Q: If you were to place FEI on this chart, what would the rankings be?

DR. VANDER WEIDE: A: I don't know since it's not my -- I don't produce safety ranks. But I would believe that they would be in the range 1 to 3 just like these companies here.

MR. FULTON: Q: And there are Moody's and DBRS rankings for FEI, correct?

DR. VANDER WEIDE: A: Well, Moody's would have a bond rating that would combine their various categories of risk, including business risk. And DBRS would have a bond rating, as well, that would combine several components of risk into one overall ranking from the perspective of bond investors, not from equity investors.

MR. FULTON: Q: As an undertaking, can I ask that you provide another table that shows the DBRS and Moody's rankings for the companies that are in Exhibit 5, plus FEI?

DR. VANDER WEIDE: A: Okay.

MR. FULTON: Q: That's an undertaking you're prepared to accept?

DR. VANDER WEIDE: A: Yes, I'm prepared to do it.

Information Request

MR. FULTON: Q: Thank you. Do you still have your rebuttal evidence close at hand, Exhibit B1-32?

DR. VANDER WEIDE: A: Yes, I do.

MR. FULTON: Q: And if you'd turn to page 8 of your rebuttal evidence.

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: And there's a reference there to Dr. Booth's referral to the relative bond ratings of Canadian/U.S. utilities, and you are asked, "Are bond ratings good measures of the risk of investing in equities?" And your response at lines 10 and 11 is, "No. Bond ratings only reflect the risk of investing in a company's bonds. They do not reflect the risk of investing in a company's stock."

It is your view, I take it, that rating agency reports do not assess risk from the equity investor's point of view?

Proceeding Time 2:28 p.m. T57

DR. VANDER WEIDE: A: Yes. That is, bond rating agencies don't consider risk from the equity investor's point of view.

MR. FULTON: Q: Right. And you did not look at those reports to see what they had to say about regulatory risk for your sample.

DR. VANDER WEIDE: A: I didn't seek out that

information. From time to time I come across one, but I did not systematically go through it for my companies.

MR. FULTON: Q: You did, however, use the rating agency reports to derive your sample of U.S. utilities.

DR. VANDER WEIDE: A: Yes. And that is, I figured that the regulatory risk or the business risk would all be encompassed in the final bond rating, and for my larger group I required that they have an investment grade bond rating. And for my smaller group, I required that they have a Triple-B or above, but the average rating for my smaller group was an A minus. And the average rating for my larger group was Triple-B plus.

MR. FULTON: Q: And was that the reason that, notwithstanding, you did -- your view that rating agency reports don't assess risk from the equity investor's point of view, and notwithstanding you did not look at those reports to see what they had to say about the regulatory risk of your sample, you still use those rating agency reports to derive your sample of U.S. utilities?

DR. VANDER WEIDE: A: If I may look for the answer in my direct testimony, I believe I addressed that. In particular, I'm on about pages 22 and 21, I guess, of my direct testimony. But with regard to bond ratings,

I first show evidence in Table 1 on page 22 that bond ratings have very little impact on the allowed return other than -- at least through the Triple-B ranking, and it's primarily they get worse for the lower rankings. And so, I have not found that bond ratings significantly affect the allowed rate of return or the required return on equity for investment grade ratings.

If a company has below investment grade, that's a totally different story. But, I did suggest that -- and I'm trying to find the answer -- that I also looked at a smaller group in order to assess the impact of having a stricter criteria, with regard to, among other things, bond ratings. Because I was aware that Canadian regulators sometimes do look at bond ratings to assess risk, in particular focus -- it seems to be a focus.

And so to provide a complete set of information, I also required in a second group that they have a higher than a Triple-B bond rating, and the average for -- and 80 percent of regulated assets. And for that group, the average bond rating was A minus. And so one could tell that there was a very slight decrease in the cost of equity. But still, it was above ten.

MR. FULTON: Q: If you could turn to your Exhibit 6,

line 12, Great Plains Energy, Mr. Wallace asked you a question about Great Plains Energy earlier today. Can you tell us what it is about Great Plains that is driving such a high growth rate of 9.75 percent?

Proceeding Time 2:34 p.m. T58

DR. VANDER WEIDE: A: I do not know. I just -- I took the analysts' growth rate. I did not seek to identify whether it was -- what the cause of that growth rate was.

MR. FULTON: Q: Okay, so then dropping down to NISOURCE at line 15, would your answer be the same that you don't know what's driving that growth rate?

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: And similarly with P&M Resources at line 21, your answer would also be the same. You don't know what's driving that growth rate.

DR. VANDER WEIDE: A: Yes, nor do I know the reasons for why some of those are in the threes.

MR. FULTON: Q: Of the electric utilities in your sample, can you tell us how many have coal, nuclear or oil generation as part of their resource mix?

DR. VANDER WEIDE: A: No.

MR. FULTON: Q: If you prefer you can do that -- could you do that by way of undertaking then?

DR. VANDER WEIDE: A: I'm certainly willing to try. I can't guarantee I can identify that information.

MR. FULTON: Q: Right, and if you can't then you can just advise that you cannot.

DR. VANDER WEIDE: A: Okay.

Information Request

MR. FULTON: Q: Thank you. If I could ask that you have placed before you Exhibit B1-20, Attachment 47.3.

DR. VANDER WEIDE: A: Let me write this down a minute first. Okay, I'm sorry, what number was it?

MR. FULTON: Q: Attachment 47.3. There's a report from Standard & Poors dated August the 6th, 2012.

DR. VANDER WEIDE: A: Yeah, I'm not there yet. We're looking for it here.

MR. FULTON: Q: Okay. Attachment 47.3. And towards the back of that exhibit is the report.

DR. VANDER WEIDE: A: Yeah, we're seeing several Standard & Poors in a row.

MR. FULTON: Q: August the 6th, 2012.

DR. VANDER WEIDE: A: August the 6th, okay. There we go, I have it.

MR. FULTON: Q: And that report ranks U.S. regulated utilities companies strongest to weakest?

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: If you turn to page 7 of that report and if you look towards the bottom of that page you'll see probably about two thirds of the way down, NISOURCE Inc.?

DR. VANDER WEIDE: A: Yes.
MR. FULTON: Q: P&M Resources Inc.?
DR. VANDER WEIDE: A: Yes.
MR. FULTON: Q: Two lines below. And Hawaiian Electric Company Inc.
DR. VANDER WEIDE: A: Yes.
MR. FULTON: Q: Okay. And will you agree with me that according to this table, those utilities are ranked amongst the weakest utilities of the U.S. regulated companies?
DR. VANDER WEIDE: A: Yes.
MR. FULTON: Q: Okay. Now, you chose those three utilities, correct?
DR. VANDER WEIDE: A: Yes, I chose them because of certain criteria that I list.
MR. FULTON: Q: They show high growth rates.
DR. VANDER WEIDE: A: Yes.

Proceeding Time 2:39 p.m. T59

MR. FULTON: Q: But according to Standards & Poor they are among the weakest?
DR. VANDER WEIDE: A: From a bond rating perspective. Again, that's different than an equity investors perspective.
MR. FULTON: Q: So why did you choose those three utilities then?
DR. VANDER WEIDE: A: Because they met my criteria for

inclusion in my larger group, which I want to emphasize requires -- has an average Triple-B plus bond rating by Standard & Poors, but also to assess the impact of that bond rating, I chose a smaller group which have an average A minus rating, and those companies are hopefully are not in that group. I will take a look to verify that.

My smaller group is in Exhibit 7, and those companies are not in the smaller group.

MR. FULTON: Q: No, they are in your comprehensive group.

DR. VANDER WEIDE: A: Right, which again has an average bond rating of Triple-B plus, the smaller group has an average bond rating of A minus.

MR. FULTON: Q: If you could next turn to Exhibit B1-24, which is the responses to BCUC IR No. 2, and I would like you to turn to page 65, which has the response to IR 179.1. So page 65?

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: B1-24.

DR. VANDER WEIDE: A: I'm there.

MR. FULTON: Q: And I want to focus in, or focus on the response B. So I will let you read the question and the answer first, and then I will ask my question.

DR. VANDER WEIDE: A: Okay.

MR. FULTON: Q: Now, there are two issues I wanted to

address here. The first is that the average Value Line utility beta frequently understates the beta derived from the historical risk premium, and the second is that that is an observable fact.

Can you tell us first what you mean by that it is an observable fact?

DR. VANDER WEIDE: A: Yes, the data on the historical risk premiums that I report and in my exhibits, that is the *ex post* risk premia, and I know it is at least in exhibit 15, let me see if I can find it as well. Those are based on historical data, and those risk premiums are calculated from the -- that is an observable fact in the sense that these are reported returns by the BMO and the S&P/TSX, both of which are well recognized providers of information in the financial markets. And so, the historical risk premiums that are provided by S&P/TSX and BMO for the period 1959 to the present, and 1983 to the present are historical facts.

Proceeding Time 2:44 p.m. T60

It is also a historical -- it is also a fact that they are higher than the betas that I use in my application of the CAPM, which were .73. And that any other witness in this proceeding has used.

So, it seems clear to me that the CAPM is also unable to predict the returns on utility stocks.

And those are both observable facts.

MR. FULTON: Q: Well, let me try it this way, then. You have explained what the observable facts are. But that the answer goes on to say you do not know how widely the fact is recognized. So, there is an observable fact, but you don't know how widely the fact is recognized. Can you --

DR. VANDER WEIDE: A: Elaborate?

MR. FULTON: Q: -- rationalize that response?

DR. VANDER WEIDE: A: Yeah. I haven't -- it was only recently, I would say within the last three or four years, that I began to study whether the CAPM actually predicts the historical risk premiums. Especially in Canada, and when I get -- when I obtain data on those historical risk premiums, I recognized immediately that the historical risk premiums were higher than would be predicted by the CAPM. And I also realized, when I thought about it, that the ratio of the historical risk premium for the utilities to the historical risk premium for the market index should also be an estimate of beta. Because that's what beta is, is the ratio of the expected return on the -- on a stock to the expected return on the market.

So, at that point I observed it.

MR. FULTON: Q: Right. So --

DR. VANDER WEIDE: A: I don't know if anyone else

actually asked that question of themselves, because there aren't a lot of people that have to focus on utility betas, and those that do seem to just calculate them mechanically without assessing whether they're necessarily reasonable or not.

MR. FULTON: Q: Okay.

DR. VANDER WEIDE: A: But -- so that's why I can't determine how many other people recognize this, but it's not a doubt that is true.

MR. FULTON: Q: Well, by that response, in terms of you're not sure how many other people have recognized it, are you saying that you can't find -- you haven't found any recognition in any published studies of that observable -- that fact that you've observed at this point?

DR. VANDER WEIDE: A: I don't know that anybody has asked that question.

MR. FULTON: Q: No, but I'm asking you the question. Have you found anything in the literature that talks about the observable fact that you are referencing here?

DR. VANDER WEIDE: A: I haven't searched. I've just not -- and I haven't come across any from the ones that I know of. However, even -- it doesn't matter whether it's recognized. What's important is that the risk premiums are higher, and so the CAPM doesn't

apply to the Canadian data.

