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<p>1 (9:05 a.m.)</p> <p>2 CHAIRMAN:</p> <p>3 Q. So I understand there are no preliminary</p> <p>4 matters.</p> <p>5 MS. GLYNN:</p> <p>6 Q. That's right, Mr. Chair.</p> <p>7 KELLY, Q.C.:</p> <p>8 Q. No, Mr. Chairman.</p> <p>9 CHAIRMAN:</p> <p>10 Q. So I think, Mr. Kelly, we are over to you,</p> <p>11 sir.</p> <p>12 DR. LAURENCE BOOTH (PREVIOUSLY SWORN) CROSS-</p> <p>13 EXAMINATION BY IAN KELLY, Q.C.</p> <p>14 KELLY, Q.C.:</p> <p>15 Q. Thank you, Mr. Chairman. Good morning, Dr.</p> <p>16 Booth.</p> <p>17 DR. BOOTH:</p> <p>18 A. Good morning, Mr. Kelly.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. Dr. Booth, this is our third discussion. We</p> <p>21 had our first discussion on cost of capital</p> <p>22 in 2009, just to kind of refresh your</p> <p>23 memory, and then again in January of 2013.</p> <p>24 So, and we have substantially the same Board</p> <p>25</p>	<p>1 Q. Right and when we actually were here in the</p> <p>2 hearing room--if you want, we'll—we can go</p> <p>3 to the transcript of January 18th, 2013.</p> <p>4 Samantha, if you could bring that up at page</p> <p>5 117. And if you go down to lines 19 through</p> <p>6 about 23, you'll see, "No, I wouldn't regard</p> <p>7 that as unusual. What I would say is what's</p> <p>8 unusual is the starting point and the</p> <p>9 starting point at the moment is long Canada</p> <p>10 bond yields of 2.3, 2½ percent, forecast 2.7</p> <p>11 percent." Correct?</p> <p>12 DR. BOOTH:</p> <p>13 A. That was unusual then and it's exactly the</p> <p>14 same thing that's unusual at the moment.</p> <p>15 KELLY, Q.C.:</p> <p>16 Q. Okay. Now, can I take you next to page 440</p> <p>17 of the company's evidence that's filed in</p> <p>18 this matter? It's in the Finance Section</p> <p>19 and—there you go. And we have a graph there</p> <p>20 that shows where interest rates have gone,</p> <p>21 and if we look at the January 2013 period,</p> <p>22 you can see we're about 2.3 percent. They</p> <p>23 go up to about, say, 3.1 approximately.</p> <p>24 Move along down to 2015, they're down just</p> <p>25</p>
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<p>1 as before, so there's a lot that I'm not</p> <p>2 going to go back over because the Board is</p> <p>3 already heard it before, but what I did want</p> <p>4 to start with is the situation that we're in</p> <p>5 now versus the situation that we were in in</p> <p>6 January 2013 when we had our last</p> <p>7 discussion, just so you know where I'm</p> <p>8 going. And at that point in time the long</p> <p>9 Canada 30-year bond rate was about 2.3</p> <p>10 percent?</p> <p>11 DR. BOOTH:</p> <p>12 A. That sounds about right.</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. Right. We can take you to a reference if</p> <p>15 you want.</p> <p>16 DR. BOOTH:</p> <p>17 A. Yeah.</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. But 2.3 percent –</p> <p>20 DR. BOOTH:</p> <p>21 A. Yeah, I remember the—I think I used the full</p> <p>22 cost of three percent which is about 20</p> <p>23 basis points more than I'm using now.</p> <p>24 KELLY, Q.C.:</p> <p>25</p>	<p>1 below two and where this graph ends, a</p> <p>2 little above two. Correct?</p> <p>3 DR. BOOTH:</p> <p>4 A. That's correct.</p> <p>5 KELLY, Q.C.:</p> <p>6 Q. Right.</p> <p>7 DR. BOOTH:</p> <p>8 A. That was the bump I was talking about with—</p> <p>9 when the U.S. introduced this schedule for</p> <p>10 stock in the bond buying program.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. Right.</p> <p>13 DR. BOOTH:</p> <p>14 A. That was when interest rates popped up.</p> <p>15 KELLY, Q.C.:</p> <p>16 Q. And so where—we've moved in a very narrow</p> <p>17 range over that period from 2013 to</p> <p>18 essentially where we are today?</p> <p>19 DR. BOOTH:</p> <p>20 A. Relatively, yes.</p> <p>21 KELLY, Q.C.:</p> <p>22 Q. Okay. Can I take you next to your</p> <p>23 Surrebuttal Evidence, just so we can fill</p> <p>24 out the end from that graph at page 3?</p> <p>25</p>

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<p>1 There you go. And you very helpfully here</p> <p>2 for us put up the latest RBC forecast and if</p> <p>3 we look out through 2016, if we come down to</p> <p>4 the Canada 30 year line, and we go across,</p> <p>5 the first quarter 2016, the second quarter,</p> <p>6 all the way over then to the end of 2017,</p> <p>7 the current forecasts are 3.35 percent?</p> <p>8 DR. BOOTH:</p> <p>9 A. That's right. That's RBC's forecast. They</p> <p>10 tend to be a little bit optimistic, but not</p> <p>11 that much different from the consensus.</p> <p>12 KELLY, Q.C.:</p> <p>13 Q. Right, it's—right, and in fact we'll see in</p> <p>14 a little—in a few minutes your colleagues at</p> <p>15 the University of Toronto tend to be even a</p> <p>16 little more optimistic?</p> <p>17 DR. BOOTH:</p> <p>18 A. Yeah, I've taken them to task on that many</p> <p>19 times, but –</p> <p>20 KELLY, Q.C.:</p> <p>21 Q. Right, okay.</p> <p>22 DR. BOOTH:</p> <p>23 A. - they rely upon large-scale macroeconomic</p> <p>24 model rather than what's going on in the</p> <p>25</p>	<p>1 a risk return trade-off.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. Okay.</p> <p>4 DR. BOOTH:</p> <p>5 A. Individuals basically saying, "I want this</p> <p>6 on a fixed income security and I need this</p> <p>7 as a risk premium. So this is what I want</p> <p>8 for expected rate of return or the required</p> <p>9 return on equities." But the only problem</p> <p>10 is, is it's not individuals determining the</p> <p>11 long Canada bond yield.</p> <p>12 KELLY, Q.C.:</p> <p>13 Q. Right, and –</p> <p>14 DR. BOOTH:</p> <p>15 A. And it's--what I think I referred to three</p> <p>16 years is the global policy maker.</p> <p>17 KELLY, Q.C.:</p> <p>18 Q. Right.</p> <p>19 DR. BOOTH:</p> <p>20 A. Which are the central banks.</p> <p>21 KELLY, Q.C.:</p> <p>22 Q. Okay, now if we can just get Samantha to put</p> <p>23 up the transcript again from the last time,</p> <p>24 at page 9? And we go there to the top of</p> <p>25</p>
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<p>1 market.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. Different people with different views, but</p> <p>4 if I can get—just get Samantha to put back</p> <p>5 up the graph that we just had? Bearing in</p> <p>6 mind now we're looking out to 2017, and we</p> <p>7 if extend out that graph line, essentially</p> <p>8 we'll have moved from the low 2s up to about</p> <p>9 3.2, and as we get out towards the end of</p> <p>10 2017, the forecast is about 3.35?</p> <p>11 DR. BOOTH:</p> <p>12 A. That is correct.</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. Correct, again that's a fairly narrow range.</p> <p>15 And as I understand your position,</p> <p>16 essentially it is that none of this really</p> <p>17 matters because until you get to an</p> <p>18 equilibrium yield of about 3.8 percent or</p> <p>19 yesterday you referred I think to 3.8 to 4,</p> <p>20 that that doesn't result in any changes?</p> <p>21 DR. BOOTH:</p> <p>22 A. That is correct, and that's the same</p> <p>23 position I had three years ago, which</p> <p>24 essentially is the—our models are based upon</p> <p>25</p>	<p>1 the page where I asked you the question,</p> <p>2 "Now in your report I tried to figure out</p> <p>3 what you think the current interest rates</p> <p>4 are going to be for 2013, and I didn't</p> <p>5 really find a clear answer to that because</p> <p>6 at the end of the day you come to the</p> <p>7 conclusion, 'Well, I've got to adjust it to</p> <p>8 380 because that's'—'I've got to at least</p> <p>9 get there before it's going to make any</p> <p>10 difference.'" And your answer was, "I think</p> <p>11 you're reading is absolutely correct, Mr.</p> <p>12 Kelly."</p> <p>13 DR. BOOTH:</p> <p>14 A. Yeah, I think that was—your reading was</p> <p>15 correct then and your reading is correct</p> <p>16 now.</p> <p>17 KELLY, Q.C.:</p> <p>18 Q. And what—right, which is the point I'm kind</p> <p>19 of coming to. We're essentially in the same</p> <p>20 position today as we were in January of</p> <p>21 2013?</p> <p>22 DR. BOOTH:</p> <p>23 A. In terms of the bond buying programs, I</p> <p>24 suspect we're worse because the U.K.</p> <p>25</p>

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<p>1 finished 2012, the U.S. finished 2014, but</p> <p>2 now we've got this mass of bond buying</p> <p>3 programs by the European Central Bank and</p> <p>4 the Bank of Japan. So I think I said,</p> <p>5 "Waiting for Godot." I should have said in</p> <p>6 the play Godot never turns up.</p> <p>7 KELLY, Q.C.:</p> <p>8 Q. I was going to ask you about that.</p> <p>9 CHAIRMAN:</p> <p>10 Q. Yes.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. And it's—there's a couple of other</p> <p>13 references first where you make it clear</p> <p>14 that you view the 3.8 percent as a minimum</p> <p>15 level, correct?</p> <p>16 DR. BOOTH:</p> <p>17 A. That's correct.</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. Yes.</p> <p>20 DR. BOOTH:</p> <p>21 A. Two percent inflation, 3.3 percent after tax</p> <p>22 is barely the rate of inflation. So it's a</p> <p>23 negative real interest rate.</p> <p>24 KELLY, Q.C.:</p> <p>25</p>	<p>1 DR. BOOTH:</p> <p>2 A. No, it is. It's something I've grabbed</p> <p>3 with for the last four years. 2009 we saw a</p> <p>4 rapid spring-back in the Canadian economy.</p> <p>5 2010, the Bank of Canada started moving up</p> <p>6 short-term interest rates, and the Royal</p> <p>7 Bank and other forecasters were saying,</p> <p>8 "Well look, Canada, a sort recession. We're</p> <p>9 going to be back on stream." And then we</p> <p>10 watched our major trading partners, and the</p> <p>11 U.S. introduced quantitative easing or bond</p> <p>12 buying. That knocked us back. All of a</p> <p>13 sudden, massive bond buying by the U.S.</p> <p>14 Government and 3½ trillion dollars' worth of</p> <p>15 securities taken off the capital market.</p> <p>16 That's where we were in 2012. I started to</p> <p>17 get—well, is this the new normal? When is</p> <p>18 this going to happen? If the U.S. was to</p> <p>19 suddenly dump those 3½ trillion dollars'</p> <p>20 worth of securities on the capital market,</p> <p>21 interest rates would pop up, two, three,</p> <p>22 four percent without any question</p> <p>23 whatsoever. Now we've not just got the U.S.</p> <p>24 We've got the other major capital markets.</p> <p>25</p>
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<p>1 Q. Okay. So let me come then to your question</p> <p>2 about "Waiting for Godot," because you</p> <p>3 mentioned that yesterday and in fact in—you</p> <p>4 make the same comment in NP-CA-082, and we</p> <p>5 don't need to go there, but when we first</p> <p>6 had this discussion in 2009, you said to the</p> <p>7 Board you expected interest rates within a</p> <p>8 few years to go to the 4.5, 5, 5.5 range.</p> <p>9 When we had this discussion the last time,</p> <p>10 you still expected them to go to that range,</p> <p>11 but had no clarity as to when we were going</p> <p>12 to get there, and as you said in "Waiting</p> <p>13 for Godot," Godot never came, and it was</p> <p>14 Beckett's thesis presumably that he was</p> <p>15 never going to come. And for clarity as to</p> <p>16 what you mean by "Waiting for Godot," is it</p> <p>17 that yes, we will eventually get there, but</p> <p>18 it's still well off in the future? In other</p> <p>19 words, are we still waiting for something</p> <p>20 you expect to happen?</p> <p>21 DR. BOOTH:</p> <p>22 A. A very good question, Mr. Kelly.</p> <p>23 KELLY, Q.C.:</p> <p>24 Q. Thank you.</p> <p>25</p>	<p>1 I compare it a bath, i.e. liquidity money.</p> <p>2 Three years ago we had the U.S. opening the</p> <p>3 taps full force, filling up the world with</p> <p>4 liquidity, with cash. They've turned off</p> <p>5 the taps, but the bath, the U.S. bath is</p> <p>6 incredibly full, and we've got the Europeans</p> <p>7 and the Bank of Japan. They've—their taps</p> <p>8 are wide open. So the world is awash with</p> <p>9 liquidity.</p> <p>10 KELLY, Q.C.:</p> <p>11 Q. Okay, so –</p> <p>12 DR. BOOTH:</p> <p>13 A. And when we think about that--and this is</p> <p>14 where I take exception. I've had</p> <p>15 discussions with our people in a</p> <p>16 macroeconomic forecasting model. They've</p> <p>17 got a standard macroeconomic forecasting</p> <p>18 model, a large-scale model with all of these</p> <p>19 exports, imports and everything else. The</p> <p>20 critical thing is the global policy makers.</p> <p>21 Do the central banks dump all of those</p> <p>22 securities and get us back to normal, or do</p> <p>23 they simply keep flushing the system with</p> <p>24 cash?</p> <p>25</p>

<p style="text-align: right;">Page 13</p> <p>1 KELLY, Q.C.: 2 Q. Right. 3 DR. BOOTH: 4 A. Personally, I don't think the monetary 5 policy is working and hasn't worked for 6 several years. 7 KELLY, Q.C.: 8 Q. Okay, don't – 9 DR. BOOTH: 10 A. But that's the only stream – 11 KELLY, Q.C.: 12 Q. No need to dive too deeply into the world's 13 monetary policy. 14 DR. BOOTH: 15 A. Okay, if I – 16 KELLY, Q.C.: 17 Q. Because it – 18 DR. BOOTH: 19 A. I don't know, Mr. Kelly. I would say 2009 I 20 was confident that we had a normal spring- 21 back. 2012, I began to question this 22 because of the U.S. Central Bank Bond 23 purchases. Now there's absolutely no 24 question; the capital markets do not believe 25</p>	<p style="text-align: right;">Page 15</p> <p>1 DR. BOOTH: 2 A. If you asked, me would I buy bonds now, I 3 would say no. If you asked me do I think 4 we're going to have interest rates of 3½ 5 percent next year, I'd say highly, highly 6 unlikely. I discounted the idea of a new 7 normal four—three or four years ago, but I 8 think we may end up being in this period of 9 low interest rates for at least another 10 three to five years. 11 KELLY, Q.C.: 12 Q. Okay. And so as a result of that, your 13 recommendation hasn't changed, correct? 14 DR. BOOTH: 15 A. That's correct. 16 KELLY, Q.C.: 17 Q. And I take it from that, that your view of 18 the cost of capital hasn't changed? 19 DR. BOOTH: 20 A. That's correct. I've recommended 7½ percent 21 three years ago, and recommended that the 22 Board use an automatic adjustment model, but 23 not change anything until the interest rates 24 hit 3.8 percent. Until that happens, we do 25</p>
<p style="text-align: right;">Page 14</p> <p>1 the economists. 2 KELLY, Q.C.: 3 Q. All right, so – 4 DR. BOOTH: 5 A. If they did and interest rates increased, 6 there'd be massive losses in the bond 7 portfolios. 8 KELLY, Q.C.: 9 Q. So we've gone from your certainty of 2009 to 10 at least "Waiting for Godot", but maybe even 11 questioning whether he's coming? 12 DR. BOOTH: 13 A. Yeah, perhaps he's not coming for another 14 ten years. 15 KELLY, Q.C.: 16 Q. Okay. So we remain in a relatively narrow 17 range that we just looked at from 18 approximately 2.2 percent long Canada rates 19 to 3 and a bit? 20 DR. BOOTH: 21 A. That's correct. 22 KELLY, Q.C.: 23 Q. Okay. 24 (9:15 a.m.) 25</p>	<p style="text-align: right;">Page 16</p> <p>1 not have ordinary investors determining 2 interest rates. 3 KELLY, Q.C.: 4 Q. So your message to the Board, if I follow 5 you correctly, is this is the time to stay 6 the course, nothing has changed to warrant 7 doing anything differently? 8 DR. BOOTH: 9 A. I would say that my message to the Board is 10 to use risk premium models post problems. 11 The same problems this time as they did 12 three years ago because the base of the 13 risk-free—the risk premium models is the 14 risk-free rate and that's not been 15 determined by ordinary investors. So I 16 recommended they not change the allowed ROE 17 three years ago unless interest rates went 18 above 3.8 percent. Based upon allowing a 7½ 19 percent fair ROE, and that's exactly the 20 same recommendation at the moment. 21 KELLY, Q.C.: 22 Q. Right. 23 DR. BOOTH: 24 A. Since then, I would just say I've become 25</p>

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<p>1 more pessimistic about where interest rates 2 are going. You probably remember, Mr. 3 Kelly, that I offered the Board an 4 alternative three years ago, that they use 5 an automatic adjustment mechanism and not 6 increase until interest rates go above 3.8 7 percent, or they go with the fixed rate. I 8 think it was 8.2 percent three years ago. 9 I've dropped that recommendation because I 10 don't see interest rates increasing over the 11 two test years to a level that would make 12 8.2 percent a fair ROE. 13 KELLY, Q.C.: 14 Q. So across the Canadian capital market, I'm 15 taking it from what you've said, that the 16 cost of equity is essentially the same today 17 as it was in 2013? 18 DR. BOOTH: 19 A. That's correct. The - 20 KELLY, Q.C.: 21 Q. 2012. All right. 22 DR. BOOTH: 23 A. I would say the overall equity market, there 24 might be a 50—I think there's generally 25</p>	<p>1 Q. Right, exactly. So if interest rates move 2 around a little bit, and we've looked at 3 that graph, when they went up to 3.35 in 4 2015, you wouldn't have said, "Oh 5 Newfoundland Power's cost to capital should 6 go up," because we're just still in that 7 narrow little range? 8 DR. BOOTH: 9 A. Yeah, my recommendation would have been 7.5 10 percent. 11 KELLY, Q.C.: 12 Q. Exactly. 13 DR. BOOTH: 14 A. And I suspect, I hate to tell you this, Mr. 15 Kelly, that if we come back here in three 16 years' time - 17 KELLY, Q.C.: 18 Q. You may be saying the same thing. 19 DR. BOOTH: 20 A. - my best bet at the moment is that it's 21 going to be exactly the same in three years' 22 time as it is now. 23 KELLY, Q.C.: 24 Q. Now let's have a look at PUB-CA-005. And 25</p>
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<p>1 about a 50-basis points or so decline in the 2 expects return on the equity market, but 3 there's a range of seven to eight or nine 4 percent by different people at like Aon and 5 Wyman and other people. 6 KELLY, Q.C.: 7 Q. So if the—and assuming for the moment that 8 we accept that the Board has exercised its 9 regulatory judgment the last time, your view 10 would be that the market conditions haven't 11 changed to change anything from 2012 to 12 2013. We're still in that narrow range? 13 DR. BOOTH: 14 A. I would—that's generally true. I think the 15 A bond yield at the time I prepared my 16 testimony to—in 2012 to now has come down 17 about 20, 25 basis points. 18 KELLY, Q.C.: 19 Q. Okay. 20 DR. BOOTH: 21 A. So there has been a decline in interest 22 rates, but my basic recommendation is not to 23 change until we hit 3.8 percent. 24 KELLY, Q.C.: 25</p>	<p>1 Samantha, if you scroll up to—scroll along 2 so we get lines 15 through about—there we 3 go, that part of the thing. And you explain 4 to—in response to this RFI, Dr. Booth, how 5 you go about trying to assist the Board and 6 your first point was "analyse the market 7 conditions." I'm going to skip through the 8 first couple. 9 DR. BOOTH: 10 A. Sure. 11 KELLY, Q.C.: 12 Q. "Let the data say what it says; consider 13 applying economic reasoning to adjust 14 historic data to reflect current market 15 conditions," and then, "show the order of 16 magnitude of any adjustments so the regular 17 can make"—"regulator can make a decision on 18 the basis of both fact and expert judgment." 19 DR. BOOTH: 20 A. That's correct. 21 KELLY, Q.C.: 22 Q. Right. And the key piece out of this for 23 the Board is at the end of day the Board has 24 got to exercise its regulatory expertise 25</p>

<p style="text-align: right;">Page 21</p> <p>1 judgment, correct?</p> <p>2 DR. BOOTH:</p> <p>3 A. Absolutely.</p> <p>4 KELLY, Q.C.:</p> <p>5 Q. Yes.</p> <p>6 DR. BOOTH:</p> <p>7 A. The Board, any board, is up there in order</p> <p>8 to exercise judgment to determine what is</p> <p>9 fair and reasonable -</p> <p>10 KELLY, Q.C.:</p> <p>11 Q. Right.</p> <p>12 DR. BOOTH:</p> <p>13 A. - in terms of the rates.</p> <p>14 KELLY, Q.C.:</p> <p>15 Q. So in the capital asset pricing model, or I</p> <p>16 don't know if you want to call it your</p> <p>17 adjusted model, we still have the basic—</p> <p>18 whatever the risk-free rate is, which you're</p> <p>19 saying is 3.8 as an equilibrium number,</p> <p>20 correct?</p> <p>21 DR. BOOTH:</p> <p>22 A. Well that's true. I mean the forecast for</p> <p>23 the test here, I think I have is 2.8</p> <p>24 percent.</p> <p>25</p>	<p style="text-align: right;">Page 23</p> <p>1 provided you with your evidence and perhaps</p> <p>2 that needs to be marked as the next -</p> <p>3 MS. GLYNN:</p> <p>4 Q. Information Number 31.</p> <p>5 KELLY, Q.C.:</p> <p>6 Q. Thirty-one. And Dr. Booth, I'm going to</p> <p>7 take you into that to page 25 and to the</p> <p>8 bottom of the page. Can we go to page 25,</p> <p>9 Samantha? The bottom of the page. There we</p> <p>10 go, and this is the rate that you were</p> <p>11 looking at in 2013 and '14?</p> <p>12 DR. BOOTH:</p> <p>13 A. That's correct.</p> <p>14 KELLY, Q.C.:</p> <p>15 Q. And you say there, "The RBC forecast for</p> <p>16 Canada is now more optimistic than that of</p> <p>17 the September consensus that puts the 10-</p> <p>18 year Canada bond yield at 1.8 2 months out</p> <p>19 and 2.2 12 months out, so adding the current</p> <p>20 spread for the 30-year bond implies a</p> <p>21 forecast long-term Canada yield of barely</p> <p>22 2.8 percent." Correct?</p> <p>23 DR. BOOTH:</p> <p>24 A. That's correct.</p> <p>25</p>
<p style="text-align: right;">Page 22</p> <p>1 KELLY, Q.C.:</p> <p>2 Q. We'll come to that.</p> <p>3 DR. BOOTH:</p> <p>4 A. I mean that's reasonable objective.</p> <p>5 KELLY, Q.C.:</p> <p>6 Q. We'll come to that one.</p> <p>7 DR. BOOTH:</p> <p>8 A. Yeah.</p> <p>9 KELLY, Q.C.:</p> <p>10 Q. But the equilibrium rate 3.8 to 4?</p> <p>11 DR. BOOTH:</p> <p>12 A. Yeah.</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. The market risk premium and beta. These are</p> <p>15 all factors as we talked about the last time</p> <p>16 that require judgment, either your judgment</p> <p>17 as the finance professor and ultimately the</p> <p>18 Board's regulatory judgment. Correct?</p> <p>19 DR. BOOTH:</p> <p>20 A. That's correct.</p> <p>21 KELLY, Q.C.:</p> <p>22 Q. Right. Now let's go to the point that you</p> <p>23 just touched on which is your interest rate</p> <p>24 use that used the last time. And we've</p> <p>25</p>	<p style="text-align: right;">Page 24</p> <p>1 KELLY, Q.C.:</p> <p>2 Q. And if you could, just go on to the next</p> <p>3 page, Samantha? "I would judge long-term</p> <p>4 Canada yields are marginally less than three</p> <p>5 percent as well below any equilibrium yield</p> <p>6 since they are only one percent above</p> <p>7 forecast inflation," et cetera. I'm going</p> <p>8 to stop there. And the rate that you used</p> <p>9 in your analysis in 2012 was that three</p> <p>10 percent rate, correct?</p> <p>11 DR. BOOTH:</p> <p>12 A. I think so, yeah. I think -</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. As your starting CAPM analysis?</p> <p>15 DR. BOOTH:</p> <p>16 A. Yeah, I think so and then I added 80 basis</p> <p>17 points for my bond buying.</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. And your 40 for credit spread adjustments?</p> <p>20 DR. BOOTH:</p> <p>21 A. Yeah, that's correct.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. So you started at three the last time. Now</p> <p>24 can we pull up your evidence from this time</p> <p>25</p>

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<p>1 and it's at page 25, line 17, and if you—no, 2 page 25 of Dr. Booth's current testimony. 3 Oh, I'm sorry, still looking for it. There 4 you go. And we'll go to the last paragraph, 5 okay? Now in this one you again are 6 referring in line 10 to the RBC forecast and 7 if I come down a little bit to the sentence 8 that begins, "If the current spread from 9 Schedule 2 between the 30, 2.05 percent and 10 the 10-year 1.2 percent bond of .81 percent 11 is added to the end of the 2016 forecast, 12 this implies the 30-year bond yield at the 13 end of 2016 will be only 3.01 percent. The 14 average of March and December consensus 15 forecast which is a proxy for the average 16 for the year as a whole, and consistent with 17 the application to an average forward test 18 year rate is 2.81 percent." Correct? 19 DR. BOOTH: 20 A. That's correct. 21 KELLY, Q.C.: 22 Q. Right, now the 2.81 percent is essentially 23 the same as the 2.8 percent that you looked 24 at the last time? 25</p>	<p>1 across the 30-year long bond rate and we 2 come to 2017, we have rates that would go to 3 3.65 percent. And as we've just seen, 4 looking at your—the corresponding updated 5 data, you'd have 3.35 percent? Correct? 6 DR. BOOTH: 7 A. That's correct. 8 KELLY, Q.C.: 9 Q. Right. So do we not—to compare apples to 10 apples, do we not need to essentially say 11 that the rate looking out over 2017 is 12 something in the three percent range? 13 DR. BOOTH: 14 A. As I said, Mr. Kelly, the—I mean you're 15 correct. If I was to be consistent with 16 what I did three years ago, then at that 17 point as I said I offered a fixed rate, but 18 remember we're—three years ago we were 19 talking about returning to the adjustment 20 mechanism. So I was looking for—I forget 21 what the test year was, but I was looking 22 for the test year for a starting point for 23 the automatic adjustment mechanism, and I 24 offered an alternative. It was a fixed 25</p>
Page 26	Page 28
<p>1 DR. BOOTH: 2 A. Yes. 3 KELLY, Q.C.: 4 Q. Correct? 5 DR. BOOTH: 6 A. They were basically exactly the same. 7 KELLY, Q.C.: 8 Q. Exactly. 9 DR. BOOTH: 10 A. The .01 percent is not material. 11 KELLY, Q.C.: 12 Q. Absolutely. Last time however though, you 13 looked out to see what was the rate going 14 out into 2014 because we have a 2013 - 2014 15 test year. This time we need to look at the 16 rate going out through 2016 – 2017, correct? 17 DR. BOOTH: 18 A. That's correct. 19 KELLY, Q.C.: 20 Q. Right, but you haven't factored that in 21 because if we go back to the top of the page 22 when you're writing this, Samantha, and we 23 look at the—this was the RBC forecast which 24 you're using a the point in time, and we go 25</p>	<p>1 rate. As we've just been talking, I'm 2 getting less and less pessimistic about 3 future interest rate increases. We've had 4 essentially the--exactly the same forecast 5 of increasing interest rates for the last 6 six years. 7 KELLY, Q.C.: 8 Q. Okay. 9 DR. BOOTH: 10 A. And it hasn't happened. 11 KELLY, Q.C.: 12 Q. Okay, now – 13 DR. BOOTH: 14 A. Which is "Waiting for Godot." 15 KELLY, Q.C.: 16 Q. Right, but my point still is, and I think 17 we've—you've agreed with me on it, that if 18 the—since the Board is looking to compare 19 where we were the last time and where we are 20 this time, we need to be adding—we'd be 21 needing to look at that out through 2017 22 which would take us, as we've just seen, 23 somewhere over three percent? 24 DR. BOOTH: 25</p>

Page 29	Page 31
<p>1 A. That's correct.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. Right, about 20 basis points more than what</p> <p>4 you've factored into the beginning of your</p> <p>5 analysis?</p> <p>6 DR. BOOTH:</p> <p>7 A. That's correct.</p> <p>8 KELLY, Q.C.:</p> <p>9 Q. Right, okay. And in fact, if we pull this</p> <p>10 up from the last time, just to kind of set</p> <p>11 the stage here a bit more, if we go back to</p> <p>12 the transcript at page 10, and go to the</p> <p>13 bottom of the page, you'll see where I put</p> <p>14 the question, "My next question then is what</p> <p>15 are you saying in relation to 2014," because</p> <p>16 we had a similar discussion, "because I</p> <p>17 look, for example, at the consensus</p> <p>18 forecast, Mr. McDonald," who was the Board's</p> <p>19 cost of capital witness, "has done a nice</p> <p>20 summary in his report out through 2013 and</p> <p>21 2014, and he still has a 3.04 percent</p> <p>22 average," and you can read all down through</p> <p>23 the next couple of pages. Over on page 12</p> <p>24 you agree that that's correct. So we had</p> <p>25</p>	<p>1 Q. Exactly the same.</p> <p>2 DR. BOOTH:</p> <p>3 A. In fact, I think they're same in—as in 2009.</p> <p>4 KELLY, Q.C.:</p> <p>5 Q. Exactly.</p> <p>6 DR. BOOTH:</p> <p>7 Q. I see no change in the relative risk of</p> <p>8 Canadian utilities.</p> <p>9 KELLY, Q.C.:</p> <p>10 Q. Right, again a matter that the Board will</p> <p>11 exercise its regulatory judgment on. And</p> <p>12 what I want—this is what I want to set up</p> <p>13 here, is what are the apples and apples</p> <p>14 comparisons with your last testimony?</p> <p>15 DR. BOOTH:</p> <p>16 A. To be actually honest, Mr. Kelly, it's</p> <p>17 almost exactly the same as three years ago.</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. Exactly, exactly.</p> <p>20 DR. BOOTH:</p> <p>21 A. And I –</p> <p>22 (9:30 a.m.)</p> <p>23 KELLY, Q.C.:</p> <p>24 Q. You and I are in substantial agreement.</p> <p>25</p>
Page 30	Page 32
<p>1 three percent the last time, looking out;</p> <p>2 today we have roughly three percent, maybe a</p> <p>3 little bit looking out? Agreed?</p> <p>4 DR. BOOTH:</p> <p>5 A. That's correct. I don't think the interest</p> <p>6 rate forecast has changed that much.</p> <p>7 KELLY, Q.C.:</p> <p>8 Q. Okay. I agree.</p> <p>9 DR. BOOTH:</p> <p>10 A. And that's one of the problems.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. Okay. Now, let's turn next then to—bear</p> <p>13 with me for one second. Let's go next to</p> <p>14 your testimony now at page 42. And here we</p> <p>15 are. If we go to the top of the page there</p> <p>16 at about line 4, you say, "I would therefore</p> <p>17 judge the going-forward utility risk premium</p> <p>18 to be 2.25 to 3," because we have to factor</p> <p>19 in the market risk premium and beta. And</p> <p>20 your recommendations on those are</p> <p>21 essentially the same as the last time?</p> <p>22 DR. BOOTH:</p> <p>23 A. Exactly the same.</p> <p>24 KELLY, Q.C.:</p> <p>25</p>	<p>1 Let's just go forward here. "If this is</p> <p>2 added to a 2.81 consensus forecast," so you</p> <p>3 haven't roast this up for the 2017 year,</p> <p>4 "for the average long Canadian bond yield</p> <p>5 for 2016 and a 50-basis flotation cost</p> <p>6 allowance, I would judge a simple CAPM fair</p> <p>7 return estimate for 2016 as follows." And</p> <p>8 then you set it out, and then you say below</p> <p>9 that at line 13, "The average estimate of</p> <p>10 6.08 is slightly lower, .2, than the simple</p> <p>11 average of 6.28 I used in my 2012 testimony</p> <p>12 simply because the forecast long Canada bond</p> <p>13 yield is that much lower." But adjusting</p> <p>14 for the fact that we have a 2017 test year,</p> <p>15 you actually get back to the same result,</p> <p>16 don't we?</p> <p>17 DR. BOOTH:</p> <p>18 A. That's right. It's not much difference.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. Exactly, okay.</p> <p>21 DR. BOOTH:</p> <p>22 A. I mean the critical thing, as I've stressed,</p> <p>23 is the—I would not regard 5½ to 6½ percent</p> <p>24 as a reasonable ROE for a regulated utility</p> <p>25</p>

