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| <p>1 (9:12 a.m.)</p> <p>2 CHAIRMAN:</p> <p>3 Q. Good morning, everybody. It's a nasty old</p> <p>4 morning out there. I would indeed like to</p> <p>5 take the opportunity here this morning to</p> <p>6 welcome everybody. I guess most of the people</p> <p>7 here are familiar to us. I see some new faces</p> <p>8 here this morning and we certainly welcome--</p> <p>9 welcome to the media as well. My name is Bob</p> <p>10 Noseworthy and I'm Chair and CEO of the Public</p> <p>11 Utilities Board and I'll just take a brief</p> <p>12 opportunity in a moment to explain a little</p> <p>13 bit more about the Board. For purposes of</p> <p>14 this hearing I'm serving as Chair of the Panel</p> <p>15 which has been delegated the responsibility to</p> <p>16 make decisions on this Rate Application by</p> <p>17 Hydro, and my colleagues joining me on the</p> <p>18 Panel here this morning are to my left, Ms.</p> <p>19 Darlene Whalen who is Vice-Chair of the Public</p> <p>20 Utilities Board and on my right is</p> <p>21 Commissioner Fred Saunders who is a retired</p> <p>22 businessman and resides in St. John's. I'd</p> <p>23 also like to take the opportunity to introduce</p> <p>24 the Board staff. To my far left here is the</p> <p>25 Board secretary, Ms. Cheryl Blundon. In the</p> | <p>1 middle would be in-house legal counsel, Ms.</p> <p>2 Dwanda Newman. And there, the chap to the</p> <p>3 right is Mr. Mark Kennedy and Mark is the</p> <p>4 Board hearing counsel who has been retained</p> <p>5 for this particular hearing. And I would ask</p> <p>6 now each of the parties to introduce</p> <p>7 themselves and I'll ask the lead legal counsel</p> <p>8 for each of the parties to do that and anybody</p> <p>9 who is assisting them this morning. Good</p> <p>10 morning, Mr. Young.</p> <p>11 MR. YOUNG:</p> <p>12 Q. Thank you, Mr. Chair. My name is Geoffrey</p> <p>13 Young, I'm here on behalf of Newfoundland and</p> <p>14 Labrador Hydro, the Applicant.</p> <p>15 CHAIRMAN:</p> <p>16 Q. Good morning, Mr. Browne.</p> <p>17 BROWNE, Q.C.:</p> <p>18 Q. My name is Dennis Browne and with me is</p> <p>19 Stephen Fitzgerald and we represent the</p> <p>20 consumers of the province.</p> <p>21 CHAIRMAN:</p> <p>22 Q. Good morning, Mr. Kelly.</p> <p>23 KELLY, Q.C.:</p> <p>24 Q. Good morning, Chair. My name is Ian Kelly, I</p> <p>25 represent Newfoundland Power and with me is</p> |
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| <p>1 Mr. Brock Myles.</p> <p>2 CHAIRMAN:</p> <p>3 Q. Morning Mr. Seviour.</p> <p>4 MR. SEVIOUR:</p> <p>5 Q. Good morning Chair, Commissioners. My name is</p> <p>6 Colm Seviour and together with Joseph</p> <p>7 Hutchings, Q.C. who unfortunately cannot be</p> <p>8 here this morning, we represent the Industrial</p> <p>9 Customers, Abitibi Consolidated, Corner Brook</p> <p>10 Pulp and Paper, North Atlantic Refining</p> <p>11 Limited and Voisey's Bay Nickel Company</p> <p>12 Limited.</p> <p>13 CHAIRMAN:</p> <p>14 Q. Thank you very much. I would indicate that</p> <p>15 the towns of Labrador City and Wabush are also</p> <p>16 Intervenors to this hearing and are</p> <p>17 represented by Mr. Edward Hearn and they are</p> <p>18 not in attendance here this morning.</p> <p>19 The purpose of this part of the hearing</p> <p>20 is to provide an opportunity for public input</p> <p>21 and comment on the General Rate Application of</p> <p>22 Hydro. Pursuant to the Public Utilities Act</p> <p>23 Hydro are seeking approval to increase rates</p> <p>24 to be charged for the supply of electricity to</p> <p>25 its customers, including its major retail</p> | <p>1 customer, Newfoundland Power and its large</p> <p>2 Industrial Customers, both of whom along with</p> <p>3 the Consumer Advocate and Labrador City-Wabush</p> <p>4 as I just indicated by way of introduction,</p> <p>5 are Intervenors in this public hearing.</p> <p>6 Essentially, the application affects every</p> <p>7 user of electricity in the province, whether</p> <p>8 they are serviced by Newfoundland and Labrador</p> <p>9 Hydro or Newfoundland Power and the</p> <p>10 application will impact the future rates each</p> <p>11 customer will pay for its electricity.</p> <p>12 Customers include householders, small</p> <p>13 businesses, industry, institutions,</p> <p>14 municipalities and others, whether located in</p> <p>15 urban or rural communities throughout the</p> <p>16 province. It is with this in mind that the</p> <p>17 Board in cooperation with the Applicant and</p> <p>18 Intervenors is providing this opportunity for</p> <p>19 individuals and representatives of</p> <p>20 organizations to express their views on</p> <p>21 Hydro's rate proposals directly to the Panel.</p> <p>22 These so called public participation days were</p> <p>23 held during the week of November 24th in</p> <p>24 Stephenville, Corner Brook, Labrador West and</p> <p>25 Happy Valley-Goose Bay and indeed we are</p> |

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| <p>1 CHAIRMAN:</p> <p>2 affording the opportunity here in St. John's</p> <p>3 today.</p> <p>4 (9:16 a.m.)</p> <p>5 Just a little bit about the Board itself.</p> <p>6 The Board is a quasi-judicial independent</p> <p>7 agency which derives its authority to conduct</p> <p>8 this hearing from provincial statutes and</p> <p>9 legislation, primarily the Public Utilities</p> <p>10 Act and the Electrical Power Control Act. The</p> <p>11 Board has an obligation under this legislation</p> <p>12 to regulate electric utilities operating in</p> <p>13 the province and this includes Newfoundland</p> <p>14 and Labrador Hydro. The Board in total</p> <p>15 consists of nine Commissioners and the three</p> <p>16 of us appointed to this Panel have been</p> <p>17 charged with hearing this particular</p> <p>18 Application by Newfoundland and Labrador Hydro</p> <p>19 and in accordance with our legislative</p> <p>20 responsibilities, we have a duty to hear the</p> <p>21 evidence presented by the Applicant and the</p> <p>22 Intervenors and other interested parties and</p> <p>23 at the end of the process, render a fair and</p> <p>24 equitable decision on electrical rates and</p> <p>25 other regulatory matters arising from the</p> | <p>1 Application.</p> <p>2 The statutes require the Board to make</p> <p>3 rate decisions that are fair and not</p> <p>4 discriminatory and the legislation requires</p> <p>5 that the utility be allowed to earn a just and</p> <p>6 reasonable financial return. The legislation</p> <p>7 also dictates that power be delivered to</p> <p>8 customers at the lowest possible cost while</p> <p>9 ensuring safe and reliable service. In</p> <p>10 fulfilling its responsibilities, the Board</p> <p>11 must protect the interest of all parties</p> <p>12 including producers, retailers and consumers</p> <p>13 of electricity. In doing this, it must also</p> <p>14 strive to balance the interest of each class</p> <p>15 of customer whether households, businesses,</p> <p>16 industries, institutions or governments,</p> <p>17 whether small or large users of electricity.</p> <p>18 That's a little bit about the background</p> <p>19 and before we do get into--background of the</p> <p>20 Board, excuse me, and before we get into the</p> <p>21 presentations here this morning, there are</p> <p>22 just a couple of housekeeping matters. These</p> <p>23 proceedings are indeed being recorded under</p> <p>24 the supervision of the Board secretary, Ms.</p> <p>25 Blundon, and will be subsequently transcribed</p> |