MR. FULTON: Q: Does Value Line recognize that its published beta is inconsistent with one derived from the historical risk premium?

DR. VANDER WEIDE: A: I don't know. They have chosen a particular method. They -- I don't believe they're aware of the fact that one should also assess betas by looking at the ratio of the historical risk premium on the -- on a particular stock or a group of stocks compared to the market index. But it's -- my evidence stands on its own right, the evidence is strong, and I don't believe that it matters whether other people have tried to estimate -- to test the CAPM in this way.

MR. FULTON: Q: I see. So, let me go back to the part B of the response again, because there is one other comment that I would like some further explanation on. And the answer is that the average Value Line utility beta frequently understates the beta derived from the historical risk premium ratio.

When you say that it frequently understates, under what conditions does it understate the beta derived from the historical risk premiums?

Proceeding Time 2:49 p.m. T61

DR. VANDER WEIDE: A: Well, the Value Line betas generally, at the present -- they vary over time, but

generally they're less than 1. And right now, as I said, the average for my companies was .73. If the beta is really .73, then the risk premium on the market -- on the utility should be roughly 70 percent of the risk premium on the market as the whole. If the beta were .5, then it should be only half. The risk premium on the utility should be only half of what it is on the market as a whole.

If it turned out one looked at evidence from 1956 and 1983 in Canada, and once found, okay, so the ratio is really .8 rather than .5 or .7, I might buy that. But if it's one and a half or two times, that suggests to me one of several conclusions. Either the S&P/TSX composite doesn't measure -- is not a good proxy for the market portfolio, in which case somebody has to create a new one which I don't know what it is, or two, the CAPM doesn't apply, doesn't explain the returns on utilities in Canada.

MR. FULTON: Q: Are there conditions under which the Value Line utility beta does not understate the beta derived from the historical risk/premium ratio?

DR. VANDER WEIDE: A: Well, in Canada we know that the -- in the U.S. there are times, yes, because the historical ratio in the U.S. is about .92 right now, and there are some utility betas that are greater than .92, although not many. But in Canada, as my Exhibit

15 I believe it is shows, on lines 57 and 58 of page 84 of 120, looking at '83 to the present, the risk premium on the S&P/TSX composite is 3.36, and the risk premium on the S&P/TSX utilities is 7-88, and on the BMO CM Utility Group it's 8-77. That's not even close. Over a 30-year period.

Likewise in line 57 we look at the evidence from '56 to 2011 and the risk premium on the composite is 3-20, and for the S&P/TSX utilities it's 4-66. That's whatever, one and a half or so, that's a lot larger than the .5 that Dr. Booth uses or the .35 that Dr. Safir uses. And I can't explain that magnitude of the difference other than to say that the CAPM doesn't explain returns in the Canadian market.

MR. FULTON: Q: Page 1 of your rebuttal evidence. At line 3 you are asked the question, "Why do raw betas tend to move toward the overall market beta 1 over time?"

DR. VANDER WEIDE: A: Right.

MR. FULTON: Q: And you provide a two-part answer. The second part of the answer begins at lines 14 and 18 and I'll let you read that and then I'll ask you my question.

DR. VANDER WEIDE: A: Yes.

Proceeding Time 2:54 p.m. T62

MR. FULTON: Q: Would you agree with me that for a

regulated utility such as a natural gas distribution utility, such utilities often operate within a known franchise area, or within a given regulatory jurisdiction?

DR. VANDER WEIDE: A: Yes. And I readily recognize that betas for utilities don't adjust toward 1. There is another problem with the betas for regulated utilities, that's what we just discussed a few minutes ago.

MR. FULTON: Q: And you would also agree with me, I take it, that you would not expect the regulated operations of a natural gas utility to expand into activities such as home construction as part of its utilities business.

DR. VANDER WEIDE: A: Correct.

MR. FULTON: Q: Okay. That being the case, would you not agree with me that for a regulated utility such as FEI, that the second reason that you have provided in your answer to question 28 of why a raw beta might move to the overall market beta of 1, may not apply, and certainly would at least be weaker for a regulated entity than for an unregulated company.

DR. VANDER WEIDE: A: Yes. And absolutely, I was providing this information solely to provide an overview of what's happening in betas. My problem with the betas for utilities is not that they tend to

move toward 1, and answers [sic] to be an adjustment, it's that the CAPM itself doesn't explain the risk premiums that have been shown -- that have -- utilities have experienced.

MR. FULTON: Q: Page 16 of your rebuttal evidence. Pardon me, it should be page 19. And on page 19, you're responding to a question of whether -- question 48, whether you agree with Dr. Booth's decision to apply the DCF method to composite data for these three market indices, rather than to individual companies in these market indices, and the market indices are the S&P utilities index, the S&P 500 index, and the S&P/TSX composite. Correct?

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: And I'll let you read that answer, and then I'll ask you my question.

DR. VANDER WEIDE: A: And what is the -- is the answer 48, you say?

MR. FULTON: Q: Yes, please.

DR. VANDER WEIDE: A: Yes, I'm through with it.

MR. FULTON: Q: Right. I want to focus on lines 11 through 15.

DR. VANDER WEIDE: A: Okay.

MR. FULTON: Q: Where you say,

> "Since Dr. Booth relies on Standard & Poor's composite stock prices to estimate the

dividend yield component of his DCF model, and Standard & Poor's retention ratios and ROEs to estimate the growth component of his DCF model, Dr. Booth's composite stock prices are not properly matched with the composite cash flows that are being valued in the marketplace."

Do I take it from that answer that it is your view that the only appropriate alternative to using the composite data, as Dr. Booth does, is to use individual company data for DCF models?

DR. VANDER WEIDE: A: Yes.

Proceeding Time 2:59 p.m. T63

MR. FULTON: Q: Okay. Is it a concern, or is there a concern using data from a sample of individual companies that the sample of the companies might not adequately reflect the nature of the utility for which the ROE is being calculated?

DR. VANDER WEIDE: A: Well, yeah, that's the concern and that's why one considers the risk of that company and compares it to the comparable -- the utility's rates that are being calculated. And that's why we go through comparable company analysis.

MR. FULTON: Q: I take it from that answer that it's your view that in order to have confidence in the results, you must have confidence in the sample

selected?

DR. VANDER WEIDE: A: Yes, you have to have confidence in the sample selected and you have to apply it, the DCF to the individual companies in the sample rather than to some broad index of electric utilities or gas utilities.

MR. FULTON: Q: Thank you.

Mr. Chairman, I'm going to be probably another 15 minutes to a half an now, so now would be a good time to take the break?

THE CHAIRPERSON: Break now and come back? Okay.

MR. FULTON: Thank you.

(PROCEEDINGS ADJOURNED AT 3:01 P.M.)

(PROCEEDINGS RESUMED AT 3:20 P.M.) **T64/65**

THE CHAIRPERSON: Please be seated.

MR. FULTON: Q: Dr. Vander Weide, could I ask you to turn to page 30 of your rebuttal evidence?

DR. VANDER WEIDE: A: Yes, I'm there.

MR. FULTON: Q: And there, you're responding to question 72 which asks, "What is the most important contribution of the more recent research literature on the accuracy of analysts' forecasts?" And in your answer you talk about unexpected accounting write-offs and special accounting charges.

And my question to you is, do analysts make their forecasts without necessarily knowing about the

unexpected accounting write-offs and special accounting charges?

DR. VANDER WEIDE: A: Yes, they do. They state fairly clearly that they are forecasting what they call normalized earnings. That is, earnings before special accounting charges and one-time write-offs that, by their nature, won't affect the company's future beyond that.

MR. FULTON: Q: Thank you. If we could turn back to page 23 of your rebuttal evidence, that page has Table 5, which is a comparison of Dr. Booth's DCF cost of equity estimates to average allowed returns for U.S. electric and natural gas utilities, 1993 to 2011. And that's a table that you prepared. Correct?

DR. VANDER WEIDE: A: Yes. Yes. Based on --

MR. FULTON: Q: Could -- yes?

DR. VANDER WEIDE: A: -- data in his exhibit.

MR. FULTON: Q: Right. Could you identify the source of the data that you use for each of the columns in that table, and that's something you can do by way of undertaking.

DR. VANDER WEIDE: A: Okay.

MR. FULTON: Q: And when you're identifying Dr. Booth's data as a source, if you could identify which schedule you took it from, and if you performed a calculation on the data, if you could also show how you performed

the calculation?

DR. VANDER WEIDE: A: Okay.

Information Request

MR. FULTON: Q: Thank you.

Page 34 of your rebuttal evidence.

DR. VANDER WEIDE: A: Yes?

MR. FULTON: Q: And at question 78, you are asked, “Are the differences between the market and book values of assets as great for public utilities as for other companies?” And you state that the difference -- in your answer at lines 3 to 13, you state that "The differences between market and book values still exist for public utilities regardless of the relationship between the accounting rate of return and the cost of equity", and you go on to give four reasons why that may be true. Correct?

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: And just dealing with those reasons that appear at lines 8 through 13, can we agree that all of FEI’s services are rate of return regulated?

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: So --

DR. VANDER WEIDE: A: Well, yes, they are.

MR. FULTON: Q: Okay. That being the case, then, item 1 doesn’t apply, does it?

DR. VANDER WEIDE: A: No.

MR. FULTON: Q: Okay. You're agreeing with me.

DR. VANDER WEIDE: A: Yes, I am. Sorry.

MR. FULTON: Q: And in reason 2, where you state that total invested capital is unlikely to equal rate base, can you be more specific as to why you believe it's unlikely? Or why it's unlikely?

Proceeding Time 3:25 p.m. T66

DR. VANDER WEIDE: A: Well, it's basically the way are accounted for -- basically the asset side, that's equal to the liabilities plus equity side, but not every item on the liabilities plus equity side is the source of financing that's used to finance assets. So if all of the company's assets are included in rate base but there are some non-cash sources -- items shown on the right-hand side, then the two won't be equal.

MR. FULTON: Q: In terms of your Reason 3, is one of the reasons that the discounted cash flow may not fully explain the market price of a company stock that some of a public utility's services may not be rate of return regulated?

DR. VANDER WEIDE: A: That would certainly be part of it, yes.

MR. FULTON: Q: Okay. And we know that doesn't apply in terms of FEI.

DR. VANDER WEIDE: A: Right.
MR. FULTON: Q: You said that would be some part of it. What are the other parts?
DR. VANDER WEIDE: A: Well, there are other things that investors may value about the company. It may be that the company is an acquisition target and it's in play and so that there might be some companies that are willing to pay higher than the current market price in order to -- in other words, the market price may not just reflect its current regulated assets but it might affect its strategic value for a potential acquirer. And there might be some options that would have value that might affect the market price as well.
MR. FULTON: Q: Now, if it is the case that the DCF model may not fully explain the market price of a company's stock, doesn't it also follow that it may be imperfect in estimating the return on equity for a public utility?
DR. VANDER WEIDE: A: It might, but in each of the circumstances that I've suggested, the market price would be above the price of the company as a pure regulated utility. That is, if it were in play as an acquisition, then its price would be higher than that of a pure regulated utility, but its earnings' growth forecast that we're using in the DCF model wouldn't reflect the value that's associated with the potential

of an acquisition. They would only reflect the value of the company as it is. And so if anything, these factors would cause the discounted cash flow estimate to understate the cost of equity.