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<p>1 because we're using a forecast long Canada 2 yield that's not being determined by 3 ordinary investors. It's being determined 4 by the central banks.</p> <p>5 KELLY, Q.C.: 6 Q. Okay, understood. Now, then we adjust for 7 that one point to be sure we're comparing 8 apples to apples. Then you go through two 9 adjustments that you made the last time and 10 the first, Dr. Booth, is the 40-basis point 11 adjustment that you used in 2012 for credit 12 spreads, and this time it's .45 percent?</p> <p>13 DR. BOOTH: 14 A. That's right.</p> <p>15 KELLY, Q.C.: 16 Q. Forty-five –</p> <p>17 DR. BOOTH: 18 A. Credit spreads are marginally higher.</p> <p>19 KELLY, Q.C.: 20 Q. Sorry?</p> <p>21 DR. BOOTH: 22 A. Credit spreads are marginally higher than 23 they were three years ago.</p> <p>24 KELLY, Q.C.: 25</p>	<p>1 programs came in, but we were looking at a 2 schedule that the FED was talking about to 3 get out of the bond buying program. Right 4 now we have no idea when the Japanese and 5 the European central banks are going to stop 6 their buying programs. And we don't know 7 when the FED is going to unwind the 3½ 8 trillion dollars' worth of securities it's 9 got.</p> <p>10 KELLY, Q.C.: 11 Q. Which is why on your analysis you're 12 actually doing this operation twist 13 adjustment?</p> <p>14 DR. BOOTH: 15 A. Well I'm doing it, but as you can see in my 16 evidence, it's a lot more volatile now than 17 it was three years ago.</p> <p>18 KELLY, Q.C.: 19 Q. Right.</p> <p>20 DR. BOOTH: 21 A. And that's partly as I explained because we 22 do have some problems with preferred shares 23 issued by banks and by resource stocks, and 24 also because there's these rate reset 25</p>
Page 34	Page 36
<p>1 Q. Right, and that's just a mathematical 2 calculation?</p> <p>3 DR. BOOTH: 4 A. That's correct.</p> <p>5 KELLY, Q.C.: 6 Q. Okay. Then you do your operation twist 7 adjustment. Correct?</p> <p>8 DR. BOOTH: 9 A. Yeah.</p> <p>10 KELLY, Q.C.: 11 Q. And the last time you had 80 basis points, 12 and this time you have 130 basis points?</p> <p>13 DR. BOOTH: 14 A. Well, the last year I had 80 basis points 15 and was reasonably comfortable with it. 16 This time I have 130 and I'm very 17 uncomfortable with it.</p> <p>18 KELLY, Q.C.: 19 Q. Not quite as certain, but -</p> <p>20 DR. BOOTH: 21 A. I'm not quite as certain because—and that's 22 why the critical thing the Board has to look 23 at is simply these bond buying programs. 24 And even in 2012 the U.S. bond buying 25</p>	<p>1 preferreds where they're being reset based 2 upon the five-year long Canada bond yield 3 and that's now down at .68 percent.</p> <p>4 KELLY, Q.C.: 5 Q. The 1.3 percent operation twist adjustment I 6 take it is your best judgment and advice to 7 the Board that you feel you can give at this 8 point in time?</p> <p>9 DR. BOOTH: 10 A. That's correct.</p> <p>11 KELLY, Q.C.: 12 Q. In other words you've tried to use your best 13 judgment to get to that number?</p> <p>14 DR. BOOTH: 15 A. That's right. I've tried to look at the 16 current level of bond yields, two percent, 17 and they're clearly incredibly low. 18 Anybody buying Government Canada bonds at 19 two percent for 50 years is taking what we 20 call—let's see. Instead of a risk-free 21 rate, it's a rate-free risk.</p> <p>22 KELLY, Q.C.: 23 Q. Okay.</p> <p>24 DR. BOOTH: 25</p>

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<p>1 A. Because the real return is negative and</p> <p>2 there's a huge amount of uncertainty</p> <p>3 surrounding that. So it's a question of</p> <p>4 what is a reasonable rate of return that</p> <p>5 people are thinking about in terms of a risk</p> <p>6 return trade-off. You add 130 basis points</p> <p>7 to 2 percent, you're at 3.3 percent.</p> <p>8 KELLY, Q.C.:</p> <p>9 Q. Okay. Now, so from there you then complete</p> <p>10 out your—can I call it an adjusted CAPM</p> <p>11 analysis?</p> <p>12 DR. BOOTH:</p> <p>13 A. No, it's not a CAPM analysis at all. It's a</p> <p>14 risk premium analysis.</p> <p>15 KELLY, Q.C.:</p> <p>16 Q. A risk premium, okay. I just—I don't want</p> <p>17 to be offside in whatever language you're</p> <p>18 using.</p> <p>19 DR. BOOTH:</p> <p>20 A. No, no, that's fine. The—I think at the</p> <p>21 moment the CAPM is, as I've said, is giving</p> <p>22 unreasonably low estimates, but you can</p> <p>23 couch any estimate in terms of the risk</p> <p>24 premium.</p> <p>25</p>	<p>1 Q. Right, 20 basis points on 7.83, because I</p> <p>2 want the Board to understand what's the</p> <p>3 comparable with 2012 – 2013. Now then you</p> <p>4 say, "Taking into account the current yields</p> <p>5 on utility preferred shares," which you've</p> <p>6 just mentioned, "and the difficulty in</p> <p>7 making a direct transfer from preferred</p> <p>8 shares to common equity, I would tend to be</p> <p>9 conservative and recommend the same 7.5</p> <p>10 percent as in 2012." Now, can I stop you</p> <p>11 there? You've already told us you used your</p> <p>12 best judgment to get to 1.3 and the .45 is</p> <p>13 simply math. Why do you adjust it back</p> <p>14 down? Because you've used judgment to make</p> <p>15 your adjustments and now you're adjusting</p> <p>16 your judgment.</p> <p>17 DR. BOOTH:</p> <p>18 A. Because the—if we look at the graph on the</p> <p>19 previous page, we can see that in 2012 we</p> <p>20 had basically a spread that was pretty</p> <p>21 constant throughout 2012. It was around</p> <p>22 about 75, 80 basis points. So I was</p> <p>23 reasonably comfortable with that. In 2013</p> <p>24 we had interest rates going up and the</p> <p>25</p>
Page 38	Page 40
<p>1 KELLY, Q.C.:</p> <p>2 Q. I don't want to get into a semantic debate</p> <p>3 is simply my point.</p> <p>4 DR. BOOTH:</p> <p>5 A. Okay.</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. Now let's go to page 51 so we understand</p> <p>8 where this kind of goes. Having made your</p> <p>9 two adjustments on the same methodology that</p> <p>10 you did from 2012, you come up with a range</p> <p>11 at lines 4 to 5 of 7.31 to 8.36 and you say,</p> <p>12 "This would indicate a 2016 fair ROE of 7.83</p> <p>13 percent for a benchmark utility," correct?</p> <p>14 DR. BOOTH:</p> <p>15 A. That's correct.</p> <p>16 KELLY, Q.C.:</p> <p>17 Q. Right. Now, can I stop you there? In order</p> <p>18 to make that apples to apples again to</p> <p>19 adjust for the 2017, I have to add on 20</p> <p>20 more basis points, so that would take us to</p> <p>21 8.03 percent?</p> <p>22 DR. BOOTH:</p> <p>23 A. That sounds about correct.</p> <p>24 KELLY, Q.C.:</p> <p>25</p>	<p>1 spread dropped down, and in fact our—before</p> <p>2 I think it was Hydro Quebec I represented a</p> <p>3 40 basis point adjustment because we were</p> <p>4 getting to the situation where interest</p> <p>5 rates were increasing and the impact of the</p> <p>6 U.S. bond buying was dissipating. People</p> <p>7 were seeing interest rates increasing. And</p> <p>8 then, starting in 2015, we have this huge</p> <p>9 increase and huge volatility. And if we go</p> <p>10 from one month to the next, we see swings of</p> <p>11 50, 60 basis points. So the problem is how</p> <p>12 much reliance am I going to be—place on</p> <p>13 something that has resulted in huge</p> <p>14 volatility swing during 2015. So when I say</p> <p>15 conservative, I'm saying when I look at the</p> <p>16 spread here, I'm not as comfortable looking</p> <p>17 at preferred shares and going from preferred</p> <p>18 shares to common shares as I was three years</p> <p>19 ago. Three years ago it was a reasonably</p> <p>20 stable relationship. Now there's extreme</p> <p>21 volatility in that relationship.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. What does conservative mean? Because if</p> <p>24 you're not sure, then couldn't vary either</p> <p>25</p>

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<p>1 way? So maybe 1.3 for operation twist</p> <p>2 should be 1.2, but maybe equally it could be</p> <p>3 1.5? In other words, you've already used</p> <p>4 your best judgment to get to 1.3. It</p> <p>5 doesn't make logical sense then to be making</p> <p>6 an adjustment to your judgment.</p> <p>7 DR. BOOTH:</p> <p>8 A. Oh it does, Mr. Kelly. All of this is based</p> <p>9 upon trying to figure out what is going on</p> <p>10 in the government bond market and what's</p> <p>11 going to happen when the bond buying</p> <p>12 programs in Europe and Japan stop and when</p> <p>13 the U.S. unwinds its program?</p> <p>14 KELLY, Q.C.:</p> <p>15 Q. Is this the point that the chair of the BCUC</p> <p>16 was making to you that you referred to at</p> <p>17 the end of your opening yesterday that</p> <p>18 you're using a lot of judgment, Dr. Booth?</p> <p>19 DR. BOOTH:</p> <p>20 A. When the BCUC, one of the panel members</p> <p>21 said—I can't remember the exact quote, but</p> <p>22 "Is judgment more important at this point in</p> <p>23 time?" And I said, "Yes."</p> <p>24 KELLY, Q.C.:</p> <p>25</p>	<p>1 what we call rate resets. They reset the</p> <p>2 dividend based, every five years, based upon</p> <p>3 the five-year government of Canada bond</p> <p>4 rate. Since the spring and the drop in the</p> <p>5 overnight rate, we've seen people looking at</p> <p>6 those preferred shares, saying, "Those are</p> <p>7 going to be reset at a premium over .68</p> <p>8 percent. I'm holding them now, but the</p> <p>9 dividends are going to be dramatically cut."</p> <p>10 So the price of those rate reset preferreds</p> <p>11 is dropped and their dividend yields have</p> <p>12 gone up. So a significant amount of that</p> <p>13 volatility I suspect, which is the index on</p> <p>14 the Toronto Stock Exchange, I suspect is</p> <p>15 being driven by these rate reset preferred</p> <p>16 shares. And you can see that when you</p> <p>17 actually look at Fortis's preferred shares.</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. Your comment about volatility is kind of</p> <p>20 interesting though, isn't it? Because</p> <p>21 you've said to the Board before that, well,</p> <p>22 the market is telling us what people—what</p> <p>23 investors think it is today. So why</p> <p>24 wouldn't we look at that market? You've</p> <p>25</p>
Page 42	Page 44
<p>1 Q. Yes.</p> <p>2 DR. BOOTH:</p> <p>3 A. There's absolutely no question judgment is</p> <p>4 more important now than I would say almost</p> <p>5 any time I've been testifying for the last</p> <p>6 30 years.</p> <p>7 KELLY, Q.C.:</p> <p>8 Q. Okay.</p> <p>9 DR. BOOTH:</p> <p>10 A. We have never ever had a situation where</p> <p>11 we've had this massive amount of</p> <p>12 intervention in government bond markets</p> <p>13 around the world which I think has made the</p> <p>14 risk premium models suspect, simply because</p> <p>15 they may be the yields that exist in the</p> <p>16 market, but I do not think they're fair</p> <p>17 basis for setting a risk premium model.</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. Okay, now –</p> <p>20 DR. BOOTH:</p> <p>21 A. So there's that huge amount of uncertainty,</p> <p>22 and that clearly—and as I said, Mr. Kelly,</p> <p>23 one of the problems with the preferred</p> <p>24 shares is a bit section of the market is</p> <p>25</p>	<p>1 applied your judgment at 1.3 percent. Why</p> <p>2 does volatility suddenly become an issue on</p> <p>3 which you have to adjust your judgment?</p> <p>4 DR. BOOTH:</p> <p>5 A. Well, because the range could be anywhere</p> <p>6 from 100 to 150 basis points for that, that</p> <p>7 adjustment. And in fact, if you go back</p> <p>8 into the spring, and it was basically 85</p> <p>9 basis points. That has been a hugely</p> <p>10 volatile adjustment. And as I said, all I'm</p> <p>11 saying is that when I look at those</p> <p>12 preferred shares, those rate reset five-year</p> <p>13 preferred shares are causing a lot of</p> <p>14 problems in the Toronto Stock Exchange</p> <p>15 index.</p> <p>16 KELLY, Q.C.:</p> <p>17 Q. Okay.</p> <p>18 DR. BOOTH:</p> <p>19 A. Which has a significant component of five-</p> <p>20 year rate reset preferred shares. So all</p> <p>21 I'm saying is the--three years ago I said to</p> <p>22 the Board, "Accept an automatic adjustment</p> <p>23 mechanism and don't change it until the</p> <p>24 forecast long Canada bond yield is 3.8</p> <p>25</p>

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1 percent." I'm looking at what's going on in
 2 the government bond market. I don't think
 3 we're going to see an increase in interest
 4 rates for the next two years.
 5 KELLY, Q.C.:
 6 Q. Yes.
 7 DR. BOOTH:
 8 A. In fact probably for the next three or four
 9 years.
 10 KELLY, Q.C.:
 11 Q. Which is why you're not—now not recommending
 12 an automatic adjustment mechanism?
 13 DR. BOOTH:
 14 A. I don't think—I wouldn't recommend the Board
 15 goes to an automatic adjustment mechanism.
 16 KELLY, Q.C.:
 17 Q. Yes. We got there in 2009 with that
 18 analysis, but -
 19 DR. BOOTH:
 20 A. Yeah, well most boards didn't. The Board
 21 came back. 2009 was huge uncertain year, as
 22 you know, Mr. Kelly, but the—and the
 23 conditions in 2009 were completely different
 24 from what they are not.
 25

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1 KELLY, Q.C.:
 2 Q. Okay.
 3 DR. BOOTH:
 4 A. The reason why the Board's -
 5 KELLY, Q.C.:
 6 Q. I don't want to bog down over automatic
 7 adjustment.
 8 DR. BOOTH:
 9 A. No, but you made a comment there and I'll
 10 just say that the reason why boards—some
 11 boards jettison in the automatic adjustment
 12 mechanism was because the ROE and the
 13 borrowing rate for utilities were going in
 14 opposite directions. We could -
 15 KELLY, Q.C.:
 16 Q. When I said "we," it was Newfoundland Power
 17 who was recommending in -
 18 DR. BOOTH:
 19 A. Well, you weren't the only one.
 20 KELLY, Q.C.:
 21 Q. - in 2009 not to have the formula. The
 22 Board did adopt it in '09, and we continued
 23 on until we got to 2012.
 24 DR. BOOTH:
 25

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1 A. That's right, but you weren't the only one.
 2 Most utilities across Canada said, "Look,
 3 how can this be? How can you give us a
 4 lower ROE when our borrowing cost is going
 5 up?"
 6 KELLY, Q.C.:
 7 Q. We're glad to see the finance professors are
 8 catching up to the utility industry.
 9 Anyway, can I -
 10 DR. BOOTH:
 11 A. No, that is not correct, Mr. Kelly. And
 12 that is a facetious remark. The -
 13 KELLY, Q.C.:
 14 Q. Well, we're -
 15 DR. BOOTH:
 16 A. As I said, in 2009 there was a period of
 17 about six months when the bond spreads
 18 increased. The A borrowing cost went up and
 19 the ROEs were going down because they were
 20 tied to the long Canada bonds yield. At
 21 that time I said the ROE—the adjustment
 22 mechanisms are fine because that was a
 23 temporary phenomenon. And it was a
 24 temporary phenomenon. And in 2009 through
 25

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1 to 2012 long Canada bond yields came down,
 2 and A bond yields came down. So the
 3 underlying premise that caused the problems
 4 in the adjustment mechanism back in 2008 -
 5 2009, has got nothing to do with what's
 6 going on at the moment.
 7 KELLY, Q.C.:
 8 Q. Okay.
 9 DR. BOOTH:
 10 A. What's going on at the moment is something
 11 that's entirely different in the capital
 12 markets which is the massive bond buying on
 13 the part of the central banks.
 14 KELLY, Q.C.:
 15 Q. Sure.
 16 DR. BOOTH:
 17 A. That did not exist in 2009. So drawing a
 18 comparison now with the fact that I'm not
 19 recommending an automatic adjustment
 20 mechanism whereas the utilities recommended
 21 in 2009 under entirely different
 22 circumstances, is not correct.
 23 KELLY, Q.C.:
 24 Q. Okay, well I don't wish to have that debate
 25

<p style="text-align: right;">Page 49</p> <p>1 further, but what I want –</p> <p>2 DR. BOOTH:</p> <p>3 A. You just did.</p> <p>4 KELLY, Q.C.:</p> <p>5 Q. I do want to come back to this point, and</p> <p>6 that we left from. And Samantha, can we</p> <p>7 come back to Dr. Booth's testimony the last</p> <p>8 time at page 56, lines 20 to 21? No, this</p> <p>9 should be his –</p> <p>10 MS. PIERCEY:</p> <p>11 Q. Oh you want 2012?</p> <p>12 KELLY, Q.C.:</p> <p>13 Q. 2012 testimony. Sorry, I wasn't clear.</p> <p>14 There we go, the bottom of the page. Now</p> <p>15 Dr. Booth, this is the analysis that you had</p> <p>16 did—that you did in 2012, and I just want to</p> <p>17 set this up for the Board. The last time</p> <p>18 you made your adjustments based upon your</p> <p>19 judgment, and starting with the 3 percent</p> <p>20 for the forecast interest rate, adjusted for</p> <p>21 your two adjustments and came up with the</p> <p>22 estimate of 6.95 percent to 8 percent, and</p> <p>23 then you said, "Overall, this would indicate</p> <p>24 a 2013 a fair ROE of 7.50," which is halfway</p> <p>25</p>	<p style="text-align: right;">Page 51</p> <p>1 your adjustment is, "I would also note that</p> <p>2 allowed ROEs in both Alberta and Quebec have</p> <p>3 been lowered since 2012". Now that doesn't</p> <p>4 seem to me to be an observation that a cost</p> <p>5 of capital expert should be making to reduce</p> <p>6 an analysis because that introduces</p> <p>7 circularity, doesn't it? A cost of capital</p> <p>8 expert is supposed to give the Board best</p> <p>9 assessment of what markets are saying, not</p> <p>10 to be driven by what boards have already</p> <p>11 done. So my first problem I have with that</p> <p>12 reason for your adjustment is circularity.</p> <p>13 I'll give you an opportunity to agree or</p> <p>14 not?</p> <p>15 DR. BOOTH:</p> <p>16 A. I would agree with that, it's the</p> <p>17 responsibility of an expert witness to</p> <p>18 inform the Board, and to offer unbiased</p> <p>19 opinion and judgment to the Board as to what</p> <p>20 is a fair ROE.</p> <p>21 KELLY, Q.C.:</p> <p>22 Q. But you wouldn't make your adjustment based</p> <p>23 upon what other regulators have done surely,</p> <p>24 it's circular?</p> <p>25</p>
<p style="text-align: right;">Page 50</p> <p>1 in between.</p> <p>2 DR. BOOTH:</p> <p>3 A. That's correct.</p> <p>4 (9:45 a.m.)</p> <p>5 KELLY, Q.C.:</p> <p>6 Q. Right. So what you've done in this time,</p> <p>7 Samantha, if we can now come back to page 51</p> <p>8 of Dr. Booth's current testimony, is we now</p> <p>9 have this adjustment to the judgment added</p> <p>10 on. In other words, there's a component in</p> <p>11 your current analysis different than in</p> <p>12 2012. This is the second change in</p> <p>13 approach, the first one being we had to</p> <p>14 adjust for the 2017 interest rate, this one</p> <p>15 here is you've added this new element of</p> <p>16 judgment to it at the end, correct?</p> <p>17 DR. BOOTH:</p> <p>18 A. It's correct that circumstances have changed</p> <p>19 over the last three years in terms of my</p> <p>20 assessment of the impact of bond buying</p> <p>21 program, that's correct.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. Can I take you down to the last sentence</p> <p>24 here, which one of the reasons you give for</p> <p>25</p>	<p style="text-align: right;">Page 52</p> <p>1 DR. BOOTH:</p> <p>2 A. Not really, it's circular in the sense that</p> <p>3 they look at exactly the same evidence, but</p> <p>4 regulators look at a variety of issues and</p> <p>5 they come on with an informed judgment as to</p> <p>6 what is fair and reasonable, and all I'm</p> <p>7 doing here is I'm not changing my</p> <p>8 recommendation. All I'm saying is in the</p> <p>9 end, "However, I note that consistent with</p> <p>10 Concentric's review of allowed ROEs prepared</p> <p>11 for the Canadian Gas Association, the</p> <p>12 statistical evidence from bond yields is for</p> <p>13 lower allowed ROEs than in 2012. I would</p> <p>14 also note that allowed ROEs in both Alberta</p> <p>15 and Quebec have been lowered since 2012".</p> <p>16 That's just background information to</p> <p>17 support my -</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. I see. So you're not saying that the</p> <p>20 explanation you provided in this is actually</p> <p>21 the reason for the 33 basis point</p> <p>22 adjustment?</p> <p>23 DR. BOOTH:</p> <p>24 A. What 33 basis point adjustment?</p> <p>25</p>

<p style="text-align: right;">Page 53</p> <p>1 KELLY, Q.C.: 2 Q. Well, you've gone from 783 to – 3 DR. BOOTH: 4 A. 750 to 783. 5 KELLY, Q.C.: 6 Q. To 750. 7 DR. BOOTH: 8 A. In terms of that 750 to 783, as I thought 9 we've established, Mr. Kelly, the major 10 reason for that is the adjustment for bond 11 buying from 80 to 130, and as I've 12 indicated, I'm very uncomfortable with that 13 because of the volatility of the preferred 14 spreads. 15 KELLY, Q.C.: 16 Q. Right, because the other problem in looking 17 at what regulators do, is it begs the 18 question of who has led the list lower, and 19 if we go for a moment to PUB-NP-034, 20 Samantha, we'll come back to this page 21 again, you see these are the current allowed 22 returns, correct? 23 DR. BOOTH: 24 A. I think so, yes. 25</p>	<p style="text-align: right;">Page 55</p> <p>1 A. No, not really. I'll explain the reason for 2 that is there's the evidentiary basis and 3 then there's the timing of the decision. 4 This Board has got quicker decisions than 5 the Alberta Utilities Commission, which 6 takes forever to come to their decision, and 7 the BCUC seems to take a long time, but in 8 terms of the sequence this year, I think 9 it's almost exactly the same as three years 10 ago. The BCUC had its hearing a month ago, 11 we've got a hearing now in Newfoundland, and 12 we're expecting to have a hearing in Alberta 13 May/June. So basically the evidentiary 14 basis for those hearings is not that 15 different. Mr. Coyne's evidence, for 16 example, is there's a 14 day difference 17 between this Board and the BCUC. So the 18 evidentiary basis on which the boards make 19 their decisions very, very similar. The 20 only difference is how long it takes the 21 boards to get the decisions out and the 22 hearing. I regard them all as being exactly 23 the same. 24 KELLY, Q.C.: 25</p>
<p style="text-align: right;">Page 54</p> <p>1 KELLY, Q.C.: 2 Q. Samantha, can you pop up NP-CA-82? Here we 3 go. Now if we can scroll up the table a 4 little bit, you'll see in – if we go to the 5 2012 lines, Dr. Booth, the first one in 6 March is a TransCanada Pipeline 7 restructuring. This is about your evidence, 8 so we'll skip over that one, and then the 9 next one we get to is actually the 10 Newfoundland Board, which is the point at 11 which it got reduced to 8.8 percent, and 12 then after that we have Nova Scotia Power, 13 then we have the Newfoundland Board again, 14 and it's only after that, after the 15 Newfoundland Board being at 8.8 now on two 16 times, that BCUC finally gets in the game 17 and Alberta gets into the game. So they 18 actually come after. We've heard a lot of 19 evidence before the Board about the 20 timeliness of this Board's decisions, so 21 it's actually this Board which has led the 22 Canadian numbers lower. Do you not agree 23 with that? 24 DR. BOOTH: 25</p>	<p style="text-align: right;">Page 56</p> <p>1 Q. Samantha, can you put back up PUB-NP-034, 2 and these are all the rates which are 3 currently in effect, and, in fact, Ontario's 4 rate is a 2016 rate just established last 5 fall. 6 DR. BOOTH: 7 A. I will accept that. 8 KELLY, Q.C.: 9 Q. In fact, Ontario has just looked at their 10 mechanisms and concluded that it is giving 11 the correct results. They've just, as of 12 January 2016, reaffirmed it? 13 DR. BOOTH: 14 A. What I would say is Ontario hasn't had a 15 litigated hearing into the ROE since 2004. 16 The Ontario Energy Board had a review with 17 internal staff that said it's working fine, 18 but that's not a litigated hearing. That 19 was an internal decision by the board. 20 KELLY, Q.C.: 21 Q. And that rate there for Ontario is a 2016 22 rate? 23 DR. BOOTH: 24 A. I think so. I think that's probably what 25</p>

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<p>1 came out in September/October.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. So if we look at that, British Columbia and</p> <p>4 Alberta are now under review, and we'll wait</p> <p>5 and see which way they go.</p> <p>6 DR. BOOTH:</p> <p>7 A. That's correct.</p> <p>8 KELLY, Q.C.:</p> <p>9 Q. But Ontario, Prince Edward Island, and Nova</p> <p>10 Scotia, are all above where this Board</p> <p>11 currently is?</p> <p>12 DR. BOOTH:</p> <p>13 A. That's correct. I mean, when you look at</p> <p>14 this, they're investor owned electric</p> <p>15 utility companies, but FortisBC Electric has</p> <p>16 generation, Nova Scotia is an integrated</p> <p>17 electrical utility that has complete</p> <p>18 generation, so you're not comparing like</p> <p>19 with like. The T & D is in Alberta, BC and</p> <p>20 Nova Scotia are not T & D, Prince Edward</p> <p>21 Island, that's the Government – so I'm not</p> <p>22 going to comment on that except for the fact</p> <p>23 they were supposed to be having a hearing</p> <p>24 and they didn't have a hearing.</p> <p>25</p>	<p>1 Q. More than that, yeah.</p> <p>2 DR. BOOTH:</p> <p>3 A. Because one of the things the OEB did was</p> <p>4 give a standardized cost of capital in the</p> <p>5 hope that they would force some mergers and</p> <p>6 acquisitions to reduce the number of tiny</p> <p>7 little distribution companies.</p> <p>8 KELLY, Q.C.:</p> <p>9 Q. There's a large number of utilities in</p> <p>10 Ontario with the allowed ROE of 9.19 percent</p> <p>11 for 2016?</p> <p>12 DR. BOOTH:</p> <p>13 A. That's right, and they've all got – well,</p> <p>14 even further than that, Mr. Kelly, they've</p> <p>15 got deemed common equity ratios, deemed cost</p> <p>16 of debt, deemed short term borrowing costs,</p> <p>17 and a deemed ROE, because most of them,</p> <p>18 their financial structures don't look</p> <p>19 anything like normal utilities because</p> <p>20 they're municipally owned. I'd also point</p> <p>21 out there that you're probably aware the</p> <p>22 Ontario Government, not only does it have a</p> <p>23 huge budget deficit, but its selling off</p> <p>24 Hydro One, and it's selling off Hydro One at</p> <p>25</p>
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<p>1 KELLY, Q.C.:</p> <p>2 Q. Ontario covers a whole range of utilities,</p> <p>3 doesn't it?</p> <p>4 DR. BOOTH:</p> <p>5 A. That's correct. Ontario is the outlier both</p> <p>6 in terms of the common equity ratio and in</p> <p>7 terms of the allowed ROE, and it's</p> <p>8 mystifying to understand why the OEB hasn't</p> <p>9 had a litigated hearing for 12 years, but as</p> <p>10 you probably know, Mr. Kelly, the two gas</p> <p>11 companies, Union Gas and Enbridge Gas, have</p> <p>12 been under settlement for about the last ten</p> <p>13 years. The only hearing into their common</p> <p>14 equity ratio was three years ago when it was</p> <p>15 confirmed at 36 percent. The rest of the</p> <p>16 utilities are the electric utilities who are</p> <p>17 almost all publicly owned.</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. I think there's something like 40 utilities</p> <p>20 across Ontario that are covered by that</p> <p>21 program?</p> <p>22 DR. BOOTH:</p> <p>23 A. I'd suspect that there's more than that.</p> <p>24 KELLY, Q.C.:</p> <p>25</p>	<p>1 a huge premium over its book value. At the</p> <p>2 same time, it's decided not to review the</p> <p>3 ROE, so I'll leave it to you to work out</p> <p>4 what the motivation of the Provincial</p> <p>5 Government is in Ontario.</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. Samantha, can we come back to page 51 of Dr.</p> <p>8 Booth's current evidence. Now this</p> <p>9 adjustment to the judgment, I'll call it, of</p> <p>10 33 basis points, is it 33 basis points that</p> <p>11 you're adjusting here?</p> <p>12 DR. BOOTH:</p> <p>13 A. No. What I'm saying is that given the</p> <p>14 uncertainty and the difficulty making a</p> <p>15 transfer for preferred shares to common</p> <p>16 equity, I would tend to recommend the same</p> <p>17 7.5 percent as in 2012, and the other side</p> <p>18 to that, Mr. Kelly, is that you can look at</p> <p>19 all the DCF evidence and the overall return</p> <p>20 on the equity market which has come down a</p> <p>21 bit.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. I'll come back to that. Before we leave</p> <p>24 this, in order to be comparable, earlier on</p> <p>25</p>