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| <p>1 for the public record. In addition, the</p> <p>2 presenters will be sworn in or affirmed, to</p> <p>3 make this an official part of the evidence</p> <p>4 before the Board. And all the documents filed</p> <p>5 throughout this hearing including the daily</p> <p>6 transcripts here today as well are available</p> <p>7 on the Board's website and this will include a</p> <p>8 transcript of today's proceedings, and anybody</p> <p>9 wishing indeed a hard copy, may simply make</p> <p>10 that request known to Ms. Blundon and I'm sure</p> <p>11 she'll do everything she can to accommodate</p> <p>12 you as quickly as possible.</p> <p>13 Before we just proceed and we only have</p> <p>14 one presentation here this morning, we did</p> <p>15 have two scheduled but I guess there's only</p> <p>16 one of the parties here at this point in time,</p> <p>17 I'll ask Ms. Newman if there's any matters,</p> <p>18 Ms. Newman, before we begin?</p> <p>19 MS. NEWMAN:</p> <p>20 Q. No, Chair, there are no matters that I'm aware</p> <p>21 of.</p> <p>22 CHAIRMAN:</p> <p>23 Q. Okay, thank you very much. We will get to the</p> <p>24 first and only presentation that we have this</p> <p>25 morning, Mr. Maurice Tuff who is President and</p> | <p>1 CEO of Blueline Innovations Inc. Mr. Tuff, I</p> <p>2 wonder could you take the witness stand here,</p> <p>3 please. Would you care for your colleague to</p> <p>4 join you or is it just -</p> <p>5 MR. MAURICE TUFF:</p> <p>6 A. We can direct any questions between the two of</p> <p>7 us.</p> <p>8 CHAIRMAN:</p> <p>9 Q. Well if that's the case I'm going to have to</p> <p>10 swear both of you, so if you could come up.</p> <p>11 Once again, good morning, Mr. Tuff and</p> <p>12 welcome. If you could introduce your</p> <p>13 colleague, please, appreciate that.</p> <p>14 MR. MAURICE TUFF:</p> <p>15 A. This is Danny Tuff; he's the Vice President of</p> <p>16 Marketing and Business Communications.</p> <p>17 CHAIRMAN:</p> <p>18 Q. Thank you very much.</p> <p>19 MR. MAURICE TUFF (SWORN)</p> <p>20 MR. DANNY TUFF (SWORN)</p> <p>21 CHAIRMAN:</p> <p>22 Q. If you can be seated and you can begin your</p> <p>23 presentation, certainly, when you're ready.</p> <p>24 MR. MAURICE TUFF:</p> <p>25 A. Mr. Chairman, Newfoundland Hydro, Newfoundland</p> |

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| <p>1 MR. MAURICE TUFF:</p> <p>2 Power, the Consumer Advocate and other members</p> <p>3 here today, participants. Blueline</p> <p>4 Innovations is here today to demonstrate that</p> <p>5 there is such thing as effective demand side</p> <p>6 management. We're going to go over an outline</p> <p>7 shortly on what we're about to present. Just</p> <p>8 give you a quick background on Blueline</p> <p>9 Innovations and what our mandate is.</p> <p>10 As a company, we're developing--currently</p> <p>11 we're developing real time feedback systems to</p> <p>12 help consumers manage their energy</p> <p>13 consumption. We also provide energy advice to</p> <p>14 both the consumer and to utilities.</p> <p>15 So today, first off, I'm going to show</p> <p>16 you the demand side management proposal that</p> <p>17 we have presented to Newfoundland and Labrador</p> <p>18 Hydro. Once that is complete, we'll move onto</p> <p>19 the motivating factors of demand side</p> <p>20 management, why should we have demand side</p> <p>21 management and can we effectively implement</p> <p>22 demand side management. So before we can go</p> <p>23 onto effective demand side management we</p> <p>24 should point out what the current state of</p> <p>25 demand side management is in Newfoundland and</p> | <p>1 why it is ineffective. Once we do that we'll</p> <p>2 show how we can implement an effective Demand</p> <p>3 Side Management Program. We'll talk about our</p> <p>4 product and some demonstration projects that</p> <p>5 we're about to embark on in the new year.</p> <p>6 Once we show you all that, of course, we'll</p> <p>7 wrap up with conclusions and any questions</p> <p>8 that anyone may have. Throughout the</p> <p>9 presentation also, if there's any questions by</p> <p>10 either counsels, they may direct them to us.</p> <p>11 CHAIRMAN:</p> <p>12 Q. Excuse me, Mr. Tuff, before you start. We</p> <p>13 normally hold the questions until after the</p> <p>14 presentation, so if you're in agreement with</p> <p>15 that we'll--we generally proceed in order, so</p> <p>16 if that's okay -</p> <p>17 MR. MAURICE TUFF:</p> <p>18 A. Absolutely.</p> <p>19 CHAIRMAN:</p> <p>20 Q. - we'll wait till the end of the</p> <p>21 presentation.</p> <p>22 MR. MAURICE TUFF:</p> <p>23 A. So, last week we met with officials of</p> <p>24 Newfoundland and Labrador Hydro when we</p> <p>25 presented this same presentation you're about</p> |
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| <p>1 to see here today to them. Their response was</p> <p>2 very good but officially we don't have the</p> <p>3 response from them yet.</p> <p>4 (VIDEO PLAYED)</p> <p>5 A. So that was the presentation that we gave</p> <p>6 Newfoundland and Labrador Hydro and we're</p> <p>7 waiting on a response from Newfoundland and</p> <p>8 Labrador Hydro for that. Now the rest of the</p> <p>9 presentation will outline--will reiterate a</p> <p>10 lot of this stuff that you just saw. It goes</p> <p>11 by fairly quickly and it's hard to absorb</p> <p>12 everything all at once but will repeat some</p> <p>13 things. So if at the end of the presentation</p> <p>14 when you're asking questions we can pop back</p> <p>15 into the presentation to specific slides.</p> <p>16 So there's two main motivating factors</p> <p>17 for demand side management and the first one</p> <p>18 is energy policy. Newfoundland, the island</p> <p>19 portion, we're having pretty well an energy</p> <p>20 crisis as we outlined earlier in the</p> <p>21 presentation. By 2009 we won't have enough</p> <p>22 energy. 2011 the capacity will no longer be</p> <p>23 there. So we have to come up with some new</p> <p>24 supply or implement an effective demand side</p> <p>25 management or do both to meet our demand</p> | <p>1 needs. Also, as you're aware, we burn quite a</p> <p>2 bit of fossil fuels to meet our requirements;</p> <p>3 Bunker C fuel out in Holyrood and our diesel</p> <p>4 communities. As a province we have to reduce</p> <p>5 our emissions and Newfoundland Hydro is part</p> <p>6 of that.</p> <p>7 So first we'll talk about the energy</p> <p>8 policy. So as I said, the energy and capacity</p> <p>9 deficits by 2000 and 2011, we have to meet</p> <p>10 those. We don't want to wake up one day and</p> <p>11 not have our lights turned on. Everyone takes</p> <p>12 for granted that our energy will be there. So</p> <p>13 we certainly don't want to shock everyone in</p> <p>14 2009 by not having the proper amount of</p> <p>15 energy. Voisey's Bay coming online, we have</p> <p>16 to have the energy to supply that also, so</p> <p>17 where is that coming from. So currently, from</p> <p>18 the evidence that we can see that the plans</p> <p>19 for new supply will not meet this deficit. In</p> <p>20 previous testimony, it's been brought up that</p> <p>21 we have Island Pond as the next main Hydro</p> <p>22 facility and Island Pond and Granite Canal are</p> <p>23 very, very expensive projects. The last one,</p> <p>24 Granite Canal, I'm going to say was 140</p> <p>25 million dollars. That works out to be about</p> |