MR. FULTON: Q: And finally your fourth reason that investors may expect that some of the utility's services will not be rate of return regulated at some point in the future, is that an expectation that you believe applies to FEI?

DR. VANDER WEIDE: A: No, this is one of the questions in my testimony that I'm maybe thinking more from an academic standpoint, that I want to cover all the possible reasons without necessarily having it have an impact, a material impact on my cost of equity estimates in this case. I was trying to think of all the possible reasons.

MR. FULTON: Q: So we can agree then that of the four reasons, two of them, Reasons 1 and 4, don't apply to FEI.

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: Page 36 of your rebuttal evidence, and under Part B where you're speaking of the annual DCF model that Dr. Safir uses, and I'm not going to even attempt to put the answer to 88, at least the formula, into words, but I'll let you read that and then I'll ask my questions.

DR. VANDER WEIDE: A: Okay, I'm familiar with it.

MR. FULTON: Q: After you refer to that answer you, at page 37 -- well, following that answer you have a discussion of how Dr. Safir estimates the growth component of his DCF model, correct?

Proceeding Time 3:31 p.m. T67

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: And then at page 37 at lines 5 to 7 following your discussion of Dr. Safir's growth estimate, you ask yourself the question: "What DCF results would Dr. Safir have obtained if he had used the correct annual DCF formula and analysts' growth rates to estimate investors' growth expectations?"

Now, from the question that you ask, I take the inference that you -- it's your view that Dr. Safir has not used the correct annual DCF formula.

DR. VANDER WEIDE: A: Yes, you would be right in taking it that way.

MR. FULTON: Q: Okay. Would you agree with me, though, that you have not in your rebuttal evidence said why he has not used the correct formula? You have not explained why in your view he has not used the correct formula.

DR. VANDER WEIDE: A: I think that's a good point. Do you want me to explain now?

MR. FULTON: Q: Yes, if you could please.

DR. VANDER WEIDE: A: Yes. The DCF model doesn't start out with this equation for K. It starts out with an equation for price and it says that the price is equal to the discounted or present value of all the future cash flows that investors expect to receive from the company. If cash flows are expected to be received once a year at the end of the year, at the end of each year that is, and they grow at a constant rate, then you can solve that present value equation for a cost of equity and the solution is D-zero divided by P-zero, times 1 plus G. That is there's no .5 G three. It's 1 plus G and then plus G.

So if you are going to just -- if you're going to make an assumption that dividends are paid annually at the end of each year, then this statement should give full weight to the first G, and it only gets .5 weight to it. If you assume that dividends are going to be paid quarterly and you now set the price equal to the present value of the future stream of quarterly dividends, you would get a slightly more complicated equation, but it would produce a K that's a little bit higher than what this revised annual one that I just described is.

In either case there is no formulation that I know of that will legitimately derive from an annual assumption of dividend payments, D-zero over P-zero

times 1 plus .5 G plus G.

MR. FULTON: Q: Thank you. If we could return to your evidence in Appendix G and page 30 of Appendix G.

DR. VANDER WEIDE: A: Do you have the page of the testimony? That's my direct.

MR. FULTON: Q: Yes, page 30.

DR. VANDER WEIDE: A: Page 30?

MR. FULTON: Q: Yes.

DR. VANDER WEIDE: A: Oh, Appendix C is my direct testimony.

MR. FULTON: Q: Yes. I'm sorry if I'm confusing you.

DR. VANDER WEIDE: A: Okay, I was looking for the exhibits, I guess. Page 30, all right.

MR. FULTON: Q: Yes.

DR. VANDER WEIDE: A: Sorry, I have it.

MR. FULTON: Q: And at question 86 you ask: "Why do you eliminate companies that have fewer than two analysts' estimates included in the IBES mean forecast?"

DR. VANDER WEIDE: A: Right.

MR. FULTON: Q: And you provide an explanation and the answer to question 86, in part that answer says:

> "However, the IBES estimate may be less reliable if the mean estimate is based on inputs of very few analysis. On the basis of my professional judgment I believe that

at least two analysts' estimates are a reasonable minimum number."

And we know that earlier today you spoke of the minimum two analysts' estimates. But can I ask you this, is it correct to conclude from that, the statement that I have just read to you, that the inputs of very few analysts means 1 or 0?

Proceeding Time 3:36 p.m. T68

DR. VANDER WEIDE: A: In this case that's correct.

MR. FULTON: Q: Okay. And when you say "the IBES estimate may be less reliable if the mean estimate is based on the inputs of very few analysts", I take it that you mean that it is so based on only one estimate.

DR. VANDER WEIDE: A: Yes, it's better to have two than just one.

MR. FULTON: Q: And is it your view that the mean estimate -- a mean estimate is equally reliable whether it's based on two estimates or twenty?

DR. VANDER WEIDE: A: No. One would prefer to have 20. It just turns out there aren't any companies that have 20 analysts' forecasts. So if you want to estimate the cost of equity, you have to make a trade-off between the number of analysts that are available and the ability to feel confidence in your number. And right now, that trade-off says that I would like to

have at least two analysts, as long as it gives me a reasonable number of companies.

MR. FULTON: Q: Okay. So that you would agree with me, then, that the reliability of the mean estimate does increase with the number of estimates.

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: Okay. Now, don't have a transcript reference for this exchange with Mr. Wallace that took place this morning at about 10:53, but as I understood your evidence, it was to the effect -- it related to why you didn't use a sample of Canadian utilities because a sample of one or two or three is not really sufficient for estimating the cost of equity. Do you recall giving evidence like that?

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: Yes? And so, given that a sample of one, two or three is not really sufficient for estimating the cost of equity, wouldn't you agree with me that a mean estimate for growth, based on only two estimates is not especially reliable either?

DR. VANDER WEIDE: A: No, the two things aren't comparable. In the case of the analysts' estimates, you already have a large sample of companies, either -- I forget the numbers. I think I have 30 in my larger group and maybe 17 or so in my smaller group. So you have -- even if there were one analyst, you

would have 17 observations on what a DCF result -- or a growth rate might be for a typical utility. So, now if you restrict that to at least two, then you're more in line with about 34 or more observations on a DCF result. Whereas if you only had two companies, or three companies, and those companies each had, say, two analysts, you'd only have six observations and perhaps only three, or two.

MR. FULTON: Q: Okay. Thank you. Now, if I could ask that Exhibit A2-3, the Brattle group, be placed before you? The Brattle group report. And page 8 of that report is what I want to take you to, Dr. Vander Weide. Exhibit A2-3, Page 8.

DR. VANDER WEIDE: A: Page 8?

MR. FULTON: Q: Yes.

DR. VANDER WEIDE: A: Okay.

MR. FULTON: Q: And the last paragraph on that page says in part,

> "The CAPM has gained much of its popularity due to its insights, its theoretical underpinnings, and its simplicity to implement. Although the specific assumptions underlying the CAPM are never met exactly in practice, it is typically viewed as a reasonable model especially for markets that are relatively sophisticated."

Now, are there any parts of the statement that I've read, just read to you, Dr. Vander Weide that you disagree with?

Proceeding Time 3:41 p.m. T69

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: Okay.

DR. VANDER WEIDE: A: And let me say at the beginning that I certainly respect the Brattle group, and there are many items in which I agree with them, but one -- it's rare that one agrees with someone on every issue, and the CAPM is one of the issues I disagree with them.

In particular, although it has many insights, I certainly agree with that, and it has very sound theoretical underpinnings, I agree with that as well. I don't agree at all that it is simple to implement. In fact, as I discuss in my testimony, there is quite a bit of evidence that the CAPM does not explain or predict the actual returns in the market place. One of those kinds of evidence that I review is that for companies with betas less than 1, it tends to understate the actual returns that are experienced, and for companies with betas greater than 1, it tends to overstate the actual returns that are experienced.

There is a whole other literature that

discusses how the capital -- different reasons why the capital asset pricing model doesn't explain returns in the market place, and I have given yet a third in my testimony, that is with regard to utilities, it doesn't explain the experience returns on utility stocks in Canada.

MR. FULTON: Q: Okay. The CAPM estimate that you obtained was 8.27 percent based on a risk-free rate of 2.95 percent, a beta of .73, a market risk premium of 6.6 percent, and a 50 basis point allowance for a floatation cost and financial flexibility, correct?

DR. VANDER WEIDE: A: Could I review that number in my testimony? Where it were --

MR. FULTON: Q: Yes, page 39, the answer to question 116.

DR. VANDER WEIDE: A: Yes, I see where you are.

MR. FULTON: Q: Yes, and so you agree with the statement that I just put to you?

DR. VANDER WEIDE: A: Yes, if you said these numbers 8.27, 2.95, .73, and 6.6, and 50 basis point allowance for floatation cost, then I agree with you.

MR. FULTON: Q: Thank you. And would you agree with me that many commissions and boards in Canada have found multiple approaches to arriving at ROEs?

DR. VANDER WEIDE: A: Yes, I think that is becoming increasingly common among Canadian regulators. I

think at one time, the CAPM was predominant method, but that is changing.

MR. FULTON: Q: Yes, and you place no weight on the CAPM estimate that you obtain, correct?

DR. VANDER WEIDE: A: Correct.

MR. FULTON: Q: And isn't that a departure from the approach that a number of Canadian regulatory boards and commissions have taken in terms of determining ROE?

DR. VANDER WEIDE: A: I haven't reviewed all the approaches that Canadian utility regulators have taken. Although I find that information interesting, I generally view my task as providing an independent estimate of the cost of equity. That is what I believe is the best estimate, rather than trying to find a number that might be pleasing to someone.

MR. FULTON: Q: Would you agree with me that this Commission used a multiple approach in the 2009 Terasen ROE?

DR. VANDER WEIDE: A: I would -- I wasn't quite finished with my answer --

MR. FULTON: Q: I'm sorry, do finish.

DR. VANDER WEIDE: A: And so, I don't believe that CAPM should be given weight for the reasons that I have discussed in my testimony.

MR. FULTON: Q: Okay, now, would you agree with me that

the BCUC in 2009 Terasen ROE used a multiple approach?

DR. VANDER WEIDE: A: Yes.

MR. FULTON: Q: Okay. And the OEB has used a multiple approach?

DR. VANDER WEIDE: A: I haven't reviewed all of the decisions to -- and I can't recall them even the ones I have reviewed, to determine what approaches they gave weight to.

MR. FULTON: Q: Okay. What about the Alberta Utilities Commission in 2011, didn't it use a multiple approach?

DR. VANDER WEIDE: A: I don't recall.

Proceeding Time 3:46 p.m. T70

MR. FULTON: Q: Okay, and -- all right. Now, I took you to the page in your evidence where -- at page 39, where you estimated a cap -- a cost of equity based on a CAPM of 8.27 percent. Can you confirm that your CAP estimate was the lowest number of all the different methods you used?