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<p>1 we had a discussion which we agreed that we</p> <p>2 need to add 20 basis points to make this</p> <p>3 apply to 2017. So instead of 750 in your</p> <p>4 analysis, is it 770?</p> <p>5 DR. BOOTH:</p> <p>6 A. No. What I said in –</p> <p>7 KELLY, Q.C.:</p> <p>8 Q. So you get the same result of 750 regardless</p> <p>9 of whether you look at a 2016 test year or a</p> <p>10 2017 test year?</p> <p>11 DR. BOOTH:</p> <p>12 A. I would say that if you believe the</p> <p>13 forecasts which have been consistently wrong</p> <p>14 for the last six years, you're entirely</p> <p>15 correct. As I've said, and I've said</p> <p>16 repeatedly, I'm getting extremely</p> <p>17 pessimistic about the forecasts that are</p> <p>18 coming out of all the economic forecasters.</p> <p>19 They're simply not believed by the capital</p> <p>20 market. If it was actually believed that</p> <p>21 interest rates would go from 2 percent to</p> <p>22 3.3 percent over the next two years, there</p> <p>23 would be huge losses in the bond market</p> <p>24 because as interest rates go up, the value</p> <p>25</p>	<p>1 adjustment mechanism, whereas now I'm just</p> <p>2 recommending 7.5 percent because I do not</p> <p>3 have any faith in the forecasters and the</p> <p>4 increase in interest rates. It's just</p> <p>5 incompatible with the way in which the</p> <p>6 capital markets are working.</p> <p>7 KELLY, Q.C.:</p> <p>8 Q. You're saying there's more uncertainty out</p> <p>9 there, but we still have to do a risk</p> <p>10 premium analysis. So if I take what you've</p> <p>11 presented yesterday in your opening, and I</p> <p>12 adjust the base forecast to 3 instead of</p> <p>13 2.81, and do the math, I get 8.03 on the</p> <p>14 screen, 20 basis, 8.04.</p> <p>15 DR. BOOTH:</p> <p>16 A. If you do that, that's – look, I have no</p> <p>17 problem with your math, Mr. Kelly, and, in</p> <p>18 fact, as I said three years ago, I</p> <p>19 recommended a fixed rate, I think, of 8.2</p> <p>20 percent because I was taking the forecast</p> <p>21 and I actually believed that we would end up</p> <p>22 having increasing interest rates. Now I'm</p> <p>23 extremely pessimistic that that's going to</p> <p>24 happen. So the major change over the last</p> <p>25</p>
Page 62	Page 64
<p>1 of bonds go down, and to be absolutely</p> <p>2 honest, I think this Board had it right</p> <p>3 several years ago where you used the</p> <p>4 existing long Canada bond yield because that</p> <p>5 is the best market expectation where the</p> <p>6 long Canada bond yield is going to be next</p> <p>7 year.</p> <p>8 KELLY, Q.C.:</p> <p>9 Q. But I –</p> <p>10 DR. BOOTH:</p> <p>11 A. And then the Board moved to a forecast. The</p> <p>12 forecasts have been consistently wrong.</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. To get to your 3 percent, I used your</p> <p>15 surrebuttal updated RBC forecast for those</p> <p>16 20 extra basis points, so Samantha, can we</p> <p>17 pull up Dr. Booth's slide from yesterday,</p> <p>18 the last one, please, and I think it's</p> <p>19 number 48.</p> <p>20 DR. BOOTH:</p> <p>21 A. I will accept, Mr. Kelly, that consistent</p> <p>22 with 2012, I've not made an adjustment for –</p> <p>23 the second year of the two year test year</p> <p>24 because in 2012, I was assuming an automatic</p> <p>25</p>	<p>1 three years is I've become extremely</p> <p>2 pessimistic about future interest rate</p> <p>3 increases.</p> <p>4 KELLY, Q.C.:</p> <p>5 Q. Dr. Booth, you have been probably the</p> <p>6 principal proponent in Canada of the risk</p> <p>7 premium analysis, and this is the</p> <p>8 methodology that you've used, correct?</p> <p>9 DR. BOOTH:</p> <p>10 A. I'm very flattered that you said I'm the</p> <p>11 principal proponent. I wouldn't have said</p> <p>12 that.</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. Well, I think you're well recognized as the</p> <p>15 major proponent for the –</p> <p>16 (10:00 a.m.)</p> <p>17 DR. BOOTH:</p> <p>18 A. Flattery will get you everywhere, Mr. Kelly,</p> <p>19 but what I would say is that I know that my</p> <p>20 colleagues, and Professor Ralph Winter,</p> <p>21 Professor Bill Waters, have been – I mean,</p> <p>22 it's the standard model that we use. It's</p> <p>23 not as if I'm doing anything strange, but I</p> <p>24 would say just to sort of back up a little</p> <p>25</p>

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<p>1 bit, when I started testifying, I used four</p> <p>2 models. Half of them were discounted cash</p> <p>3 flow models, one was a CAPM model, and one</p> <p>4 was an estimate implying a rate of return</p> <p>5 using market to book ratios. So one quarter</p> <p>6 of my testimony was CAPM. The change in the</p> <p>7 number of companies that we've got in Canada</p> <p>8 has knocked out a lot of useful techniques</p> <p>9 and you're sort of forced back, what have</p> <p>10 you got, and the major thing we've got is</p> <p>11 CAPM, and 1994 – actually, I think it's</p> <p>12 1993, the BCUC had a generic hearing where</p> <p>13 they adopted the automatic adjustment</p> <p>14 mechanism. That was nothing to do with us,</p> <p>15 we didn't – my colleague, Mike Berkowitz,</p> <p>16 and I, we didn't initiate that, we didn't</p> <p>17 say use the risk premium.</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. I don't want to go back through the history</p> <p>20 too far.</p> <p>21 DR. BOOTH:</p> <p>22 A. No, no, but when you say I'm the proponent,</p> <p>23 I don't think that's true.</p> <p>24 KELLY, Q.C.:</p> <p>25</p>	<p>1 what I'm going to suggest to you is whether</p> <p>2 it's 770, in other words you add the 20, but</p> <p>3 make an adjustment, or it's 804, what your</p> <p>4 analysis is showing on this risk premium</p> <p>5 analysis which you do consistently is</p> <p>6 actually a somewhat higher cost of equity</p> <p>7 before you make any judgment, and at 770,</p> <p>8 it's still higher. In other words, the</p> <p>9 directional impact is higher, not lower.</p> <p>10 Agreed?</p> <p>11 DR. BOOTH:</p> <p>12 A. I'd say there's some truth to that, and just</p> <p>13 to come back again, the simple CAPM 6</p> <p>14 percent, and it's not as if everything is</p> <p>15 sequential. I look at the full canopy of</p> <p>16 information, and I've been looking at DCF</p> <p>17 versus CAPM, and I'm being forced to look at</p> <p>18 other estimates; what does AON Hewitt say,</p> <p>19 what does Towers Perrin say, what does Duff</p> <p>20 & Phelps say to corroborate what's going on,</p> <p>21 and that informed my judgment to look at the</p> <p>22 CAPM and say that's not fair, it's not a</p> <p>23 reasonable rate of return. Then that's</p> <p>24 brought in, these adjustments that I think</p> <p>25</p>
Page 66	Page 68
<p>1 Q. That was a compliment. You can take it as a</p> <p>2 compliment.</p> <p>3 DR. BOOTH:</p> <p>4 A. I know, but I'm a humble guy, I'm not going</p> <p>5 to take compliments I don't deserve.</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. Fair enough. As a matter of analysis,</p> <p>8 though, if we look at what you have on the</p> <p>9 screen, essentially what you have is a risk</p> <p>10 premium type formula analysis, isn't it?</p> <p>11 DR. BOOTH:</p> <p>12 A. That's right, it is a risk premium.</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. And a formula type analysis. In other</p> <p>15 words, you start with what you take as the</p> <p>16 long Canada forecast bond yield, you make</p> <p>17 some adjustments to it, and then you come up</p> <p>18 with your final result?</p> <p>19 DR. BOOTH:</p> <p>20 A. That's correct. If I just did a simple</p> <p>21 CAPM, we'd be down to 6 percent.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. Oh, yeah, and this type of analysis, what</p> <p>24 you end up with is the type of formula, and</p> <p>25</p>	<p>1 are necessary to come up with a risk premium</p> <p>2 that makes sense.</p> <p>3 KELLY, Q.C.:</p> <p>4 Q. So your risk premium analysis takes us on</p> <p>5 the Canadian market directionally somewhat</p> <p>6 higher? We can debate whether it's 20 basis</p> <p>7 points or 50 basis points, but directionally</p> <p>8 higher on the analysis?</p> <p>9 DR. BOOTH:</p> <p>10 A. I would say that the core estimate is the</p> <p>11 same, if not slightly lower, which is the</p> <p>12 normal fair ROE. I'd have to go back and</p> <p>13 see what that was in 2012, and then the</p> <p>14 credit spread adjustment, you're correct, is</p> <p>15 5 basis points up. The big one is operation</p> <p>16 twist, and the problem there is -</p> <p>17 KELLY, Q.C.:</p> <p>18 Q. You've used your best judgment to get there.</p> <p>19 DR. BOOTH:</p> <p>20 A. I've used my judgment, but there's huge</p> <p>21 uncertainty surrounding that adjustment now</p> <p>22 that was even bigger than it was three years</p> <p>23 ago because the U.S. is now finished and</p> <p>24 we've got all these other things going on,</p> <p>25</p>

<p style="text-align: right;">Page 69</p> <p>1 but you're correct, I mean, the estimate is</p> <p>2 what it is, it's higher.</p> <p>3 KELLY, Q.C.:</p> <p>4 Q. Now the next point I want to explore with</p> <p>5 you, because we've had a discussion about</p> <p>6 where the capital markets are, and you've</p> <p>7 told me they're substantially the same. We</p> <p>8 looked at your risk premium analysis and saw</p> <p>9 it's slightly directionally higher, I don't</p> <p>10 want to make a mountain out of a molehill,</p> <p>11 it's directionally higher.</p> <p>12 DR. BOOTH:</p> <p>13 A. No, that's fine.</p> <p>14 KELLY, Q.C.:</p> <p>15 Q. The way the Board approached this in its</p> <p>16 last Order was to take your 380, apply their</p> <p>17 judgment to the market risk premium and the</p> <p>18 beta, and if you use the Board's methodology</p> <p>19 from the last time in the current market</p> <p>20 conditions, the math would be the exact</p> <p>21 same. In other words, you'd be 380,</p> <p>22 assuming the same market risk premium and</p> <p>23 beta, you'd get the same math, correct?</p> <p>24 DR. BOOTH:</p> <p>25</p>	<p style="text-align: right;">Page 71</p> <p>1 7.5 percent every hearing I've been in.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. Let's talk next then a little bit about DCF.</p> <p>4 We chatted about this in our last discussion</p> <p>5 in January, 2013, and I think you recognized</p> <p>6 at that stage that there'd been a shift by</p> <p>7 Canadian regulators, and that the use of</p> <p>8 multiple tests, including DCF, is now</p> <p>9 preferable?</p> <p>10 DR. BOOTH:</p> <p>11 A. I think it's fair to say that I'd been</p> <p>12 recommending looking at other models as well</p> <p>13 as simple CAPM models. Like myself, most</p> <p>14 boards still count it in terms of a CAPM,</p> <p>15 and then do this sort of hand wave and can</p> <p>16 say other models we add 50 basis points or</p> <p>17 60 basis points, or 75 basis points, and</p> <p>18 that would be – the other models would</p> <p>19 primarily be DCF.</p> <p>20 KELLY, Q.C.:</p> <p>21 Q. Let me take you to page 40 of the transcript</p> <p>22 from our discussion the last time, and I</p> <p>23 take you down to about line 13 on page 40.</p> <p>24 "Can we agree that since the last hearing</p> <p>25</p>
<p style="text-align: right;">Page 70</p> <p>1 A. That's correct. From what I remember, the</p> <p>2 Board came up with a CAPM of 8.2, and then</p> <p>3 pushed it up to 8.8 by the use of other</p> <p>4 models.</p> <p>5 KELLY, Q.C.:</p> <p>6 Q. Right. We'll come to the other models.</p> <p>7 What I'm trying to set up to be sure we</p> <p>8 understand it, first of all, you say the</p> <p>9 overall market is the same, your risk</p> <p>10 premium analysis is directionally higher,</p> <p>11 and on the Board's methodology you would get</p> <p>12 the same result?</p> <p>13 DR. BOOTH:</p> <p>14 A. Yeah, I would – I mean, I just qualify</p> <p>15 directionally higher, but with a huge amount</p> <p>16 of uncertainty.</p> <p>17 KELLY, Q.C.:</p> <p>18 Q. Fair enough.</p> <p>19 DR. BOOTH:</p> <p>20 A. But otherwise, you're correct, I recommended</p> <p>21 7.5 percent, as your data shows, ever since</p> <p>22 2012 when we started these massive bond</p> <p>23 buying programs and it's disrupted the</p> <p>24 capital markets, and since then, I've said</p> <p>25</p>	<p style="text-align: right;">Page 72</p> <p>1 before this Board", in other words, 2009,</p> <p>2 "that there's been a shifting emphasis among</p> <p>3 regulators from CAPM towards DCF, and I'm</p> <p>4 not by the question suggesting that other</p> <p>5 regulators have simply embraced DCF, but</p> <p>6 that there'd been a shift in emphasis across</p> <p>7 the country in terms of the use of DCF with</p> <p>8 CAPM or risk premium analysis, if you like",</p> <p>9 and your answer was, "I agree with that",</p> <p>10 and then you go on to explain why.</p> <p>11 DR. BOOTH:</p> <p>12 A. Yeah, the –</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. Do we agree?</p> <p>15 DR. BOOTH:</p> <p>16 A. That's true, I've seen more of these with</p> <p>17 60, 70, 80 basis points adjustment for other</p> <p>18 models, that's correct.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. And if we go over to the next page to page</p> <p>21 41, and if we come down to the question that</p> <p>22 begins at line 12, I take you to a</p> <p>23 particular RFI at the time, and at line 14,</p> <p>24 perhaps if you can take it back up to the</p> <p>25</p>

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<p>1 top of it, there we go, if you go to line</p> <p>2 19, you were asked to confirm that, "In</p> <p>3 arriving at its 9.5 percent ROE for TGI",</p> <p>4 this is the BCUC, "it gave most weight to</p> <p>5 the DCF approach, lesser weight to the ERP</p> <p>6 and CAPM approaches, and a very small amount</p> <p>7 of weight to the CE approach, comparable</p> <p>8 earnings", and the answer you gave, you</p> <p>9 confirmed that that's correct, but you</p> <p>10 thought at the time it was a bit of an</p> <p>11 outlier.</p> <p>12 DR. BOOTH:</p> <p>13 A. That's correct, and I said it's a bit of an</p> <p>14 outlier simply because of the way in which</p> <p>15 the BCUC framed that decision in 2009, and</p> <p>16 that was also the decision that led them to</p> <p>17 bump up the common equity ratio from 35 to</p> <p>18 40 percent.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. Right, so the BCUC gives most weight to the</p> <p>21 DCF?</p> <p>22 DR. BOOTH:</p> <p>23 A. I wouldn't say that now. I'm not so sure.</p> <p>24 I'd have to go and look at the decision for</p> <p>25</p>	<p>1 Q. That's exactly right. In fact, I was going</p> <p>2 to come to this later, but since we're on</p> <p>3 the topic, let's talk about it now. In</p> <p>4 fact, the BCUC had a very extensive</p> <p>5 examination before coming to its conclusions</p> <p>6 about the use of DCF and the fact that this</p> <p>7 analyst bias issue doesn't exist the way you</p> <p>8 suggest it has?</p> <p>9 DR. BOOTH:</p> <p>10 A. That was the 2009 decision where they made</p> <p>11 explicit statements about analysts' bias. I</p> <p>12 warned you - in 2013, they said they wanted</p> <p>13 to look at multi-factor models and more</p> <p>14 advanced models, and I told them beware of</p> <p>15 asking for what you might not - you may get</p> <p>16 what you're asking for.</p> <p>17 KELLY, Q.C.:</p> <p>18 Q. Right, in fact, to follow up on this let me</p> <p>19 take you to CA-NP-079, and this is about the</p> <p>20 use of U.S. data, and if we go down to line</p> <p>21 19, in its 2013 generic cost of capital</p> <p>22 decision, the BC Utilities Commission</p> <p>23 accepted the use of U.S. data and made no</p> <p>24 explicit adjustments, agreed?</p> <p>25</p>
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<p>1 the 2013 one, but you're absolutely correct,</p> <p>2 in 2009, not only did they give weight to</p> <p>3 the DCF, but they also said that analysts'</p> <p>4 growth estimates, no reason to discount</p> <p>5 them. So that, I would say, was a little</p> <p>6 bit of an outlier compared to other Canadian</p> <p>7 boards.</p> <p>8 KELLY, Q.C.:</p> <p>9 Q. BCUC is a pretty experienced and competent</p> <p>10 board, isn't it, Dr. Booth?</p> <p>11 DR. BOOTH:</p> <p>12 A. Oh, absolutely. Look, I have a lot of</p> <p>13 respect for the BCUC. They had a major</p> <p>14 hearing, as you're probably aware, in 2012</p> <p>15 where I think they had four or five</p> <p>16 commissions, and they brought in Ron</p> <p>17 Giamarrino, who was the former Chair of the</p> <p>18 Finance Group at UBC, as a special</p> <p>19 commissioner to deal with a lot of the</p> <p>20 witness testimony, because in that hearing,</p> <p>21 I think, there was about five expert</p> <p>22 witnesses and that was a really</p> <p>23 sophisticated hearing.</p> <p>24 KELLY, Q.C.:</p> <p>25</p>	<p>1 DR. BOOTH:</p> <p>2 A. I'd have to check that, but I've got no</p> <p>3 reason to believe that that's not correct.</p> <p>4 KELLY, Q.C.:</p> <p>5 Q. In its 2009 generic cost of capital</p> <p>6 decision, which is the one you told us a few</p> <p>7 minutes ago was the last time the OEB looked</p> <p>8 at, the OEB also accepted the U.S. data</p> <p>9 without making any adjustments, correct?</p> <p>10 DR. BOOTH:</p> <p>11 A. Yes, so I said that was not a litigated</p> <p>12 hearing. There were on information requests</p> <p>13 and there was no cross-examination, so the</p> <p>14 evidence that the three utility witnesses</p> <p>15 put forward was never challenged.</p> <p>16 KELLY, Q.C.:</p> <p>17 Q. And there's some very good quotations there</p> <p>18 from the OEB. I'm not going to spend time</p> <p>19 on those. Come over to page 2, Samantha,</p> <p>20 line 22. In its TQM decision, which is 2008,</p> <p>21 so the National Energy Board as far back as</p> <p>22 2008 found that, "U.S. market returns are</p> <p>23 relevant to the cost of capital for Canadian</p> <p>24 firms, and that the regulatory regimes in</p> <p>25</p>

<p style="text-align: right;">Page 77</p> <p>1 Canada and the U.S. are sufficiently similar 2 as to justify comparison. Moreover, the NEB 3 found that Canadian utilities are competing 4 for capital in global financial markets that 5 are increasingly integrated. The NEB 6 recognized that it is no longer possible to 7 view Canada as insulated from the remainder 8 of the investing world, and that doing so 9 would be detrimental to the ability of 10 Canadian utilities to compete for capital". 11 So that's where the NEB, another main 12 regulator in Canada, arrived in 2008? 13 DR. BOOTH: 14 A. That's correct, and that was a decision 15 where the National Energy Board used ACWI 16 and that's something that even the NEB has 17 retraced its steps on, but there's actually 18 no question, Mr. Kelly, that the capital 19 markets are more integrated now than they 20 were two years ago, five years ago, ten 21 years ago, fifteen years ago, twenty years 22 ago. We have seen fundamental changes in 23 taxes and impediments, particularly for 24 pension fund and tax preferred investments 25</p>	<p style="text-align: right;">Page 79</p> <p>1 KELLY, Q.C.: 2 Q. So is it your view that the financial 3 situation which has existed over the last 4 four or five years has actually facilitated 5 or moved towards further integration, did I 6 take that from your answer? 7 DR. BOOTH: 8 A. I would say that there's two things going 9 on. One is that there is more integration, 10 still difficult for Canadians to buy foreign 11 securities that are not listed in U.S. 12 exchanges, very difficult to buy German 13 stocks if you're a Canadian, or Italian 14 stocks, so we still have restrictions mainly 15 due to securities regulations buying foreign 16 securities, but there's no question that the 17 capital markets themselves are getting more 18 integrated, and there's also no question 19 that the current problems facing investors 20 in Germany, Italy, France, the U.K., the 21 U.S., are all very similar, they're looking 22 at the same problems of slow growth, massive 23 government - central bank intervention in 24 the markets. So it's those same economic 25</p>
<p style="text-align: right;">Page 78</p> <p>1 that used to basically make sure that we 2 invested in Canada. You probably remember 3 at one point we had a 10 percent allowance 4 for foreign securities in tax preferred 5 plans. That's disappeared. 6 KELLY, Q.C.: 7 Q. So we have much more integrated capital 8 markets than even two years ago? 9 DR. BOOTH: 10 A. I would say they're getting more integrated 11 and right now, and for the last six to seven 12 years, we've been in what we call a macro 13 investing environment. It doesn't matter 14 what stocks you pick, it's all macro, it's 15 all basically where's the global economy 16 going, what's going to happen with central 17 banks, and capital markets have moved more 18 closely together over the last six to seven 19 years than they did in the previous time 20 periods because we're all looking at 21 fundamentally the same economic environment 22 of slow growth, high debt and deficits in 23 the public sector, and significant 24 unemployment in the rest of the world. 25</p>	<p style="text-align: right;">Page 80</p> <p>1 problems that result in the same reaction 2 and result in the same sort of behaviour of 3 security prices. Trying to say, well, 4 that's because they're integrated versus 5 you're looking at the same economic 6 phenomenon is incredibly difficult. 7 KELLY, Q.C.: 8 Q. Yeah. 9 DR. BOOTH: 10 A. Academics will be looking at this for the 11 next 30 years. 12 KELLY, Q.C.: 13 Q. A nice question as to what's the chicken and 14 the egg, but what's important for this board 15 to take out of it is we have more integrated 16 markets than we did when you and I were 17 having this discussion in 2013? 18 DR. BOOTH: 19 A. That's right, and when we come back in 20 another three year's time, if there's still 21 2 percent long Canada bond yields, we'll 22 probably have the same discussion because 23 we're in - I think I mentioned three years 24 ago, we got a long drawn out recovery, and 25</p>

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<p>1 we recovered and we're waiting for Godot, 2 we're waiting for the rest of the world to 3 get their act together. 4 (10:15 a.m.) 5 KELLY, Q.C.: 6 Q. Dr. Booth, we went through the apples to 7 apples comparison on your risk premium 8 analysis so that the Board can compare that. 9 Now last time around, you also had a DCF 10 analysis and the Board referred to that in 11 its judgment, and you and I had a fairly 12 extensive discussion over it the last time, 13 and I want to take you to that, so we do an 14 apples to apples comparison so the Board can 15 see the directional changes that flow out of 16 that, if any. If we go to your testimony 17 the last time, it begins on page 14 – sorry, 18 it's Appendix "D", my mistake. Okay, and 19 this is where you start the discussion about 20 your individual company estimates, and 21 Samantha, if you could come over to page 15. 22 Do you have that, Dr. Booth? 23 DR. BOOTH: 24 A. Page 15, yes. 25</p>	<p>1 analysis the last time. If you come over, 2 Samantha, to page 17, and come down to Dr. 3 Booth's conclusion at about line 18, Dr. 4 Booth, you write, "I would judge DCF 5 estimates using analysts' growth forecast to 6 be less reliable than the DCF estimates for 7 the market as a whole, but they confirm the 8 low risk nature of U.S. utilities and a fair 9 return for them of about 873", which is what 10 we just looked at. "This estimate is 11 consistent with the average ROE of U.S. gas 12 and electric utilities of just over 11 13 percent since 1993", correct? 14 DR. BOOTH: 15 A. What page are we looking at? 16 KELLY, Q.C.: 17 Q. Sorry, page 17 of Appendix "D". 18 DR. BOOTH: 19 A. Okay, sorry, I see that. 20 KELLY, Q.C.: 21 Q. I'll give you another minute to just have a 22 quick look at that again. 23 DR. BOOTH: 24 A. That's right, and the fact that I show a 25</p>
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<p>1 KELLY, Q.C.: 2 Q. And this is the DCF analysis that you did 3 the last time, and just to refresh the 4 Board's memory, we'll go to the transcript 5 if we need to, the line we have to look at 6 is the "K" line? 7 DR. BOOTH: 8 A. That's correct. 9 KELLY, Q.C.: 10 Q. We come down to the 873, correct? 11 DR. BOOTH: 12 A. Yes. 13 KELLY, Q.C.: 14 Q. The median, not the average? 15 DR. BOOTH: 16 A. Yeah. 17 KELLY, Q.C.: 18 Q. We add 50 basis points for flotation and we 19 get the 923 that the Board referred to in 20 its decision the last time? 21 DR. BOOTH: 22 A. I'll accept that. 23 KELLY, Q.C.: 24 Q. Okay. Now if you – and you did this DCF 25</p>	<p>1 market to book ratio significantly above 1. 2 KELLY, Q.C.: 3 Q. So the last time on this methodology, you 4 got a 9.23 DCF with the 50 basis points 5 added on? 6 DR. BOOTH: 7 A. That's correct. 8 KELLY, Q.C.: 9 Q. Now can we go to your evidence this time, 10 which is again in Appendix "D", and we go to 11 page 14, and you actually do DCF analysis 12 this time on two different samples or two 13 different proxy groups. The one on the top 14 of the page are essentially gas utilities 15 and I'm going to skip over those and go to 16 the U.S. electric ones on the bottom. Are 17 you with me, Dr. Booth? 18 DR. BOOTH: 19 A. I am. 20 KELLY, Q.C.: 21 Q. And the proxy group which you used were Duke 22 Energy, Allele Inc., Eversource, Great 23 Plains, OGE Energy, Pinnacle West, and 24 Westar Energy? 25</p>

<p style="text-align: right;">Page 85</p> <p>1 DR. BOOTH:</p> <p>2 A. That's right, I think they're exactly the</p> <p>3 same as Mr. Coyne's.</p> <p>4 KELLY, Q.C.:</p> <p>5 Q. And you chose those as the reasonable U.S.</p> <p>6 comparators, correct?</p> <p>7 DR. BOOTH:</p> <p>8 A. No, I chose them so that you wouldn't ask me</p> <p>9 about why did you choose those firms. I</p> <p>10 chose them because they're chosen by</p> <p>11 American experts, for the same reason I</p> <p>12 chose the gas companies.</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. And you're trying to find as close a proxy</p> <p>15 sample as is useful?</p> <p>16 DR. BOOTH:</p> <p>17 A. Well, when you look at these companies, as I</p> <p>18 think I've said, you're looking at the capital</p> <p>19 market greater expectations and the capital</p> <p>20 market values for these utilities, and then you</p> <p>21 look at them and you consider whether or not</p> <p>22 they're reasonable comparators, and the capital</p> <p>23 market rates return are more useful than</p> <p>24 looking at the accounting rates of return,</p> <p>25</p>	<p style="text-align: right;">Page 87</p> <p>1 all human, and I would want to draw it to</p> <p>2 your attention that the number doesn't seem</p> <p>3 right because as an electric utility, it</p> <p>4 didn't look right to us.</p> <p>5 DR. BOOTH:</p> <p>6 A. Well, as an electric utility, it doesn't</p> <p>7 look right on the Great Plains on 3.23</p> <p>8 percent compound growth in their earnings</p> <p>9 either.</p> <p>10 KELLY, Q.C.:</p> <p>11 Q. Yeah.</p> <p>12 DR. BOOTH:</p> <p>13 A. What I was doing, just reporting this data,</p> <p>14 and, in fact, for the gas you find a large</p> <p>15 number of negative numbers.</p> <p>16 KELLY, Q.C.:</p> <p>17 Q. I'm not quarrelling about - I'm just</p> <p>18 pointing out to you we think you just</p> <p>19 misread a table.</p> <p>20 DR. BOOTH:</p> <p>21 A. Okay, look, I take that, subject to check.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. Sure, and nothing turns on it, so just so</p> <p>24 you're aware of it because, otherwise, it</p> <p>25</p>
<p style="text-align: right;">Page 86</p> <p>1 because they're adjusted by investors.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. Can I just point out one little thing for</p> <p>4 you, and you can - nothing really turns on</p> <p>5 this, but if you look at Pinnacle West under</p> <p>6 the first column, five year growth past, and</p> <p>7 you got -0.04, and -</p> <p>8 DR. BOOTH:</p> <p>9 A. Well, when you say "I've got", yes, it's the</p> <p>10 five year past growth reported by Yahoo.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. Just bear with me for a second. That looked</p> <p>13 like a very odd number for an electric</p> <p>14 utility, so we checked, and we think you</p> <p>15 simply misread the table you were taking it</p> <p>16 from. That appears to be the last quarter</p> <p>17 result as opposed to the five year result,</p> <p>18 and you can take, subject to check, that the</p> <p>19 correct number should be 7.59 percent.</p> <p>20 DR. BOOTH:</p> <p>21 A. I'll take that, subject to check.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. And nothing as far as I can see turns on</p> <p>24 that analysis. It's just one of those, we're</p> <p>25</p>	<p style="text-align: right;">Page 88</p> <p>1 just makes the table look odd. Now to</p> <p>2 compare apples to apples, we have to come</p> <p>3 over to mid column, the "K" line again,</p> <p>4 correct?</p> <p>5 DR. BOOTH:</p> <p>6 A. That's correct.</p> <p>7 KELLY, Q.C.:</p> <p>8 Q. We come down to the 8.90, the median again?</p> <p>9 DR. BOOTH:</p> <p>10 A. That's correct.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. We add 50 basis points, so we'd be at 9:40?</p> <p>13 DR. BOOTH:</p> <p>14 A. Correct.</p> <p>15 KELLY, Q.C.:</p> <p>16 Q. 8.90 and 50 is 9.40, correct?</p> <p>17 DR. BOOTH:</p> <p>18 A. Correct.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. So the comparison with the 9.23 the last</p> <p>21 time would be 9.40 this time?</p> <p>22 DR. BOOTH:</p> <p>23 A. No, I don't think that's correct. I think,</p> <p>24 as you said, the comparison three years ago</p> <p>25</p>

<p style="text-align: right;">Page 89</p> <p>1 was with the gas companies.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. No, it was with a proxy sample that you took</p> <p>4 back then, a different proxy sample, I</p> <p>5 agree.</p> <p>6 DR. BOOTH:</p> <p>7 A. That's correct. I mean, if you just say,</p> <p>8 well, it's a proxy sample when you're</p> <p>9 picking that sample, then you're correct.</p> <p>10 If you look at it and say gas companies to</p> <p>11 gas companies, then you're not correct,</p> <p>12 because the gas companies to gas companies,</p> <p>13 this is 8.38 percent median.</p> <p>14 KELLY, Q.C.:</p> <p>15 Q. These are your samples, though. So that</p> <p>16 we're not at cross-purposes, Samantha, let's</p> <p>17 go back to the top of the page and here's</p> <p>18 your gas sample, in which case if we look at</p> <p>19 the same set of numbers, we'd be at 8.38 for</p> <p>20 the median?</p> <p>21 DR. BOOTH:</p> <p>22 A. That's right.</p> <p>23 KELLY, Q.C.:</p> <p>24 Q. And then we'd be at with 50 basis points,</p> <p>25</p>	<p style="text-align: right;">Page 91</p> <p>1 electric utilities is 8.90. So you can look</p> <p>2 at that and say, well, there's 50 basis</p> <p>3 points higher cost of equity for the</p> <p>4 electrics and the gas, and that actually</p> <p>5 confirms the fact that the betas for the</p> <p>6 U.S. electric companies is significantly</p> <p>7 higher than the betas for the U.S. gas</p> <p>8 companies.</p> <p>9 KELLY, Q.C.:</p> <p>10 Q. But these are the comparisons that the Board</p> <p>11 will have to look at between the 9.23 that</p> <p>12 you had the last time, and 9.40 or 8.88 this</p> <p>13 time?</p> <p>14 DR. BOOTH:</p> <p>15 A. Well, what I would recommend the Board do is</p> <p>16 say, well, it's 9.23 percent for the U.S.</p> <p>17 gas samples that I used last time, and they</p> <p>18 were basically, from what I remember, based</p> <p>19 upon Ms. McShane's sample and the Brattle</p> <p>20 Group sample, and again designed to avoid a</p> <p>21 lot of cross-examination of why this</p> <p>22 company, why not that company, and on that</p> <p>23 point, it was 9.23 three years ago, and now</p> <p>24 it's 8.38 plus 50 basis points, 8.88.</p> <p>25</p>
<p style="text-align: right;">Page 90</p> <p>1 8.88?</p> <p>2 DR. BOOTH:</p> <p>3 A. That's right, so down by 30/35 basis points.</p> <p>4 KELLY, Q.C.:</p> <p>5 Q. A small down there, a small up on the</p> <p>6 bottom?</p> <p>7 DR. BOOTH:</p> <p>8 A. Yes.</p> <p>9 KELLY, Q.C.:</p> <p>10 Q. And what I'm taking out of that, Dr. Booth,</p> <p>11 is directionally I'm not seeing any material</p> <p>12 change in the U.S. market for the cost of</p> <p>13 equity between 2013 and where we are today.</p> <p>14 Do you agree with that?</p> <p>15 DR. BOOTH:</p> <p>16 A. No, I would not agree with that. I mean,</p> <p>17 first of all, I don't put a great deal of</p> <p>18 stock on individual point estimates, but</p> <p>19 having said that, directionally the gas</p> <p>20 utilities are down compared to three years</p> <p>21 ago, although as I said, I wouldn't put a</p> <p>22 great deal of faith in that, and the other</p> <p>23 thing you can look at this is the fact that</p> <p>24 the median gas utilities is 8.38, the median</p> <p>25</p>	<p style="text-align: right;">Page 92</p> <p>1 KELLY, Q.C.:</p> <p>2 Q. The sample is not exactly the same either.</p> <p>3 DR. BOOTH:</p> <p>4 A. No, that's true, the sample is not exactly</p> <p>5 the same because life changes.</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. As we saw when we looked at the market as a</p> <p>8 whole, when we look at these numbers, these</p> <p>9 are minor variations from the 9.23 that we</p> <p>10 saw the last time, a few basis points higher</p> <p>11 on one, a few basis points lower on the</p> <p>12 other, agreed?</p> <p>13 DR. BOOTH:</p> <p>14 A. 30/50 basis points, is that minor? I would</p> <p>15 suspect if you say that to Newfoundland</p> <p>16 Power, they would say 50 basis points is not</p> <p>17 minor on the ROE.</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. It's an interesting approach that you take</p> <p>20 because on CAPM, when we were talking about</p> <p>21 50 basis points difference in your CAPM, or</p> <p>22 I should call it your equity or your risk</p> <p>23 premium analysis, you were quick to say, oh,</p> <p>24 50 basis points, I can take 33 of it away</p> <p>25</p>