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| <p>1 MR. MAURICE TUFF: 2 \$600,000 per gigawatt hour. That's just in 3 capital costs. 4 So looking back on some of the past 5 testimony, Dennis Browne asked what Island 6 Pond could produce and if indeed that it met 7 the demands in the future and one of the 8 responses from an official from Newfoundland 9 Hydro is that we don't have any specific plan 10 which is quite scary. If we can come up with 11 a new supply, that's one thing, but if we 12 don't have a plan to do that, that's certainly 13 another thing. In order to keep the economy 14 growing, you have to have a sufficient energy 15 supply. You certainly won't want to bring 16 Newfoundland to a halt by reducing its energy 17 production. 18 So beyond meeting the energy 19 requirements, our environmental policy, right 20 now Newfoundland is pegged at .07 pounds per 21 kilowatt hour of CO2 being emitted. That 22 takes into account its diesel communities and 23 Holyrood. We're doing quite well as compared 24 to somewhere like Nova Scotia, where they're 25 primarily dependent on coal, they're upwards</p> | <p>1 of 4 pounds per kilowatt hour. But as a group 2 across Canada, individuals are asked to reduce 3 their CO2 emissions by one ton per year. Your 4 energy consumption of your home is half of 5 that, the other being transportation. So it's 6 critical that Newfoundland Hydro embark on a 7 program to get these emissions down. Now 8 there's a couple of ways you can, well remove 9 Holyrood altogether but then you have to come 10 up with an alternative source or you can get 11 consumers to reduce what they're consuming and 12 one of the first plants that you stop 13 producing energy from would be your Holyrood 14 facility. 15 (9:35 a.m.) 16 So as you're all aware, Kyoto now has 17 been implemented by Canada. We're still 18 waiting on Russia to put it in stone, so to 19 speak, and we've committed to reducing our 20 emissions at 6 percent below 1990 levels. In 21 order to do that, everyone has to do their 22 part and Newfoundland Hydro is certainly part 23 of that. And Newfoundland and Labrador Hydro 24 has also come out with a corporate policy on 25 their environment. They have a good</p> |
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| <p>1 environment policy when it comes to footprints 2 on the land and that sort of thing. But we 3 also have to reduce our emissions. So, 4 looking at the Newfoundland and Labrador Hydro 5 Voluntary Challenge and Registry Report that 6 was issued in 2000, they've stated that they 7 have a commitment to reduce greenhouse gas 8 reduction and they talk about how they're 9 going to go about doing that, which is really 10 good to say it but you have to actually do it. 11 And one of the things that, in further 12 evidence that came up, I'm going to guess that 13 it was Dennis Browne, I'm not too sure on who 14 asked the question--so they were asking if we 15 have a deficit, how are you going to meet that 16 deficit, and one of the responses to that was 17 we can build thermal plants. In our opinion 18 well that's not an option. Well, it conflicts 19 directly with your commitment to reduce 20 greenhouse gases. Obviously if you add new 21 capacity and your capacity is burning Bunker C 22 or any other fossil fuel, that you're emitting 23 carbon dioxide. So that option of building 24 thermal plants directly conflicts with their 25 environmental policy.</p> | <p>1 So Newfoundland and Labrador Hydro 2 throughout the hearing has been saying that 3 they've had a Demand Side Management Program 4 in place, we call it an ineffective demand 5 side management. It's basically not even a 6 Demand Side Management Program. As you can 7 see from our presentation, we say that 8 education to the consumer does not work. How 9 many people got their leaflet in the mail and 10 how many people actually acted on that. I 11 don't know. And I'm surprised if anyone else 12 can tell me 500,000 people got the leaflet and 13 20,000 acted on it. We don't know the hard 14 numbers. So have pegged HYDROWISE as an 15 ineffective Demand Side Management Program. 16 One of the things as I just mentioned that has 17 absolutely no means to measure its impact so 18 you send out these leaflets, you put on two or 19 three commercials to tell consumers to reduce 20 their consumption and do they actually do it. 21 Well, one thing is if they do do it, they got 22 to wait a month before they see any result 23 from that and as we all know, in order to 24 react to what you have done in a positive 25 manner, you have to have the feedback right</p> |

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| <p>1 MR. MAURICE TUFF:</p> <p>2 away and there's absolutely no way you can do</p> <p>3 it with just an educational program alone. So</p> <p>4 as I just--I'll reiterate again, education</p> <p>5 alone does not reduce consumption. And the</p> <p>6 big problem with the education as I just</p> <p>7 mentioned is that there's no feedback loop.</p> <p>8 People get the education and then they have no</p> <p>9 means to measure what they have just done.</p> <p>10 So this goes on in the evidence again and</p> <p>11 it was asked of some Newfoundland and Labrador</p> <p>12 Hydro official and I'll give you some time to</p> <p>13 read this, how much you reduce--what are the</p> <p>14 targets for reducing consumption with</p> <p>15 HYDROWISE, and there is no target. So in</p> <p>16 effect it's money that's just being spent that</p> <p>17 has no impact on anything except maybe public</p> <p>18 image to the utility which is a non-regulated</p> <p>19 expense. Regulated expenses are supposed to</p> <p>20 be effective. So I can move on from that and</p> <p>21 if anyone wants to go back to it afterwards,</p> <p>22 I'll also have that.</p> <p>23 So Hydro has said that they have a Demand</p> <p>24 Side Management Program, we've just said that</p> <p>25 their HYDROWISE Program doesn't work. And if</p> | <p>1 you're in agreement or not in agreement with</p> <p>2 that, one thing is that they say is--but right</p> <p>3 now that is our Demand Side Management</p> <p>4 initiative within Hydro, is the HYDROWISE</p> <p>5 initiative. So Newfoundland and Labrador</p> <p>6 Hydro's demand side management initiative is</p> <p>7 HYDROWISE. So in effect, we're saying that</p> <p>8 they don't have a Demand Side Management</p> <p>9 Program. But that doesn't have to be the way</p> <p>10 obviously. There are case studies of</p> <p>11 effective Demand Side Management. One of the</p> <p>12 things of Demand Side Management which</p> <p>13 HYDROWISE does have, it's simple to implement</p> <p>14 but certainly, if it doesn't work it doesn't</p> <p>15 matter how simple it is to implement, it</p> <p>16 serves no purpose. But an effective Demand</p> <p>17 Side Management Program still has to be simple</p> <p>18 to implement. We talked about R2000 homes</p> <p>19 being effective. Sure it is. It's easy to</p> <p>20 implement it, but as we all know R2000 homes</p> <p>21 is a very intensive thing to get done.</p> <p>22 The other criteria is affordable and</p> <p>23 available to everyone. If you look back again</p> <p>24 at the R2000 homes, it's not affordable and</p> <p>25 it's not available to everyone. How can</p> |