DR. VANDER WEIDE: A: I would, but I would also caution against -- although I say "What is your -- what CAPM result", I would be -- I would caution against saying that if I had to rely on the CAPM, alone, this would be my result. And the reason is, is, as I discuss throughout the testimony, even a .73 beta for the U.S. utilities is too low to explain the experience risk premiums on Canadian utilities compared to the

Canadian market index. And this has to move somewhere in that -- some -- in that direction.

I also state in answer 120 on page 42 that if one looked at the historical ratio of the average utility risk premium to the average S&P 500 risk premium, that would be 0.92. And if one applied a beta of .92, one would get an estimate of 9.52. If I were really focusing on the CAPM, that would be a much closer number than using the .73 which I think understates the real beta.

MR. FULTON: Q: All right. Well, let's just go back to my question, because your answer was -- I asked whether you could confirm that your CAPM estimate was the lowest number of all the different methods you used and you said you would, and then you went on to a lengthier response. If I take you to page 44 of your evidence, Table 3, and bearing in mind that your CAP estimate was 8.27 percent, you will agree with me that your CAP estimate was the lowest number of all the different methods you used.

DR. VANDER WEIDE: A: Yes. But I also stated that if I were to actually include a CAPM, it would very likely have been based on the 0.92 that gave a beta that gave a 9.52 percent CAPM result. For U.S. utilities.

MR. FULTON: Thank you, Dr. Vander Weide. Those are my questions. Thank you, Mr. Chairman.

THE CHAIRPERSON: Thank you, Mr. Fulton. Any questions?
COMMISSIONER GIAMMARINO: Thank you, Dr. Vander Weide.
DR. VANDER WEIDE: A: Weide.
COMMISSIONER GIAMMARINO: Thank you. Giammarino causes the same kind of problem.
DR. VANDER WEIDE: A: It's a very tough one.
COMMISSIONER GIAMMARINO: That's right.

I want to just clear up something from this morning's discussion, I think. Could we go to -- I think it's Exhibit 10? Where you've got calculations of the risk premiums.

DR. VANDER WEIDE: A: Is that my direct --
COMMISSIONER GIAMMARINO: Your exhibit, yes.
DR. VANDER WEIDE: A: Okay. And what page is it, in that?
COMMISSIONER GIAMMARINO: That's on page 69.
DR. VANDER WEIDE: A: 69. Okay.
COMMISSIONER GIAMMARINO: I hope I have the right one. This is -- there was a lengthy discussion this morning about do you think this is the risk premium, that sort -- do you remember that?
DR. VANDER WEIDE: A: Right.
COMMISSIONER GIAMMARINO: And then looking at points in here.
DR. VANDER WEIDE: A: Yes.
COMMISSIONER GIAMMARINO: So I found that -- I'm sorry,

but I just found the whole thing very confusing on both sides. So, can I try an interpretation, and you can tell me if it's completely wrong?

DR. VANDER WEIDE: A: Sure, that would be fine.

COMMISSIONER GIAMMARINO: If I look at any one entry under the risk premium column -- so let me back up for a second. You are trying to estimate the risk premium that investors expect today.

DR. VANDER WEIDE: A: Yes.

COMMISSIONER GIAMMARINO: And there is some -- it's a concept at this point. We have to estimate it. So, each one of those would be an observation on a realized risk premium. Is that an okay --

DR. VANDER WEIDE: A: That would be one way to look at it, yes.

COMMISSIONER GIAMMARINO: Okay. And now to form an estimate from observations one gathers them and does things to them. We might run a regression, we might take means, we might do something else.

DR. VANDER WEIDE: A: Yes.

Proceeding Time 3:51 p.m. T71

COMMISSIONER GIAMMARINO: So was your answer that you wouldn't take any -- you wouldn't have much -- sorry. That any one of them could be an estimate but you wouldn't have confidence in it?

DR. VANDER WEIDE: A: That's going a little bit too

far, okay? I view there being two different methods involving the DCF that provide information. One is the straightforward DCF, and that one I use the most recent DCF estimate for a group of electric and gas utilities with different degrees of risk. And that's just a straightforward application of the DCF itself.

This method says, well, you're leaving out some information when you look at that one. By that one I mean the DCF method. That is, you're overlooking the fact that there might actually be a relationship between the DCF base risk premium and the interest rate, and maybe we could use that additional information to obtain further information about the cost of equity today. And so this, the *ex ante* risk premium is an attempt to make use of that additional information about the relationship between the risk premium and the interest rate to provide additional information. Not the only information but additional information.

COMMISSIONER GIAMMARINO: Right. I'm sorry, I didn't mean to go into that. The inference I will get back to in a sec. It was just simpler than that. It's about inference from sample sizes.

DR. VANDER WEIDE: A: Right, okay.

COMMISSIONER GIAMMARINO: So however you would adjust it, there's an estimate that comes from one number and you

were being asked, is that the risk premium? And your answer was no, and that caused my confusion. It's an observation on a realization, and you're not confident on one observation.

DR. VANDER WEIDE: A: I must have misspoke or I didn't understand the answer, one -- or the question, one or the other.

COMMISSIONER GIAMMARINO: So it that okay? To characterize what you were saying this morning as look, you know, I wouldn't --

DR. VANDER WEIDE: A: I believe it is, yes.

COMMISSIONER GIAMMARINO: I wouldn't have confidence in one observation.

DR. VANDER WEIDE: A: No. I don't have confidence within the context of this method related to a single line in this table. I do have confidence as an additional approach using the final result. That is--

COMMISSIONER GIAMMARINO: On one observation?

DR. VANDER WEIDE: A: No. No.

COMMISSIONER HARLE: Only on the total.

COMMISSIONER GIAMMARINO: Right.

DR. VANDER WEIDE: A: That is taking account of the regression relationship.

COMMISSIONER GIAMMARINO: Which uses many observations.

DR. VANDER WEIDE: A: Uses many observations, that's correct.

COMMISSIONER GIAMMARINO: Thank you. I think that's what I was trying to clarify.

DR. VANDER WEIDE: A: Right, and I think -- I appreciate that you did that because I don't think I understood the question the first time when it came up earlier today.

COMMISSIONER GIAMMARINO: Okay. I didn't understand it or the answer, so.

I want to -- this is another just clarifying question, but it relates to the evidence that Ms. McShane presented and that you were asked to comment on on page 93 I think it was, of hers.

DR. VANDER WEIDE: A: Of her --

COMMISSIONER GIAMMARINO: Her testimony.

DR. VANDER WEIDE: A: Let us get that up from my --

MR. GHIKAS: B1-9, tab F.

MS. JENKINS: F. Page 93.

COMMISSIONER GIAMMARINO: Yes, and this again, I think this is just a clarifying, almost a mechanical question, but as you were discussing that result I thought I heard you say that the .46 you said was being -- you were multiplying the yield to maturity minus the risk, the return on T-bills? So I thought I heard that. What the word says is the return on --

DR. VANDER WEIDE: A: You are correct there. And I probably misspoke there. What I was referring to was

it wasn't just the Long Canada Bond return or the bond yield. It was the difference between that number and the T-bill yield.

COMMISSIONER GIAMMARINO: But it's the yield to maturity as opposed to the holding period return in your -- that's what you were telling me.

DR. VANDER WEIDE: A: I don't really know. I don't know the answer to that because it isn't my testimony.

COMMISSIONER GIAMMARINO: Right, okay. It's just what you said. I wasn't sure if you said yield or holding period.

DR. VANDER WEIDE: A: Again, I may have been confusing in my response.

COMMISSIONER GIAMMARINO: Okay. No, I'm good with that.

Now, you've got the risk-free investment in -- the default-free investment in long-term Canada Bonds.

DR. VANDER WEIDE: A: Yes.

COMMISSIONER GIAMMARINO: And you'd consider that to be a relatively safe investment even if it's for say a holding period of a year?

DR. VANDER WEIDE: A: For a holding period of a year?

COMMISSIONER GIAMMARINO: Would it be safer than utilities?

DR. VANDER WEIDE: A: It would be safer in the sense of default risk. It wouldn't be safer in terms of

variability of return necessarily, because as we saw from some of the data that was presented, the variability of return can be very high for one year holding of a long term government bond.

Proceeding Time 3:56 p.m. T72

COMMISSIONER GIAMMARINO: Do you have a sense of where it fits relative to -- so you think it is riskier, long term bonds are riskier than long term utilities?

DR. VANDER WEIDE: A: I haven't studied that question. I believe it is risky to bet on a single year interest rate change on a long term bond, because, if the bond is long term, just a slight interest rate change can have a very big impact on the price.

COMMISSIONER GIAMMARINO: But similarly, a utility has capital in place that will generate cash floes for a long period.

DR. VANDER WEIDE: A: Right.

COMMISSIONER GIAMMARINO: And so a change in interest rates should have at least that impact on --

DR. VANDER WEIDE: A: Not necessarily, because if interest rates change, the utility can come back to the Commission and as for an adjustment in its rate of return, its allowed rate of return, to be commensurate with that change in the interest rate. Whereas if you are holding a long term government bond, you don't have that opportunity to go back to a commission and

ask for an adjustment in your revenue -- in your coupons or your interest payments on the bond.

COMMISSIONER GIAMMARINO: Now, what would relative to the market?

DR. VANDER WEIDE: A: Relative to the market as a whole?

COMMISSIONER GIAMMARINO: Yeah.

DR. VANDER WEIDE: A: I just don't believe I have an opinion on that. I'd have to study that. The Long Canada bond held for one year, versus the market as a whole for one year?

COMMISSIONER GIAMMARINO: Right.

DR. VANDER WEIDE: A: I don't have an opinion on that as I sit here.

COMMISSIONER GIAMMARINO: Now, we saw evidence this morning that the return on a portfolio of Long Canada bonds since '83 was higher than the market?

DR. VANDER WEIDE: A: Right.

COMMISSIONER GIAMMARINO: And utilities were higher than the market. And based on that you have come down against the capital asset pricing model, and I would have thought that before forming that judgment you might have said, "Gee, is this unreasonable? Is there something strange in that sample period?" for instance.

DR. VANDER WEIDE: A: Well --

COMMISSIONER GIAMMARINO: Sorry, just to complete the question. For instance, it was a period that you said, investors in '83 didn't think that yields were going to -- or interest rates were going to come down the way that they did. And so the big winner was certainly long bonds and maybe utilities.

DR. VANDER WEIDE: A: Right.

COMMISSIONER GIAMMARINO: So, wouldn't it have been reasonable to compare those -- to take a look at how risky you think the market is before passing judgment?

DR. VANDER WEIDE: A: Since I was looking at the risk free rate, rather than looking at the return on the government bond, I didn't think it was necessary to make a comparison between the return on a long term government bond and the return on the market as a whole. My goal was to estimate a risk premium over the risk free rate and the long bond, the only way you can get something that is risk free is holding it to maturity.