<p style="text-align: right;">Page 93</p> <p>1 just as a judgmental matter?</p> <p>2 DR. BOOTH:</p> <p>3 A. No, I think that's not a correct assertion.</p> <p>4 As I said, the big problem with that</p> <p>5 analysis is simply the preferred share</p> <p>6 yields and the fact that we've seen this</p> <p>7 demonstrable increase in volatility. All</p> <p>8 I'm saying here is if you believe these</p> <p>9 numbers, and these are straight from the</p> <p>10 analysts' forecasts and they're mechanical</p> <p>11 calculations, then the U.S. gas sample</p> <p>12 indicates a reduction from 2013 to today,</p> <p>13 and it also indicates that the U.S.</p> <p>14 electrics have got a higher cost of equity</p> <p>15 than the U.S. gas companies, which is</p> <p>16 consistent with their beta estimates. So</p> <p>17 what I would tell the Board to take from</p> <p>18 this is that directionally the DCF indicates</p> <p>19 a reduction in the U.S. equity cost, and the</p> <p>20 fact that U.S. electric companies are</p> <p>21 riskier than U.S. gas companies.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. Okay, so your advice to the Board, and we</p> <p>24 talked about Canadian direction earlier,</p> <p>25</p>	<p style="text-align: right;">Page 95</p> <p>1 the different governments?</p> <p>2 DR. BOOTH:</p> <p>3 A. That's exactly right, but all I'm doing is</p> <p>4 pointing out that when you look at</p> <p>5 integrated capital markets, the basis</p> <p>6 proposition is the same thing sells for the</p> <p>7 same price in two markets. So the classic</p> <p>8 example is gold, because we run the gold</p> <p>9 standard for 120 years, so we saw movements</p> <p>10 in gold and we saw exchange rates driven by</p> <p>11 the price of gold. It's a commodity, it has</p> <p>12 to sell for effectively the same price in</p> <p>13 different markets. Equities are not a</p> <p>14 commodity. Equities are different between</p> <p>15 the U.S. and Canada, and in particular, as</p> <p>16 we know, Canadian utilities are not traded</p> <p>17 in the United States, and they have very</p> <p>18 little non-Canadian ownership, and they're</p> <p>19 restricted from selling securities into the</p> <p>20 U.S. So claiming that it's integrated on</p> <p>21 the big level, particularly in the massive</p> <p>22 flows in government bond markets, and then</p> <p>23 saying, well, that means it's fully</p> <p>24 integrated in all the different components</p> <p>25</p>
<p style="text-align: right;">Page 94</p> <p>1 your advice to the Board, you think, is that</p> <p>2 the U.S. market is slightly directionally</p> <p>3 lower?</p> <p>4 DR. BOOTH:</p> <p>5 A. I would say –</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. That doesn't seem to fit, frankly. We just</p> <p>8 talked about integrated capital markets.</p> <p>9 One would logically expect that we have a</p> <p>10 slightly higher – directionally higher in</p> <p>11 Canada, directionally higher in the United</p> <p>12 States, or at least equal in the U.S., which</p> <p>13 is what I'm seeing in the data?</p> <p>14 DR. BOOTH:</p> <p>15 A. Well, are you seeing in the data the fact</p> <p>16 that the U.S. bond yields are 70 to 80 basis</p> <p>17 points higher than Canada? If you believe</p> <p>18 in industry graded market, the borrowing</p> <p>19 cost for the U.S. Government should be the</p> <p>20 same as the borrowing cost for the</p> <p>21 Government of Canada.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. But you've already explained how that's</p> <p>24 driven by public policy differences across</p> <p>25</p>	<p style="text-align: right;">Page 96</p> <p>1 of the markets is a bit of a stretch.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. Dr. Booth, I gave you as a cross-examination</p> <p>4 aid a copy of the recent FERC decision in</p> <p>5 the United States, June, 2014.</p> <p>6 DR. BOOTH:</p> <p>7 A. Yes, I enjoyed reading that.</p> <p>8 KELLY, Q.C.:</p> <p>9 Q. Did you enjoy reading that?</p> <p>10 DR. BOOTH:</p> <p>11 A. I'm being facetious.</p> <p>12 KELLY, Q.C.:</p> <p>13 Q. Well, you accused me of being facetious</p> <p>14 earlier and -</p> <p>15 DR. BOOTH:</p> <p>16 A. Well, I'm facetious as well, Mr. Kelly.</p> <p>17 KELLY, Q.C.:</p> <p>18 Q. I see.</p> <p>19 MS. GLYNN:</p> <p>20 A. We'll enter that as Information 32.</p> <p>21 KELLY, Q.C.:</p> <p>22 Q. Thank you. I don't intend to go through</p> <p>23 this, but can we agree that FERC, Federal</p> <p>24 Energy Regulatory Commission in the U.S., is</p> <p>25</p>

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<p>1 probably the pre-eminent regulator in the</p> <p>2 United States, or do you know?</p> <p>3 DR. BOOTH:</p> <p>4 A. I would expect so, in the same way that we</p> <p>5 always used to treat the CRTC regulated</p> <p>6 telephone companies, and the National Energy</p> <p>7 Board regulating inter-provincial pipelines</p> <p>8 as being the major regulators, and we know</p> <p>9 that provincial regulators listen to the</p> <p>10 decisions of national regulators.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. So they use a DCF model and they have now</p> <p>13 essentially streamlined it with the same</p> <p>14 model applying to both gas and electric</p> <p>15 utilities in the U.S.?</p> <p>16 DR. BOOTH:</p> <p>17 A. Yeah, I was struck by how formal this is,</p> <p>18 and how – we all know the United States is</p> <p>19 litigious, but this reads like a Supreme</p> <p>20 Court decision with all these footnotes. I’m</p> <p>21 not a lawyer, Mr. Kelly, but I looked at</p> <p>22 this and I thought, wow, this doesn’t look</p> <p>23 like anything that the National Energy Board</p> <p>24 would produce.</p> <p>25</p>	<p>1 constitute a theft of property”, and I think</p> <p>2 the phrase was, “They’re against the</p> <p>3 Constitution”, and on the break, I said what</p> <p>4 country do you think you’re in. The U.S. is</p> <p>5 an extremely litigious country, and when I</p> <p>6 read this, I couldn’t help but think that in</p> <p>7 Canada we give a huge leeway for tribunals</p> <p>8 and as long as they come up with what is a</p> <p>9 fair and reasonable, Appellant courts are</p> <p>10 extremely unwilling to impose a standard on</p> <p>11 the Board and say you have to do this or you</p> <p>12 have to do that. They trust the judgment of</p> <p>13 regulatory boards. I read this, and I saw</p> <p>14 this is how we do it, and there will be an</p> <p>15 appeal if you don’t do it exactly the way</p> <p>16 everything is laid out.</p> <p>17 KELLY, Q.C.:</p> <p>18 Q. You may not totally understand the way the</p> <p>19 FERC system works in the States because they</p> <p>20 have hearing judges, and then it goes to the</p> <p>21 Commission, but I don’t need to get into</p> <p>22 that discussion with you.</p> <p>23 DR. BOOTH:</p> <p>24 A. It’s true, like, I mean, I would certainly</p> <p>25</p>
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<p>1 KELLY, Q.C.:</p> <p>2 Q. But we’ll agree that DCF is the methodology</p> <p>3 commonly employed in the United States?</p> <p>4 DR. BOOTH:</p> <p>5 A. That’s true, and I read this and there were</p> <p>6 all sorts of challenges and referrals back</p> <p>7 basically from previous decisions, and my</p> <p>8 overriding implication from looking at this,</p> <p>9 as I said, is how litigious the U.S. is, and</p> <p>10 also the fact that they’re referring to the</p> <p>11 presiding Judge rather than a tribunal.</p> <p>12 KELLY, Q.C.:</p> <p>13 Q. I take it, you’re not that familiar with how</p> <p>14 the FERC regulatory mechanism works in the</p> <p>15 U.S., are you?</p> <p>16 DR. BOOTH:</p> <p>17 A. I’m not very familiar with the United</p> <p>18 States, but I’ll give you an example, Mr.</p> <p>19 Kelly, I was testifying before the Ontario</p> <p>20 Energy Board in the early 90s, and a</p> <p>21 prominent U.S. witness came in, and he</p> <p>22 looked at the Board, and I’m paraphrasing,</p> <p>23 and he said, “Professor Booth’s</p> <p>24 recommendations are unconstitutional, they</p> <p>25</p>	<p>1 not hold myself out either as a legal expert</p> <p>2 or as an expert on the United States. All</p> <p>3 I’m saying is my impression of reading this,</p> <p>4 it just reminds me how litigious the United</p> <p>5 States is.</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. Okay, now something closer to home, I also</p> <p>8 gave you a cross-aid which is some extracts</p> <p>9 from the textbook that you and Dr. Cleary</p> <p>10 have written?</p> <p>11 DR. BOOTH:</p> <p>12 A. Can’t we talk about this decision?</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. I don’t need to spend more time on it, Dr.</p> <p>15 Booth.</p> <p>16 DR. BOOTH:</p> <p>17 A. Oh, because I’ve got all sorts of things</p> <p>18 flagged.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. Not necessary.</p> <p>21 DR. BOOTH:</p> <p>22 A. Okay, fine. I’ve wasted four hours of</p> <p>23 reading this last night, Mr. Kelly.</p> <p>24 MS. GLYNN:</p> <p>25</p>

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<p>1 A. We'll enter the excerpt as Info 33.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. Thank you. You referred in your opening,</p> <p>4 Dr. Booth, to your textbook, and you'll be</p> <p>5 pleased to know I've acquired your third</p> <p>6 edition most recent -</p> <p>7 DR. BOOTH:</p> <p>8 A. Oh, you'll be pleased to know there's a</p> <p>9 fourth edition coming out, and I hope you</p> <p>10 buy that one, Mr. Kelly.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. I couldn't get the fourth edition. It's not</p> <p>13 out yet, but I did get the most recent.</p> <p>14 DR. BOOTH:</p> <p>15 A. Oh, it is out, and I hope you paid full</p> <p>16 price, you didn't buy it on Amazon or</p> <p>17 somewhere.</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. Can we look at - I'm not going to go through</p> <p>20 a lot of this. Can we look at page 263 of</p> <p>21 this?</p> <p>22 DR. BOOTH:</p> <p>23 A. Yes.</p> <p>24 KELLY, Q.C.:</p> <p>25</p>	<p>1 corporations in mature industries with</p> <p>2 stable profits and an established dividend</p> <p>3 policy. In Canada the banks and utility</p> <p>4 companies fit this profile, while in the</p> <p>5 United States, there are numerous NYSE</p> <p>6 listed companies of this nature, correct?</p> <p>7 DR. BOOTH:</p> <p>8 A. Correct.</p> <p>9 KELLY, Q.C.:</p> <p>10 Q. So a use of a DCF for a utility company is</p> <p>11 in fact what you'd expect?</p> <p>12 DR. BOOTH:</p> <p>13 A. Yeah, I mean, this is from the point of view</p> <p>14 of invested value in the stock, then all</p> <p>15 we're doing is saying that you value the</p> <p>16 string of dividends, which is true. If you</p> <p>17 don't have dividends, there's nothing to</p> <p>18 value.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. Come over with me to page 353 and come down</p> <p>21 to "Lessons to be Learned" where you write,</p> <p>22 "Estimating required returns using the CAPM</p> <p>23 is fraught with difficulties. We need</p> <p>24 estimates of beta as well as the expected</p> <p>25 return on the market. Generally, betas are</p>
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<p>1 Q. And the paragraph - this is talking about</p> <p>2 the dividend discount model, which is</p> <p>3 essentially a DCF analysis, correct?</p> <p>4 DR. BOOTH:</p> <p>5 A. That's right. Yeah, it's exactly - I mean,</p> <p>6 you discount whatever you think you're going</p> <p>7 to receive as an investor. So if you're</p> <p>8 looking at companies, you look at free cash</p> <p>9 flows; when you look at investors, you look</p> <p>10 at the dividends.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. And this is what Dr. Booth and Dr. Cleary</p> <p>13 say about limitations of the DDM. "Although</p> <p>14 the DDM provides significant insight into</p> <p>15 the factors that affect the valuation of</p> <p>16 common shares, it is based on several</p> <p>17 assumptions that are not met by a large</p> <p>18 number of firms, especially in Canada. In</p> <p>19 particular, it is best suited for companies</p> <p>20 that one, pay dividends based on a stable</p> <p>21 dividend pay-out history that they want to</p> <p>22 maintain in the future; and two, are growing</p> <p>23 at a steady and sustainable rate. As such,</p> <p>24 the DDM works reasonably well for large</p> <p>25</p>	<p>1 estimated using past data with two years of</p> <p>2 weekly data or five years of monthly data</p> <p>3 being the most commonly employed approaches.</p> <p>4 Of course, what we really want is an</p> <p>5 estimate of beta for future periods so beta</p> <p>6 estimates can and do vary through time, as</p> <p>7 illustrated in Table 9.1." And I stop</p> <p>8 there, when we're talking about betas in</p> <p>9 CAPM or in risk premium analysis, it's</p> <p>10 actually a future beta that we're trying to</p> <p>11 capture, correct?</p> <p>12 DR. BOOTH:</p> <p>13 A. That's right, the discussion that I had</p> <p>14 yesterday, if you look back at what happened</p> <p>15 during estimation period, you have to</p> <p>16 estimate a reasonable number of things that</p> <p>17 could happen. If nothing happened during</p> <p>18 that estimation period and you use that for</p> <p>19 a future period, you're committing an error,</p> <p>20 it's a bias.</p> <p>21 KELLY, Q.C.:</p> <p>22 Q. If we come down to the last part of that</p> <p>23 section there, it says, "The realistic</p> <p>24 approach is to recognize that CAPM does a</p> <p>25 reasonable job of predicting returns on</p>

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<p>1 average over the long run.”</p> <p>2 DR. BOOTH:</p> <p>3 A. That’s correct.</p> <p>4 KELLY, Q.C.:</p> <p>5 Q. So not terribly useful for looking out over</p> <p>6 a shorter test year period?</p> <p>7 DR. BOOTH:</p> <p>8 A. No, I would say the critical thing there is</p> <p>9 that if you actually use the beta estimates,</p> <p>10 they can be high, they can be low and you’re</p> <p>11 going to make errors unless you actually use</p> <p>12 judgment in estimating and taking those</p> <p>13 betas and applying them towards the future.</p> <p>14 But if you mechanically do anything, whether</p> <p>15 it’s DCF of risk premium or multi-factor</p> <p>16 models or anything without exercising</p> <p>17 judgment, in the short run you’re going to</p> <p>18 make errors. Even though in the long run</p> <p>19 these errors may even out.</p> <p>20 KELLY, Q.C.:</p> <p>21 Q. Which is the point the BC Utilities</p> <p>22 Commission was making to you, a lot of</p> <p>23 judgment in your risk premium analysis.</p> <p>24 DR. BOOTH:</p> <p>25 A. Well no, I would not say that. I think what</p>	<p>1 KELLY, Q.C.:</p> <p>2 Q. Can we go over to 774 finally, there we go,</p> <p>3 a little bit further down, Samantha, please,</p> <p>4 another bit. There we go. In this section,</p> <p>5 Section 206, you write, “In the previous</p> <p>6 section we saw that the DCF model could be</p> <p>7 rearranged to estimate the investor’s</p> <p>8 required return on a firm’s common shares.</p> <p>9 We also discussed how the model performs</p> <p>10 poorly when applied to growth stocks which</p> <p>11 pay low dividends and/or display high growth</p> <p>12 rates. In these situations, it makes sense</p> <p>13 to rely more heavily on risk based models,</p> <p>14 the most important risk based model is the</p> <p>15 capital asset pricing model, the CAPM which</p> <p>16 we discussed in Chapter 9.” So CAPM, while</p> <p>17 you don’t say it’s only for firms which</p> <p>18 display high growth rates and pay low</p> <p>19 dividends, more useful for that because you</p> <p>20 can’t use DCF over there?</p> <p>21 DR. BOOTH:</p> <p>22 A. Well that’s right, if you’re going to look</p> <p>23 at them and say, well conceptually DCF and</p> <p>24 CAPM are estimating exactly the same thing,</p> <p>25 conceptually you say, well, we start out and</p>
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<p>1 I would say to you, Mr. Kelly, is the same</p> <p>2 as I think I’ve said to this Board and every</p> <p>3 board in Canada, if you want somebody to add</p> <p>4 up a bunch of numbers, go and hire a</p> <p>5 statistician. If you want somebody to tell</p> <p>6 them what was the economic scenario that</p> <p>7 generated those numbers and what those</p> <p>8 numbers mean, go and get a professor of</p> <p>9 finance or a professor of economics. Every</p> <p>10 data point we observe is a reflection of</p> <p>11 something that’s gone on in a capital market</p> <p>12 and the economy, and if we had gone through,</p> <p>13 back in 2003 and said, well the betas for</p> <p>14 utilities are zero, because during that</p> <p>15 period Nortel was going up and utilities</p> <p>16 weren’t varying and I had recommended a zero</p> <p>17 risk premium for a utility, I would have</p> <p>18 been laughed out of the room, but that’s</p> <p>19 what the statistics tell us and if you hired</p> <p>20 a statistician, they’ll tell you, well, that</p> <p>21 is the statistic, but an economist or a</p> <p>22 professor of finance, somebody who</p> <p>23 understands what’s going on would be able to</p> <p>24 inform the Board and say, don’t look at</p> <p>25 that, and that’s exactly what I do.</p>	<p>1 we assume that there’s 50 percent weight on</p> <p>2 each. If you then go and look at Apple and</p> <p>3 try to do a DCF on Apple or even worse, you</p> <p>4 try and do BlackBerry, try and do a DCF</p> <p>5 analysis on BlackBerry to estimate the</p> <p>6 equity cost, you can’t do it. There’s no</p> <p>7 dividends, difficult to come up with growth</p> <p>8 estimates, incredibly difficult. So instead</p> <p>9 of 50/50 in that case, you say forget about</p> <p>10 DCF, 100 percent weight on the CAPM.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. And one of the problems that you have and</p> <p>13 what kind of motivates looking to the United</p> <p>14 States is the fact that you have a small</p> <p>15 sample in Canada that you could do a DCF</p> <p>16 analysis on?</p> <p>17 DR. BOOTH:</p> <p>18 A. That’s true, as I mentioned, when I started</p> <p>19 doing this 1985, the first time I entered</p> <p>20 testimony before the CRTC, we actually had</p> <p>21 Newfoundland Telephone, it was called Newtel</p> <p>22 at the time, it created a parent, but we had</p> <p>23 Island Telephone, we had New Brunswick</p> <p>24 Telephone, we had BC Telephone, we had Bell</p> <p>25 Canada, we had Quebec Telephone, we had</p>

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<p>1 Maritime Electric, we had Consumer's Gas, we</p> <p>2 had Unicor, which owns Uni Gas, we had</p> <p>3 Specific Northern Gas, we had a lot of</p> <p>4 utilities, we could do a lot of things. Now</p> <p>5 we're stuck with a sample of five companies,</p> <p>6 TransCanada and Enbridge are rapidly moving</p> <p>7 into the United States. Fortis is now</p> <p>8 buying U.S. regulated assets with abandon,</p> <p>9 so we've got Canadian utilities, we've got</p> <p>10 Emera. The AUC basically said the only</p> <p>11 companies they're bothered about in terms of</p> <p>12 doing a DCF analysis are Emera and Fortis.</p> <p>13 The rest of them is just, that's what we got</p> <p>14 left.</p> <p>15 KELLY, Q.C.:</p> <p>16 Q. So consistent with this Board's approach we</p> <p>17 look at a risk premium analysis and we look</p> <p>18 to a DCF analysis incorporating U.S.</p> <p>19 utilities because it gives us perspective,</p> <p>20 it gives us a broader sense of what's</p> <p>21 happening in the equity markets, agreed?</p> <p>22 DR. BOOTH:</p> <p>23 A. That's right. Conceptually, Mr. Kelly, you</p> <p>24 can look at anything. You can look at the</p> <p>25 cap asset price model allows you to make</p>	<p>1 adjustments.</p> <p>2 KELLY, Q.C.</p> <p>3 Q. Right, that's the quotes which we had on the</p> <p>4 screen earlier from CANP-079, about the use</p> <p>5 of American data, correct?</p> <p>6 DR. BOOTH:</p> <p>7 A. That's right, I have no problem with looking</p> <p>8 at American data as long as we make</p> <p>9 appropriate adjustments.</p> <p>10 KELLY, Q.C.:</p> <p>11 Q. Okay. Mr. Chairman, making good time, I'm</p> <p>12 about to move to another area. I can start</p> <p>13 now or we can break now and continue after</p> <p>14 the break.</p> <p>15 CHAIRMAN:</p> <p>16 Q. What would you prefer to do?</p> <p>17 KELLY, Q.C.:</p> <p>18 A. I'm in your hands.</p> <p>19 CHAIRMAN:</p> <p>20 Q. What do you guys want to do, want to break</p> <p>21 now or carry on?</p> <p>22 VICE-CHAIR WHALEN:</p> <p>23 Q. We'd rather carry on.</p> <p>24 CHAIRMAN:</p> <p>25 Q. Carry on.</p>
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<p>1 risk adjustments for any securities. So you</p> <p>2 can actually look at Apple and if you wanted</p> <p>3 to estimate the fair return on Apple and</p> <p>4 then make a risk adjustment from Apple to</p> <p>5 the regulated utility. That's what the cap</p> <p>6 asset pricing model and other factor models</p> <p>7 do, they make risk adjustments. So I have</p> <p>8 no problem, in fact, I would say that we now</p> <p>9 have to look at U.S. evidence more than any</p> <p>10 other time since I've been testifying simply</p> <p>11 because even the Canadian companies are less</p> <p>12 useful than they were even three years ago</p> <p>13 and I suspect that when we come back, if we</p> <p>14 come back in three years' time, we'll</p> <p>15 probably have to say, well Fortis is now 80</p> <p>16 percent U.S. and we have to knock out Fortis</p> <p>17 if we're going to do that and Enbridge and</p> <p>18 TransCanada, there could be even bigger</p> <p>19 problems. So our Canadian sample is just</p> <p>20 getting smaller and smaller and smaller, so</p> <p>21 I agree with the National Energy Board, with</p> <p>22 the BCUC, we have to look at the U.S. or the</p> <p>23 U.K. or Germany or Japan, other countries,</p> <p>24 and estimate and see what they're doing for</p> <p>25 their utilities and make appropriate risk</p>	<p>1 KELLY, Q.C.:</p> <p>2 Q. Thank you. Dr. Booth, I want to change</p> <p>3 gears a bit now and talk a bit about</p> <p>4 business risk and the last time we were</p> <p>5 here, I guess in 2012, the Canadian economy</p> <p>6 was doing pretty well and you were kind of</p> <p>7 referring to it as running on all cylinders?</p> <p>8 DR. BOOTH:</p> <p>9 A. No, Mark Carney, the Governor of the Bank of</p> <p>10 Canada was describing the financial system</p> <p>11 as firing on all cylinders. We still have a</p> <p>12 little bit of spare capacity in the economy,</p> <p>13 but Canada was in pretty good shape.</p> <p>14 KELLY, Q.C.:</p> <p>15 Q. Right, and would it be fair for me to</p> <p>16 observe that at least since then we seemed</p> <p>17 to have lost two of the spark plugs, Alberta</p> <p>18 and Newfoundland due to the collapse of oil</p> <p>19 and commodity prices?</p> <p>20 DR. BOOTH:</p> <p>21 A. I think Saskatchewan would say they're a</p> <p>22 little bit of a spark plug.</p> <p>23 KELLY, Q.C.:</p> <p>24 Q. Well let's put Saskatchewan in there too</p> <p>25 then.</p>

<p style="text-align: right;">Page 113</p> <p>1 DR. BOOTH:</p> <p>2 A. I think it's fair to say the concerns over</p> <p>3 China over the last 18 months has really led</p> <p>4 to a decline in commodity prices that's</p> <p>5 leading to a readjustment of the Canadian</p> <p>6 economy back to where it was, say ten years</p> <p>7 ago if those prices continue at a level</p> <p>8 they're at the moment.</p> <p>9 KELLY, Q.C.:</p> <p>10 Q. Right, and in this province we have not only</p> <p>11 oil which has certainly decimated the</p> <p>12 provincial treasury, but minerals, in</p> <p>13 particular iron ore and the Labrador economy</p> <p>14 has been devastating on this province.</p> <p>15 DR. BOOTH:</p> <p>16 A. Yeah, nickel prices particularly in</p> <p>17 Labrador, I suspect, I mean, I haven't</p> <p>18 tracked nickel for awhile, but basically all</p> <p>19 commodities are coming down. As I mentioned</p> <p>20 in my direct yesterday, until a short period</p> <p>21 ago China was adding electrical capacity of</p> <p>22 the U.K. every year. I found that statistic</p> <p>23 absolutely amazing and all of that</p> <p>24 electrical capacity needs cooper, needs</p> <p>25 fuel, needs everything.</p>	<p style="text-align: right;">Page 115</p> <p>1 KELLY, Q.C.:</p> <p>2 Q. Right, and there's an RFI on that, but I</p> <p>3 don't think I need to take you there. Now,</p> <p>4 let's go to Report 4 in the Newfoundland</p> <p>5 Power evidence and Samantha, if we go over</p> <p>6 to page 5, there we go. Bear with me for a</p> <p>7 second. If you come over to page 5 and you</p> <p>8 come down to the second paragraph, Dr.</p> <p>9 Booth, energy sales under proposed rates,</p> <p>10 this is towards the end of the paragraph,</p> <p>11 "energy sales under proposed rates, which</p> <p>12 includes the elasticity effects of the</p> <p>13 proposed 2.5 percent increase are forecast</p> <p>14 to be .6 percent in 2016 and 0.1 percent in</p> <p>15 2017." Agree?</p> <p>16 DR. BOOTH:</p> <p>17 A. Well I'm still trying to find it, but I have</p> <p>18 no problem with that. No, that's okay.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. I do want you to have a look at it.</p> <p>21 DR. BOOTH:</p> <p>22 A. So where are we on the page?</p> <p>23 KELLY, Q.C.:</p> <p>24 Q. We're in the second paragraph down on the</p> <p>25 screen.</p>
<p style="text-align: right;">Page 114</p> <p>1 KELLY, Q.C.:</p> <p>2 Q. And we had the conference board report on</p> <p>3 the screen earlier when Mr. Coyne was</p> <p>4 testifying where they called the situation</p> <p>5 in Newfoundland grim with the government</p> <p>6 looking at austerity measures. Do you share</p> <p>7 that view?</p> <p>8 DR. BOOTH:</p> <p>9 A. Unfortunately—I'm aware of that, Mr. Kelly,</p> <p>10 unfortunately governments have a habit of</p> <p>11 thinking the good times last forever, so</p> <p>12 when they get extra revenues, they spend it</p> <p>13 and then when the poor times come along,</p> <p>14 they go deficits and the situation is grim.</p> <p>15 KELLY, Q.C.:</p> <p>16 Q. Right, okay, and in terms of business risk,</p> <p>17 you would agree that business risk is based</p> <p>18 on the Newfoundland economy, business risk</p> <p>19 for Newfoundland Power is based on the</p> <p>20 situation in the Newfoundland economy, not</p> <p>21 the Canadian or global economy.</p> <p>22 DR. BOOTH:</p> <p>23 A. That's correct, I mean they're worried about</p> <p>24 how the local economy affects the ability of</p> <p>25 the utility to earn its allowed ROE.</p>	<p style="text-align: right;">Page 116</p> <p>1 DR. BOOTH:</p> <p>2 A. It starts, "Given the province's struggling</p> <p>3 economy"?</p> <p>4 KELLY, Q.C.:</p> <p>5 Q. Yes.</p> <p>6 DR. BOOTH:</p> <p>7 A. Okay. Yeah, I think, look, there's no</p> <p>8 question that the problem with natural</p> <p>9 resource prices has hit Newfoundland and the</p> <p>10 economy is not as strong as it was a few</p> <p>11 years ago. That's indisputable.</p> <p>12 KELLY, Q.C.:</p> <p>13 Q. And this is the forecast, sales forecast</p> <p>14 which is being accepted, so were you here</p> <p>15 for Mr. Smith's testimony earlier in the</p> <p>16 hearing or did you read the transcript in</p> <p>17 which he explained, together with Ms. Perry,</p> <p>18 that Newfoundland Power has historically had</p> <p>19 about a one percent sales growth year over</p> <p>20 year?</p> <p>21 DR. BOOTH:</p> <p>22 A. Well I can't remember who mentioned that one</p> <p>23 percent, but my understanding is one percent</p> <p>24 sales growth, yes.</p> <p>25 KELLY, Q.C.:</p>

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<p>1 Q. Yeah, okay. So we're going from one percent</p> <p>2 sales growth to essentially no sales growth</p> <p>3 in 2017?</p> <p>4 DR. BOOTH:</p> <p>5 A. So is that sales volume or is that dollars?</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. No, that's kilowatt hours.</p> <p>8 DR. BOOTH:</p> <p>9 A. Okay, fine, so it's volume.</p> <p>10 KELLY, Q.C.:</p> <p>11 Q. It's volume.</p> <p>12 DR. BOOTH:</p> <p>13 A. It's energy use.</p> <p>14 KELLY, Q.C.:</p> <p>15 Q. Energy use, okay. Now, Mr. Smith also</p> <p>16 explained and we can go to the transcript if</p> <p>17 you want to see it, that one percent equates</p> <p>18 to about 6.5 million in revenue, but you got</p> <p>19 to talk out the purchase power cost or about</p> <p>20 2 million dollars once you remove the</p> <p>21 purchase power expense, so you'll accept</p> <p>22 that?</p> <p>23 DR. BOOTH:</p> <p>24 A. I have no reason to doubt it.</p> <p>25 KELLY, Q.C.:</p>	<p>1 horizon, once you get out of the test year,</p> <p>2 you don't have that contribution to offset</p> <p>3 increases in operating expense, agreed?</p> <p>4 DR. BOOTH:</p> <p>5 A. That's right, as a result prices go up.</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. Then you got to come back in and make an</p> <p>8 application if you're going to go down that</p> <p>9 road.</p> <p>10 DR. BOOTH:</p> <p>11 A. Well that's right, but I mean, it's the job</p> <p>12 of the utility to forecast these things and</p> <p>13 build them into rates.</p> <p>14 KELLY, Q.C.:</p> <p>15 Q. Okay, so hold that thought because I do want</p> <p>16 to come back to that one. The second thing</p> <p>17 that the contribution gives you is that it</p> <p>18 helps cover the cost of financing the</p> <p>19 capital improvements until the next general</p> <p>20 rate application when they get incorporated</p> <p>21 in the rate base because in this</p> <p>22 jurisdiction, you don't get any compensation</p> <p>23 for it until it gets in the rate base.</p> <p>24 DR. BOOTH:</p> <p>25 A. That's right, normally you don't want to</p>
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<p>1 Q. Okay. Now, would you agree with me that</p> <p>2 that revenue, that contribution in sales</p> <p>3 growth is important because it offsets</p> <p>4 increases in operating costs between test</p> <p>5 years, that's one of the things that that</p> <p>6 sales growth allows.</p> <p>7 DR. BOOTH:</p> <p>8 A. Let's back up a little bit. The question is</p> <p>9 how does the growth affect the business risk</p> <p>10 and the utility, which I think is what</p> <p>11 you're saying, and what you're doing is</p> <p>12 pointing out that when a utility grows, the</p> <p>13 bulk of its assets are fixed and the bulk of</p> <p>14 its expenses are fixed, so if you happen to</p> <p>15 sell more kilowatt hours and sales grow up,</p> <p>16 you're spreading them over, the costs over a</p> <p>17 large number of units, so the cost of the</p> <p>18 unit of power goes down and that makes the</p> <p>19 energy source more competitive in in fact</p> <p>20 there is any competition. So growth, given</p> <p>21 in a fixed cost production, results in lower</p> <p>22 costs.</p> <p>23 KELLY, Q.C.:</p> <p>24 Q. And if you don't have growth over, let's say</p> <p>25 you're talking about a three-year time</p>	<p>1 charge current customers for assets that are</p> <p>2 not in use.</p> <p>3 KELLY, Q.C.:</p> <p>4 Q. Well they got to get built, but even when</p> <p>5 they're built and in service, they don't get</p> <p>6 compensated for it until the next GRA, so</p> <p>7 that incremental growth helps cover those</p> <p>8 two factors between GRAs.</p> <p>9 DR. BOOTH:</p> <p>10 A. Yeah, I think it's fair to say, Mr. Kelly,</p> <p>11 that growth is generally a good thing.</p> <p>12 KELLY, Q.C.:</p> <p>13 Q. Okay, and so we can agree on those two</p> <p>14 principles to start off with, can we?</p> <p>15 DR. BOOTH:</p> <p>16 A. Well I would have to think a little bit more</p> <p>17 about the impact of the kilowatt hours, but</p> <p>18 the general proposition that growth allows</p> <p>19 the spreading of fixed costs and as a</p> <p>20 result, minimizes increases in rates for</p> <p>21 customers is correct.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. Right. So one of the risks or problems of</p> <p>24 the deteriorated economy is the loss of</p> <p>25 contribution that you're going to get</p>