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| <p>1 people conserve if they don't have the tools</p> <p>2 to do it. Well you can tell them to go out</p> <p>3 and swap out their fridge for a more efficient</p> <p>4 one. You can tell them to do that with their</p> <p>5 hot water boiler. But it's not affordable.</p> <p>6 And as we know, in our province a lot of</p> <p>7 people just can't afford to do these things.</p> <p>8 And it must provide immediate results. And</p> <p>9 immediate results has to be both parties; the</p> <p>10 utility and the consumer. In order for demand</p> <p>11 side management to work, people have to</p> <p>12 continue using it. So they have to see</p> <p>13 results immediately. People are not going to</p> <p>14 wait three months, four months, five months to</p> <p>15 see that their Demand Side Management Program</p> <p>16 has worked. They talked about--Newfoundland</p> <p>17 and Labrador Hydro talked about some of its</p> <p>18 initiatives going into the diesel communities</p> <p>19 and the question to them was what about your</p> <p>20 follow-up on that. And there was very little</p> <p>21 follow-up on what they had--previous</p> <p>22 initiatives they had made. But if you get an</p> <p>23 immediate response by seeing an impact on a</p> <p>24 network, then you're more inclined to stick</p> <p>25 with that program.</p> | <p>1 So our solution to immediate--getting the</p> <p>2 immediate response back and the effective</p> <p>3 Demand Side Management is our product, is the</p> <p>4 power cost meter. It could be anyone's</p> <p>5 product. Of course, we're going to pitch our</p> <p>6 own, but there are other ways to get feedback</p> <p>7 to the customer and I'll talk about those.</p> <p>8 This, however, is the most cost effective and</p> <p>9 easily implemented method that we can come up</p> <p>10 with. So our device gives real time feedback</p> <p>11 to the customer. As you can see on the</p> <p>12 display here we got it in kilowatt hours.</p> <p>13 That's more geared towards the utility but the</p> <p>14 consumer reacts to dollars and cents. If they</p> <p>15 see \$248 on their power cost meter and it's</p> <p>16 ticking off rapidly, they'll be more inclined</p> <p>17 to take the steps necessary to reduce their</p> <p>18 consumption. You can also see a little disc</p> <p>19 on the device there, a little circle. That in</p> <p>20 fact spins at the same rate as what your disc</p> <p>21 on your meter would spin. That could be</p> <p>22 digital or electromechanical. But it gives</p> <p>23 the consumer a quick cue to how much energy</p> <p>24 they're burning. So if every light is on in</p> <p>25 the house and the heat is on blast and they</p> |

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| <p>1 MR. MAURICE TUFF:</p> <p>2 just turned on the dryer to iron a shirt, then</p> <p>3 they'll see this wheel spinning really fast</p> <p>4 and they can quickly make the adjustment to go</p> <p>5 around and turn the lights off, it's very</p> <p>6 habit forming.</p> <p>7 As I just mentioned, dollars and cents</p> <p>8 which is what the consumer reacts to. If you</p> <p>9 can preach to the consumer about your peak</p> <p>10 periods and everything else, but really most</p> <p>11 consumers are concerned with what comes out of</p> <p>12 their pocket at the end of the month. So</p> <p>13 giving them the real time feedback in dollars</p> <p>14 and cents is critical.</p> <p>15 As part of our one tonne challenge in</p> <p>16 Canada, CO2 emissions, this device also has a</p> <p>17 display on it for showing the customer how</p> <p>18 much CO2 they are responsible for emitting</p> <p>19 into the atmosphere. So, as I said before,</p> <p>20 for every kilowatt hour, .07 pounds of CO2 is</p> <p>21 emitted in Newfoundland. The kilowatt hours,</p> <p>22 once again it's great for block rates. If you</p> <p>23 got a lifeline of 700 kilowatt hours how do</p> <p>24 you know if you've exceeded your lifeline, now</p> <p>25 you're into more expensive rate. Well, with</p> | <p>1 this device you'd know. You'd see that you've</p> <p>2 exceeded 700 kilowatt hours. You'd be able to</p> <p>3 budget a lot better and take the means to</p> <p>4 conserve. Ontario has just introduced a new</p> <p>5 block rate so it's going to be critical for</p> <p>6 places like that also. Their lifeline I think</p> <p>7 is set at 750 kilowatt hours. We also have a</p> <p>8 prediction technique built into this so based</p> <p>9 on your household load curve, you can predict</p> <p>10 what your bill will be at the end of the</p> <p>11 month. We've had great work with Dr. Iqbal at</p> <p>12 Memorial University and he provided us with</p> <p>13 some test case data. He's been monitoring</p> <p>14 houses to the second on their energy</p> <p>15 consumption. And our device can predict for</p> <p>16 two weeks down the road within a margin of</p> <p>17 error of 30 cents. So this will tell you</p> <p>18 based on your current rate what you're doing,</p> <p>19 this is what your bill will be. And it's</p> <p>20 programmable. So one of the important things</p> <p>21 is that if this is used in a diesel community</p> <p>22 or if it's used right here in St. John's, that</p> <p>23 it has to have the current rates. We have an</p> <p>24 extensive database of rates right across</p> <p>25 Canada and we're expanding that to the US of</p> |
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| <p>1 every rate by every utility in North America.</p> <p>2 And that way a consumer can go in on the</p> <p>3 internet and program, download the rates into</p> <p>4 this device. If they want to have the</p> <p>5 absolute accurate rate that they're using, you</p> <p>6 can set it like an alarm clock also to have it</p> <p>7 at, say, seven cents per kilowatt hour to give</p> <p>8 them a ballpark figure. In the consumer</p> <p>9 oriented, that is critical to any device. If</p> <p>10 an electrician has to come in and install it,</p> <p>11 if it's very complex, the average consumer is</p> <p>12 not going to adopt it. A device like this is</p> <p>13 very simple to install, within minutes. You</p> <p>14 put it in your home and you're hooked up. Now</p> <p>15 you know what you're burning and how fast</p> <p>16 you're burning it. As we talked about</p> <p>17 earlier, one of the critical things of any</p> <p>18 demand side management technology is that it</p> <p>19 has to be affordable. We can get into</p> <p>20 specifics on the cost but a device like this</p> <p>21 would retail for less than \$100.</p> <p>22 The measurable impact, well, we'll show</p> <p>23 you a study that has shown that this does have</p> <p>24 an impact on the network if used in large</p> <p>25 scale. We can tell you right now that anyone</p> | <p>1 who uses one of these will conserve over 10</p> <p>2 percent. Lots of studies have proved that.</p> <p>3 So as opposed to HYDROWISE where they put out</p> <p>4 pamphlets and you can't measure what impact</p> <p>5 it's having, a device of this sort will tell</p> <p>6 you right away how much you're conserving, and</p> <p>7 it's proven.</p> <p>8 Real-time feedback is nothing new.</p> <p>9 Blueline Innovations did not come up with</p> <p>10 real-time feedback. We came up with the</p> <p>11 technology to implement it.</p> <p>12 So we'll run over some of the studies</p> <p>13 that back our case up on how feedback on</p> <p>14 energy consumption works. One of the main</p> <p>15 papers, Sarah Darby of the Environmental</p> <p>16 Change Institute at the University of Oxford</p> <p>17 did a paper where she looked at, I think it</p> <p>18 was, 30 papers that were done over the years</p> <p>19 on real-time feedback. She had summarized</p> <p>20 that if people are given real-time feedback,</p> <p>21 they will conserve on average 15 percent.</p> <p>22 She's even said it will go up to 20 percent if</p> <p>23 they're given a tabletop device.</p> <p>24 (9:46 a.m.)</p> |