COMMISSIONER GIAMMARINO: Yeah, I guess my question, and you can let me know if you agree or not, but now that I have presented it that way, wouldn't it have been reasonable to take a look at other asset classes and how they perform, and especially the ones that are interest sensitive, to see if -- I mean, we always ask when we look at a sample, is this sample unusual in

some ways, and you might have gained some information from doing that, perhaps?

DR. VANDER WEIDE: A: Well, I guess that I had comfort in the fact that I also had a data set that went back from 1956 to the present, and that one they were both increases and decreases in the interest rate, approximately of equal length.

COMMISSIONER GIAMMARINO: Yeah.

DR. VANDER WEIDE: A: I also looked at the magnitude of the difference in the earned returns. I guess my expectations were that I could live with some small variations in the achieved risk premiums, but in my mind, the magnitude was so large that I couldn't come to terms with that. And I guess third, if it is due to some interest rate sensitivity, or some other factor which we don't know, then we need a new theory, because the CAPM doesn't explain that interest rate change because it is a single period model. There are no changes in interest rates in the CAPM.

COMMISSIONER GIAMMARINO: Right. Well, maybe I will go to that now then. I was going to ask a little more. So let me go on, on that point you've raised. And in footnote 6, you have got a list of a number of studies that you've looked at, that have analyzed the CAPM. And included in that is a summary by Fama and French, 2004?

DR. VANDER WEIDE: A: Yes.

Proceeding Time 4:02 p.m. T73

COMMISSIONER GIAMMARINO: That's all I'm going to refer to. If you don't want to look at that, that's it. Now, in that summary they take the traditional single factor, single period CAPM and are pretty critical of it.

DR. VANDER WEIDE: A: Right.

COMMISSIONER GIAMMARINO: And suggest that maybe the future is in an inter-tempo CAPM, that has multi factors. And that would allow for changes in the opportunities -- the investments that are available to investors. Did you consider that as an alternative?

DR. VANDER WEIDE: A: That would certainly be an alternative, but from my years in testifying on the cost of capital, I have realized that there are two qualities that make a model present reasonable evidence. One is that it's -- you can estimate the inputs to the model reasonably well, and two, it has to be reasonably easy to understand. So that one can judge the model in the context where everyone doesn't have Ph.D.s in finance or economics. And once you get into dynamic capital asset pricing models, to me that's getting into a level that's too complicated for discussion in a public forum.

COMMISSIONER GIAMMARINO: If we were to go on the

empirical side of that same set of investigations, rather than introducing one factor, Fama and French have made great progress by adding three -- or adding too. And you mentioned Tipman and Jaghadish, and their momentum finding, and so we've had a fourth, which is a momentum.

I think that would be relatively easy to get across. This is just an empirical regularity. It's much the same as what you're trying to do, if I understand it. People have looked and said the cap -- the single period CAPM doesn't seem to explain returns. What would? And they've thrown in the kitchen sink, as you know. And distilled it down. So Fama and French kind of distilled it to those four factors.

Wouldn't that have been a reasonable thing to do in this case?

DR. VANDER WEIDE: A: Yeah, and in my professional judgment, no. And the reason is that I've tried Fama/French and other approaches, not in testimony, but on my own, and I find that the economic landscape is quite complex. And in reality, there are a lot of factors that affect stock returns.

COMMISSIONER GIAMMARINO: Mm-hmm.

DR. VANDER WEIDE: A: And so, the results of these models can be quite sensitive to the economic

environment that we're in. I've seen Fama/French, for instance, give results that my intuition would say are too high. And I've seen them give results that are way too low. Like, one or two percent. And I can't find a reasonable explanation for why those results vary to that extent. And my only intuition is that there are a lot of factors explaining returns, and the results are -- whereas a set of factors work in one environment, they don't always work in another environment.

COMMISSIONER GIAMMARINO: Sure.

DR. VANDER WEIDE: A: And it's hard to tell the difference between those two.

COMMISSIONER GIAMMARINO: That's fine. I see your point. But it seems to me that I would still like to be informed by another approach. I mean, if you're going to go down that path, which you've gone, of adding an explanatory factor, I'd like the benefit of the research that's out there, the body of knowledge that you have about this empirical relationship.

DR. VANDER WEIDE: A: Right.

COMMISSIONER GIAMMARINO: We may -- we can still debate whether it's the right one, and I agree with you, that's always going to --

DR. VANDER WEIDE: A: Well, frankly, I didn't go down the path of adding another variable. I just looked at

the CAPM.

COMMISSIONER GIAMMARINO: Okay.

DR. VANDER WEIDE: A: And I found that the model didn't explain the returns that are out there. And I decided that, one, I would -- it would probably be more effort than it was worth to try to evaluate all the possible models that would have -- could affect -- explain those returns, and it would be somewhat difficult to explain them anyway.

COMMISSIONER GIAMMARINO: Okay. Just a final point on that, and I will clarify what I meant about adding a factor. But it's true, there is just a lot of different factors that people have looked at, and I guess the nice thing about that survey is, it says at the end it seems these three will do it. These three factors.

Proceeding Time 16:07 p.m. T74

Now, what I meant by adding actually was -- you're right. I was thinking of the total risk premium which you've often referred to beta times the risk premium, so I apologize. What I meant was that you've introduced a conditional risk premium. In your earlier discussion you said, "What I'm doing with the interest rate adjustment is doing a conditional risk premium." And so I just want to ask you about that.

So you've added the long-term risk -- yeah,

the long-term risk-free rate -- for the return on that or the level?

DR. VANDER WEIDE: A: It was the level, the yield.

COMMISSIONER GIAMMARINO: The yields. Okay.

Now, there is this work on the conditional risk premium that's found that in addition -- now, in fact as I know it there's the term premium. It's the long minus short. The default premium, the dividend/price ratio. Did you look at those as well?

DR. VANDER WEIDE: A: I did not.

COMMISSIONER GIAMMARINO: Okay. I had another point on that. Oh yes. And are you sort of familiar with the attempts to include -- to do a conditional risk premium?

DR. VANDER WEIDE: A: I'm generally familiar with it. Yeah, I have read the articles. I haven't done research on it myself.

COMMISSIONER GIAMMARINO: Okay. I'm just wondering how comfortable you are with that. I don't do research in the area either, but it's a daunting task in a way.

DR. VANDER WEIDE: A: It is.

COMMISSIONER GIAMMARINO: And I'm wondering what your feelings are about the reliability of a conditional risk premium.

DR. VANDER WEIDE: A: Again, I haven't done research, but I'm somewhat skeptical that it would be useful in

a regulatory setting.

COMMISSIONER GIAMMARINO: Fair enough. Now, when you analyze the Canadian CAPM, the ability of the CAPM to explain the Canadian data, there's a few things that we -- suspects that we would look at. So one is the market, as you said, if maybe the TSX isn't mean variant sufficient and that could be -- did you look at other indices? So there are, you know, indices that include bonds and real estate and that sort of thing.

DR. VANDER WEIDE: A: I'm not aware of other indices for Canada.

COMMISSIONER GIAMMARINO: Okay, I'm quite sure they exist, but let me ask you going beyond that, the typical Canadian investor over your estimation period -- so you went back to '56, you said -- has gone from being terribly restricted in terms of foreign ownership to being relatively unrestricted in terms of foreign ownership. And so over that period the CAPM would suggest, would it not, that the market portfolio has changed dramatically for the Canadian investor.

DR. VANDER WEIDE: A: Yes. Yes.

COMMISSIONER GIAMMARINO: So have you included U.S. returns in your market portfolio?

DR. VANDER WEIDE: A: Well, I guess I -- I don't know a way to combine the two returns for Canada and the U.S.

I could have taken the U.S. return data, but I also notice for U.S. utilities that the relationship was much closer to what I thought it would have been, that is .92, the ratio of the risk premiums as opposed to .73 which was the Value Line beta, and .92 is still a lot higher than .5 or .35. But I already reported what that result was for the U.S. utilities, but for the Canadian utilities I was just stunned by the magnitude of the difference.

COMMISSIONER GIAMMARINO: I understand that, but I'm just going through the methodology.

DR. VANDER WEIDE: A: Right.

COMMISSIONER GIAMMARINO: And so, but you didn't look at the possibility that Canadians are pricing Canadian utilities relative to an index that includes -- an opportunity set that includes all of Canada, of course bonds and stocks, and the U.S. and there's a foreign exchange component to a U.S. holding as well.

DR. VANDER WEIDE: A: Right. I did not investigate that.

COMMISSIONER GIAMMARINO: Okay. Now, what about the leverage of the companies in your sample, because they differ cross-sectionally. Would you have adjusted for that in estimating betas?

DR. VANDER WEIDE: A: All I had was the index yield and the index return. I didn't have the betas for the

individual companies in the index. The indices were produced by S&P/TSX, which I guess is now S&P, and by BMO Capital Markets. And I didn't look at the individual betas within in the indices because I didn't have that information.

COMMISSIONER GIAMMARINO: You would have the leverage on that portfolio, though. I imagine that's available.

DR. VANDER WEIDE: A: I don't believe -- I don't know of any source of it.

COMMISSIONER GIAMMARINO: Okay. I guess the other thing that affects betas, you pointed out the strategic benefit of certain investments and what you called options or real options if we could use that term. Did you do any consideration of the extent to which, especially I think over that period, the utilities may have had access to growth options that would have affected their risk profiles.

Proceeding Time 4:12 p.m. T75

DR. VANDER WEIDE: A: They could have, especially since what we call utilities in Canada really frequently have a lot of other businesses. And I think Mr. Engen mentioned Enbridge and TransCanada, for example, as growth opportunities, and how their growth rates are -- potential growth rates are so high right now.

Frankly, I didn't know how to -- I was beginning with looking at a CAPM and all -- and in the

time available, the conclusion I came to was, the CAPM wouldn't work.

COMMISSIONER GIAMMARINO: Right.

DR. VANDER WEIDE: A: It seemed to be more complicated than I could foresee the value being, and the cost hence would be considerably higher to try to develop a new model that would better explain the returns. That wouldn't be an inexpensive undertaking.

COMMISSIONER GIAMMARINO: Although, I mean some of it is done for us, right? There is a good literature on -- you know, it really has paralleled what you're finding, that the single period, single factor CAPM does the same --

DR. VANDER WEIDE: A: Right. Right.

COMMISSIONER GIAMMARINO: -- someone else does.

DR. VANDER WEIDE: A: But now to decide which one of the alternative models and what works the best would be a pretty major undertaking.

COMMISSIONER GIAMMARINO: Okay. You said that risk is the probability of loss?

DR. VANDER WEIDE: A: In my view, it is, yes.

COMMISSIONER GIAMMARINO: Okay, now --

DR. VANDER WEIDE: A: By loss I mean probability of earning less than your required return.

COMMISSIONER GIAMMARINO: Right. Now, when we think of risk aversion and investors, is that the definition

that you would use?

DR. VANDER WEIDE: A: It certainly would be similar to that, yes. It would be similar to the safety first portfolio models.

COMMISSIONER GIAMMARINO: Okay. Can I ask you -- let me see -- oh, yes. About the analysts' forecasts.

DR. VANDER WEIDE: A: Yes.

COMMISSIONER GIAMMARINO: So you rely very heavily on these analysts' forecasts.