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<p>1 between test year periods or until the next</p> <p>2 GRA?</p> <p>3 DR. BOOTH:</p> <p>4 A. It depends how good the company is who</p> <p>5 forecast it.</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. Well the forecast will only cover the test</p> <p>8 year.</p> <p>9 DR. BOOTH:</p> <p>10 A. That's correct.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. If you're going to be beyond the test year,</p> <p>13 you lose that contribution.</p> <p>14 DR. BOOTH:</p> <p>15 A. I'd have to think about that, Mr. Kelly,</p> <p>16 it's not something that I've gone into, but</p> <p>17 –</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. Well that's a good point to pick up because</p> <p>20 this is not something that you've looked at</p> <p>21 in terms of utility analysis, I take it?</p> <p>22 DR. BOOTH:</p> <p>23 A. Well when you look at these issues, Mr.</p> <p>24 Kelly, you have to look at it in the context</p> <p>25 of is there anything unusual about this, and</p>	<p>1 qualitative risk assessments, sort of like</p> <p>2 the one that you're assessing here, and it</p> <p>3 sounds like it's incredibly risky and I have</p> <p>4 to admit, the first time I testified I</p> <p>5 listened to the grand old man of utility</p> <p>6 witnesses at that time, someone called</p> <p>7 Steven Sherwood and I thought, God, that's</p> <p>8 convincing, this utility must be incredibly</p> <p>9 risky and then I looked at it and I heard it</p> <p>10 again the next year and I just kept looking</p> <p>11 at the ability of the utility to earn its</p> <p>12 allowed ROE, so you can come up with these</p> <p>13 scenarios and posit increasing risk and you</p> <p>14 say, well, this is normal, these are the</p> <p>15 normal sort of risks faced by utilities, has</p> <p>16 this caused problems for the utility in the</p> <p>17 past, and that's what I look at, has there</p> <p>18 been any significant problems in the ability</p> <p>19 of Newfoundland Power to earn its allowed</p> <p>20 ROE either from its forecasting areas and in</p> <p>21 the forecasting areas we tend to be</p> <p>22 conservative or I tend to see utilities</p> <p>23 being conservative or I tend to see</p> <p>24 utilities being conservative. So if you're</p> <p>25 pushing this forward as a risk, I would</p>
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<p>1 going back over the last 25 years for the</p> <p>2 province, we've had periods of very good</p> <p>3 economic growth; we've had periods of not</p> <p>4 very good economic growth. We've had</p> <p>5 periods of bad winter storms; we've had</p> <p>6 periods where we had mild winter storms.</p> <p>7 We've had, I would suspect most of the</p> <p>8 underlying risks that affect the utility, so</p> <p>9 I don't look at an individual factor, I just</p> <p>10 look at, well, what is the upshot of these,</p> <p>11 what does it really mean in terms of the</p> <p>12 performance of the utility, which is why I</p> <p>13 look at the ability of the utility to earn</p> <p>14 its allowed ROE. So I would grant you that</p> <p>15 there may be some issues, I'd have to get</p> <p>16 into these in more detail, but the upshot is</p> <p>17 this must have been seen before over the</p> <p>18 last 25 years.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. But you haven't really analyzed this, I take</p> <p>21 it, from your answer?</p> <p>22 DR. BOOTH:</p> <p>23 A. No, and there's no need for me to analyze</p> <p>24 it. I've been involved in hearings where</p> <p>25 utility witnesses produce all of these</p>	<p>1 suspect Newfoundland Power has been in the</p> <p>2 situation before over the last 25 years.</p> <p>3 KELLY, Q.C.:</p> <p>4 Q. We're going to continue that discussion, but</p> <p>5 I want to get the elements out there first.</p> <p>6 One is the lost of contribution and we know</p> <p>7 the order of magnitude, one percent is about</p> <p>8 2 million dollars. Now the next thing and</p> <p>9 you've alluded to this already, is forecast</p> <p>10 risk, if the forecast turns out, if the</p> <p>11 economic impacts turn out to be worse than</p> <p>12 anticipated, let's say we had a further, a</p> <p>13 one percent reduction, not flat but a one</p> <p>14 percent reduction, then not only would we</p> <p>15 lose the 2 million in contribution, we'd</p> <p>16 lose the 2 million for the one percent</p> <p>17 reduction; basic math, agreed?</p> <p>18 DR. BOOTH:</p> <p>19 A. Yeah, assuming the utility doesn't react and</p> <p>20 the utility reacts.</p> <p>21 KELLY, Q.C.:</p> <p>22 Q. Well you keep that point in mind because</p> <p>23 we're going to be coming to that one.</p> <p>24 DR. BOOTH:</p> <p>25 A. Okay.</p>

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<p>1 KELLY, Q.C.: 2 Q. Now, that's just with the current costs, 3 right? 4 DR. BOOTH: 5 A. Yes. 6 KELLY, Q.C.: 7 Q. The Board would be quite knowledgeable of 8 its regulatory agenda and it has before it 9 already a host of costs related to 10 Newfoundland and Labrador Hydro. Do you 11 have any familiarity with that, those 12 operating and – 13 DR. BOOTH: 14 A. Are you referring to the Hydro costs? 15 KELLY, Q.C.: 16 Q. Newfoundland and Labrador Hydro, which 17 eventually flowed through to Newfoundland 18 Power rates, do you have any knowledge of 19 the regulatory agenda involving the Board 20 over that? 21 DR. BOOTH: 22 A. I would imagine it's extensive given the 23 fact that it's such a huge project. 24 KELLY, Q.C.: 25 Q. Well quite apart from Muskrat Falls there</p>	<p>1 improvement in the system for the next 2 several years, I'm aware of that. 3 KELLY, Q.C.: 4 Q. And so those costs, that .6 of a billion is 5 24 percent, approximately, of the existing 6 rate base of the province, so it's a big 7 impact just in that, even before we get to 8 Muskrat Falls, agreed? 9 DR. BOOTH: 10 A. Well that's generally true and generally a 11 utility is like that. 12 KELLY, Q.C.: 13 Q. Mr. Chairman, this is now a good time to 14 break. We'll pick up afterwards. 15 CHAIRMAN: 16 Q. Okay. 17 (RECESS – 11:00 A.M.) 18 (RETURN – 11:34 A.M.) 19 CHAIRMAN: 20 Q. So, Mr. Kelly, once more into the breach, 21 sir. 22 KELLY, Q.C.: 23 Q. Thank you, Mr. Chairman. Dr. Booth, we were 24 talking about costs coming on the system 25 when we broke for the break and when we were</p>
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<p>1 are a host of cost applications before the 2 Board over the existing system. 3 DR. BOOTH: 4 A. I would expect that, Mr. Kelly. 5 KELLY, Q.C.: 6 Q. Let me just give you some order of magnitude 7 on the capital side, 119 million for 100 8 megawatt gas turbine; 230 million for 230 kV 9 transmission line; 77 million in Hydro's 10 2015 capital budget; 184 million for Hydro's 11 2016 capital budget which is 610 million or 12 .6 billion coming, that have either been 13 approved or pending before the Board, bulk 14 of it already approved, right? So that cost 15 pressure, quite apart from Muskrat Falls, 16 approved by the Board with one minor 17 qualification, is coming into the system 18 over the next number of years. Do you have 19 a sense of that? 20 DR. BOOTH: 21 A. I had some idea that there were significant 22 projects and I know the company's 23 forecasting capital expenditures in the 24 order of 100 million dollars a year when 25 depreciation is about 50, so there's a net</p>	<p>1 doing that, I hadn't included the almost 12 2 million dollars which are coming for the 3 problems we've had over the past winter for 4 replacing the boiler tubes out at Units 1 5 and 2 on the Holyrood Plant, do you have any 6 familiarity with that? 7 DR. BOOTH: 8 A. No. 9 KELLY, Q.C.: 10 Q. And of course, all of that pales in 11 comparison to what's coming on the hill, 12 which is Muskrat Falls, 9 billion or so and 13 projected price increases in the price of 14 electricity of 50 percent or more, do you 15 have a general familiarity at least with 16 that? 17 DR. BOOTH: 18 A. I have a general familiarity with that. 19 KELLY, Q.C.: 20 Q. Okay, can I take you, it's still on the 21 screen, can I take you back a page in the 22 forecast to the top of page 4, there you go. 23 And if you come down to the second line, it 24 says "overall customer response to changes 25 in the price of electricity is relatively</p>

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<p>1 inelastic. A one percent change in the price 2 of electricity will result in a change in 3 energy sales of less than one percent. 4 Current analysis indicates that a one 5 percent increase in the price of electricity 6 will result in a 0.2 percent decrease in 7 energy sales.” Do you agree with that? 8 DR. BOOTH: 9 A. I do. 10 KELLY, Q.C.: 11 Q. And if that’s one percent, the statistician 12 in me tells me that a 50 percent increase is 13 a 10 decrease in sales? 14 DR. BOOTH: 15 A. Mr. Kelly, the statistician will tell you, 16 and you would tell you it’s probably a 17 nonlinear relationship. 18 KELLY, Q.C.: 19 Q. Right, which is exactly the point, Dr. 20 Booth, that what that introduces is a whole 21 bunch of uncertainty, doesn’t it? 22 DR. BOOTH: 23 A. Well I would say – 24 KELLY, Q.C.: 25 Q. Because you can’t tell me what that</p>	<p>1 DR. BOOTH: 2 A. Oh I think there’s absolutely no question 3 that going out to 2018 and beyond, there may 4 be problems with the cost of power coming 5 through as a result of Muskrat Falls, 6 there’s no question about that. 7 KELLY, Q.C.: 8 Q. Okay, can we go to NPCA-036 and this is a 9 question which was put to you about the 10 impact of the Newfoundland economy and you 11 make the observation, beginning at line 10, 12 “Dr. Booth judges it to have relatively 13 little impact as the demand for electricity 14 is not very price or income sensitive.” And 15 first of all, I take it you haven’t 16 specifically studied the price elasticity of 17 electricity. 18 DR. BOOTH: 19 A. No, the last time I looked at that was about 20 15, 20 years ago when there was a study done 21 and published by the Government of Canada, 22 but the fact is people don’t turn their 23 lights out and there may be an immediate 24 impact when, whoa we’re paying a lot, but 25 people adjust to it which is why in part I</p>
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<p>1 relationship is going to be, can you? 2 DR. BOOTH: 3 A. No, that’s absolutely correct, I’d have to 4 do a demand analysis and I haven’t done one. 5 KELLY, Q.C.: 6 Q. No, and it would be very difficult to 7 predict that because you’re trying to judge 8 how people are going to react 9 psychologically to this problem, as well as 10 economically? 11 DR. BOOTH: 12 A. That is true, that’s why I put out the cost 13 of power for 1000 kilowatt user across 14 different jurisdictions because we can say, 15 for example in New York, the cost of power 16 is ridiculous compared to St. John’s and we 17 can see that St. John’s is cheaper than 18 Toronto, so there are significant 19 differences across different metropolitan 20 areas. 21 KELLY, Q.C.: 22 Q. So one of the other risks that we know is 23 coming is at least a sales risk as we have 24 to deal with this problem, can we agree on 25 that much?</p>	<p>1 look at the cost of 1000 kilowatt hours 2 across Canada. People adjust to it and 3 they’re not going to freeze because the 4 price of electricity has gone up and they’re 5 not going to stop paying—they’re not going 6 to kick their son off playing video games in 7 the den because of, hey, that’s costing a 8 lot of money. There’s a temporary phenomena 9 that may be price shock and then there’s the 10 long-run impact. 11 KELLY, Q.C.: 12 Q. But you haven’t studied it? Then you go on 13 – 14 DR. BOOTH: 15 A. All I can say is that I’m surprised that 16 it’s .2, I would have thought it was less 17 than that. I would have thought it was even 18 less price sensitive. 19 KELLY, Q.C.: 20 Q. Utility has studied it. 21 DR. BOOTH: 22 A. Yeah, I know. 23 KELLY, Q.C.: 24 Q. Then you go on to say, “the only way it 25 could directly affect Newfoundland Power’s</p>

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<p>1 business risk is either through short-run 2 forecasting errors"--and we talked about 3 that a minute ago, "or the long-run death 4 spiral if the customer rate base can no 5 longer support Newfoundland Power's 6 infrastructure." You then say "The former 7 is covered by the band around Newfoundland 8 Power's allowed ROE." And if I can just 9 stop you there, we know there is a 40 basis 10 points band around the Newfoundland Power's 11 rate of return, agreed?</p> <p>12 DR. BOOTH:</p> <p>13 A. Approximately, yeah.</p> <p>14 KELLY, Q.C.:</p> <p>15 Q. Approximately, and essentially what you are 16 saying is the risk that we talked about for 17 contribution risk, deteriorating economy, 18 could result in Newfoundland Power, the 19 earnings being reduced at least into the 20 lower band of the ROE?</p> <p>21 DR. BOOTH:</p> <p>22 A. That's correct, it could actually be that 23 Newfoundland Power doesn't earn its allowed 24 ROE and instead of -</p> <p>25 KELLY, Q.C.:</p>	<p>1 less of cost advantage and yet during that 2 period, NP continued to earn its allowed 3 ROE. And when we look at this, as I 4 indicated before, it's a question of utility 5 witnesses and counsel say, well this time 6 it's different. We've faced these risks for 7 25 years but they haven't materialized so 8 far, but this time it's different.</p> <p>9 KELLY, Q.C.:</p> <p>10 Q. One of the points that you've flagged 11 yourself, in this answer to this RFI, is 12 that this risk can result in Newfoundland 13 Power's earnings being reduced, as we just 14 talked about?</p> <p>15 DR. BOOTH:</p> <p>16 A. There's a possibility that if these risks 17 are material and that they fail to forecast 18 and manage those risks properly, which would 19 be a first compared to the last 25 years, 20 then they may actually under earn for the 21 first time.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. And the Board will be in a good position to 24 judge the nature of these risks as opposed 25 to yourself because they are the regulators</p>
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<p>1 Q. And may go under the band?</p> <p>2 DR. BOOTH:</p> <p>3 A. It may go—exactly, the risk is supposed to 4 be symmetrical, Mr. Kelly, it's supposed to 5 be, you possibly gain, you possibly lose. 6 As I indicated, except for the CRA 7 assessments that caused it to under and then 8 over earn, it's difficult to see that 9 Newfoundland Power has actually experienced 10 any risk.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. So one of the risks that you identify in 13 this ROE is that—or in this RFI is that 14 Newfoundland Power has a risk to its 15 earnings from what they have been.</p> <p>16 DR. BOOTH:</p> <p>17 A. What I'm indicating is and I look at—I asked 18 Newfoundland Power to provide copies of the 19 risk assessment done in the 1990s, rate 20 hearings at that time, so that I could see 21 what the experts were saying at that time 22 and they tended to say that there's increase 23 in competition, there's increase in power 24 costs, there's less competition—sorry, 25 there's increase in competition, there's</p>	<p>1 sitting with these applications before it, 2 obviously.</p> <p>3 DR. BOOTH:</p> <p>4 A. Oh that's correct. Look, I mean, this Board 5 sits in on all of these facilities' 6 expansions and all of the cost analysis and 7 everything else. The Board will have access 8 to a lot of detailed knowledge than I've got 9 access to. All I'm saying is that after 25 10 years looking at NP, none of the risks that 11 have been flagged previously have actually 12 materialized. This time it may be 13 different, but that's what utility witnesses 14 always say, this time is different.</p> <p>15 KELLY, Q.C.:</p> <p>16 Q. Could be. Now the other factor which would 17 fall out of this if I follow the discussion 18 we just had, is more frequent GRAs seem to 19 be what you're suggesting; in other word, 20 the utility will just come back more often?</p> <p>21 DR. BOOTH:</p> <p>22 A. Well I would say that there's a asymmetry 23 that if a utility flags something that's 24 materially going to affect its performance, 25 then it can come before the regulator and</p>

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<p>1 say, look, there's something seriously going</p> <p>2 on here, please we need to re-examine this</p> <p>3 particular risk and that's the regulatory</p> <p>4 bargain. As I point out in my testimony</p> <p>5 that if a competitive firm loses sales, it</p> <p>6 can't suddenly turn around and charge more</p> <p>7 for everybody else or go back and say, well</p> <p>8 look, the widget I sold you last year, I'm</p> <p>9 sorry, you're going to have to pay more for</p> <p>10 it because I didn't sell enough widgets;</p> <p>11 whereas that can happen for a regulated</p> <p>12 utility.</p>	<p>1 flagging up the prospect at least of this</p> <p>2 death spiral is you have to increase the</p> <p>3 price on fewer people going forward, fewer</p> <p>4 units?</p>
<p>13 KELLY, Q.C.:</p>	<p>5 DR. BOOTH:</p>
<p>14 Q. Tell me about the death spiral, what does</p> <p>15 that mean?</p>	<p>6 A. I'm saying there's two elements of risk for</p> <p>7 a utility, one is the short-run forecasting</p> <p>8 risk which generally utilities manage that</p> <p>9 very well in a sense that they over earn</p> <p>10 because they forecast things that don't</p> <p>11 actually happen. They forecast spending</p> <p>12 money that they don't actually spend. And</p> <p>13 then the fundamental risk is that the</p> <p>14 utility faces fundamental changes in supply</p> <p>15 and demand that threatens its ability to</p> <p>16 recover its costs and the standard procedure</p> <p>17 is to reallocate those costs and it can</p> <p>18 result, as you said, as it did for the</p> <p>19 Mainline, higher costs, causing other people</p> <p>20 to say I don't want to renew. I don't want</p> <p>21 to renew and ship on the Mainline, I'll find</p> <p>22 some other way of getting my gas to market,</p> <p>23 it's too expensive.</p>
<p>16 DR. BOOTH:</p>	<p>24 KELLY, Q.C.:</p>
<p>17 A. Well the death spiral is TransCanada</p> <p>18 Mainline. The TransCanada Mainline is a</p> <p>19 bullet pipeline from Alberta into central</p> <p>20 Canada and it basically requires gas to flow</p> <p>21 from Alberta into central Canada.</p> <p>22 Unfortunately, they are alternative supply</p> <p>23 bases that have developed that can serve</p> <p>24 central Canada, principally the Marcel's</p> <p>25 Field in the eastern United States. And the</p>	<p>25 Q. So that's a risk we have. Now let's come</p>
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<p>1 TransCanada Mainline saw a significant drop</p> <p>2 off in its load and it came before the, as</p> <p>3 any utility does, it came before the</p> <p>4 National Energy Board and says we're in</p> <p>5 danger of not earning allowed ROE, we've got</p> <p>6 some assets that are under utilized, help</p> <p>7 us. And there was a major hearing, 2011</p> <p>8 where the National Energy Board gave the</p> <p>9 Mainline the tools it needed in order to</p> <p>10 compete.</p>	<p>1 over to –</p>
<p>11 KELLY, Q.C.:</p>	<p>2 DR. BOOTH:</p>
<p>12 Q. But the reason they call it a death spiral,</p> <p>13 it kind of goes like this, isn't it, as the</p> <p>14 price goes up, people use less, so you then</p> <p>15 have to jack up the price again to cover</p> <p>16 what you didn't get causing a further</p> <p>17 increase in price of on fewer people.</p>	<p>3 A. That's a risk every utility has. It's a</p> <p>4 question of whether or not it's a realistic</p> <p>5 risk.</p>
<p>18 DR. BOOTH:</p>	<p>6 KELLY, Q.C.:</p>
<p>19 A. That's exactly right.</p>	<p>7 Q. Right, but we don't have anything else, like</p> <p>8 Muskrat Falls coming with 9 billion. Let's</p> <p>9 go over to NP –</p>
<p>20 KELLY, Q.C.:</p>	<p>10 DR. BOOTH:</p>
<p>21 Q. That's the problem.</p>	<p>11 A. Yeah, but I'll correct you on that, Mr.</p> <p>12 Kelly, we do have, I asked Newfoundland</p> <p>13 Power what the situation was like in the</p> <p>14 '90s and they said there was a period when</p> <p>15 they had a 40 percent cost disadvantage</p> <p>16 relative to fuel oil and they lost about 3.7</p> <p>17 percent of their customers, but they still</p> <p>18 earned their allowed ROE. And during the</p> <p>19 '90s there was significant testimony before</p> <p>20 this Board on the problem that they faced</p> <p>21 into fuel completion with fuel oil, so</p> <p>22 that's a 40 percent cost disadvantage. If</p> <p>23 Muskrat Falls comes along and it ends up</p> <p>24 being 50 percent, well you have to say, well</p> <p>25 is it going to be--suddenly become material</p>
<p>22 DR. BOOTH:</p>	
<p>23 A. And that's exactly what the Mainline faced.</p>	
<p>24 KELLY, Q.C.:</p>	
<p>25 Q. And so as we're facing Muskrat Falls, you're</p>	

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<p>1 when it wasn't material in the 1990s.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. I'm going to come back to that one. Let's</p> <p>4 go to NPCA-061 and you were asked in this</p> <p>5 RFI about Moody's and their comments. If we</p> <p>6 come down to line 14, you say "Dr. Booth</p> <p>7 makes no comment on Moody's assessment of</p> <p>8 the impact of Muskrat Falls, except to note</p> <p>9 that the Board has a number of regulatory</p> <p>10 tools to manage that exposure and if the</p> <p>11 risks materialize, he expects the hearing to</p> <p>12 consider how to deal with any problems.</p> <p>13 Regulatory precedent in Canada rather than</p> <p>14 the United States is that there is no reason</p> <p>15 to believe that NP's shareholders bear this</p> <p>16 risk, rather than ratepayers." So if I</p> <p>17 understand your testimony correctly, this is</p> <p>18 all the ratepayers' risk?</p> <p>19 DR. BOOTH:</p> <p>20 A. Ultimately it is the ratepayer's risk, it's</p> <p>21 the ratepayer who is going to pay the higher</p> <p>22 cost of electricity and if the Board passes</p> <p>23 those on, as it currently does, then it's</p> <p>24 ratepayers who are going to pay those higher</p> <p>25 electricity costs and they're the ones that</p>	<p>1 KELLY, Q.C.:</p> <p>2 Q. That's why we talked about how big that is</p> <p>3 and the uncertainty around it. Now, let's</p> <p>4 go to CA-NP-062 and this is another</p> <p>5 question—no, sorry, it should be NP-CA,</p> <p>6 sorry, I got the things backwards. Now if</p> <p>7 we go down to—this is another question about</p> <p>8 the death spiral and Moody's and at line 10</p> <p>9 you say, "Dr. Booth's understanding is that</p> <p>10 the legal requirement in Canada is the</p> <p>11 equity cost is a cost and that it cannot be</p> <p>12 reduced to share the pain; hence, he does</p> <p>13 not accept that any Canadian regulator would</p> <p>14 allow an unfair or unreasonable ROE. He</p> <p>15 also cannot see what costs the Board could</p> <p>16 disallow as a prudent that would make any</p> <p>17 material difference since the main concern</p> <p>18 is not NP's cost but the flow-thru of</p> <p>19 Hydro's commodity costs." So if I stop</p> <p>20 there, that's the point that we've already</p> <p>21 talked about, assuming an unlimited ability</p> <p>22 for customers to pay.</p> <p>23 DR. BOOTH:</p> <p>24 A. That's correct, as I've said, as long as the</p> <p>25 underlined commodity is competitive and</p>
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<p>1 are going to be faced with the higher cost</p> <p>2 of Muskrat Falls.</p> <p>3 KELLY, Q.C.:</p> <p>4 Q. And that assumes, of course, doesn't it,</p> <p>5 that you can pass on whatever the cost</p> <p>6 consequence is and the ratepayer has the</p> <p>7 ability to pay it.</p> <p>8 DR. BOOTH:</p> <p>9 A. That's correct. And if that's the case,</p> <p>10 there's no death spiral. The only situation</p> <p>11 where that can materialize if electricity</p> <p>12 costs become so expensive that Junior can't</p> <p>13 play video games in the den and you have to</p> <p>14 turn the thermostat down and turn the lights</p> <p>15 off.</p> <p>16 KELLY, Q.C.:</p> <p>17 Q. And that's the presumption that you're</p> <p>18 making in the answer that you've given that</p> <p>19 this is a problem, not a problem for the</p> <p>20 company because you're assuming that</p> <p>21 customers have essentially an unlimited</p> <p>22 ability to pay.</p> <p>23 DR. BOOTH:</p> <p>24 A. That's what we call price insensitive demand</p> <p>25 which is what electricity is.</p>	<p>1 there's no alternative to electricity, then</p> <p>2 the costs are going to be passed on.</p> <p>3 KELLY, Q.C.:</p> <p>4 Q. Let's go to the next sentence, "If this</p> <p>5 flow-thru becomes material, he expects that</p> <p>6 the provincial government and the Board to</p> <p>7 take appropriate action." Now, I don't know</p> <p>8 how familiar you are with Muskrat Falls, but</p> <p>9 Nalcor is building it, they're the</p> <p>10 unregulated entity, there's going to be a</p> <p>11 power purchase agreement with Newfoundland</p> <p>12 and Labrador Hydro. What action has this</p> <p>13 Board set up to be able to take in relation</p> <p>14 to that? Have you studied that issue?</p> <p>15 DR. BOOTH:</p> <p>16 A. No, all I'm saying here is let's just follow</p> <p>17 along and read the quote that I referred to</p> <p>18 from the Ontario Energy Board, "regarding</p> <p>19 the risks of future events, the Board agrees</p> <p>20 with CCC that the relevant future risks are</p> <p>21 not going to likely affect Enbridge in the</p> <p>22 near term. Any risk that may materialize</p> <p>23 over a longer term can be taken into account</p> <p>24 in subsequent proceedings. In considering</p> <p>25 the risk of future events, the Board would</p>

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<p>1 take into account the fact that generally</p> <p>2 the more distant a potential event, the more</p> <p>3 speculative of any conclusion or the</p> <p>4 likelihood that a risk will materialize.”</p> <p>5 All I’m saying here is that in the test</p> <p>6 year, this is not a factor and in fact,</p> <p>7 neither 2016 or 2017, the risks that you</p> <p>8 mention, a factor for Newfoundland Power,</p> <p>9 probably 2018 is not a factor. We’re</p> <p>10 looking at the future and all I’m saying is</p> <p>11 that I would expect that if there is a</p> <p>12 significant supply shock that affects the</p> <p>13 price of electricity and that affects people</p> <p>14 dropping off the system for Newfoundland</p> <p>15 Power deciding to convert to oil, I would</p> <p>16 expect the Province and this Board, the</p> <p>17 Board to use its degree of regulatory</p> <p>18 protection and I would expect the Province</p> <p>19 to say it doesn’t make sense that we’ve got</p> <p>20 all this electricity coming out of Muskrat</p> <p>21 Falls and everyone is converting to heating</p> <p>22 oil which is not environmentally</p> <p>23 satisfactory. So there’s a variety of tools</p> <p>24 the Province can go to, as well as this</p> <p>25 Board in order to think through how to best</p>	<p>1 that’s a risk that NP is going to have to</p> <p>2 suffer, that’s a significant change from</p> <p>3 what I’ve seen elsewhere in Canada.</p> <p>4 KELLY, Q.C.:</p> <p>5 Q. But you’re relying on somehow the Provincial</p> <p>6 Government and the Board to do something and</p> <p>7 can I suggest to you that that introduces a</p> <p>8 question of legislative and regulatory</p> <p>9 uncertainty as to how this is going to work,</p> <p>10 regulatory and legislative risk?</p> <p>11 DR. BOOTH:</p> <p>12 A. No, I wouldn’t say that at all. I would say</p> <p>13 it introduces the possibility that, I mean,</p> <p>14 not every action is a risk, Mr. Kelly.</p> <p>15 Utilities might like to think every action</p> <p>16 is a risk, but this is an action on the</p> <p>17 part—expect in an action on the part of the</p> <p>18 Province if it becomes serious to take steps</p> <p>19 to protect the utility. I can’t conceive</p> <p>20 for one minute that the Provincial</p> <p>21 Government is going to say, well, we’ll</p> <p>22 allow all these people to switch to heating</p> <p>23 oil and we’ll see Newfoundland Power have</p> <p>24 all these problems earning its allowed ROE,</p> <p>25 we can see the death spiral and everyone is</p>
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<p>1 handle that risk.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. But you haven’t analyzed that and I take it</p> <p>4 from the answer you gave me a few minutes</p> <p>5 ago, you don’t have concrete proposals as to</p> <p>6 what this Board would do?</p> <p>7 DR. BOOTH:</p> <p>8 A. No, but I know what every other board in</p> <p>9 Canada has done, which is when there’s</p> <p>10 anything that comes up to jeopardize a</p> <p>11 utility, they have a hearing, that’s the</p> <p>12 Canadian regulatory compact and if the</p> <p>13 incidents you are talking about is severe</p> <p>14 enough to seriously affect Newfoundland’s</p> <p>15 ability to earn its allowed ROE, I fully</p> <p>16 expect the company to come before the Board</p> <p>17 and this Board to hear the evidence and</p> <p>18 think about what can we do to make sure that</p> <p>19 Newfoundland Power can continue to have an</p> <p>20 expectation that it’s going to earn its</p> <p>21 allowed ROE. That’s what happened every</p> <p>22 time I’ve seen it in Canada. I don’t have</p> <p>23 to know exactly what the Board is going to</p> <p>24 do, all I know is if this Board just sits</p> <p>25 idly by and says we’re not doing anything,</p>	<p>1 just going to hold their hands up and say,</p> <p>2 well we’re not going to do it.</p> <p>3 KELLY, Q.C.:</p> <p>4 Q. So you’re optimistic that the government is</p> <p>5 going to take steps to protect the utility</p> <p>6 in this province?</p> <p>7 DR. BOOTH:</p> <p>8 A. I’m optimistic—no, I’m optimistic, in the</p> <p>9 province, the government is elected by</p> <p>10 people who vote and when people who vote see</p> <p>11 their power costs going up –</p> <p>12 KELLY, Q.C.:</p> <p>13 Q. They might take steps to protect the</p> <p>14 ratepayer, the customer.</p> <p>15 DR. BOOTH:</p> <p>16 A. Well exactly, but by protecting –</p> <p>17 KELLY, Q.C.:</p> <p>18 Q. Not the utility.</p> <p>19 DR. BOOTH:</p> <p>20 A. By protecting the ratepayer, they’re going</p> <p>21 to protect the utility. Look, all I’m</p> <p>22 saying here, Mr. Kelly, is that I do not</p> <p>23 have any precedent whatsoever for a</p> <p>24 regulator to sit idly by when something</p> <p>25 comes up that damages the utility’s ability</p>