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| <p>1 MS. NEWMAN:</p> <p>2 Q. Excuse me, Mr. Tuff. I believe you provided a</p> <p>3 copy of that paper to the clerk of the Board</p> <p>4 and she circulated to the parties and the</p> <p>5 Board, so if we can just label that MT No. 1</p> <p>6 perhaps, so everybody has a reference for</p> <p>7 that.</p> <p>8 A. Okay.</p> <p>9 Q. And while we're at it, I understand that you</p> <p>10 did provide a copy of another paper or another</p> <p>11 document, "Energy Advice, What is it Worth?"</p> <p>12 A. Um-hm.</p> <p>13 Q. And that'll be MT No. 2. And you also did</p> <p>14 provide a little note in advance of those</p> <p>15 papers. We'll call that MT No. 3, and I</p> <p>16 understand from the clerk that you're able to</p> <p>17 provide a copy of your presentation to us.</p> <p>18 A. Yes.</p> <p>19 Q. Once we get that, we'll circulate that to the</p> <p>20 Board and the parties and we'll call that MT</p> <p>21 No. 4.</p> <p>22 A. Also, I'll reference other studies here and we</p> <p>23 also have eight copies. We can get more of</p> <p>24 those studies, so there'll be more evidence</p> <p>25 presented.</p> | <p>1 Q. Okay. We'll deal with those when you do.</p> <p>2 CHAIRMAN:</p> <p>3 Q. Thank you, Ms. Newman.</p> <p>4 A. This is the big one, and kind of the shocker</p> <p>5 that we saw was that Ontario Hydro done a</p> <p>6 study back in 1993 with real-time feedback.</p> <p>7 It installed in 100 homes in Ontario desktop</p> <p>8 computers on people's kitchen cupboard or</p> <p>9 counter, sorry, so what happened was they</p> <p>10 would show in real time exactly what that</p> <p>11 house was consuming and they conserved, on</p> <p>12 average, 12.9 percent less than the control</p> <p>13 groups. Why they did not complete that is a</p> <p>14 little bit beyond us. We're trying to find</p> <p>15 out why it didn't go anywhere after that. In</p> <p>16 the study, which I have a copy of here, they</p> <p>17 do say that they were going to do follow-up</p> <p>18 studies. Those we cannot find.</p> <p>19 The program also labelled RECS,</p> <p>20 Residential Electricity Cost Speedometer, also</p> <p>21 pointed out some other things, and one of them</p> <p>22 was that they had calls with people who were</p> <p>23 now interested in upgrading their homes. So</p> <p>24 they got them in the mode of energy</p> <p>25 conservation. Now you can sell them the</p> |
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| <p>1 bigger ticket items.</p> <p>2 Another study in the Journal of Consumer</p> <p>3 Research, 12.3 percent, 15.1 in American</p> <p>4 Psychology Association, done by Princeton</p> <p>5 University in 1978, and this final one, which</p> <p>6 is quite funny, Princeton University done a</p> <p>7 study in 1977 and their means of real-time</p> <p>8 feedback was that they had a meter man go out</p> <p>9 every single day and read the meter and put a</p> <p>10 placard up in their front window. So they</p> <p>11 consumed on average 10.5 percent less. So</p> <p>12 we're saying about our real-time feedback of</p> <p>13 the device that we have that that works well.</p> <p>14 Even other simpler formats, I guess, if you</p> <p>15 want to call it that can work also. The</p> <p>16 trouble, of course, is how do you send out a</p> <p>17 meter man every day to every home in the</p> <p>18 province.</p> <p>19 George Gaskell, he's also from Oxford</p> <p>20 University, "a utility bill is a form of</p> <p>21 feedback in which the feedback loop is too far</p> <p>22 removed from the use of inputs to have any</p> <p>23 information value." So when you're consuming</p> <p>24 your energy throughout the month and you</p> <p>25 decide that you're going to embark on a</p> | <p>1 conservation program, so you turn your heat</p> <p>2 back slightly, you have to wait one month to</p> <p>3 see what the response to that was. By that</p> <p>4 time, your kids have probably turned the heat</p> <p>5 back up, other things have changed, and you</p> <p>6 lose your thought, you lose your motivation to</p> <p>7 be conservation aware. So sending out a</p> <p>8 utility bill at the end of the month just does</p> <p>9 not work when it comes to getting consumers to</p> <p>10 conserve.</p> <p>11 So what is the next step for Blueline</p> <p>12 Innovations, Newfoundland and Labrador Hydro</p> <p>13 and Newfoundland Power? Well, we have</p> <p>14 demonstration projects coming up in the new</p> <p>15 year. The good news is that Newfoundland</p> <p>16 Power has signed a letter of understanding</p> <p>17 with Blueline Innovations to implement 100</p> <p>18 units in the new year and to do a proper study</p> <p>19 on their impact on the network. One thing</p> <p>20 that we have said though is that these studies</p> <p>21 have been done time in and time out, as I've</p> <p>22 just shown you, so in all likelihood, very</p> <p>23 confident that the study will also show that</p> <p>24 there'll be a reduction in consumption.</p> <p>25 One of the things though that we don't</p> |

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| <p>1 MR. MAURICE TUFF:</p> <p>2 have from Newfoundland Power is a financial</p> <p>3 commitment. Right now, we are financing,</p> <p>4 Blueline Innovations, this whole endeavour.</p> <p>5 The utility companies, unless they're mandated</p> <p>6 to spend money on effective demand side</p> <p>7 management, are going to have trouble spending</p> <p>8 that money.</p> <p>9 Demonstration project B. Newfoundland</p> <p>10 and Labrador Hydro, we still don't have any</p> <p>11 commitment from them. We have met with</p> <p>12 Newfoundland and Labrador Hydro. They seem</p> <p>13 enthusiastic about it, but we do have to get a</p> <p>14 firm commitment from Newfoundland and Labrador</p> <p>15 Hydro to implement this. This would be a</p> <p>16 great device to take a whole community in one</p> <p>17 of the diesel--one of the diesel communities</p> <p>18 and see what the impact is on that</p> <p>19 consumption. Environment Canada has contacted</p> <p>20 us and asked about specific issues of that</p> <p>21 sort where they'd take a community and</p> <p>22 implement this right across and see what the</p> <p>23 impact would be.