DR. VANDER WEIDE: A: For utilities. I don't meet -- I don't generally provide cost of equity estimates for non-utilities.

COMMISSIONER GIAMMARINO: Okay. Now, these analysts, how far forward are their forecasts?

DR. VANDER WEIDE: A: About five years.

COMMISSIONER GIAMMARINO: Five. And you're -- the numbers you use are their five-year compound growth rates?

DR. VANDER WEIDE: A: Right. And for utilities they're generally in the ballpark of -- although there are a few instances where they are higher, and a few instances where they're lower, usually in the same sample.

COMMISSIONER GIAMMARINO: Mm-hmm.

DR. VANDER WEIDE: A: Than one would expect in the long term.

COMMISSIONER GIAMMARINO: Right.

DR. VANDER WEIDE: A: But I have two reasons for that. One is, it seems like stock prices are more sensitive to changes in analysts' growth rates than they are to other available growth estimates. And I have even checked various combinations of analysts and then a weighted average of analysts and long-term GDP.

COMMISSIONER GIAMMARINO: Mm-hmm.

DR. VANDER WEIDE: A: And if you try to determine which influences stock prices, it's more the changes in the analysts' forecasts influence the stock price rather than some other growth rates.

Now, if the analysts happened, and I don't believe they are overly optimistic, there is no real evidence that that, but if they happen to be overly optimistic in their growth estimates, or if for some reason -- I used an overly optimistic growth inadvertently, but that was included in the stock price because investors used that growth rate, whether they were rational or not. Then if we take that optimism out of the growth rate to get a reasonable estimate of the cost of equity, we have to take and somehow subtract it out if the stock price as well.

For instance, during the Tech stock boom of the late 1990s, stock prices were high because investors' growth rates were very high. Now in

hindsight, we all think, "Boy, that was really stupid of people to have such high growth expectations." But if we just lowered the growth expectations but stayed with those irrationally high stock prices, we'd get cost of equity results that are near zero.

COMMISSIONER GIAMMARINO: Right. I guess -- so what I'm concerned about with that, and you can comfort me now, with your response is, you've got an infinite growth model. I mean, this model is extremely simple. Growth will be this rate compound --

DR. VANDER WEIDE: A: Right. Right.

COMMISSIONER GIAMMARINO: -- forever.

DR. VANDER WEIDE: A: Right.

COMMISSIONER GIAMMARINO: Now, I would have -- you know, mechanically we could put a number in like that, but I would have thought you would want to adjust somehow as Ms. McShane did, for instance, with two stages. One way of adjusting or --

Proceeding Time 4:18 p.m. T76

DR. VANDER WEIDE: A: I have done that in the past. What I tend to do is if I thought that all of the companies could grow faster than the economy -- or that their short run growth rates were higher than the economy could possibly grow, I might do that. But if some of them, the short run growth rates are lower than the economy, then to be consistent, I ought to

raise them over time to the economy wide growth rate as well, it appears to me. I can't just do that for the high growth rates, because there may be circumstances that are unique to the particular utility for why analysts expect him to grow at lower than economy wide growth rate.

COMMISSIONER GIAMMARINO: Well, I am not sure I quite understand that. Because I could certainly see if there is a small growth number that I wouldn't know whether it is a mistake or, you know, it's perfectly consistent with a model, but it is just mistakenly low. But if you have a growth rate of 9 percent, and you this morning said that is inconsistent with a perpetual growth model, then it seems that that has to be taken out.

If I could use an analogy, if I said let's estimate the average height of people in this room, and one person was -- in meters, and someone was mistakenly measured in feet. You said, well there is six meters --

DR. VANDER WEIDE: A: Right.

COMMISSIONER GIAMMARINO: Q: We'd say that just can't be.

DR. VANDER WEIDE: A: Right.

COMMISSIONER GIAMMARINO: Q: So we would adjust the number. So when you say that 9.3 is clearly

inconsistent with the growth model, I would have thought, right, that's like, we must have got a measure in feet instead of meters here, let's get it right and adjust it down.

DR. VANDER WEIDE: A: Well, we would adjust it over time, because it is clearly possible to grow faster than the economy for some period of time. So, we would have a second or a third stage, maybe a third stage where it grew at the economy wide growth rate, but it wouldn't affect the average. If we had a yard stick that somehow -- if we said, well let's take all the people in the room and we're looking at their height, but we took out only the two tallest people in the room, we would then -- and then measure the heights of the rest, we would underestimate the average height.

COMMISSIONER GIAMMARINO: No, I was suggesting that you go and re-measure with yards. I am not saying throw it out, I am saying wouldn't you -- when you see those measurements that are 9.3 and, you know, 9.2, wouldn't you go back and say that must be a two stage? Or there is no way that can be right, so I am going to re-measure it and --

DR. VANDER WEIDE: A: Well, I have the same feeling for those that are three or two.

COMMISSIONER GIAMMARINO: I see. I see.

DR. VANDER WEIDE: A: So, I would have to re-measure those as well.

COMMISSIONER GIAMMARINO: I see, okay. What we are interested in this Panel is the growth of regulated assets.

DR. VANDER WEIDE: A: Yes.

COMMISSIONER GIAMMARINO: Is there any way that you can look at those companies and the analysts' reports and get some sense of their view? Do they cover that? You know, this is what we've -- I know you have taken an undertaking -- but there has been an undertaking to look at certain sectors. Do they talk about, you know, the regulated base is going to grow by 2 percent or something like that?

DR. VANDER WEIDE: A: Sometimes they do. But you can't really estimate the cost of equity by adjusting the growth rate for the regulated assets, if the stock price reflects the higher growth potential, the other parts of the business. Because as both the stock price and the growth rate that affect the DCF result. So, if you had a stock price that reflected the higher growth of unregulated businesses, and you had a growth rate that reflected only the regulated business, you would underestimate the cost of equity for both.

COMMISSIONER GIAMMARINO: Now, what I am going to suggest I think is too expensive, but we could estimate the

present value of the growth options and subtract them off.

DR. VANDER WEIDE: A: Yeah, that is correct, and I agree with you, it would be too expensive, but we could do that.

COMMISSIONER GIAMMARINO: I see. If you could just give me a second to see if I have got --

You did say that you've never seen criticism for looking at total risk versus diversifiable risk, and I am sorry we don't have the -- do you remember that?

DR. VANDER WEIDE: A: Yes, I do remember that.

COMMISSIONER GIAMMARINO: But whenever we talk beta, that is what we are talking about, is it not?

DR. VANDER WEIDE: A: Yes, but we always start out with a proxy group of just utilities. We don't -- I thought the question related to what is the proxy group -- when we use beta, we are talking about diversifiable risk. But we don't say, let's start out with a group of high tech stocks, and then adjust them for diversifiable risk. We start out with a group that are comparable in risk, and my recall is we were talking about the kinds of companies that ought to be included in the proxy group.

COMMISSIONER GIAMMARINO: Okay, maybe I am -- I probably misunderstood that. I will look at the transcript.

Oh, one last, I think this is my last comment. Through most of your analysis you used the yield on a long-term bond.

Proceeding Time 4:23 p.m. T74

DR. VANDER WEIDE: A: Yes.

COMMISSIONER GIAMMARINO: The yield to maturity. And then at some point you start using forecasted risk-free rates.

DR. VANDER WEIDE: A: Yes.

COMMISSIONER GIAMMARINO: Why wouldn't you just stick with -- in fact can I make it a two-part question? Why not look at a pure strip, you know, a dollar a year instead? Because we've got the coupon effects on 30-year bonds. Is it reasonable to look at, instead of that, constructing a hypothetical dollar year bond to get rid of the coupon and the maturity effect?

DR. VANDER WEIDE: A: Well, I guess the issue is how do you determine the price of that theoretical dollar a year bond? Would you do it to equate the yield to another market yield?

COMMISSIONER GIAMMARINO: We do have -- so the Bank of Canada has these spot rates, so per year for 30 years. So if we had a dollar a quarter we could price that hypothetically. I was just wondering if you would agree that might -- that would eliminate the coupon effect because different coupons --

DR. VANDER WEIDE: A: Well, I would certainly want to think about that.

COMMISSIONER GIAMMARINO: Okay. Now, why did you use the forecasted in those cases and not again the --

DR. VANDER WEIDE: A: Because I don't think that the current yields are market yields. I believe that the Federal Reserve Bank in the U.S. and the Bank of Canada are intentionally keeping yields low in order to stimulate the economy. And all the forecasts that I have seen are showing fairly substantial increases in yields.

COMMISSIONER GIAMMARINO: And you don't think that those forecasts are embedded in the forward -- the implied forward rates.

DR. VANDER WEIDE: A: No because the monetary authorities are keeping those rates low. If the yield starts to move up they immediately pour more money into the system.

COMMISSIONER GIAMMARINO: And that could be inflationary.

DR. VANDER WEIDE: A: In the longer run it could, and indeed that's why the forecasts are for higher rates.

COMMISSIONER GIAMMARINO: Okay. I find that a little inconsistent that, you know, we've got forecasts of higher -- everyone seems to understand that, and yet for some reason they're trading bond -- governments are not the only people buying long-term bonds.

DR. VANDER WEIDE: A: No.

COMMISSIONER GIAMMARINO: And they're buying bonds at prices that generate these returns and they're happy to do so. And they've got all their expectations in there, so I would think that the opportunity cost to the investor is what they can get today. They can't say, "Well, I'm going to invest in a 30-year bond and the yield I'm going to think about is the one that's forecasted for next year," because then there is risk. They'd have to wait.

DR. VANDER WEIDE: A: That's one I'd have to think about.

COMMISSIONER GIAMMARINO: Okay. Mr. Chairman, I think that's all the questions I have.

THE CHAIRPERSON: Thank you. That's our questions. Mr. Ghikas, do you have a redirect?

MR. GHIKAS: I have no redirect, thank you, Mr. Chairman.

THE CHAIRPERSON: Mr. Vander Weide, you are excused and I'd like to thank you for spending the time with us today. You've been most informative.

DR. VANDER WEIDE: A: Thank you, it's been a pleasure to be here.

THE CHAIRPERSON: Excellent.

(WITNESS ASIDE)

THE CHAIRPERSON: Mr. Ghikas, would you like a moment to set up your next panel?

MR. GHIKAS: That is our panel, Mr. Chairman.

THE CHAIRPERSON: You're finished. That's it.

MR. GHIKAS: So I believe the next panel is the Corix Panel.

MR. FULTON: I think probably give them five minutes, Mr. Chairman.

THE CHAIRPERSON: We'll take five minutes then.

(PROCEEDINGS ADJOURNED AT 4:26 P.M.)

(PROCEEDINGS RESUMED AT 4:33 P.M.) **T78/79**

THE CHAIRPERSON: Please be seated.

Ms. Cheesman?

MS. CHEESMAN: Thank you, Mr. Chair, Commissioners. We have heard a lot of very detailed and specific questions and answers over the last few days, so I'm just going to take it back a little bit and be a bit more general. I have some very, very brief opening remarks prior to introducing Ms. Ahern.