<p style="text-align: right;">Page 149</p> <p>1 to earn its allowed ROE. I saw it with</p> <p>2 Specific Natural Gas down in the northwest</p> <p>3 of B.C. and that, I think it was in my 2009</p> <p>4 testimony, where the BCUC took a number of</p> <p>5 measures to try and protect PNG when it lost</p> <p>6 almost all of its industrial load and we saw</p> <p>7 it in the National Energy Board when there</p> <p>8 was a huge hearing, people intervened and</p> <p>9 they wanted to write off a big chunk of the</p> <p>10 Mainline's assets. They said they're</p> <p>11 stranded, they're no longer needed, wipe</p> <p>12 them all out and let the TransCanada</p> <p>13 shareholders bear the costs. The National</p> <p>14 Energy Board didn't do that, they took a</p> <p>15 reasonable approach to get the utility and</p> <p>16 to TransCanada the tools necessary for it to</p> <p>17 continue to earn its allowed ROE and in</p> <p>18 fact, it has continued to earn its allowed</p> <p>19 ROE.</p> <p>20 KELLY, Q.C.:</p> <p>21 Q. Now if we go down to line 26, you also say</p> <p>22 this, "He"—which is Dr. Booth—"would expect</p> <p>23 that in an extreme situation Newfoundland</p> <p>24 Power, like any competitive organization,</p> <p>25 will look to cut costs wherever possible if</p>	<p style="text-align: right;">Page 151</p> <p>1 yesterday, you talked about PBR in terms of</p> <p>2 FAC electricity and squeezing efficiencies</p> <p>3 out. Newfoundland Power, I think, has a</p> <p>4 very good record before this Board of very</p> <p>5 efficient operations, so when you're trying</p> <p>6 to figure out what you're going to squeeze</p> <p>7 out to balance financial integrity versus</p> <p>8 system maintenance and reliability, that's</p> <p>9 quite a fine balance, isn't it?</p> <p>10 DR. BOOTH:</p> <p>11 A. Mr. Kelly, I remember vividly in 2004 before</p> <p>12 the Ontario Energy Board, one of the</p> <p>13 commissioners asked me why do we have to</p> <p>14 give these guys an incentive to be</p> <p>15 efficient? Why do we have to go to a PBR,</p> <p>16 they should be efficient and do their job.</p> <p>17 But when I look at what's happened in</p> <p>18 Alberta, when I look at what's happened in</p> <p>19 B.C., when I look at what's happened in the</p> <p>20 Régis where they put the utility on a</p> <p>21 performance base or incentive regulation, or</p> <p>22 in Ontario where they're being under</p> <p>23 settlement, it's amazing the efficiencies</p> <p>24 that utilities have been able to generate.</p> <p>25 Perhaps this time is different, perhaps</p>
<p style="text-align: right;">Page 150</p> <p>1 its basic business model was under threat."</p> <p>2 So one of the things that you're putting up</p> <p>3 here is that Newfoundland Power, going</p> <p>4 forward, will have to consider what costs to</p> <p>5 cut as it tries to balance financial</p> <p>6 integrity versus system maintenance</p> <p>7 reliability, agreed?</p> <p>8 DR. BOOTH:</p> <p>9 A. No, no, not at all. I would say that nearly</p> <p>10 every other utility in the world has been a</p> <p>11 performance base regulation, so if there is</p> <p>12 a huge shock to the system, all I'm saying</p> <p>13 is this Board has a number of tools that it</p> <p>14 can look at in order to manage those risks.</p> <p>15 One of them may be to put some sort of PBR</p> <p>16 and say to Newfoundland Power, we're going</p> <p>17 to impose a one percent cost or efficiency</p> <p>18 gain, which is usually the "X" factor in PBR</p> <p>19 and we'll give you the potential to actually</p> <p>20 generate savings and become efficient and</p> <p>21 it's amazing what efficiencies utilities can</p> <p>22 generate.</p> <p>23 KELLY, Q.C.:</p> <p>24 Q. That's a really interesting comment because</p> <p>25 at the beginning of your testimony</p>	<p style="text-align: right;">Page 152</p> <p>1 Newfoundland Power is the one utility in</p> <p>2 Canada that is already operating incredibly</p> <p>3 efficient and there's no fat.</p> <p>4 KELLY, Q.C.:</p> <p>5 Q. So one of the risks that you are, I'm going</p> <p>6 to call it a risk, one of the risks that</p> <p>7 you're putting up is that there may be a</p> <p>8 change in the whole regulatory legislative</p> <p>9 structure?</p> <p>10 DR. BOOTH:</p> <p>11 A. Yeah, could be that, look, all I'm saying is</p> <p>12 that in three years' time if this scenario</p> <p>13 comes about, there's a number of measures</p> <p>14 that the Board and the province can do to</p> <p>15 make sure that this is not a big shock to</p> <p>16 the system and I think a performance based</p> <p>17 regulation is not exactly a structural</p> <p>18 change, as far as I'm aware just about every</p> <p>19 utility in Canada is under some form of PBR</p> <p>20 or settlement.</p> <p>21 KELLY, Q.C.:</p> <p>22 Q. Now, you talked about the cod moratorium and</p> <p>23 I did promise you we would come back to this</p> <p>24 and you've heard the testimony before that</p> <p>25 during the cod moratorium in order to</p>

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<p>1 balance that financial integrity with system</p> <p>2 reliability, the company had to cut system</p> <p>3 maintenance and reliability so that by the</p> <p>4 time we got to the end of the 1990s, 1999,</p> <p>5 the system had suffered significantly in</p> <p>6 terms of reliability, are you aware of that?</p> <p>7 DR. BOOTH:</p> <p>8 A. Well I wasn't aware of that, but I'm not</p> <p>9 surprised, I mean, you're probably aware the</p> <p>10 brownouts we had in eastern Canada were</p> <p>11 caused because a U.S. utility cut back on</p> <p>12 its maintenance when it was on the PBR.</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. And more recently, I don't want to go too</p> <p>15 far into this, but more recently in this</p> <p>16 jurisdiction we've had the issue with Hydro,</p> <p>17 the generating utility and its problems in</p> <p>18 maintaining the system, so there's a trade</p> <p>19 off between maintaining financial integrity</p> <p>20 and reliability if you have declining sales,</p> <p>21 lack of contribution, growth, et cetera.</p> <p>22 It's simply the corollary, agreed?</p> <p>23 DR. BOOTH:</p> <p>24 A. Well I wouldn't say it's simply the</p> <p>25 corollary, I would say that whenever you</p>	<p>1 have on the screen your graph from yesterday</p> <p>2 with the allowed and actual ROEs, and you</p> <p>3 will see during the 1990s, that the ROE, the</p> <p>4 company under earned its allowed ROE,</p> <p>5 correct?</p> <p>6 DR. BOOTH:</p> <p>7 A. That is correct, my understanding, I asked</p> <p>8 the company to explain that and they said it</p> <p>9 was CRA assessment.</p> <p>10 KELLY, Q.C.:</p> <p>11 Q. No, I think you're mixing up a little bit.</p> <p>12 DR. BOOTH:</p> <p>13 A. Oh there was a severe sleet storm.</p> <p>14 KELLY, Q.C.:</p> <p>15 Q. No, that comes a little bit later. Let me</p> <p>16 help you along here. In the 1990s, what</p> <p>17 happened to long Canada rates in bond rates?</p> <p>18 DR. BOOTH:</p> <p>19 Q. They came down.</p> <p>20 KELLY, Q.C.:</p> <p>21 Q. They came down, exactly. And what does that</p> <p>22 do? It reduces your cost of capital,</p> <p>23 doesn't it?</p> <p>24 DR. BOOTH:</p> <p>25 A. Well hopefully as long as the regulator</p>
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<p>1 sort of look to cut costs, first of all</p> <p>2 there shouldn't be any costs to cut in the</p> <p>3 first place if in fact it's operating</p> <p>4 efficiently, but there's always a danger</p> <p>5 that you may cut a little bit too much. I</p> <p>6 mean, that's what competitive firms do and</p> <p>7 you got to remember, Mr. Kelly, that we're</p> <p>8 basically looking at, regulation is designed</p> <p>9 to emulate the impact of competition for the</p> <p>10 utility to operate as efficiently as</p> <p>11 possible, minimal to low run average cost so</p> <p>12 ratepayers don't pay more than they should</p> <p>13 do if in fact it was a competitive</p> <p>14 environment. And unfortunately a</p> <p>15 competitive environment, sometimes here are</p> <p>16 things that wouldn't happen with a regulated</p> <p>17 utility with a gold plated rate base, that's</p> <p>18 inevitable.</p> <p>19 (12:00 p.m.)</p> <p>20 KELLY, Q.C.:</p> <p>21 Q. Samantha, can we put up Dr. Booth's slide</p> <p>22 No. 3, please? If you can take us over,</p> <p>23 Samantha, you might be able to enlarge the</p> <p>24 1990s or 2000 part or is that—that's as good</p> <p>25 as it gets is it? Okay. Now, Dr. Booth, we</p>	<p>1 actually passes through their financial</p> <p>2 costs, then the ROE should come down.</p> <p>3 KELLY, Q.C.:</p> <p>4 Q. And so if you look at 1991 through 1996, the</p> <p>5 Board held the allowed return up as we went</p> <p>6 through the very difficult proposition of</p> <p>7 the cod moratorium, it didn't reduce.</p> <p>8 DR. BOOTH:</p> <p>9 A. Yes.</p> <p>10 KELLY, Q.C.:</p> <p>11 Q. That's the clear observation, and yet even</p> <p>12 in that circumstance with an allowed ROE</p> <p>13 held up, the company was forced into the</p> <p>14 position of trying to balance financial</p> <p>15 integrity versus system reliability and</p> <p>16 system reliability got deteriorated. So</p> <p>17 we've been through this experience, nobody</p> <p>18 wants to go back there.</p> <p>19 DR. BOOTH:</p> <p>20 A. But what you're actually telling me is the</p> <p>21 allowed ROE is probably excessive in the</p> <p>22 early '90s, so in fact they didn't under</p> <p>23 earn, actually they probably over earned if</p> <p>24 their allowed ROE had been set properly, is</p> <p>25 that what you're telling me?</p>

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1 KELLY, Q.C.:

2 Q. And that helped balance the financial
3 integrity, so maintaining an ROE that
4 enables you to manage through the problem is
5 what the Board did back then. You're in
6 here saying cut the ROE—or from your
7 testimony this morning, at least maintain
8 it.

9 DR. BOOTH:

10 A. My recommendation is 7.5 percent, the same
11 as three years ago.

12 KELLY, Q.C.:

13 Q. Maintain it like last time.

14 DR. BOOTH:

15 A. And my recommendation as well, Mr. Kelly, is
16 that if there are any serious risks outside
17 the test year, they should be dealt with at
18 that appropriate time. My understanding is
19 there is nothing significant within the
20 next, the test years, 2016 to 2017 and all
21 I'm saying is that the Board has the
22 regulatory tools to manage these risks
23 should they materialize.

24 KELLY, Q.C.:

25 Q. Haven't quite been able to tell us, though,

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1 how it's going to do that.

2 DR. BOOTH:

3 A. Because that's the job of the Board. I'm
4 not going to go to them and say do this, do
5 that, do that. All I'm saying is that what
6 will happen is there will be a hearing if
7 anything significant happens and out of that
8 would come a judgment on the part of the
9 Board and I've never, as I say, I've never
10 seen a regulator not responsive to any
11 serious concerns raised by the utility. If
12 you're telling me this time it's different,
13 all I could say is I've heard that for the
14 last 30 years and it hasn't been different
15 so far.

16 KELLY, Q.C.:

17 Q. Dr. Booth, can I take you to your
18 surrebuttal testimony to page 16, beginning
19 at line 8, I'm going to give you and the
20 Board an opportunity to read down through
21 the first paragraph, that's essentially the
22 discussion we just had and in lines 14 and
23 15, you point to the role of the Provincial
24 Government and the Board to protect the
25 utility. Okay, with me so far?

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1 DR. BOOTH:

2 A. That's correct.

3 KELLY, Q.C.:

4 Q. Then at line 17, you say this, "I agree that
5 the Board might in the future take actions
6 that hurt the bondholder." Now, which
7 bondholder are you talking about?

8 DR. BOOTH:

9 A. The people that buy Newfoundland Power's
10 bonds.

11 KELLY, Q.C.:

12 Q. Would they be our existing bondholders, the
13 550 million outstanding?

14 DR. BOOTH:

15 A. Generally it's the existing bondholders
16 because if the Board takes action, the new
17 bondholders will price that into the yield
18 that they expect.

19 KELLY, Q.C.:

20 Q. So I'm not quite sure I understood your
21 answer. Is it the existing bondholders,
22 those who already hold the bonds who would
23 be hurt or new bondholders?

24 DR. BOOTH:

25 A. The old bondholders.

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1 KELLY, Q.C.:

2 Q. But how would they be hurt? So we're going
3 to hurt the old bondholders, the existing
4 debt owners?

5 DR. BOOTH:

6 A. I didn't say we were going to hurt the old
7 bondholders, all I said is that when the
8 bondholders—all I said is the Board may take
9 actions that are not necessarily in the best
10 interest of the bondholders, which is, I
11 mean, a change in the common equity ratio is
12 not particularly in the interest of the
13 bondholders. They would like as much equity
14 as possible, lower the financial risk and an
15 upgrade of their bonds so they pick up a
16 capital gain.

17 KELLY, Q.C.:

18 Q. Okay, so existing bondholders could be hurt
19 by the type of tools that you are suggesting
20 could be used and would it not also follow
21 from that that future bondholders would be
22 negatively impacted?

23 DR. BOOTH:

24 A. Why would future bondholders be negatively
25 impacted?

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<p>1 KELLY, Q.C.:</p> <p>2 Q. Well let me put the question slightly</p> <p>3 differently, that if steps are taken which</p> <p>4 affect—that it may affect the company’s</p> <p>5 ability to be able to borrow at the same</p> <p>6 rates that it otherwise would have been.</p> <p>7 DR. BOOTH:</p> <p>8 A. I think that’s correct in the sense that if</p> <p>9 this Board decides to replace 5 percent</p> <p>10 common equity with 5 percent debt, then the</p> <p>11 bondholders are going to say with a little</p> <p>12 bit more financial leverage and they’re</p> <p>13 probably going to want a few basis points on</p> <p>14 the Euro and the debt.</p> <p>15 KELLY, Q.C.:</p> <p>16 Q. So the cost of debt will rise?</p> <p>17 DR. BOOTH:</p> <p>18 A. No, I didn’t say it will rise, I said it</p> <p>19 could rise.</p> <p>20 KELLY, Q.C.:</p> <p>21 Q. It could rise from what it otherwise would</p> <p>22 have?</p> <p>23 DR. BOOTH:</p> <p>24 A. Probably that’s the case, correct.</p> <p>25 KELLY, Q.C.:</p>	<p>1 fair and reasonable rates. That may result</p> <p>2 in some equity holders saying, well, I</p> <p>3 didn’t expect that, I’m going to lose money</p> <p>4 and it may be that some of the bondholders</p> <p>5 can say, well I didn’t expect that, now I’m</p> <p>6 not quite so happy with those bonds. That’s</p> <p>7 part and parcel of the investment risk.</p> <p>8 KELLY, Q.C.:</p> <p>9 Q. So if I put all that together, I’m looking</p> <p>10 at a picture in which even, never mind the</p> <p>11 shareholders, but we’re down to bondholders</p> <p>12 could be negatively affected as you’ve said</p> <p>13 in your –</p> <p>14 DR. BOOTH:</p> <p>15 A. Sure, you’re acting like Mr. Sherwin saying</p> <p>16 it’s against the constitution if you</p> <p>17 expropriate property.</p> <p>18 KELLY, Q.C.:</p> <p>19 Q. No, I was surprised to read your words when</p> <p>20 you said “I agree that the Board might in</p> <p>21 the future take actions that hurt the</p> <p>22 bondholder”, which is, like that, to me,</p> <p>23 rings pretty serious.</p> <p>24 DR. BOOTH:</p> <p>25 A. No, it doesn’t, it’s not serious at all.</p>
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<p>1 Q. Right, so one of the things you are</p> <p>2 postulating is to deal with the risks we’ve</p> <p>3 talked about, the Board might have to take</p> <p>4 actions which would be serious enough to</p> <p>5 hurt existing bondholders and negatively</p> <p>6 affect future bondholders?</p> <p>7 DR. BOOTH:</p> <p>8 A. No, I’m saying that if any of these risks</p> <p>9 materialize, the Board is going to look at</p> <p>10 its overall tool kit and it’s going to take</p> <p>11 appropriate measures. The bondholders when</p> <p>12 they buy Newfoundland Power’s debt have got</p> <p>13 a contractual agreement that agrees that</p> <p>14 they think Newfoundland Power can do certain</p> <p>15 things, that’s where they protect them, in</p> <p>16 the bond contract. That’s why there’s an</p> <p>17 interest coverage shown restriction.</p> <p>18 Everything else is part of the risk of</p> <p>19 investing in bonds. You can’t look at this</p> <p>20 and say, well the Board can never take an</p> <p>21 action that possibly hurts the bondholders.</p> <p>22 I mean, you can say that for the equity</p> <p>23 holders as well, they can’t lower the</p> <p>24 allowed ROE because that hurts the equity</p> <p>25 holders. It’s the job of the Board to set</p>	<p>1 All I’m saying is the Board is going to look</p> <p>2 at everything and do its best to protect the</p> <p>3 utility to give it an opportunity to earn</p> <p>4 its allowed ROE. That may involve putting</p> <p>5 the Board on—sorry, the company on</p> <p>6 performance base regulation, it may involve</p> <p>7 going through more tax efficient capital</p> <p>8 structure, it may involve changing the</p> <p>9 depreciation rate and stretching out the</p> <p>10 amortization of the utility’s assets. I</p> <p>11 don’t know what the Board is going to do if</p> <p>12 it ever materializes and I’m not making any</p> <p>13 recommendations whatsoever. All I’m saying</p> <p>14 is that if this situation every materializes</p> <p>15 and is perceived to be serious, there are</p> <p>16 measures, there is a tool kit that the</p> <p>17 Board’s got in order to manage all those</p> <p>18 risks and I do not expect it just to sit</p> <p>19 idly by and not take measures to protect the</p> <p>20 utility and changing the depreciation rates</p> <p>21 is exactly what TransCanada wanted in the</p> <p>22 TransCanada Mainline, so that’s a standard</p> <p>23 tool that is used to moderate risk.</p> <p>24 KELLY, Q.C.:</p> <p>25 Q. Okay, let’s go back for a moment to NP-CA-</p>

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<p>1 062 because you referred a number of times</p> <p>2 to this OEB comment. Now is the OEB there</p> <p>3 talking about the rate of return?</p> <p>4 DR. BOOTH:</p> <p>5 A. No, it's talking about capital structure.</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. Okay, well if we look at capital structure,</p> <p>8 would you agree with me that Newfoundland</p> <p>9 Power has had a stable capital structure for</p> <p>10 decades?</p> <p>11 DR. BOOTH:</p> <p>12 A. That's correct, 40 to 45 percent in the</p> <p>13 early '90s and 45 percent for at least the</p> <p>14 last 15 years.</p> <p>15 KELLY, Q.C.:</p> <p>16 Q. And if I take you to the company's finance</p> <p>17 evidence, let's go to page 421.</p> <p>18 MS. PIERCEY:</p> <p>19 Q. What was the page again?</p> <p>20 KELLY, Q.C.:</p> <p>21 Q. 421. And if you go to the middle of the</p> <p>22 page, Samantha, and then kind of scroll</p> <p>23 down. And in fact, you'd be familiar with</p> <p>24 the Stated Case decision from our Court of</p> <p>25 Appeal which our Court of Appeal has dealt</p>	<p>1 Alberta Utilities Commission where you apply</p> <p>2 generic ROES to a wide range of companies,</p> <p>3 it's then efficient to look at the common</p> <p>4 equity ratio within the GRA of an individual</p> <p>5 company and change that to equalize the risk</p> <p>6 such that they can continue to get exactly</p> <p>7 the same ROE.</p> <p>8 KELLY, Q.C.:</p> <p>9 Q. That's when you got multiple investor owned</p> <p>10 utilities within the same regulatory</p> <p>11 umbrella?</p> <p>12 DR. BOOTH:</p> <p>13 A. That's correct. Where you don't have</p> <p>14 multiple utilities, as in the case, for</p> <p>15 example of the BCUC, the BCUC actually</p> <p>16 changes the common equity ratio and has</p> <p>17 changed the common equity ratio and the ROE</p> <p>18 at the same time and set differential</p> <p>19 premiums on the ROE and the common equity</p> <p>20 ratio.</p> <p>21 KELLY, Q.C.:</p> <p>22 Q. But if you're going to change the ROE,</p> <p>23 because this is their language a few minutes</p> <p>24 ago, for a change in the risk, if the risk</p> <p>25 goes up, it's the equity component that you</p>
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<p>1 with the importance of the stability in</p> <p>2 capital structure management.</p> <p>3 DR. BOOTH:</p> <p>4 A. Oh, I generally agree with that completely.</p> <p>5 KELLY, Q.C.:</p> <p>6 Q. Okay, you would.</p> <p>7 DR. BOOTH:</p> <p>8 A. Yeah, I'd generally recommend that you don't</p> <p>9 change capital structures unless there's a</p> <p>10 significant change in business risk, which</p> <p>11 is the policy of the National Energy Board,</p> <p>12 the Ontario Energy Board and most boards in</p> <p>13 Canada, except the Albert Utility</p> <p>14 Commission.</p> <p>15 KELLY, Q.C.:</p> <p>16 Q. Right, and so what you just said is you</p> <p>17 don't change capital structures unless</p> <p>18 there's a material change in business risk.</p> <p>19 If the risk increased, ordinarily you would</p> <p>20 increase the equity in the capital</p> <p>21 structure, correct?</p> <p>22 DR. BOOTH:</p> <p>23 A. Generally you would, it depends what you're</p> <p>24 doing. If you're like the National Energy</p> <p>25 Board, the Ontario Energy Board and the</p>	<p>1 would increase. The response to increasing</p> <p>2 risk is an increase in equity component.</p> <p>3 DR. BOOTH:</p> <p>4 A. Well it can be, it can be an increase in the</p> <p>5 ROE.</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. Or it could be an increase in the ROE, but</p> <p>8 in terms of capital structure, if you're</p> <p>9 going to adjust the capital structure</p> <p>10 because of a change in risk, increasing risk</p> <p>11 increases equity, decreasing risk decreases</p> <p>12 equity, agreed?</p> <p>13 DR. BOOTH:</p> <p>14 A. Agreed, yeah. And in this case with this</p> <p>15 company regulated by the Board, it's not</p> <p>16 into the problem of the generic ROE, it can</p> <p>17 regulate, it can change the ROE and the</p> <p>18 capital structure.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. Now if we go to NP-CA-026, the question asks</p> <p>21 you – it gives this quote, "In our</p> <p>22 judgment", referring to Dr. Booth, which</p> <p>23 would be you and Dr. Berkowitz, "in our</p> <p>24 judgment, capital structures should be long</p> <p>25 lived, as they are primarily a function of</p>

<p style="text-align: right;">Page 169</p> <p>1 the business risk of the firm. In</p> <p>2 particular, it is not standard practice to</p> <p>3 change equity ratios on an ongoing basis”,</p> <p>4 and you were asked, “Does Dr. Booth still</p> <p>5 agree with the above statement regarding the</p> <p>6 long lived nature of capital structures”,</p> <p>7 and you answered, referring to certain other</p> <p>8 ones, “Yes, while noting the word</p> <p>9 “primarily”. So you generally agree with</p> <p>10 the statement that you’ve got on the screen?</p> <p>11 DR. BOOTH:</p> <p>12 A. Absolutely. I disagree with the policy of</p> <p>13 the Alberta Utilities Commission where</p> <p>14 they’re changing their capital structure</p> <p>15 couple of years. I personally don’t think</p> <p>16 that makes a lot of sense.</p> <p>17 KELLY, Q.C.:</p> <p>18 Q. Now in terms of capital structure, if you</p> <p>19 know you have a risk problem that appears to</p> <p>20 have material and significant components to</p> <p>21 it, and you know that that is coming, is it</p> <p>22 not good financial management to maintain</p> <p>23 your existing capital structure, or maybe</p> <p>24 even strength it to be ready for it?</p> <p>25</p>	<p style="text-align: right;">Page 171</p> <p>1 make recommendations.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. Let’s go to CA-NP-050, and go to page 4 and</p> <p>4 see if we can come to some agreement on some</p> <p>5 practical points here as well. If we could</p> <p>6 go to page 4, and this deals with – come</p> <p>7 down, Samantha, a little bit lower on the</p> <p>8 page, if you could. We begin at line 26 and</p> <p>9 27, “Newfoundland Power has consulted with</p> <p>10 its investment bankers concerning the</p> <p>11 current Canadian preferred share market”.</p> <p>12 Line 30, “The company has been advised that</p> <p>13 preferred shares with a fixed coupon rate</p> <p>14 and perpetual term are not currently</p> <p>15 marketable in Canadian capital markets.</p> <p>16 Preferred shares, which have a coupon rate</p> <p>17 which is reset at the predetermined time,</p> <p>18 typically five years, are currently</p> <p>19 marketable in Canadian capital markets”. Do</p> <p>20 you agree with that statement?</p> <p>21 DR. BOOTH:</p> <p>22 A. Yes, at the moment most of the preferred</p> <p>23 shares are these rate reset preferred</p> <p>24 shares.</p> <p>25</p>
<p style="text-align: right;">Page 170</p> <p>1 (12:15 p.m.)</p> <p>2 DR. BOOTH:</p> <p>3 A. Not particularly. Right now, as I said, if</p> <p>4 we were going back to Muskrat Falls, as I’ve</p> <p>5 said, that is not within the test year, it’s</p> <p>6 not a factor for 2016, 2017, or 2018. I’m</p> <p>7 not convinced that the dire prospects will</p> <p>8 actually happen. If it does happen, I would</p> <p>9 fully expect in the 2020 GRA, that that will</p> <p>10 come up as an issue and probably if it is</p> <p>11 serious, then there will be a lot of</p> <p>12 discussion and a lot of analysis at that</p> <p>13 point in time. If that does materialize, I</p> <p>14 would expect the company to put forward its</p> <p>15 case that a whole bunch of things need to</p> <p>16 change.</p> <p>17 KELLY, Q.C.:</p> <p>18 Q. And as we talked about before, the Board</p> <p>19 will be in the best position to determine</p> <p>20 the extent of that risk?</p> <p>21 DR. BOOTH:</p> <p>22 A. That’s correct. They’ll receive expert</p> <p>23 evidence by the company and by other</p> <p>24 witnesses, and the Board will judge that and</p> <p>25</p>	<p style="text-align: right;">Page 172</p> <p>1 KELLY, Q.C.:</p> <p>2 Q. If we go on, “Preferred shares which have a</p> <p>3 coupon reset provision are exposed to</p> <p>4 changes in market interest rates. This makes</p> <p>5 them similar to debt financing and</p> <p>6 distinguishes them from preferred shares</p> <p>7 with perpetual terms and fixed coupon rates.</p> <p>8 Preferred shares”, go to the next page,</p> <p>9 Samantha, “which have a coupon reset</p> <p>10 provision are not treated simply as equity</p> <p>11 for accounting and credit rating purposes”.</p> <p>12 Do you agree with that statement?</p> <p>13 DR. BOOTH:</p> <p>14 A. I agree with part of that statement, not all</p> <p>15 of that statement.</p> <p>16 KELLY, Q.C.:</p> <p>17 Q. Can you tell me what you agree with?</p> <p>18 DR. BOOTH:</p> <p>19 A. Preferred shares rank behind debt, so they</p> <p>20 provide equity support for the bond holders</p> <p>21 regardless of whether the preferred share</p> <p>22 dividend is a rate we set or whether it’s a</p> <p>23 fixed rate preferred share. So, for</p> <p>24 example, in the restrictions in Newfoundland</p> <p>25</p>

<p style="text-align: right;">Page 173</p> <p>1 Power's first mortgage bonds, there's the</p> <p>2 interest restriction. Generally gas</p> <p>3 utilities particularly have a similar</p> <p>4 restriction, but the restriction applies to</p> <p>5 the funded debt, not to preferred share</p> <p>6 dividends. So that you can finance with</p> <p>7 preferred shares and that provides an after</p> <p>8 tax expense that increases the overall</p> <p>9 operating income without affecting the</p> <p>10 interest income, so the interest CAPM ratio</p> <p>11 goes up for purposes of the first mortgage</p> <p>12 bond.</p> <p>13 KELLY, Q.C.:</p> <p>14 Q. Do you agree that credit rating agencies</p> <p>15 view these as similar to debt?</p> <p>16 DR. BOOTH:</p> <p>17 A. It depends on what the terms of the</p> <p>18 provisions are. Basically, if you get what</p> <p>19 we call a hard retraction where it's a five</p> <p>20 year retractable preferred share in cash,</p> <p>21 they treat it as bonds. If it's a soft</p> <p>22 retraction where you can't get your money</p> <p>23 back, but we'll give you more shares, then</p> <p>24 they treat it as equity. So the thing about</p> <p>25</p>	<p style="text-align: right;">Page 175</p> <p>1 Canadian capital markets". Do you agree</p> <p>2 with that?</p> <p>3 DR. BOOTH:</p> <p>4 A. I'm not an investment banker, but I think if</p> <p>5 you went to an investment banker and said,</p> <p>6 look, we want to issue 50 million dollars'</p> <p>7 worth of preferred shares, the investment</p> <p>8 banker would say, well, I'll see what I can</p> <p>9 do, and the investment banker – 50 million</p> <p>10 dollars is a lot of money. I'm sure the</p> <p>11 investment banker would be able to do it.</p> <p>12 KELLY, Q.C.:</p> <p>13 Q. You're not an investment banker, so you</p> <p>14 can't take issue with this statement?</p> <p>15 DR. BOOTH:</p> <p>16 A. I would say that – you know, of course,</p> <p>17 Newfoundland Power does have preferred</p> <p>18 shares outstanding and it has about .8</p> <p>19 percent of its capital structure in</p> <p>20 preferred shares.</p> <p>21 KELLY, Q.C.:</p> <p>22 Q. Very old ones, long historical basis.</p> <p>23 DR. BOOTH:</p> <p>24 A. That's true, but their long historical basis</p> <p>25</p>
<p style="text-align: right;">Page 174</p> <p>1 preferred shares is they're similar to debt</p> <p>2 in the sense that they've got contractual</p> <p>3 provisions and you can structure them to</p> <p>4 mimic equity, to mimic debt, to mimic a</p> <p>5 variety of securities. We even had at one</p> <p>6 point a company trying to issue 30 day</p> <p>7 preferred shares, and Revenue Canada said</p> <p>8 this is ridiculous, you can't have 30 day</p> <p>9 preferred shares, they're supposed to be -</p> <p>10 equity is supposed to be a permanent part of</p> <p>11 the capital structure. So instead of 30 day</p> <p>12 preferred shares, you issue long-term</p> <p>13 preferred shares where the dividend</p> <p>14 fluctuates with a short-term interest rate,</p> <p>15 and Fortis, for example, has issued long</p> <p>16 term preferred shares where the dividend</p> <p>17 fluctuates every quarter with the Treasury</p> <p>18 Bill rate.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. The statement then goes on, "Newfoundland</p> <p>21 Power has also been advised that a minimum</p> <p>22 issue of 100 million would be required for a</p> <p>23 utility preferred share issue with a coupon</p> <p>24 reset to be marketable in the current</p> <p>25</p>	<p style="text-align: right;">Page 176</p> <p>1 where those were issued at one point in</p> <p>2 time, and there were a small amount of</p> <p>3 preferred shares were issued. So in terms</p> <p>4 of being available in the capital market, we</p> <p>5 do have increased concentration in the</p> <p>6 capital market, so we tend to get big issues</p> <p>7 because they're sold through a relatively</p> <p>8 few number of big institutional purchasers.</p> <p>9 KELLY, Q.C.:</p> <p>10 Q. Have you examined or do you have any</p> <p>11 evidence that Newfoundland Power could</p> <p>12 market preferred shares of less than 100</p> <p>13 million dollars?</p> <p>14 DR. BOOTH:</p> <p>15 A. I'm 100 percent convinced that if they went</p> <p>16 through an investment banker and said we</p> <p>17 want to issue 50 million dollars' worth of</p> <p>18 preferred shares, they could get it done.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. You didn't answer my question. Have you</p> <p>21 studied it or got any evidence before the</p> <p>22 Board?</p> <p>23 DR. BOOTH:</p> <p>24 A. No, that's not – my recommendation –</p> <p>25</p>