</p> <p>24 On our webpage also, we do have a form</p> <p>25 where you can fill out and become part of the</p> | <p>1 trial or put in your submission to become part</p> <p>2 of the trial. Of course, everyone cannot be</p> <p>3 part of the trial. Eventually everyone will</p> <p>4 be able to have one of these devices. We've</p> <p>5 had a great response from this. When we went</p> <p>6 on CBC Radio with a small blurb there, we had,</p> <p>7 in one night, 100 phone calls, tied up the</p> <p>8 lines, of people who wanted this device and</p> <p>9 wanted to become part of the trial. So not</p> <p>10 only do they want the device, they become</p> <p>11 enthusiastic about energy conservation. So</p> <p>12 it's there. We just need to give them the</p> <p>13 tools.</p> <p>14 So based on all this, we have this</p> <p>15 evidence. We have come to several</p> <p>16 conclusions, and one of them is that we need</p> <p>17 an effective Demand Side Management Program to</p> <p>18 meet our future energy needs. How long can we</p> <p>19 go and build and build and build? I mean, we</p> <p>20 could bring in nuclear reactors. Is that</p> <p>21 unreasonable? We can add on to Holyrood and</p> <p>22 burn more Bunker C, which will impact our</p> <p>23 commitment to reducing our greenhouse gases.</p> <p>24 Or we can take demand side management</p> <p>25 seriously, which other states and provinces</p> |
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| <p>1 have done, California being one, and implement</p> <p>2 the most effective demand side management</p> <p>3 program we possibly can do.</p> <p>4 In order to get these two utilities to</p> <p>5 carry out an effective Demand Side Management</p> <p>6 Program, as opposed to just some leaflets to</p> <p>7 get people to reduce, they have to be mandated</p> <p>8 to implement this program, and they need a</p> <p>9 significant investment in effective demand</p> <p>10 side management. If you take an X amount of</p> <p>11 dollars and just throw at it at the beginning</p> <p>12 and don't do any follow up on it, it's not</p> <p>13 going to work. There has to be a real</p> <p>14 commitment to sustaining effective demand side</p> <p>15 management.</p> <p>16 And that is our slide show. I'll now</p> <p>17 open up the floor, Mr. Chairman, to any</p> <p>18 questions.</p> <p>19 CHAIRMAN:</p> <p>20 Q. Thank you very much, Mr. Tuff. We'll go to</p> <p>21 Hydro's questions first, Mr. Young.</p> <p>22 MR. YOUNG:</p> <p>23 Q. Thank you, Mr. Chair. Good morning, Mr. Tuff</p> <p>24 and Mr. Tuff. I do have a few questions. I</p> <p>25 must say it was a fascinating demonstration</p> | <p>1 and from your other comments, I thought</p> <p>2 certainly provocative too as to things we can</p> <p>3 do going forward, and as you mentioned, you</p> <p>4 know, with the medium term, I guess I could</p> <p>5 call it, we will need new capacity on the</p> <p>6 province, certainly on the island part of the</p> <p>7 province. So it's something we ought to look</p> <p>8 at the demand side element to this.</p> <p>9 I'm wondering, before I ask some sort of</p> <p>10 questions as to how it works with the utility,</p> <p>11 I'm wondering if you could explain to me how</p> <p>12 the technology actually works? You mentioned</p> <p>13 that it was very consumer friendly, I think</p> <p>14 was the term you used, and it attaches to your</p> <p>15 meter. Could you just flush out that a little</p> <p>16 bit more for us, please?</p> <p>17 A. Well, I can talk generally about how it works.</p> <p>18 Some of our patent lawyers would be upset if I</p> <p>19 disclosed everything that we do, but -</p> <p>20 Q. I don't blame them. I don't need to know the</p> <p>21 inner secrets.</p> <p>22 A. - the details of the component.</p> <p>23 Q. Just what would the consumer see, for example?</p> <p>24 A. The consumer would receive a package of a</p> <p>25 device. They are on order. Unfortunately we</p> |

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| <p>1 MR. MAURICE TUFF:</p> <p>2 didn't have one here today to show you. Would</p> <p>3 receive a device no bigger than a discman or</p> <p>4 something. It's actually smaller than that.</p> <p>5 That goes inside the home. That displays the</p> <p>6 consumption to the user. They have several</p> <p>7 options on that, prediction of what they will</p> <p>8 burn, the current amount they burned, the</p> <p>9 total amount. So over the past ten months,</p> <p>10 this is how much you consumed. Then they can</p> <p>11 take that device, hook it to their computer,</p> <p>12 if they have one, and I mean, in diesel areas,</p> <p>13 we have, I think it's a 40 percent penetration</p> <p>14 of computers, so it's not a big thing in</p> <p>15 diesel communities but there are a lot of</p> <p>16 people who will take advantage of our advance</p> <p>17 features where you can upload your</p> <p>18 consumption, do comparisons of it. It's more</p> <p>19 or less to get people into the mode of</p> <p>20 conservation. They now have control.</p> <p>21 To get it actually to work, well, you</p> <p>22 have your display device, of course, but you</p> <p>23 have to have a sensing method. Our sensing</p> <p>24 method, to make it as friendly as possible to</p> <p>25 the consumer so they don't have to pay an</p> | <p>1 electrician to install this, is to put a</p> <p>2 component on the meter. The meter is already</p> <p>3 certified. It measures the energy accurately.</p> <p>4 We now read that meter and send in wirelessly</p> <p>5 the data to the device. Our device does not</p> <p>6 have to be certified by Weights and</p> <p>7 Measurement Canada because it's not used as a</p> <p>8 basis of charge. The consumer then just takes</p> <p>9 it, puts it on the meter, goes in their home,</p> <p>10 turns on their display unit and now they have</p> <p>11 real-time feedback.</p> <p>12 Q. You mentioned that it can be provided, the</p> <p>13 information can be provided by consumption of</p> <p>14 kilowatt hours. It can also be provided--is</p> <p>15 there a demand element here you could also be</p> <p>16 shown?</p> <p>17 A. Yes. Well, the demand element, more for</p> <p>18 commercial consumers. Yes, you can add that,</p> <p>19 and in our brochure, you can also see that the</p> <p>20 demand rates can be added to it. That is all</p> <p>21 dependent on the rate structure. We send in</p> <p>22 the amount of kilowatt hours consumed and the</p> <p>23 time that it's consumed and the amount at any</p> <p>24 instant. So using the rate structure, you can</p> <p>25 calculate that.</p> |