We distributed this morning a written copy of my summary, and so if we could please have that filed as Exhibit. I think it's B2-12. Oh, sorry.

COMMISSIONER O'HARA: We don't have it.

THE CHAIRPERSON: It's okay. We can listen.

("OPENING REMARKS OF COUNSEL FOR CORIX MULTI-UTILITY SERVICES INC., DECEMBER 12, 2012", MARKED EXHIBIT B2-12)

MS. CHEESMAN: I apologize for that. Thank you. As

represented, it's very brief.

OPENING STATEMENT BY MS. CHEESMAN:

So, as noted by Mr. Ghikas, long ago, in his opening remarks, the touchstone of this generic cost of capital hearing is the fair returns standard. And we have dedicated a significant amount of time to discussing that standard as applied to the benchmark FortisBC Energy Inc., but it's also important, of course, to consider how that standard applies to smaller utilities and it's this question on which Corix Multi Utility Services, a small utility itself, has focused over the course of these proceedings.

The Commission has recognized through this process that small utilities are fundamentally different than larger large-scale utility, traditional companies, and has encouraged Corix's active participation in this proceeding. Whether in the context of a CPCN process or a regular rate application, small utilities typically lack the resources required to present sort of detailed and comprehensive information required to allow the Commission to undertake the examination required to establish a fair return on equity that balances the interests of ratepayers and utility shareholders on a case-by-case basis. We appreciate the opportunity to bring here today the perspective and unique

requirements of small utilities and their customers, in the interests of establishing a fair and efficient generic methodology to assist in setting appropriate fair returns for those utilities.

Specifically what Corix is encouraging the Commission to do is adopt in this proceeding a generic process to determine the risk premium to be added to the low-risk benchmark rate of return on common equity for specific smaller utilities under the jurisdiction of the Commission.

As well, we are seeking a framework for developing an appropriate and reasonable deemed rate-making capital structure for smaller utility operations.

To that end, on November 30th, Corix filed Exhibit B2-11, confirming its intention to provide a single witness panel consisting of a single witness, Ms. Pauline Ahern. She has attended this proceeding today to answer any remaining questions and clarifications regarding Corix's proposed approach for determining the risk premium applicable to smaller utilities.

With your permission, I will ask that Ms. Ahern be sworn in.

CORIX MULTI UTILITY SERVICES INC. PANEL

PAULINE M. AHERN, Affirmed:

EXAMINATION IN CHIEF BY MS. CHEESMAN:

MS. CHEESMAN: Q: Thank you. Ms. Ahern, your direct testimony is included in the record as part of Exhibit B2-7 in this proceeding. Could you please confirm that the contents of that testimony remain true?

MS. AHERN: A: Yes, they do.

MS. CHEESMAN: Q: And you also responded to a number of IRs arising from that testimony?

MS. AHERN: A: Correct.

MS. CHEESMAN: Q: And are there any changes or corrections to either of those things that you'd like to make today?

MS. AHERN: A: No, there aren't.

MS. CHEESMAN: Q: And do you adopt the direct testimony and the IR responses you have provided as your evidence in this proceeding?

MS. AHERN: A: Yes, I do.

MS. CHEESMAN: Q: You have also provided a CV which is attached as Appendix A to your testimony. So if we could just turn there for a moment, we will quickly review some of the entries on your CV.

MS. AHERN: A: Okay.

Proceeding Time 4:38 p.m. T80

MS. CHEESMAN: Q: Okay, so could you please confirm that CV accurately sets out your qualifications and experience pertaining to the matters before this

Commission?

MS. AHERN: A: Yes, it does. As at the time of the filing, yes.

MS. CHEESMAN: Q: And specifically you hold an MBA from Rutgers University and a BA degree from Clark University, is that right?

MS. AHERN: A: Yes.

MS. CHEESMAN: Q: You are also a certified rate of return analyst, which is a certification awarded by the Society of Utility Regulatory and Financial Analysts, is that right?

MS. AHERN: A: Yes.

MS. CHEESMAN: Q: And then by way of specific experience, you've offered expert testimony on behalf of investor-owned utilities in over 200 proceedings before 27 state regulatory commissions, is that right?

MS. AHERN: A: Yes.

MS. CHEESMAN: Q: And that testimony has included common equity cost rate, fair rate of return and capital structure and product quality issues?

MS. AHERN: A: Yes.

MS. CHEESMAN: Q: And I think your testimony for this proceeding is largely summarized at pages 2 and 3 of Exhibit B2-7. Could I ask you to very briefly review for us your primary opinions on the matters as set out in your testimony?

MS. AHERN: A: Okay, my direct testimony provides a framework for evaluating the magnitude of the equity risk premium which is to be added to the benchmark return established in this proceeding. The framework I propose is based upon several measures of size and fundamental risk as published by Morning Star Inc. or Ibbitson and Associates and Duff & Phelps. My direct testimony also provides guidelines for determining an appropriate and reasonable deemed ratemaking capital structure for small utility operations based upon utility industry average capital structure ratios and bond and credit rating criteria.

MS. CHEESMAN: Q: Thank you, Ms. Ahern.

Mr. Chair, she's available for cross-examination.

THE CHAIRPERSON: Thank you, Ms. Cheesman.

MS. CHEESMAN: Thank you.

THE CHAIRPERSON: Mr. Wallace or --

MR. WALLACE: No questions, thank you.

THE CHAIRPERSON: Okay.

CROSS-EXAMINATION BY MS. BRAITHWAITE:

MS. BRAITHWAITE: Q: If could start at about page 17 of your report, you talk about the Florida Public Service Commission and a system that they've used to recognize additional risk for small utilities. And what they appear to do is they add a small utility risk premium

of 50 basis points.

MS. AHERN: A: Correct.

MS. BRAITHWAITE: Q: Is that proposed by you as an alternative to using the Morning Star and DNP size risk studies?

MS. AHERN: A: No, the purpose of using the Florida proceeding, the Florida generic formula was just to show the regulatory support, how another regulatory jurisdiction accomplishes it. They also include a credit adjustment, a liquidity premium and they make an adjustment, sliding adjustment based on different common equity ratios. But I am not proposing in this -- I am proposing a framework here. I'm not proposing that it be used -- the 50 basis points is the appropriate premium.

MS. BRAITHWAITE: Q: Okay. I guess the question more generally is is your opinion that the sliding scale or decile system that's used in the two sized risk studies that you referenced preferable, in your opinion, to a fixed small utility risk premium, whatever the size of that would be?

MS. AHERN: A: Yes, I do. Because the deciles and the rankings allow you, will allow the Commission or the utility that is coming in seeking a risk premium to determine where in the deciles the benchmark utility falls or resides. And where within the deciles or

rankings their specific utility resides. And then the risk premiums associated with each of the risk factors, and I believe Ibbitson only has one. Duff & Phelps has, I believe it's eight size factors and three fundamental risk factors, can be determined on a specific utility basis. And the spreads between the premium applicable to the benchmark, that particular ranking, and the premium applicable to the specific utility, they can be used as a guideline. Maybe arranged. I originally had said average all the premiums, but I am now thinking it may serve better as a range after doing some more analysis, that based on these eleven or twelve factors your range may go from 200 basis points to 520 for a specific utility, and then based on other factors it would be the utilities' purview, which -- what to recommend, what to request. And then it would be within, obviously the Commission's purview to determine exactly what it would be.

But these guidelines will provide you better with a specific premium for a specific utility.

Proceeding Time 4:43 p.m. T81

MS. BRAITHWAITE: Q: Okay, thank you. And I think part of your answer went to my next question, which is, if you apply the two decile systems in the two separate studies, you come up with separate results. For

example, even in the example that you gave at page 16 of your report, the Morningstar study, resulted for a company in the 10th decile yielded a result of 4.36 percent premium adjustment.

MS. AHERN: A: Right. That's the spread between the premium applicable to a hypothetical company in the 5th decline and one in the 10th decile. And I believe you asked me to do something similar for the Duff and Phelps in the IRs.

MS. BRAITHWAITE: Q: That's right. Exhibit B2-8.

MS. AHERN: A: Right. And based on market capitalization alone, only that factor. The spread between the 5th -- what would be a 5th ranking -- I'm sorry. A 15th ranking. Duff and Phelps has 25 rankings. Ibbitsen has 10 deciles.

The hypothetical company that would be in the fifth decile for Ibbitsen would be in the 15th for Duff and Phelps. The 10th decile company for Ibbitsen would be in the 25th ranking. And the difference in the spread is 3.89. So if you are looking at -- my point is, if you are looking at only those two factors, the size premium would be between 3.89 and 4.36 in the hypothetical example.

MS. BRAITHWAITE: Q: Okay.

MS. AHERN: A: And I believe more information helps you get a more reliable result than just looking at a

single piece of information. Or, just saying, it's going to be 50 basis points. That may or may not be appropriate for a specific utility.

MS. BRAITHWAITE: Q: So would your -- is your recommendation that a Commission would then look at other factors and determine within that range what they thought was the appropriate risk premium?

MS. AHERN: A: It's my -- well, it's my recommendation that the Commission adopt this methodology for assessing the magnitude of a possible risk premium. The utility would then use this information and to the best of their ability, depending on what beta are available for them, determine what the range would be based on all of these factors. And then the utility would recommend what size risk premium they were going to request, and it's up to the Commission to then -- to determine whether that's reasonable or not.

MS. BRAITHWAITE: Q: Okay.

MS. AHERN: A: And, you know, we will be doing that in the next phase. You'll see Corix, at least, come in with a recommendation for a range of premiums, but it's always within the Commission's purview to decide exactly what it should be.

MS. BRAITHWAITE: Q: Is it your opinion that types of projects that a utility undertakes affect its risk profile from an investor's point of view?

Proceeding Time 4:46 p.m. T82

MS. AHERN: A: Yes. However it's very difficult to quantify the effect of risk on common equity cost rate based on those types of projects. I don't see any empirical studies out there about those types of things. I think we talked about deferred accounts in the IRs and some other -- and captive customers. I prefer to look at some real empirical studies. Some of the other factors in Duff and Phelps include acid base, book value of equity, net income, absolute value of net income, number of customers, revenues, number of employees.

MS. BRAITHWAITE: Q: You're saying those factors are bigger contributors to the risk profile?

MS. AHERN: A: No, I'm just pointing out what some of the measures of size that Duff & Phelps uses. Size, to the best of my knowledge, is the only extra risk factor that has -- there have been empirical studies to determine what premium is applicable to it.

MS. BRAITHWAITE: Q: Okay, so you're not aware of any studies that relate risk to type of undertaking provided by a utility.

MS. AHERN: A: Not in terms of quantifying a risk premium.

MS. BRAITHWAITE: Q: Okay. So do you think that the type of activity undertaking by a utility is something

that a regulator should take into account?

MS. AHERN: A: I think to the extent possible everyone should take them into account. Every rate of return analyst should do the same thing when they're looking at a -- on a relative basis, they're looking at a peer group, proxy group upon whose market data they're basing their common equity cost rate recommendation. They should compare the relative risk to their client, their utility. The relative risk should be, in this case, between a small company and the benchmark.