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<p>1 actually, it's not even my recommendation,</p> <p>2 Mr. Kelly. My recommendation is that this</p> <p>3 Board deem the preferred shares for the next</p> <p>4 three years, so they don't actually have to</p> <p>5 issue them.</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. Just hold that, I'm going to come to that</p> <p>8 one. The company goes on, if I can come</p> <p>9 down to lines 19 through 22, "The Board has</p> <p>10 recognized that Newfoundland Power's</p> <p>11 relatively small size reduces its financial</p> <p>12 flexibility. The minimum issue size of the</p> <p>13 utility preferred share issue of 100 million</p> <p>14 highlights this point. 100 million</p> <p>15 represents approximately 10 percent of the</p> <p>16 company's forecast rate base". That's</p> <p>17 statistically about right?</p> <p>18 DR. BOOTH:</p> <p>19 A. I think that's true. The 5 percent is 55</p> <p>20 million, so 100 million, that's</p> <p>21 approximately correct.</p> <p>22 KELLY, Q.C.:</p> <p>23 Q. And the last time around we had this</p> <p>24 discussion where you were suggesting that</p> <p>25</p>	<p>1 problem with that. The Alberta Utilities</p> <p>2 Commission has no problem with that.</p> <p>3 KELLY, Q.C.:</p> <p>4 Q. And that takes us then back to the question</p> <p>5 of deeming, and essentially what you're</p> <p>6 suggesting to this Board is that 5 percent</p> <p>7 of the common equity be treated by the Board</p> <p>8 and remunerated as if it was a preferred</p> <p>9 share, correct?</p> <p>10 DR. BOOTH:</p> <p>11 A. That's correct.</p> <p>12 KELLY, Q.C.:</p> <p>13 Q. So they would get about half the rate of</p> <p>14 return on those common shares as they would</p> <p>15 on the other 40 percent?</p> <p>16 DR. BOOTH:</p> <p>17 A. Depends what rates of return that you're</p> <p>18 assuming.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. I'm just using your –</p> <p>21 DR. BOOTH:</p> <p>22 A. Well, that's true. I mean, see the</p> <p>23 statement here, "preferred shares typically</p> <p>24 carry a higher coupon than debt issue,</p> <p>25</p>
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<p>1 somehow Fortis could mirror these shares</p> <p>2 down?</p> <p>3 DR. BOOTH:</p> <p>4 A. That's exactly what CU does with ATCO</p> <p>5 Electric, ATCO Gas, and ATCO Pipelines.</p> <p>6 KELLY, Q.C.:</p> <p>7 Q. And we had that discussion the last time,</p> <p>8 those shares would then carry a Fortis</p> <p>9 credit rating, agreed?</p> <p>10 DR. BOOTH:</p> <p>11 A. That's correct. If Fortis issues these</p> <p>12 shares, then basically – when we're talking</p> <p>13 about mirroring down, all it means is that</p> <p>14 Newfoundland Power would issue a matching</p> <p>15 preferred share to Fortis.</p> <p>16 KELLY, Q.C.:</p> <p>17 Q. And that would breach the ring fencing</p> <p>18 requirements that the Board has set up?</p> <p>19 DR. BOOTH:</p> <p>20 A. Oh, I don't know about that. That's a legal</p> <p>21 question that if the Board thinks it</p> <p>22 breaches its policies, then that's a Board</p> <p>23 decision. All I'm saying is that ATCO</p> <p>24 Electric, ATCO Gas, ATCO Pipelines, have no</p> <p>25</p>	<p>1 preferred shares have largely been displaced</p> <p>2 by lower cost debt and utility capital</p> <p>3 structure", I'm actually proposing a halfway</p> <p>4 house, I'm not proposing that they replace</p> <p>5 the 5 percent preferred shares with debt at</p> <p>6 the moment. Sorry, the 5 percent equity</p> <p>7 with debt at the moment. The preferred</p> <p>8 shares are more expensive than debt. They're</p> <p>9 less expensive than equity, but they're more</p> <p>10 expensive than debt.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. So on your proposal, that would lock in 5</p> <p>13 percent of the common equity, but only</p> <p>14 remunerated at, let's say, approximately</p> <p>15 half the common equity rate of return?</p> <p>16 DR. BOOTH:</p> <p>17 A. Yes. Actually, that's what the Regie does</p> <p>18 with Gaz Metro.</p> <p>19 KELLY, Q.C.:</p> <p>20 Q. And you told me a minute ago you're not a</p> <p>21 lawyer, but I'm going to suggest to you that</p> <p>22 that would not be in accordance with our</p> <p>23 Public Utilities Act, which requires an</p> <p>24 appropriate rate of return on the common</p> <p>25</p>

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<p>1 equity?</p> <p>2 DR. BOOTH:</p> <p>3 A. Well, it wouldn't be common equity. It would</p> <p>4 be 5 percent deemed preferred shares.</p> <p>5 KELLY, Q.C.:</p> <p>6 Q. But they would – they would still be common</p> <p>7 equity shares.</p> <p>8 DR. BOOTH:</p> <p>9 A. I'm saying that the Board would deem 5</p> <p>10 percent preferred shares.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. And you haven't studied that legal issue in</p> <p>13 this jurisdiction?</p> <p>14 DR. BOOTH:</p> <p>15 A. No, that's correct, Mr. Kelly, I'm not a</p> <p>16 lawyer. I'm just telling the Board what the</p> <p>17 Regie does for Gaz Metro, what the AUC does</p> <p>18 for CU Inc. If you tell me that there's</p> <p>19 specific legal problems that restrict the</p> <p>20 actions of this Board, then we're back to</p> <p>21 saying, well, issue 50 million dollars'</p> <p>22 worth or preferred shares. If we were</p> <p>23 forced into that situation, then I would</p> <p>24 tend to agree with Dr. Cleary and say, well,</p> <p>25</p>	<p>1 we need to have higher prices. Normally</p> <p>2 when a firm is under any form of competitive</p> <p>3 threat, which is what you're implying for</p> <p>4 Muskrat Falls, the – actually, the</p> <p>5 competitive firm is not to increase cost,</p> <p>6 it's to reduce cost, but you're proposing</p> <p>7 essentially to increase cost.</p> <p>8 KELLY, Q.C.:</p> <p>9 Q. So do we agree with my question, that the</p> <p>10 question the Board has to consider is that</p> <p>11 good regulatory practice to be doing that at</p> <p>12 this point in time? That's the question the</p> <p>13 Board has to address. Do we agree on that</p> <p>14 point?</p> <p>15 DR. BOOTH:</p> <p>16 A. I think it's good regulatory practice at the</p> <p>17 current point in time if the Board tells the</p> <p>18 rating agencies and the company that the</p> <p>19 common equity ratio, they reaffirm that the</p> <p>20 range is 40 to 45 percent, and for the next</p> <p>21 three years they're going to deem 5 percent</p> <p>22 of the equity as being preferred shares, and</p> <p>23 keep its flexibility open to deal with an</p> <p>24 possible problems in the next GRA.</p> <p>25</p>
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<p>1 perhaps in those circumstances we should</p> <p>2 take advantage of current low interest rates</p> <p>3 and go directly to refund that 5 percent</p> <p>4 equity as debt, but at the moment, my</p> <p>5 recommendations are a lot more flexible.</p> <p>6 It's basically deem the equity for three</p> <p>7 year period until we see what happens with</p> <p>8 Muskrat Falls, and then think about how the</p> <p>9 Board can take actions to protect the</p> <p>10 utility and protect rate payers.</p> <p>11 KELLY, Q.C.:</p> <p>12 Q. And then the question that the Board has to</p> <p>13 address is, is it good regulatory practice</p> <p>14 and judgment to do that and pay out, as Ms.</p> <p>15 Perry explained, 55 million to increase the</p> <p>16 debt in the capital structure at a time when</p> <p>17 these additional risks are coming forward?</p> <p>18 That's the question that the Board would</p> <p>19 have to consider, agreed?</p> <p>20 DR. BOOTH:</p> <p>21 A. Yeah, it's an interesting situation where</p> <p>22 utilities – when they say, well, we got all</p> <p>23 these risks, we're not competitive,</p> <p>24 therefore, we need to have higher costs and</p> <p>25</p>	<p>1 KELLY, Q.C.:</p> <p>2 Q. Okay.</p> <p>3 DR. BOOTH:</p> <p>4 A. I would say that's a reasonable halfway</p> <p>5 house between taking what is currently the</p> <p>6 most generous common equity ratio almost of</p> <p>7 any utility in Canada, and not going</p> <p>8 immediately to the most tax efficient</p> <p>9 capital structure, but taking a halfway</p> <p>10 house as a wait and see to see what happens</p> <p>11 with Muskrat Falls.</p> <p>12 KELLY, Q.C.:</p> <p>13 Q. And the Board will have to weigh where's the</p> <p>14 right regulatory judgment in terms of what</p> <p>15 to do with that, agreed?</p> <p>16 DR. BOOTH:</p> <p>17 A. It always has to do with that, Mr. Kelly.</p> <p>18 I'm recommending a halfway house for the</p> <p>19 Board. I'm not recommending it immediately</p> <p>20 go to debt. I'm recommending that it keep</p> <p>21 its flexibility open, such that if there is</p> <p>22 any problem in three years' time beyond the</p> <p>23 test year for the next three years, that</p> <p>24 it's got as much regulator flexibility as</p> <p>25</p>

<p style="text-align: right;">Page 185</p> <p>1 possible.</p> <p>2 KELLY, Q.C.:</p> <p>3 Q. Thank you, Dr. Booth. Once again, I've</p> <p>4 enjoyed our discussion.</p> <p>5 DR. BOOTH:</p> <p>6 A. As have I too, Mr. Kelly.</p> <p>7 CHAIRMAN:</p> <p>8 Q. I think we're over to you, Madam.</p> <p>9 DR. LAURENCE BOOTH – CROSS-EXAMINATION BY GREENE,</p> <p>10 Q.C.:</p> <p>11 Q. Thank you, Mr. Chair. Good afternoon, Dr.</p> <p>12 Booth. I just wanted to talk to you for a</p> <p>13 few moments with respect to your unadjusted</p> <p>14 CAPM, and Mr. Kelly did bring you there</p> <p>15 earlier this morning, but if we could go to</p> <p>16 page 42 of your report, please.</p> <p>17 MS. PIERCEY:</p> <p>18 Q. Page 42 of his current report?</p> <p>19 GREENE, Q.C.:</p> <p>20 Q. His original report filed in this</p> <p>21 Application. While we're waiting for it to</p> <p>22 come up, perhaps we can cover a few –</p> <p>23 DR. BOOTH:</p> <p>24 A. This is 2012.</p> <p>25</p>	<p style="text-align: right;">Page 187</p> <p>1 the current risk free rate, and your market</p> <p>2 risk premium, and your beta, the ranges, you</p> <p>3 came up with the unadjusted CAPM for 2016 at</p> <p>4 5.56 to 6.61, as shown there on lines 11 and</p> <p>5 12, is that correct, Dr. Booth?</p> <p>6 DR. BOOTH:</p> <p>7 A. That's correct.</p> <p>8 GREENE, Q.C.:</p> <p>9 Q. And as Mr. Kelly reviewed with you this</p> <p>10 morning, if you looked at 2017 as well</p> <p>11 seeing that this is a two year test year for</p> <p>12 this GRA, and increased the risk free rate</p> <p>13 to be the average of the two years, that</p> <p>14 would add approximately 20 basis points?</p> <p>15 DR. BOOTH:</p> <p>16 A. That's correct. If you believe that finally</p> <p>17 interest rates are going to increase, and</p> <p>18 finally the forecasters are going to be</p> <p>19 right, but they've been persistently wrong</p> <p>20 for the last six years, and I personally</p> <p>21 would judge them to be wrong for the next</p> <p>22 three years as well, including my colleagues</p> <p>23 at the University of Toronto.</p> <p>24 GREENE, Q.C.:</p> <p>25</p>
<p style="text-align: right;">Page 186</p> <p>1 GREENE, Q.C.:</p> <p>2 Q. It's the current – this proceeding. I think</p> <p>3 we firmly established by now, Dr. Booth,</p> <p>4 that you believe that CAPM is the most</p> <p>5 appropriate method to use to determine the</p> <p>6 ROE for the utility because it most properly</p> <p>7 reflects the financial -</p> <p>8 DR. BOOTH:</p> <p>9 A. Under normal circumstances, yes.</p> <p>10 GREENE, Q.C.:</p> <p>11 Q. Okay. So that normally the CAPM is the</p> <p>12 appropriate method, but give the current</p> <p>13 situation which has continued from when we</p> <p>14 were talking about it before, with the low</p> <p>15 Canada bond rate and the current interest</p> <p>16 environment, it needs to be adjusted, is</p> <p>17 that correct?</p> <p>18 DR. BOOTH:</p> <p>19 A. That's correct.</p> <p>20 GREENE, Q.C.:</p> <p>21 Q. And I just wanted to take you through what</p> <p>22 your unadjusted CAPM was, and then compare</p> <p>23 it to Mr. Coyne's. So when you did your</p> <p>24 normal approach – or the CAPM approach using</p> <p>25</p>	<p style="text-align: right;">Page 188</p> <p>1 Q. But I'm just going – we understand the</p> <p>2 theory. I just wanted to compare. So your</p> <p>3 unadjusted CAPM is that range there, and</p> <p>4 there is a question as to whether the Board</p> <p>5 will accept a two year forecast at least</p> <p>6 seeing that it is a two year test year of</p> <p>7 the risk free rate. Now I wanted to now</p> <p>8 look at Mr. Coyne's unadjusted CAPM which we</p> <p>9 actually looked at with him, which is PUB-</p> <p>10 NP-064. You were here when I had some</p> <p>11 discussion with Mr. Coyne about that.</p> <p>12 DR. BOOTH:</p> <p>13 A. I was.</p> <p>14 GREENE, Q.C.:</p> <p>15 Q. So his unadjusted CAPM, and we accept that</p> <p>16 he uses a different beta than you do, would</p> <p>17 be – when you look down below, it is 6.8</p> <p>18 percent, but that includes his 50 basis</p> <p>19 points for flotation, and your range we just</p> <p>20 looked at did not, is that correct?</p> <p>21 DR. BOOTH:</p> <p>22 A. That's correct.</p> <p>23 GREENE, Q.C.:</p> <p>24 Q. So if we compare the two, you're very close</p> <p>25</p>

<p style="text-align: right;">Page 189</p> <p>1 on the unadjusted CAPM, within the same</p> <p>2 range. His 6.3 would fall within your range</p> <p>3 we just looked at of 5.56 to 6.61?</p> <p>4 DR. BOOTH:</p> <p>5 A. That's correct.</p> <p>6 GREENE, Q.C.:</p> <p>7 Q. Okay, and we've already established, I</p> <p>8 believe, today that given the current market</p> <p>9 conditions, that's not appropriate and I</p> <p>10 think you also said earlier today that, in</p> <p>11 fact, when you're looking at how it should</p> <p>12 be adjusted, more judgment is required today</p> <p>13 than even when we talked about it last time,</p> <p>14 is that correct?</p> <p>15 DR. BOOTH:</p> <p>16 A. That's correct. Last time, I was reasonably</p> <p>17 confident in the data for the preferred</p> <p>18 share yields. This time, I'm not.</p> <p>19 GREENE, Q.C.:</p> <p>20 Q. And when we go through your adjustments,</p> <p>21 which you've already explained with Mr.</p> <p>22 Kelly, so I don't think it's necessary to do</p> <p>23 it, you do add the credit risk – the spread</p> <p>24 for the credit risk?</p> <p>25</p>	<p style="text-align: right;">Page 191</p> <p>1 credit adjustment does pick up the changes</p> <p>2 in the spreads for utility debt, and that</p> <p>3 has been accepted just about everywhere as a</p> <p>4 reasonable adjustment. I call it the</p> <p>5 conditional CAPM pricing model simply</p> <p>6 because we have a long literature on the</p> <p>7 conditional CAPM, and the idea is simply</p> <p>8 that we try and incorporate data to indicate</p> <p>9 and make it more sensitive to current</p> <p>10 capital market conditions.</p> <p>11 GREENE, Q.C.:</p> <p>12 Q. And your adjustment for it to reflect the</p> <p>13 current market conditions turns out to be</p> <p>14 about 175 basis points?</p> <p>15 DR. BOOTH:</p> <p>16 A. That's right. The major one is the 45 basis</p> <p>17 points for the credit spreads. That's</p> <p>18 objective. The research of the Bank of</p> <p>19 Canada says it shouldn't be 50 percent, it</p> <p>20 should be a little bit lower. Almost every</p> <p>21 board that I'm aware of that's thought about</p> <p>22 an automatic adjustment mechanism has</p> <p>23 incorporated 50 percent adjustment to</p> <p>24 spreads, so I'd say that's reasonably</p> <p>25</p>
<p style="text-align: right;">Page 190</p> <p>1 DR. BOOTH:</p> <p>2 A. That's correct.</p> <p>3 GREENE, Q.C.:</p> <p>4 Q. And the Operation Twist adjustment to</p> <p>5 reflect the global bond buying program of</p> <p>6 the various global governments, you came up</p> <p>7 with 7.5, so if we could go over to page 45</p> <p>8 just to have a look at your adjusted CAPM</p> <p>9 and take those two conditions into account.</p> <p>10 So here we see your range has increased</p> <p>11 based upon how you believe the CAPM estimate</p> <p>12 should be adjusted to reflect the market</p> <p>13 conditions. So that is your best expert</p> <p>14 opinion to the appropriate adjustments to</p> <p>15 make to CAPM?</p> <p>16 DR. BOOTH:</p> <p>17 A. Yes, the adjustment here is simply that when</p> <p>18 you use run averages for the market risk</p> <p>19 premium, even though the survey data does</p> <p>20 take into account current capital market</p> <p>21 conditions, you're going to end up with the</p> <p>22 same risk premium all the time, and I don't</p> <p>23 think it's as reflective of current capital</p> <p>24 market conditions as it should be, and a</p> <p>25</p>	<p style="text-align: right;">Page 192</p> <p>1 acceptable. The BCUC, the OEB, the Regie,</p> <p>2 have all accepted a 50 percent adjustment to</p> <p>3 the spreads, and I've never had any serious</p> <p>4 objection to that because over a business</p> <p>5 cycle you would hope the average to work out</p> <p>6 to be the average, which is 100 basis</p> <p>7 points. Since 2012, I've begun to suspect</p> <p>8 seriously that we're never going to get back</p> <p>9 to 100 basis point spreads on "A" bonds,</p> <p>10 that's no longer normal, unless we get the</p> <p>11 long Canada bond yield up to normal levels.</p> <p>12 So it's not going to average out to zero</p> <p>13 over a business cycle. So my original</p> <p>14 acceptance of that 50 percent adjustment</p> <p>15 didn't anticipate the bond buying by all of</p> <p>16 the central banks around the world.</p> <p>17 GREENE, Q.C.:</p> <p>18 Q. So when we look at the results of your</p> <p>19 judgment, we see that adjustment of about</p> <p>20 175 basis points, and when we went through</p> <p>21 with Mr. Coyne, we saw that his was about</p> <p>22 250 basis points from his unadjusted CAPM to</p> <p>23 his adjusted Canadian CAPM.</p> <p>24 DR. BOOTH:</p> <p>25</p>

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1 A. Well, I'd qualify that and say that not the
2 full 175 basis points is judgment. I think
3 the 45 basis points for the credit spreads
4 is just basically the same as the OEB, the
5 same as the Regie, the same as the BC
6 Utilities Commission, so I would say that
7 that – I'm not imposing significant judgment
8 there. I'm just making the estimate a
9 little bit more sensitive to the business
10 cycle. The major area of judgment is this
11 attempt to try and handle the bond buying,
12 the implications of the bond buying program,
13 and 130 basis points now, 80 basis points
14 three years ago, 80 basis points I was
15 comfortable with, 130 I'm not comfortable
16 with, but that is certainly the major area
17 of judgment.

18 GREENE, Q.C.:
19 Q. And again you have agreed that more judgment
20 even is required this time when looking at
21 how CAPM should be adjusted for the
22 marketplace?

23 DR. BOOTH:
24 A. That's correct, but I'll just point out
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1 there that it's not just me saying this, I
2 mean, the Duff & Phelps report that I sent
3 around, they've recalibrated the market risk
4 premium at 5.5 percent, which is right in
5 the middle of my 5 to 6 percent range,
6 except that it's based upon a normalized
7 long term U.S. government bond yield, and
8 they use 4 percent, I tend to think 3.8
9 percent, but the point is they accept the
10 normalized bond yield when they do their
11 risk premium analysis. AON Hewitt looks at
12 a normalized or a long run – they call it a
13 long run target bond yield of 4.18 percent.
14 So I think everybody will recognize that the
15 current long term bond yields are not
16 anywhere close to normal equilibrium,
17 however you want to define it, so 3.8, 4,
18 4.1, I think it is from the AON Hewitt,
19 that's where my judgment comes in, but it's
20 not just my judgment, it's the judgment of
21 almost all market participants.

22 GREENE, Q.C.:
23 Q. And what I'm trying to do is compare your
24 judgment to Mr. Coyne's for the purposes of
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1 this proceeding, and when you look at those
2 results, you've already explained why you
3 were conservative in pulling it towards your
4 adjusted CAPM or your conditional CAPM to
5 the low end of the range, is that correct?

6 DR. BOOTH:
7 A. That's correct.

8 GREENE, Q.C.:
9 Q. So that is one difference you would have as
10 well with Mr. Coyne?

11 DR. BOOTH:
12 A. That's correct.

13 GREENE, Q.C.:
14 Q. Now you also looked at DCF to, I'll say,
15 validate or to inform your judgment with
16 respect to your recommendation, is that
17 correct?

18 DR. BOOTH:
19 A. That's correct. All my estimates inform my
20 judgment, but the DCF, I started doing this
21 analysis four years ago that shows that they
22 should be the same, but under periods of
23 very low real returns, real bond yields,
24 which is what we've got at the moment, the
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1 risk premium models underestimate DCF models
2 unless you go into the sort of adjustments
3 that I'm making.

4 GREENE, Q.C.:
5 Q. And in terms of looking at how the board
6 should look at your DCF analysis to see the
7 adjustments, I want to talk to you first
8 about, while you have agreed with Mr. Kelly
9 on the capital markets are more integrated
10 now than ever, you still believe there
11 should be some adjustment made to reflect
12 differences between the economies and take
13 that into account, is that correct?

14 MR. BOOTH:
15 A. Sure. I mean, the capital markets between
16 the U.S. and Canada are reasonably
17 integrated. They're reasonably integrated
18 even more so between the U.S. and the U.K.
19 You can also say they're integrated with
20 Brazil, Mexico, Thailand. The global capital
21 markets are becoming more integrated all the
22 time, but if I was to come before the Board
23 and take a tied back rate of return and say,
24 well, I'm going to use this tied back rate
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<p>1 of return for Newfoundland Power, I think a</p> <p>2 lot of eyebrows would be raised. So</p> <p>3 integrated doesn't mean to say the rates of</p> <p>4 return are exactly the same. It just means</p> <p>5 to say that the capital markets trading</p> <p>6 amongst those securities is basically free</p> <p>7 of impediments.</p> <p>8 GREENE, Q.C.:</p> <p>9 Q. So in terms of the Board and what it must do</p> <p>10 when it's considering what the fair return</p> <p>11 is, what would your opinion be with respect</p> <p>12 to the type of adjustment the Board should</p> <p>13 make when looking at the U.S. data?</p> <p>14 DR. BOOTH:</p> <p>15 A. Before the BCUC, I recommended adjustment –</p> <p>16 I can't remember whether I recommended 50 or</p> <p>17 100, but the BCUC, I think, took 50 to 100.</p> <p>18 This Board took 50 to 100 in 2013. When we</p> <p>19 look at what's going on in the U.S. versus</p> <p>20 Canada, I would say there's absolutely no</p> <p>21 question that U.S. utilities, and I'm</p> <p>22 referring to U.S. utility holding companies,</p> <p>23 the ones that we're using to get insight</p> <p>24 into the fair rate of return for</p> <p>25</p>	<p>1 U.S. DCF estimate.</p> <p>2 GREENE, Q.C.:</p> <p>3 Q. And I understand then that you believe that</p> <p>4 would be a reasonable adjustment to make</p> <p>5 this time as well if that's where the Board</p> <p>6 decides to make an adjustment?</p> <p>7 DR. BOOTH:</p> <p>8 A. I would probably say it's even more</p> <p>9 appropriate now because the evidence in</p> <p>10 terms of the gas companies in the United</p> <p>11 States is less clear than the evidence in</p> <p>12 terms of the electric companies in terms of</p> <p>13 the risk comparisons. I have real</p> <p>14 difficulty in taking Duke Energy, with all</p> <p>15 those nuclear plants, and saying it's</p> <p>16 comparable to a T & D company in Canada.</p> <p>17 GREENE, Q.C.:</p> <p>18 Q. Now the other adjustment that we talked</p> <p>19 about already is the influence of analysts'</p> <p>20 bias with respect to how DCF is used. Again</p> <p>21 I gather from your evidence today, you</p> <p>22 believe that it still continues to be an</p> <p>23 issue, still influencing analysts' growth</p> <p>24 estimates. What do you believe the – do you</p> <p>25</p>
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<p>1 Newfoundland Power, there's no question in</p> <p>2 my mind that the electric holding companies</p> <p>3 in the U.S. are riskier than Newfoundland</p> <p>4 Power, because they're predominantly</p> <p>5 integrated utilities, they've got</p> <p>6 generation, they've not nuclear plants,</p> <p>7 they've got all sorts of things going on,</p> <p>8 and the empirical evidence in terms of their</p> <p>9 betas is the betas are consistently .1, .15,</p> <p>10 more than the utilities in Canada. If you</p> <p>11 take this Board's 6.5 percent risk premium,</p> <p>12 market risk premium, and you've got a .1</p> <p>13 beta difference, straight off the bat you're</p> <p>14 saying a 65 basis points adjustment for</p> <p>15 risk, and then I think it's acknowledged,</p> <p>16 Mr. Coyne said that U.S. "A" bond yields</p> <p>17 were 11 basis points higher than in Canada,</p> <p>18 I have a slightly bigger number, but if you</p> <p>19 take that as indicative rather than the</p> <p>20 Government bond yields, you're looking at</p> <p>21 70/80 basis points, which is not much</p> <p>22 different from what Mr. McDonald and I</p> <p>23 recommended three years ago and this Board</p> <p>24 took a 50 to 100 basis points discount to</p> <p>25</p>	<p>1 believe the Board should consider that and</p> <p>2 make any adjustment when looking at DCF</p> <p>3 results?</p> <p>4 (12:45 p.m.)</p> <p>5 DR. BOOTH:</p> <p>6 A. First of all, I don't think it's an issue.</p> <p>7 I think there's absolutely no question</p> <p>8 analysts are biased. I'm not aware of any</p> <p>9 significant academic research that indicates</p> <p>10 that they're not biased. There is some</p> <p>11 evidence that the bias went down in the mid-</p> <p>12 2000s, but I prefer – I mean, I can give you</p> <p>13 lots of academic articles. I've not given</p> <p>14 those. What I've given is McKenzie and the</p> <p>15 Royal Bank of Canada, and I've given them</p> <p>16 those because McKenzie is not sort of</p> <p>17 academic on a small group of academics</p> <p>18 arguing about it, McKenzie is absolutely</p> <p>19 categorical that analysts are biased. When</p> <p>20 we're talking about biased, it just means</p> <p>21 they're optimistic. They get attached to</p> <p>22 their stocks and they tend to see good in</p> <p>23 them, and as a result they tend to be</p> <p>24 optimistic. I was struck by the fact that</p> <p>25</p>

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<p>1 as I was preparing this testimony, RBC's</p> <p>2 Playbook comes out with all of these</p> <p>3 pictures, and it's basically a compendium of</p> <p>4 graphs, and RBC accepts and they've got a</p> <p>5 graph, a little table that looks almost</p> <p>6 exactly the same as McKenzie, which is that</p> <p>7 the analysts start out optimistic, and as</p> <p>8 you get closer and closer and closer to the</p> <p>9 date, they get more information from the</p> <p>10 company, and generally their estimates are</p> <p>11 brought down until eventually they're pretty</p> <p>12 close, but they start out optimistic. Now</p> <p>13 when the economy is rising and earnings are</p> <p>14 rising, the bias isn't as great as it is in</p> <p>15 the opposite when it's going down. When we</p> <p>16 talk about the bias in analysts' forecasting</p> <p>17 going down in the 2000s, 2004, 2005, 2006,</p> <p>18 these are years when the equity market was</p> <p>19 doing very well. So the bias went down</p> <p>20 probably not because of any implicit change</p> <p>21 in their approach, but simply because</p> <p>22 earnings ended up being better than they</p> <p>23 anticipated. Those were good years for the</p> <p>24 stock market. So I deliberately try in my</p> <p>25</p>	<p>1 far as I can remember, at least for the last</p> <p>2 ten years, used analysts' forecasts within a</p> <p>3 Canadian setting or a U.S. setting without</p> <p>4 actually trying to make adjustments to make</p> <p>5 sure that they make sense. It's</p> <p>6 unreasonable to think of 13/14 percent</p> <p>7 returns in the Canadian capital market. The</p> <p>8 Chairman pointed out the world is 72. I</p> <p>9 mean, if I thought that was really going to</p> <p>10 happen, I mean, we'd just close up shop, I'd</p> <p>11 just make enough money and I could retire,</p> <p>12 but that hasn't happened, and I don't think</p> <p>13 it will happen. You have to bear in mind</p> <p>14 that overall we're constrained by the growth</p> <p>15 rate in the economy. Some firms may grow</p> <p>16 faster than the economy for a period of</p> <p>17 time, but not indefinitely, not forever, and</p> <p>18 certainly not utilities.</p> <p>19 GREENE, Q.C.:</p> <p>20 Q. So if we come back to the multi-stage model</p> <p>21 and if that's the one the Board considers</p> <p>22 and takes into account in weighing the</p> <p>23 evidence before it, what is your opinion of</p> <p>24 the magnitude of the adjustment that the</p> <p>25</p>
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<p>1 evidence to put information that is out</p> <p>2 there being told to investors. RBC is</p> <p>3 telling investors in its Playbook that</p> <p>4 analysts are biased. McKenzie is telling</p> <p>5 people that analysts are biased. Parkinson</p> <p>6 of the Globe and Mail is reporting on</p> <p>7 McKenzie saying, well, look, not much has</p> <p>8 changed, Wall Street is still biased. I</p> <p>9 could give you a lot of academic articles,</p> <p>10 but I prefer to give you things that are in</p> <p>11 the public domain that are more likely to</p> <p>12 influence investors.</p> <p>13 GREENE, Q.C.:</p> <p>14 Q. So in terms of that, the constant growth has</p> <p>15 the more opportunity for that to be an</p> <p>16 influence, and for that reason, you do not</p> <p>17 believe it should be used, is that correct?</p> <p>18 DR. BOOTH:</p> <p>19 A. I would agree with the AUC, that when you're</p> <p>20 getting estimates from DCF estimates so</p> <p>21 significantly above the long run growth in</p> <p>22 GDP, and you're assuming that these are</p> <p>23 going to go on forever by utility, that just</p> <p>24 doesn't make any sense. I have never, as</p> <p>25</p>	<p>1 Board should consider making?</p> <p>2 DR. BOOTH:</p> <p>3 Q. Well, here's an interesting question. If</p> <p>4 the Board thinks that the short run five</p> <p>5 year growth rates are biased, and as a</p> <p>6 result it puts greater weight on multi</p> <p>7 period, then you look at it and you say,</p> <p>8 well, if you think the first five years are</p> <p>9 overoptimistic, and then you taper to the</p> <p>10 long run growth rate and the GDP as saying</p> <p>11 that the next five years are overoptimistic,</p> <p>12 straight off the bat it's saying that the</p> <p>13 first ten years of a multi-stage DCF</p> <p>14 analysis are optimistic. So you get into</p> <p>15 bind. If you reject constant growth, you</p> <p>16 also reject the first ten years of a multi-</p> <p>17 stage model, and then there's no evidence</p> <p>18 whatsoever that utilities grow at a growth</p> <p>19 rate of GDP. The AUC mentioned this, and,</p> <p>20 in fact, if I picked up the tabs from the</p> <p>21 FERC, the FERC recognizes it as well.</p> <p>22 They've got a hearing, a hearing to consider</p> <p>23 whether or not it's reasonable to assume</p> <p>24 U.S. utilities can grow at the rate of GDP,</p> <p>25</p>