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| <p>1 Q. Right. And you indicated you had a database.</p> <p>2 So would you be able to--I'm thinking--the</p> <p>3 only thing I can think would be comparable to</p> <p>4 this is programming a VCR or a remote control.</p> <p>5 Is it that sort of thing? You can then select</p> <p>6 the rate structure for the right jurisdiction,</p> <p>7 plug that in and the machine would</p> <p>8 automatically convert kilowatt hours to</p> <p>9 dollars? Is that how this essentially would</p> <p>10 work?</p> <p>11 A. Yes. So what happens is we've created an</p> <p>12 extensive database, taken all the rate</p> <p>13 schedules across Canada at this point.</p> <p>14 Ontario was certainly a hassle. I think they</p> <p>15 have over 80 suppliers of electricity to the</p> <p>16 customers. What it does, you take those rate</p> <p>17 structures, you put them in a database that's</p> <p>18 on the internet. The consumer then opens up</p> <p>19 Microsoft Explorer, Internet Explorer, goes to</p> <p>20 that webpage, can view--they drill down into</p> <p>21 where they are located. So they'd select</p> <p>22 Newfoundland. They'd select Newfoundland</p> <p>23 Hydro or Newfoundland Power. Then they'd pick</p> <p>24 their particular rate schedule. Once you</p> <p>25 click that, there's an upgrade button. If you</p> | <p>1 got your device, you take it off your</p> <p>2 countertop, you bring it into your computer,</p> <p>3 you connect it using a cable, and you press</p> <p>4 upgrade. That then sends the new rate</p> <p>5 schedule to the device. That's a more</p> <p>6 advanced option. It's not very hard to do at</p> <p>7 all, but to keep it simple, so that a computer</p> <p>8 is not required for this device, you can also,</p> <p>9 using your hands, enter the rate. So if you</p> <p>10 get your bill and you see that at 7.1 cents</p> <p>11 per kilowatt hour, you can insert that.</p> <p>12 Q. You mentioned early in your presentation that</p> <p>13 your business does two things. One is, I</p> <p>14 guess, this technology, the real-time feedback</p> <p>15 system. The other thing you mentioned was</p> <p>16 energy advice. Are they independent elements</p> <p>17 or is the energy advice portion of your</p> <p>18 business really support the technology?</p> <p>19 A. No, you have to have energy advice. That's</p> <p>20 why we said--well, HYDROWISE on its own does</p> <p>21 not work, but combined with some feedback, it</p> <p>22 does work. So if you take us, for instance,</p> <p>23 as we were implementing this project or this</p> <p>24 product, we've come up with a lot of effective</p> <p>25 ways to reduce energy consumption. So if you</p> |

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| <p>1 MR. MAURICE TUFF:</p> <p>2 just supplied a device to the consumer and</p> <p>3 don't tell them how to reduce their energy,</p> <p>4 then there's no impact. They won't know what</p> <p>5 to do, and vice versa, you give them the</p> <p>6 education but you don't give them the</p> <p>7 feedback, they can't conserve. So you have to</p> <p>8 give them education and the feedback.</p> <p>9 MR. YOUNG:</p> <p>10 Q. You've obviously been reading the transcripts.</p> <p>11 You might have seen several references over</p> <p>12 the last months, I guess, to the term price</p> <p>13 signal. That's something we've talked about a</p> <p>14 fair bit, whether or not the consumer is</p> <p>15 actually getting a sufficient price signal,</p> <p>16 considering all the various complexities that</p> <p>17 happen between the time that the power is</p> <p>18 consumed and the time that the bill gets</p> <p>19 calculated. This strikes me, this really is a</p> <p>20 consumption signal, which is, I suppose, the</p> <p>21 other half of the equation. But one of the</p> <p>22 things you've said in relation to your</p> <p>23 consumption signal is it's a behavioural</p> <p>24 change I think you're expecting to get, and</p> <p>25 I'm just wondering what would the, I suppose,</p> | <p>1 the life cycle of the price--the consumption</p> <p>2 signal be? For example, if a consumer, a</p> <p>3 typical consumer installed one of these, how</p> <p>4 long would it be typically before you would</p> <p>5 see reduced consumption? Would it be</p> <p>6 immediate, the first few days, the first</p> <p>7 month, and then how does it change over month</p> <p>8 after month after that? What's the pattern</p> <p>9 been?</p> <p>10 (10:00 a.m.)</p> <p>11 A. The pattern, well, first of all, I'll address</p> <p>12 the immediate reduction. If they got the</p> <p>13 education and they have this device, it is</p> <p>14 immediate. People get very enthusiastic about</p> <p>15 new devices in the home. You all know that</p> <p>16 when you buy something new, you use it more.</p> <p>17 But that's the great feature of this. So they</p> <p>18 use it more, they reduce their consumption</p> <p>19 right away, but it becomes habit forming. So</p> <p>20 simple things. If you come out of the</p> <p>21 bathroom and you turn off the light behind</p> <p>22 you, now at first, you have to remember to do</p> <p>23 that because you're trying to get that wheel</p> <p>24 on our device to spin slower, and you keep</p> <p>25 doing that and keep doing that. Eventually,</p> |
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| <p>1 it becomes habit forming. So if you remove</p> <p>2 the device from the home, the consumer would</p> <p>3 now have to make an honest effort to correct</p> <p>4 or incorrect, I guess, their new habits or</p> <p>5 energy conservation.</p> <p>6 The studies have shown there is also</p> <p>7 evidence that after a couple of years, that</p> <p>8 the group with feedback has consumed less than</p> <p>9 the control groups, continue to consume less</p> <p>10 than the control groups, so it is a sustained</p> <p>11 reduction.</p> <p>12 Q. How about the consumer that gets, I guess, the</p> <p>13 automatic positive reinforcement of having a</p> <p>14 lower bill and something they can see real</p> <p>15 time; has there been any sustained changes?</p> <p>16 For example, do you find that those consumers</p> <p>17 would go out and make appliance choices that</p> <p>18 would be different from the consumer that</p> <p>19 doesn't have this or adding insulation or</p> <p>20 those sorts of things?</p> <p>21 A. Well, the RECS study that was done in Ontario,</p> <p>22 they make a reference to this. I'll have to</p> <p>23 find it. Well, I'll take another look at it.</p> <p>24 You'll get a copy of this. But in this, they</p> <p>25 say that one of their consumers called them up</p> | <p>1 and now wanted to know more on what other</p> <p>2 means they could use to reduce their</p> <p>3 consumption. So once you get in the mode of</p> <p>4 conservation, you see that you are in control.</p> <p>5 You can reduce your consumption. Then the</p> <p>6 belief is that people will take the bigger</p> <p>7 steps to do it. But this is so cost</p> <p>8 effective, let's say for \$60, you can get a 15</p> <p>9 percent reduction. How much is an R2000 home</p> <p>10 to get something comparable? How much is your</p> <p>11 new fridge? How much is your new hot water</p> <p>12 boiler? How much is it to replace every light</p> <p>13 in your house? Well, do this first. You have</p> <p>14 the psychology behind it that says, okay,</p> <p>15 everyone will conserve. Now people want to</p> <p>16 take it the extra step and the studies do say</p> <p>17 that there is quite an interest in people once</p> <p>18 they become involved, and the biggest part of</p> <p>19 it is getting them involved.</p> <p>20 Q. It strikes me that one of the things you</p> <p>21 mentioned about the HYDROWISE Program and</p> <p>22 programs like that is it does, I think you</p> <p>23 would agree with me, educate consumers to the</p> <p>24 benefits of making appliance choices which are</p> <p>25 wiser, considering insulation, but it doesn't</p> |