For example, some of these things where we don't have empirical evidence, if the benchmark utility has deferred accounts and a specific utility has deferred accounts, there's no difference in relative risk. It becomes a complete matter of expert judgment, commission judgment in determining whether or not a premium needs to be assigned to all those other factors. There is no empirical basis for it.

California in the United States, based on decoupling, there are a lot of reductions to ROE for decoupling mechanisms in the United States and most of them are *ad hoc.* People come in and recommend 100 basis points, 50, 25. A lot of it's based on what another commission had done. And the California Commission has come in and they do have a lot of decoupling or revenue adjustment mechanisms in

California, but they have gone on record in their orders and saying until someone comes in and can empirically support their recommendation, we are not going to make a deduction.

Proceeding Time 4:49 p.m. T83

MS. BRAITHWAITE: Q: Okay.

THE CHAIRPERSON: I'm sorry, what was the last part of what you said?

MS. AHERN: A: Until a witness comes in and can empirically support their recommendation of 20, 50, or 100 basis points, we are not going to make an adjustment.

THE CHAIRPERSON: I understand.

MS. AHERN: A: Because it is not supported.

MS. BRAITHEWAITE: Q: Okay --

MS. AHERN: A: But theoretically -- just let me finish. Theoretically, those types of mechanisms do reduce risk. We have done a study and provided it in response to one of the IRs. That can't be measured. That investors don't appear to have taken -- in this case it was decoupling mechanisms. We haven't found any effect on risk premiums, or volatility in risk premiums before and after decoupling went into effect.

There are so many factors that effect the risk of a company and effect the market price, that any one of these factors, the effect may be so

deminimus that it can't be measured, although they are risk reducing theoretically. Size has empirically been proven that there, you know, you can measure the premium.

MS. BRAITHEWAITE: Q: Okay, thank you. You indicate in your CV I think it is, or maybe even in your report, that you've testified before 27 state regulatory commissions on return on equity matters?

MS. AHERN: A: Yes.

MS. BRAITHEWAITE: Q: Have you proposed before any of those regulators a size based adjustment similar to the approach that you have suggested here?

MS. AHERN: A: I have always included an evaluation of size. In some cases I have proposed a deduct, because the client company was larger on average than my proxy company. In some cases, I have not proposed any, because they have been the same decile, there has been zero spread.

I am currently, and here I did an *ad hoc*, I am currently in an electric case, where based on size the company is smaller than the proxy group. However, the company is a pure T&D, transmission and distribution company. It is impossible to find holding companies, publically traded companies which are wholly transmission/distribution. I did the best I could, but that means in that respect, the proxy

group is riskier than my client. But on size, my client is riskier than the -- based on size is riskier than the proxy group. It can't be measured, but I chose not to make any business risk adjustment in that case.

MS. BRAITHEWAITE: Q: Okay, can you refer me to any decisions where the regulatory commissions that you've provided evidence to in the past, where they have adopted the decile system, or commented on the decile system that is used in their reports that you reference? Or sorry, the studies you reference in your report?

Proceeding Time 4:53 p.m. T84

MS. AHERN: A: I can't recall whether that actually referred to the decile system. It is common practice that anyone who proposes -- that's the only one out there except for recently the Duff and Phelps has come into existence. I did respond to an IR -- I think it was in response to B2-10, asking where it had been adopted.

In Attachment 41-6 and then it's listed I guess in my response to 41-6, and that's in Exhibit B2-10. Oh no, it's not listed there. If you look at 41-6, on the right there were basis points allowed. There were several jurisdictions where it was adopted, an adjustment was adopted and it may not have been

what I had proposed but the evidence was based on the Morningstar or Ibbitson data.

MS. BRAITHWAITE: Q: Okay. Those are all my questions, thank you.

MS. AHERN: A: If I may clarify, 42.6 in B2-10. That says -- pardon me?

THE CHAIRPERSON: I was thanking Ms. Braithwaite.

MS. AHERN: A: Okay. I was just saying Delaware, Minnesota, Florida, South Carolina, Pennsylvania, and Kentucky.

THE CHAIRPERSON: Mr. Bussoli, a new face.

MR. BUSSOLI: Yes.

THE CHAIRPERSON: It's about five to. Do you want to go? Have you got a spot where you can go on for --

MR. BESSOLI: I think I could get through just the first set of questions here.

THE CHAIRPERSON: Okay, that's fine.

MR. BESSOLI: I might as well get some out of the way.

CROSS-EXAMINATION BY MR. BUSSOLI:

MR. BESSOLI: Q: Ms. Ahern, I'm going to refer to your direct testimony, page 3.

MS. AHERN: A: Yes.

MR. BESSOLI: Q: That's Exhibit B2-7. You state there:

> "My testimony reviews academic, empirical and regulatory support for sizes of risk factor which must be reflected in the rate

of return providing a framework for determining the magnitude of a size premium to be added to the benchmark ROE."

And regarding empirical support for a size premium, you include in your evidence the following three studies which you talked about: the Morningstar study, the Duff & Phelps size study, and then the Duff & Phelps risk study. Do you agree with that?

MS. AHERN: A: Yes.

Proceeding Time 4:56 p.m. T85

MR. BUSSOLI: Q: So when asked to provide pertinent regulatory support for a size premium in the allowed rate of return of small utilities, you state on page 17 of your direct testimony you state,

"In my opinion, the most compelling support for reflecting the risk effects of a company's size in the allowed rate of return is the Florida Public Service Commission's annual reauthorization of its leveraged formula to determine the appropriate authorized ROEs for the water companies within its jurisdiction."

And if we now look at your response to IR 12.1, which is Exhibit B2-9 --

MS. AHERN: A: Yes.

MR. BUSSOLI: Q: You answered a question there about

your proposed framework to determine the unique cost of equity of each utility relative to the benchmark utility. So the question is, why is your proposed method to determine the appropriate size premium to be added to the benchmark utility ROE only based on the size premium suggested by the empirical literature and not the size of premium authorized in the Florida formula for small utilities?

MS. AHERN: A: Because I do not know the genesis of the 50 basis points. The Florida generic formula has been in -- well, it's been re-evaluated every year. It was first established, I believe, in 1991, in the early '90s. While the small utility risk premium is only 50 basis points, they also, as I said earlier, they acted -- I think it's 50 -- a bond yield differential. Because they believe that the small utilities in Florida have a Triple-B bond rating as opposed to the usually A bond rating of the proxy group that the formula is based upon. And because of the size, they also add a 50 basis point private placement premium. That's the debt cost, right? So when you add that, with the size premium to the equity, the ROE, it's actually really 150 basis points.

But that is again -- I don't know the empirical support behind it.

MR. BUSSOLI OLE: Q: Okay. So can you explain why this

formula is relevant to this proceeding, then?

MS. AHERN: A: Well, as the question poses, it's a pertinent regulatory support that reflects that a company's size needs to be reflected in its rate of return.

MR. BUSSOLI: Q: Okay. So can you walk us through that formula?

MS. AHERN: A: Okay. It's actually --=

MR. BUSSOLI: Q: And I'm just going to refer to it. There is Exhibit B2-7, PMA 10, page 8.

MS. AHERN: A: That's where I was going to go.

MR. BUSSOLI: Q: Oh, okay. Perfect. We're on the same page.

Proceeding Time 16:59 a.m. T86

MS. AHERN: A: Florida has decided to use a natural gas index. They have used a natural gas index throughout the life of the leverage formula. Personally I don't think that's necessary any more. The reason was they didn't feel that there were enough water companies that had enough data available at the time of the establishment of the formula about twenty years ago.

They calculate a discounted cash flow for this gas index, and they calculate a CAPM. The details follow on I guess pages 3 and 4. After they calculate those they just average them, and to that they add a bond yield differential which is based on a

sliding spread they have.

THE CHAIRPERSON: Excuse Ms. Ahern. We're having problems finding the reference material. If you could just hold up for a second.

MR. BUSSOLI: It's Exhibit B2-7, PMA 10.

THE CHAIRPERSON: I'll have to borrow somebody's --

MR. BUSSOLI: I actually have copies that I could just pass up.

THE CHAIRPERSON: Could you? Yeah, that would be nice.

COMMISSIONER HARLE: I don't have it either, I don't know why.

THE CHAIRPERSON: Everybody all set?

MS. AHERN: A: Okay, I'll start over.

THE CHAIRPERSON: All right, sorry.

MS. AHERN: A: No, I apologize. The Florida Commission uses the natural gas index and I believe there are -- it's not an index per se, they built it themselves. They call it an index. Two, four, six, eight, proxy companies, and they decided to use the gas index in the early days of the leverage formula because they didn't feel they were enough publicly traded water companies with sufficient trading data and market data. Back in those days there were low trading volumes and many of the water companies were not traded on a national exchange, and have continued using the natural gas index.

They calculated DCF for it and they calculated CAPM. They then averaged the results of those, and you'll see the two columns, "Updated Results". Those are the results that they obtained in, I think, it was May of 2002 currently in effect, was what was previously updated in May of 2011 authorized in June of 2011.

After they averaged them, they add this bond yield differential to reflect what they perceived to be an appropriate bond rating for the small water companies in Florida which is Triple-B. That differential is Triple-B relative to whatever the average bond rating is for the gas index at that time. To that they just added, automatic, 50 basis point private placement premium and a 50 basis points small utility premium.

Now, you don't have it, but the common equity ratio of the proxy group is 48.94 percent, or it was at the time. I believe it was probably year end 2011. And what they tried to determine is a range of return on equities for companies that have common equity ratios in the range of between 40 and 60 percent. And they have developed a formula for 2012, down at the very bottom.

The return on common equity would be 5.84 percent plus 2.51 percent times the ER, or the equity

ratio, of the company in question. If you use 40 percent that would be 12.14, I believe. And if you use 60 percent it would be 8.36.

Proceeding Time 5:03 p.m. T87

MR. BUSSOLI: Q: Sorry, you said on the return on common equity, calculation it's 5.84 percent plus 2.521 -- I think you said multiplied by ER, but you mean divide, right?

MS. AHERN: A: I'm sorry, you're correct. Divided. And that's based on the ROE that falls out after all the adjustments. If you look at the top, they make an adjustment of 1.15 percent for a utility with a 40 percent equity ratio that results in 12.14 percent.

This is what they authorize -- they adopt. And then when a utility -- a utility can choose to use the formula or not. They can opt out, and they can apply for rates based on, you know, a full-blown rate of return testimony. Once they do that, this is off the table. And then they are -- it's just like a regular rate case. Their evidence may or may not be adopted.

This is available to the utilities because many of them are very, very small and they just don't have the finances to put on a rate case. But it's not obligatory.

MR. BUSSOLI: Q: Okay, thank you. That leads to some

other questions, but I think now is probably a good time to break and we'll come to those questions tomorrow morning.

THE CHAIRPERSON: That's fine. Okay. Thank you. We'll adjourn for today. Back tomorrow, 8:30 a.m.

MS. AHERN: A: Thank you.

(PROCEEDINGS ADJOURNED AT 5:05 P.M.)