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<p>1 and I've yet to see any witness show any</p> <p>2 evidence whatsoever that U.S. utilities can</p> <p>3 over a long period of time grow their</p> <p>4 earning to the growth rate and GDP.</p> <p>5 GREENE, Q.C.:</p> <p>6 Q. So coming back, if you looked at the multi-</p> <p>7 stage results, is there a specific basis</p> <p>8 point adjustment that you would recommend to</p> <p>9 the Board they should use to adjust for</p> <p>10 analysts' bias?</p> <p>11 DR. BOOTH:</p> <p>12 A. I'd have to think about that. Off the top</p> <p>13 of my head, I can't tell you 50 basis</p> <p>14 points, 100 basis points. I tend to</p> <p>15 believe that what's important is the growth</p> <p>16 sustainable. Oliver Wyman says 3.3 percent</p> <p>17 growth. I wasn't aware of that until the</p> <p>18 document came out in this hearing room, but</p> <p>19 it's similar to the growth rate that's</p> <p>20 sustainable from the profitability of the</p> <p>21 utilities in the amount that they've</p> <p>22 retained within their rate base. So I would</p> <p>23 suggest the Board looks at sustainable</p> <p>24 growth rate. If it rejects the constant</p> <p>25</p>	<p>1 took you through your recommendations in</p> <p>2 other proceedings in the actual and the</p> <p>3 result there is an RFI on record with</p> <p>4 respect to it. And obviously it</p> <p>5 demonstrates that you would tend to be</p> <p>6 somewhat lower than what the allowed ROEs</p> <p>7 would be. And you've already indicated in</p> <p>8 how you came up with your estimate, now that</p> <p>9 you tend to be conservative, is that</p> <p>10 correct?</p> <p>11 DR. BOOTH:</p> <p>12 A. I think I'm very conservative. I could have</p> <p>13 just come in and given a CAPM and said, 6, 6</p> <p>14 ½ percent, that's a fair ROE. And when you</p> <p>15 look at the utilities you have to think in</p> <p>16 terms of how does the market value the</p> <p>17 utilities which is the market to book ratio</p> <p>18 and I've constantly referred to that as the</p> <p>19 dirty window problem, the investors are</p> <p>20 looking through a dirty window to get an</p> <p>21 idea of what the true profitability of the</p> <p>22 utility is. But we don't see any public</p> <p>23 utilities. They've all been traded on the</p> <p>24 market. They're all been taken over by</p> <p>25</p>
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<p>1 growth models, as it has in the past, then</p> <p>2 implicitly it has to think that the multi-</p> <p>3 stage models are also biased, not to the</p> <p>4 same degree, but by definition, they're</p> <p>5 regarded as overestimates, and think about</p> <p>6 the sustainable growth rate and the multi-</p> <p>7 stage model somewhere in between there might</p> <p>8 be a reasonable number.</p> <p>9 GREENE, Q.C.:</p> <p>10 Q. At this point you're not in a position to</p> <p>11 actually be specific on the basis point</p> <p>12 adjustment.</p> <p>13 DR. BOOTH:</p> <p>14 A. No, I tend to believe that, as I just said,</p> <p>15 if analysts growth rates are biased,</p> <p>16 optimistic as I think they are, then that</p> <p>17 means the first ten years of a mortgage</p> <p>18 stage model are overestimates by definition.</p> <p>19 You can't have it any other way. If you</p> <p>20 reject the constant growth model, you're</p> <p>21 rejecting the first ten years of the</p> <p>22 mortgage stage model.</p> <p>23 GREENE, Q.C.:</p> <p>24 Q. Moving onto my last questions, Mr. Kelly</p> <p>25</p>	<p>1 holding companies and then we discover the</p> <p>2 holding company doesn't have the utilities</p> <p>3 capital structure; it has a lot more debt in</p> <p>4 its capital structure whether that's</p> <p>5 Enbridge Inc., whether it's Fortis and</p> <p>6 Fortis is not that bad. And then you</p> <p>7 wondering what's going on here? And they're</p> <p>8 using the cash flows from the utilities to</p> <p>9 fund a corporate empire. This has been going</p> <p>10 on for the last 25 years in Canada. So, if,</p> <p>11 in fact, these utilities were regulated as—I</p> <p>12 wouldn't say as they should be—but if they</p> <p>13 were regulated in terms of a fair ROE and</p> <p>14 common equity ratio, there'd be no value</p> <p>15 whatsoever for another company buying them</p> <p>16 as part of a corporate empire. But the fact</p> <p>17 is that there's a little bit of gravy on the</p> <p>18 table and the holding companies buy</p> <p>19 utilities because they can leverage out the</p> <p>20 assets and then use the proceeds to buy</p> <p>21 another utility. That's what Fortis has</p> <p>22 been doing for the last 20 years.</p> <p>23 GREENE, Q.C.:</p> <p>24 Q. And so for those reasons you've expressed</p> <p>25</p>

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<p>1 you would recommend that the Board also be</p> <p>2 concerned when looking at the data that's</p> <p>3 been presented, is that correct?</p> <p>4 DR. BOOTH:</p> <p>5 A. I would say that I would not recommend the</p> <p>6 Board give an allowed ROE of 6, 6 ½ percent.</p> <p>7 I think the utilities in Canada could be</p> <p>8 financed on ROEs even that low. I</p> <p>9 recommended 7.5 percent and I'm not</p> <p>10 recommending that we push Newfoundland Power</p> <p>11 down to the 36 to 38 percent of other</p> <p>12 distribution companies in Canada. I'm</p> <p>13 recommending 40 percent and even there I'm</p> <p>14 recommending the 5 percent equity basically</p> <p>15 be deemed as preferred shares. I'm not</p> <p>16 recommending what I would regard as a harsh</p> <p>17 situation, I would regard my recommendations</p> <p>18 as pretty moderate. And I think—I'm well</p> <p>19 aware of Muskrat Falls and I'm well aware</p> <p>20 that beyond the test year there may be some</p> <p>21 issues that the Board has to deal with. So,</p> <p>22 be as flexible as possible.</p> <p>23 GREENE, Q.C.:</p> <p>24 Q. Okay. Thank you, Dr. Booth. That's all my</p> <p>25</p>	<p>1 problem. Short term dividend growth rates</p> <p>2 for public utilities did not differ</p> <p>3 significantly from GDP growth rates. On</p> <p>4 page 17, the FERC said, as long ago as 1983</p> <p>5 when it first adopted the constant growth</p> <p>6 DCF model for gas pipeline causes, the</p> <p>7 projections by investment advisor services</p> <p>8 of growth for relatively short periods of</p> <p>9 time cannot be relied on without further</p> <p>10 consideration. So, we're talking about</p> <p>11 analyst's growth forecasts. 1983, 33 years</p> <p>12 ago FERC said it can't be relied upon. So,</p> <p>13 it's not just me saying there's a problem</p> <p>14 with growth forecasts. Then as I said, I</p> <p>15 was pointing out that, if I read it</p> <p>16 correctly, the FERC has a paper hearing into</p> <p>17 looking at whether or not U.S. pipelines can</p> <p>18 grow at the growth rate of GDP. Because if</p> <p>19 you take these analysts forecast and taper</p> <p>20 them to GDP, as far as—as I've said, I can't</p> <p>21 see any evidence on the record anywhere that</p> <p>22 utilities, low risk stable utilities can</p> <p>23 grow at the growth rate in GDP. Having said</p> <p>24 that, there is a difference in the United</p> <p>25</p>
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<p>1 questions.</p> <p>2 CHAIRMAN:</p> <p>3 Q. So, I think I'm –</p> <p>4 DR. BOOTH, RE-EXAMINATION-IN-CHIEF BY THOMAS JOHNSON,</p> <p>5 Q.C.</p> <p>6 JOHNSON, Q.C.:</p> <p>7 Q. Just to me for one brief redirect. Doctor</p> <p>8 Booth, when Mr. Kelly was cross-examining</p> <p>9 you, you indicated momentarily in relation</p> <p>10 to the FERC document that you had made a</p> <p>11 couple notes about it, but then the cross-</p> <p>12 examination moved on. And I just wanted to</p> <p>13 ask you whether there was anything further</p> <p>14 that you wanted to add in relation to the</p> <p>15 FERC document.</p> <p>16 DR. BOOTH:</p> <p>17 A. I just point out that on page 11 of that</p> <p>18 document, the Commission reversed the</p> <p>19 presiding judge's sole reliance on five year</p> <p>20 growth estimates. So, they went with some</p> <p>21 sort of tapering, as in the multi stage</p> <p>22 model. Page 16 they highlight wide gap</p> <p>23 between short term and long term natural gas</p> <p>24 pipeline growth rates which is a real</p> <p>25</p>	<p>1 States because they've had this huge roll</p> <p>2 out of infrastructure in the transmission</p> <p>3 grid after the big brownout that we had in</p> <p>4 Eastern—in Canada and Eastern United States.</p> <p>5 So, there was all sorts of incentives in the</p> <p>6 United States to modernize their</p> <p>7 infrastructure which was not in a good</p> <p>8 shape.</p> <p>9 JOHNSON, Q.C.:</p> <p>10 Q. That was my question, thank you very much,</p> <p>11 Dr. Booth.</p> <p>12 DR. BOOTH, CROSS-EXAMINATION BY MR. CHAIRMAN</p> <p>13 CHAIRMAN:</p> <p>14 Q. Do you have any? I just got a few</p> <p>15 questions. I'll be ask quick as I possibly</p> <p>16 can. You said in you 2013 evidence and I</p> <p>17 was taken by it, the cost of capital is not</p> <p>18 as complicated as experts make it. There's</p> <p>19 public information available from such</p> <p>20 sources as they list a bunch of them. And</p> <p>21 there's no reason to change that opinion</p> <p>22 now, is there?</p> <p>23 DR. BOOTH:</p> <p>24 A. No. I think it's not one of the most</p> <p>25</p>

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<p>1 difficult problems we deal with in finance</p> <p>2 courses.</p> <p>3 CHAIRMAN:</p> <p>4 Q. In 2013 I think you testified or you</p> <p>5 provided us with returns on the TSE of</p> <p>6 around 9.1/9.5.</p> <p>7 DR. BOOTH:</p> <p>8 A. And I've still got that data. That's on</p> <p>9 Schedule 1.</p> <p>10 CHAIRMAN:</p> <p>11 Q. That hasn't changed significantly?</p> <p>12 DR. BOOTH:</p> <p>13 A. Well, no, when you add just three more years</p> <p>14 of data, it doesn't make a huge difference.</p> <p>15 It's come down a little bit because we've</p> <p>16 lost some of the profitability from the</p> <p>17 energy companies.</p> <p>18 CHAIRMAN:</p> <p>19 Q. How many shares, how many stocks are on the</p> <p>20 TSE?</p> <p>21 DR. BOOTH:</p> <p>22 A. Good question. I used to ask my students,</p> <p>23 how many firms in the TSE 300 and they'd say</p> <p>24 300 and I'd say no, sorry, 254. And we</p> <p>25</p>	<p>1 a good marker there, you're saying.</p> <p>2 (1:00 p.m.)</p> <p>3 DR. BOOTH:</p> <p>4 A. It's not as good as it used to be, but I</p> <p>5 think that when you—and the AUC accepted</p> <p>6 this, they said well, if we got these</p> <p>7 estimates for the overall equity market and</p> <p>8 they accepted my estimates, then they say,</p> <p>9 well, we're comfortable that the utilities</p> <p>10 expected return, required return has to be</p> <p>11 less than that. And basically it's why I</p> <p>12 put all this information for AON Hewitt and</p> <p>13 Duff & Phelps and my own estimates, it's</p> <p>14 difficult to see how the overall equity</p> <p>15 market return can exceed 7 percent long run,</p> <p>16 8/9 percent short run, arithmetic returns.</p> <p>17 And I would suggest to anybody, look at</p> <p>18 their portfolio and say, what does it do for</p> <p>19 me, if I get 7 percent on the TSX from now</p> <p>20 until I retire? And I promise you if you</p> <p>21 did that compounding exercise, you'd be</p> <p>22 very, very happy. And I also promise you,</p> <p>23 you're not going to get it.</p> <p>24 CHAIRMAN:</p> <p>25</p>
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<p>1 change it from the TSE 300 to the TSE</p> <p>2 Composite precisely because we wouldn't find</p> <p>3 300 companies to put in the TSX index. And</p> <p>4 then I'd ask them how many firms in the S&P</p> <p>5 500 and they'd all think that was a trick as</p> <p>6 well, but I would say no, there's 500. The</p> <p>7 problem is that we have seen a hollowing out</p> <p>8 of the Canadian stock market. How many</p> <p>9 firms on the TSX, probably 2500 on the TSX</p> <p>10 and the Venture. How many to actually</p> <p>11 invest in? A lot of those are really junior</p> <p>12 mining stocks where they'll highly liquid;</p> <p>13 they're rarely traded and you can buy them,</p> <p>14 but you can't sell them.</p> <p>15 CHAIRMAN:</p> <p>16 Q. I guess my point is if you wanted to start</p> <p>17 looking at cost of capital, you can start</p> <p>18 with—the return on the TSE is a good marker.</p> <p>19 DR. BOOTH:</p> <p>20 A. I use the TSX Composite. I use the dividend</p> <p>21 yield on the TSX Composite as indicative of</p> <p>22 —</p> <p>23 CHAIRMAN:</p> <p>24 Q. And Ektors Utility (phonetic) so you've got</p> <p>25</p>	<p>1 Q. And you're still saying the Fernandez survey</p> <p>2 is accurate with respect to market risk</p> <p>3 premium?</p> <p>4 DR. BOOTH:</p> <p>5 A. When I started looking at Fernandez, I</p> <p>6 looked at the historic estimates in Canada</p> <p>7 and then along comes Fernandez and he</p> <p>8 surveys all these people. So, I can tell</p> <p>9 and I think I said this in 2009, I can tell</p> <p>10 you what my opinion is, but I can also, just</p> <p>11 list the Fernandez survey where it's got 90</p> <p>12 responses from Canada and thousands and</p> <p>13 responses from United States.</p> <p>14 CHAIRMAN:</p> <p>15 Q. I think you said 7000 in 2013.</p> <p>16 DR. BOOTH:</p> <p>17 A. Yeah, I think it's gone down. I think</p> <p>18 people got tired of filling out his survey.</p> <p>19 So, the numbers have actually, as I said,</p> <p>20 gone down. It's like everything else, if</p> <p>21 you get a survey, the first time you do it</p> <p>22 you're happy and then every year it becomes</p> <p>23 a bit of a chore. So, the number of</p> <p>24 responses has gone down, but I don't think</p> <p>25</p>

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<p>1 it can be dismissed. And particularly the</p> <p>2 way he's asking it now which is, what's your</p> <p>3 overall return on the stock market? We can</p> <p>4 argue about the risk premium and say, well,</p> <p>5 is that over what—risk free rate or</p> <p>6 whatever. But just asking people who do you</p> <p>7 estimate the overall equity market return to</p> <p>8 be? That's a question that's difficult to,</p> <p>9 sort of, say well, it's a bias question,</p> <p>10 it's a fudge question. And when you look</p> <p>11 across all of the major markets, Canada</p> <p>12 actually has 8 percent—Canada and the U.S.</p> <p>13 has the highest expected equity market</p> <p>14 return</p> <p>15 CHAIRMAN:</p> <p>16 Q. And, I guess, the same thing applies to the</p> <p>17 concept of beta. There's publically</p> <p>18 available data there too, you don't have to</p> <p>19 do all these elaborate calculations if you</p> <p>20 don't want to.</p> <p>21 DR. BOOTH:</p> <p>22 A. Sure. You can go and look at the Globe and</p> <p>23 Mail and you can—Financial Post is a little</p> <p>24 bit more difficult to get the data. And you</p> <p>25</p>	<p>1 way. I'm giving you all of the betas for</p> <p>2 the Canadian and U.S. stocks. I'm giving</p> <p>3 you the historic evidence for the Canadian</p> <p>4 equity market. I'm giving you stuff from</p> <p>5 AON Hewitt. I'm giving you stuff from Duff</p> <p>6 & Phelps. I'm giving you stuff from TD</p> <p>7 Economics. I try to give as much data as</p> <p>8 possible to supplement my own work. And the</p> <p>9 amount of data and reports out there now</p> <p>10 compared to 20 years ago is night and day.</p> <p>11 CHAIRMAN:</p> <p>12 Q. Um-hm. So, this quantitative easing</p> <p>13 business, how is that different from</p> <p>14 counterfeiting? Let's cut to the chase here</p> <p>15 now. What's the difference between what</p> <p>16 Janet Yellen is doing or Mario Draghi or any</p> <p>17 of these characters, say, well then, my</p> <p>18 favourite is John Law and the Mississippi—</p> <p>19 you know that one, don't you?</p> <p>20 DR. BOOTH:</p> <p>21 A. Yes.</p> <p>22 CHAIRMAN:</p> <p>23 Q. I mean, what's the difference between—</p> <p>24 they're just printing money, aren't they?</p> <p>25</p>
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<p>1 can go and look at Yahoo and FERC uses Yahoo</p> <p>2 because the estimates are from IBESE,</p> <p>3 Institution of Brokers Estimation Service</p> <p>4 for Earnings. But I mean a lot of this</p> <p>5 isn't rocket science. You can go to Yahoo;</p> <p>6 you can go to Google; you can go to Globe</p> <p>7 and Mail; you can go to Financial Post and</p> <p>8 you can get this post. And I tell my</p> <p>9 students that when I started out in this</p> <p>10 business I had to pay 25 cents a data point</p> <p>11 and they look at me as if I've got two</p> <p>12 hears. Nowadays all of this data is there.</p> <p>13 So, it's not difficult to go in and get this</p> <p>14 data on the betas. It's not difficult to</p> <p>15 look at the market risk premium. And as</p> <p>16 I've said judgment constrained by the facts.</p> <p>17 You, first of all, have to present the data</p> <p>18 to utility regulators which I do. I don't</p> <p>19 present one data; I present you with all the</p> <p>20 data for the last 25 years on all of the</p> <p>21 companies, U.S. and Canada. You can see</p> <p>22 whether my estimate, you think, is off the</p> <p>23 wall. You don't have to just take one</p> <p>24 estimate and, that's been adjusted in some</p> <p>25</p>	<p>1 It's ex-nihilo money they call it.</p> <p>2 DR. BOOTH:</p> <p>3 A. That's exactly what they're doing. What</p> <p>4 they're doing is basically coming in—what</p> <p>5 they were doing was buying 85 million</p> <p>6 dollars of, billion, I forget, billon –</p> <p>7 CHAIRMAN:</p> <p>8 Q. I think I got a figure here that's 225</p> <p>9 trillion out there now. I mean, that's not</p> <p>10 right, is it?</p> <p>11 DR. BOOTH:</p> <p>12 A. No, I think that's excessive. The U.S., I'd</p> <p>13 say, 3 ½ to 4 trillion; the UK is probably a</p> <p>14 trillion.</p> <p>15 CHAIRMAN:</p> <p>16 Q. That's just the FED, I'm talking about all</p> <p>17 the other stuff that's out there.</p> <p>18 DR. BOOTH:</p> <p>19 A. We don't worry about the other stuff; that's</p> <p>20 all basically one person's assets and</p> <p>21 another person's liability, they nets out.</p> <p>22 I'm not worried about the global amount of</p> <p>23 debt. I'm worried about the fact that the</p> <p>24 FED is paying for the U.S. government bonds</p> <p>25</p>

<p style="text-align: right;">Page 221</p> <p>1 it buys with cash. But the trick to all of</p> <p>2 that is the people who get the cash are just</p> <p>3 depositing it at the FED. They're not going</p> <p>4 out and spending it. And that's my monetary</p> <p>5 policy has been dead for the last five</p> <p>6 years. It's such an extent at the European</p> <p>7 Central Bank, all the money has been coming</p> <p>8 back to the ECB. They're now saying we're</p> <p>9 going to charge you 50 basis points for</p> <p>10 every dollar you put on deposit with the</p> <p>11 ECB. And the Bank of Japan is doing exactly</p> <p>12 the same thing because they want to get that</p> <p>13 cash out into the system. They want people</p> <p>14 to spend it because at the moment people</p> <p>15 aren't spending all this cash, all this</p> <p>16 money they're creating. We got a bath full</p> <p>17 of liquidity, but nobody is taking a bath.</p> <p>18 CHAIRMAN:</p> <p>19 Q. I just got some figures here on the European</p> <p>20 Central Bank that's kind of interesting. An</p> <p>21 interest rate increase of less than 2</p> <p>22 percent to as little at 1 ½ percent would</p> <p>23 under mind the value of bonds and related</p> <p>24 risks at the ECB and in the Euro system to</p> <p>25</p>	<p style="text-align: right;">Page 223</p> <p>1 Q. So, you wouldn't agree with Peter Schiff,</p> <p>2 for instance, who says that we're waiting</p> <p>3 for a monetary Pearl Harbour.</p> <p>4 DR. BOOTH:</p> <p>5 A. No. These guys are there to sell popular</p> <p>6 books and you don't sell popular books by</p> <p>7 just doing what academics do. You sell</p> <p>8 popular books by having Armageddon.</p> <p>9 CHAIRMAN:</p> <p>10 Q. So, you think it's possible, for instance,</p> <p>11 for Janet Yellen to start raising interest</p> <p>12 rates without bringing the system down.</p> <p>13 DR. BOOTH:</p> <p>14 A. I think the U.S. is going to be extremely</p> <p>15 careful of increasing interest rates. And</p> <p>16 we've seen, just in the last month that the</p> <p>17 probability of the four interest rate hikes</p> <p>18 that were predicted back in December, she's</p> <p>19 backing off of them because once she's done</p> <p>20 increasing interest rates, bond values are</p> <p>21 going to go down.</p> <p>22 CHAIRMAN:</p> <p>23 Q. But I guess that's the point, that will have</p> <p>24 a knock on effect, won't it?</p> <p>25</p>
<p style="text-align: right;">Page 222</p> <p>1 the point they would require further capital</p> <p>2 injections. And this would lead to a</p> <p>3 deflating asset bubble and take down the</p> <p>4 European Central Bank and their wider</p> <p>5 European system. Do you agree or disagree</p> <p>6 with that?</p> <p>7 DR. BOOTH:</p> <p>8 A. I disagree with that. There's a lot of</p> <p>9 people out there talking—there's always</p> <p>10 people saying, prepare for the coming doom.</p> <p>11 I tend to be optimistic. These books have</p> <p>12 been around there for the last 30 years</p> <p>13 about the coming doom. I've got a very good</p> <p>14 friend of mine who's a certified financial</p> <p>15 planner. He's incredibly pessimistic, but</p> <p>16 he's been incredibly pessimistic ever since</p> <p>17 I met him. And his clients are all</p> <p>18 incredibly pessimistic because they're</p> <p>19 heading what they want to hear. And there's</p> <p>20 people out there who are certified financial</p> <p>21 planners who are incredibly optimistic and</p> <p>22 guess what, all their clients are incredibly</p> <p>23 optimistic. You gravitate –</p> <p>24 CHAIRMAN:</p> <p>25</p>	<p style="text-align: right;">Page 224</p> <p>1 DR. BOOTH:</p> <p>2 A. Exactly. And it's going to have—it's—I own</p> <p>3 bank shares because I think interest rates</p> <p>4 should go up. Banks are in serious trouble</p> <p>5 because of bond buying because their</p> <p>6 interest spread is disappeared. And –</p> <p>7 CHAIRMAN:</p> <p>8 Q. So, wouldn't you get a run if interest rates</p> <p>9 rise on the banks?</p> <p>10 DR. BOOTH:</p> <p>11 A. No, if the interest rates increase by banks</p> <p>12 because their interest rate spreads will</p> <p>13 increase and as long as they're handled in</p> <p>14 the default risk, the banks will make a lot</p> <p>15 more money. It is incredibly difficult for</p> <p>16 the banks to be profitable in the current</p> <p>17 environment. And I'm talking here not so</p> <p>18 much about the Canadian banks, but the</p> <p>19 European banks, how can they make money when</p> <p>20 you got negative interest rates? It's why</p> <p>21 in Europe they want abolish the 500 Euro</p> <p>22 note because they want to charge negative</p> <p>23 interest rates. Well, if I'm charged</p> <p>24 negative interest rates, I would take the</p> <p>25</p>

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<p>1 cash out in 500 Euro notes and I'm going to</p> <p>2 put them in the safety deposit in my house</p> <p>3 and I'm not going to suffer half a percent</p> <p>4 loss. I'm going to have all these 500 Euro</p> <p>5 notes. So, the reaction of the regulatory</p> <p>6 authorities, let's get rid of the 500 Euro</p> <p>7 note. Let's force people into the financial</p> <p>8 system, force them to suffer losses if they</p> <p>9 put the money on deposit, force people to</p> <p>10 spend money. I means that's the desperate</p> <p>11 straits that Europe is into. Basically</p> <p>12 close all of the avenues and for people to</p> <p>13 spend money. And you're probably aware that</p> <p>14 Corbyn the UK is talking about quantitative</p> <p>15 easing for people. Instead of having the</p> <p>16 central bank buying the debt in the capital</p> <p>17 market from the government, why don't we</p> <p>18 have the Central Bank directly investing in</p> <p>19 real projects like infrastructure and</p> <p>20 everything else and just creating the</p> <p>21 dollars to straight away the finance quote</p> <p>22 for people, instead of banks. And that's</p> <p>23 very similar to what Bernie Sanders has been</p> <p>24 saying in the United States. But he's got</p> <p>25</p>	<p>1 DR. BOOTH:</p> <p>2 A. Well, you're going to have to deal with 15,</p> <p>3 20 dollar oil if that happens and you're</p> <p>4 going to have to look at copper and nickel</p> <p>5 and coking coal prices going down even</p> <p>6 further. But China is real, I wouldn't buy</p> <p>7 Chinese shares because they treat financial</p> <p>8 statements in a cavalier way –</p> <p>9 CHAIRMAN:</p> <p>10 Q. They're not reliable. How can they be</p> <p>11 reliable; they're communists.</p> <p>12 DR. BOOTH:</p> <p>13 A. Okay, I was being moderate, a cavalier way,</p> <p>14 but they basically say well, equity holders</p> <p>15 will give us money and we'll give them a</p> <p>16 piece of the paper; that sounds like a</p> <p>17 pretty good deal. So, when you look at</p> <p>18 that—but I went to China in 1988 before</p> <p>19 China opened up and at that point I got a</p> <p>20 limo picking me up at the airport, I was the</p> <p>21 only car on the road all the way from the</p> <p>22 airport into central Beijing, the rest were</p> <p>23 bicycles. And I went down to Shanghai and</p> <p>24 along the bullet in Shanghai they had</p> <p>25</p>
Page 226	Page 228
<p>1 to that level that we're actually talking</p> <p>2 about things that we used to say, well, this</p> <p>3 is what Argentina does; this is what Brazil</p> <p>4 does; this is what irresponsible countries</p> <p>5 do, but we're seeing serious discussion</p> <p>6 about the similar sort of policies.</p> <p>7 CHAIRMAN:</p> <p>8 Q. So, what about a collapse of the—my last</p> <p>9 question—what about a collapse of the</p> <p>10 Chinese currency? What happens there? I</p> <p>11 mean, there's people who say that China is,</p> <p>12 as I said to you earlier, the Red Ponzi,</p> <p>13 it's a Potemkin economy, it's totally false.</p> <p>14 There's no real—it's just quantitative</p> <p>15 easing, massive printing of all this money</p> <p>16 and there's nothing to back it up. And if</p> <p>17 there's—the Shanghai Index is down now 45</p> <p>18 percent since last June, what about if the</p> <p>19 Yong (phonetic) collapses, will that take</p> <p>20 down the system? If that happens, what</p> <p>21 would happen to Canadian interest rates?</p> <p>22 How would it hit us here in Newfoundland, if</p> <p>23 something like that happened? That's the</p> <p>24 question I can't get my little head around?</p> <p>25</p>	<p>1 bicycles everywhere. You couldn't cross the</p> <p>2 road on the bullet because of bicycles. I</p> <p>3 was last in China in 2003, cars everywhere</p> <p>4 and you still can't cross the road on the</p> <p>5 bullet down in Shanghai because they're not</p> <p>6 bicycles anymore, they're cars. They got</p> <p>7 cars all over the place. They didn't learn</p> <p>8 a thing. They put flyer—they didn't learn a</p> <p>9 thing—they put flyers (phonetic) and dumped</p> <p>10 all of these cars right onto the bullet in</p> <p>11 Shanghai. So, they replicated a lot of the</p> <p>12 mistakes that western economies made, but</p> <p>13 China is real. As I said, they're adding</p> <p>14 the electrical capacity of the UK every</p> <p>15 year. The problem is they're on this</p> <p>16 conveyor belt of producing more coal,</p> <p>17 producing more steel, producing all these</p> <p>18 electric plants and somehow they have to get</p> <p>19 those resources into consumption. And</p> <p>20 they're trying to switch from an export</p> <p>21 industrial based model with very, very high</p> <p>22 savings rates into pleasing their</p> <p>23 population. And the growth rate is going</p> <p>24 down; there's no question about that. But</p> <p>25</p>

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<p>1 the most important thing is they're dumping</p> <p>2 all of the excess stuff that they've got</p> <p>3 because they're not using it in China</p> <p>4 anymore. So, they're dumping all of the</p> <p>5 steel in Europe and the UK; they're dumping</p> <p>6 a lot of their exports wherever they can.</p> <p>7 So, the big question is going to be when</p> <p>8 people start to respond to the excess supply</p> <p>9 that China is dumping on the world, and what</p> <p>10 the implications are going to be. If they</p> <p>11 then start no longer producing all of these</p> <p>12 extra coal mines or all these extra steel</p> <p>13 factories that they don't need. And then</p> <p>14 that's going to have a knock on impact on</p> <p>15 commodities.</p> <p>16 CHAIRMAN:</p> <p>17 Q. And finally, in Europe last year, I read</p> <p>18 there was 15,000 died because they couldn't</p> <p>19 –</p> <p>20 DR. BOOTH:</p> <p>21 A. A lot more than that.</p> <p>22 CHAIRMAN:</p> <p>23 Q. Was it more than that?</p> <p>24 DR. BOOTH:</p> <p>25</p>	<p>1 the next five years it's going to be</p> <p>2 economic to put solar panels on without need</p> <p>3 subsidies in many areas of Canada and</p> <p>4 particularly North America. And once you're</p> <p>5 into a distributed grid, distributed</p> <p>6 generation and if the batteries come down,</p> <p>7 we strand all of the transmission network.</p> <p>8 CHAIRMAN:</p> <p>9 Q. Well –</p> <p>10 DR. BOOTH:</p> <p>11 A. I mean, that's not a risk that has been</p> <p>12 raised at the current point in time, but –</p> <p>13 CHAIRMAN:</p> <p>14 Q. I disagree with your assessment of solar and</p> <p>15 wind, but I'm not going to debate it here</p> <p>16 with you, but I'd sure like to have a crack</p> <p>17 at you.</p> <p>18 DR. BOOTH:</p> <p>19 A. Well, look, my son wants to support solar.</p> <p>20 CHAIRMAN:</p> <p>21 Q. If I tried that here now, I'd probably be</p> <p>22 assassinated in the back office, so I think</p> <p>23 we're going to adjourn. Thank you very</p> <p>24 much. It's always entertaining and</p> <p>25</p>
Page 230	Page 232
<p>1 A. 15,000 people of what?</p> <p>2 CHAIRMAN:</p> <p>3 Q. I'm sorry—getting late—died from the cold,</p> <p>4 lack of electricity, lacking of heating. A</p> <p>5 serious people emerging in Germany, emerging</p> <p>6 in—well in most European countries now</p> <p>7 people are actually dying because they can't</p> <p>8 afford to pay their electricity bills.</p> <p>9 They're up to these huge increases and</p> <p>10 people are eating versus heating. They're</p> <p>11 riding busses. They're going to malls.</p> <p>12 They're trying to stay warm. And there was</p> <p>13 tens of thousands of deaths, that's what I</p> <p>14 read in one of my web pages that I go to.</p> <p>15 Are you familiar with that?</p> <p>16 (1:15p.m.)</p> <p>17 DR. BOOTH:</p> <p>18 A. I've got a regular trend who is an investor</p> <p>19 banker and he thinks the smartest move</p> <p>20 Ontario government are doing is selling off</p> <p>21 Hydro 1 because he thinks the distributed</p> <p>22 generation is a realistic scenario that</p> <p>23 we're going to get these micro grids that</p> <p>24 Mr. Coyne talked about and possibly within</p> <p>25</p>	<p>1 educational, more important, to listen to</p> <p>2 you.</p> <p>3 DR. BOOTH:</p> <p>4 A. Thank you.</p> <p>5 CHAIRMAN:</p> <p>6 Q. Thank you. We're adjourned now until Monday</p> <p>7 morning at 9:00.</p> <p>8 Upon conclusion at 1:17 p.m.</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>

CERTIFICATE

I, Judy Moss, do hereby certify that the foregoing is a true and correct transcript of a hearing in the matter of a General Rate Application by Newfoundland Power Inc. to establish customer electricity rates for 2016 and 2017 heard on the 8th day of April, 2016 at the Public Utilities Commission office, St. John's, Newfoundland and Labrador and was transcribed by me to the best of my ability by means of a sound apparatus.

Dated at St. John's, NL this
8th day of April, 2016

Judy Moss
Discoveries Unlimited Inc.

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