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| <p>1 MR. YOUNG:</p> <p>2 give the very immediate response. Whereas</p> <p>3 your product seems to give a very immediate</p> <p>4 response. I was just wondering whether you</p> <p>5 had the transfer from one to the other, from</p> <p>6 the immediate to the sustained, or is there a</p> <p>7 balanced approach that you need to take?</p> <p>8 A. Well, first, I wouldn't say that people are</p> <p>9 being educated by the HYDROWISE Program. In</p> <p>10 my own experience and from what we can gather</p> <p>11 is that people are not listening. So they</p> <p>12 don't have any means to get a feedback on any</p> <p>13 changes that they made. So even if they did</p> <p>14 listen to HYDROWISE, they have no way of</p> <p>15 knowing how much they have conserved. Once</p> <p>16 you get that, people then, of course, get into</p> <p>17 the mode of trying to match up how much they</p> <p>18 think they conserved with their actual bill,</p> <p>19 and their bill would become more effective in</p> <p>20 that means. They would start challenging the</p> <p>21 bill, "oh, I'm going to get that lower," this</p> <p>22 sort of thing. So the sustainment, as long as</p> <p>23 the device is in the house, they'll have real-</p> <p>24 time feedback. The bill is going to continue</p> <p>25 to come, so they'll also have that. So I</p> | <p>1 think the two are hand in hand. You have your</p> <p>2 bills arriving monthly and you also have real-</p> <p>3 time feedback.</p> <p>4 Q. I'm just wondering on the last point you made</p> <p>5 about, you know, getting no bang for your buck</p> <p>6 or no feedback at all from the HYDROWISE sort</p> <p>7 of thing. I mean, if a customer does take an</p> <p>8 effort and, for example, an electrically</p> <p>9 heated home does the thing that everyone</p> <p>10 recommends and does the insulation and the</p> <p>11 windows and all those things, which are</p> <p>12 important, I mean, that may be a summer</p> <p>13 project. The results may not be there until</p> <p>14 six or eight or ten months from then, but at</p> <p>15 the end of the year, we think there is a</p> <p>16 definitely a feedback. It might not be as</p> <p>17 immediate as watching this thing on your</p> <p>18 kitchen table, but I mean, I think you'd agree</p> <p>19 with me that there is some feedback there.</p> <p>20 It's not that there's no feedback. It's just</p> <p>21 that it's a delayed one.</p> <p>22 A. Well, of course, everything is feedback, but a</p> <p>23 removed feedback is ineffective, and that's</p> <p>24 what we're saying, and the other thing we're</p> <p>25 saying is that the cost of this can get--</p> |
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| <p>1 everyone can purchase it, or the utility can</p> <p>2 provide it to everyone. How many homes can</p> <p>3 you go in and insulate and what impact is that</p> <p>4 even? So you go in and you insulate,</p> <p>5 reinsulate 100, 200, I don't know, 5,000 homes</p> <p>6 and that's significant investment to do that,</p> <p>7 and then you have to wait eight months to see</p> <p>8 it. So people won't take it upon themselves,</p> <p>9 unless they're forced to, to put insulation in</p> <p>10 their home. If you look at the program now</p> <p>11 the Government of Canada has come out with,</p> <p>12 you get an energy audit. If you reduce the</p> <p>13 consumption, if you find ways to reduce your</p> <p>14 consumption by a certain percentage, then you</p> <p>15 install your new doors or whatever it is that</p> <p>16 you're going to do and then you get a rebate</p> <p>17 after another audit has been done. Now the</p> <p>18 trouble of that is getting it out to the</p> <p>19 numbers. We never once argued that it doesn't</p> <p>20 work in individual cases, but we're saying</p> <p>21 that it doesn't work in the broad sense and it</p> <p>22 doesn't work to help a utility implement</p> <p>23 effective demand side management.</p> <p>24 Q. You mentioned that you had met with Hydro just</p> <p>25 last week and you don't have a written</p> | <p>1 response back, and you also mentioned that you</p> <p>2 do have something from Newfoundland Power.</p> <p>3 When did you meet with Newfoundland Power on</p> <p>4 this? Was it last week or was it sometime in</p> <p>5 the past?</p> <p>6 A. We've been having meetings with Newfoundland</p> <p>7 Power over the past year.</p> <p>8 Q. I see.</p> <p>9 A. And the final response, the final letter is</p> <p>10 dated December 5th. So that gives us</p> <p>11 permission to install 100 of our meters on</p> <p>12 their meters.</p> <p>13 Q. December 5th, just very recently.</p> <p>14 A. Yes, very recently.</p> <p>15 Q. Yes, understood. The numbers that you've</p> <p>16 indicated, I think you've used a 10 percent</p> <p>17 number as a reduction and some of your</p> <p>18 studies, I think, on your presentation had</p> <p>19 somewhat higher numbers. Is the 10 percent a</p> <p>20 conservative estimate or is that an</p> <p>21 extrapolation based upon some behaviour you</p> <p>22 know is likely in this part of the world or</p> <p>23 how does it work?</p> <p>24 A. No, that's a conservative estimate. If it's</p> <p>25 15, you're pretty safe in saying that it's 10</p> |

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| <p>1 MR. MAURICE TUFF: 2 percent. 3 MR. YOUNG: 4 Q. I see. So that would be data from Britain, I 5 assume sometimes in this Oxford study? Is 6 that the case? 7 A. All of these studies are independent studies 8 that prove that real-time feedback has reduced 9 it by 15 plus percent. 10 Q. Okay. 11 A. They're not our studies. 12 Q. And the Ontario Hydro one, it's ten years old. 13 Even that was, I think it was close to 13 14 percent. Is that correct? 15 A. Yes, but the psychology of feedback hasn't 16 become outdated. 17 Q. Thanks very much. 18 A. Thank you. 19 Q. That's all my questions, Mr. Chair. 20 CHAIRMAN: 21 Q. Thank you, Mr. Young. Move now to the 22 Consumer Advocate, Mr. Browne. 23 BROWNE, Q.C.: 24 Q. Thank you, Mr. Chairman. Mr. Tuff, what are 25 your academic qualifications?</p> | <p>1 A. I graduated from Memorial University with a 2 Bachelor of Engineering degree. Actually, 3 Darlene was one of my first work-term 4 supervisors. I got a pass with distinction, 5 so she can attest to that. Right now, 6 currently, I'm doing my Masters in electrical 7 engineering. I have my course work completed 8 and I'm working on a thesis. 9 Q. And what's your age? 10 A. I'm 26 years old. 11 Q. In terms of this product, as you're aware, 12 consumers don't own their meters. They're 13 owned by the utility. You're aware of that? 14 A. Absolutely. 15 Q. And therefore if any consumer should want this 16 device, they can't--if you decide to try to 17 market it, they can't access the device 18 without the permission of the utility. You're 19 aware of that? 20 A. Yes, we're aware of that. 21 Q. Have the utilities indicated a willingness to 22 allow consumers to have this installed on 23 their meters? 24 A. I wouldn't call it a willingness. What 25 happened was we asked for permission to get</p> |
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| <p>1 onto the meters with Newfoundland Power. Once 2 we went to them and asked them, they are right 3 in the fact of saying that it's a sensitive 4 issue. People--this is what people are being 5 billed on, so just slapping anything on their 6 meters is not what they're into. So they had 7 to do their due diligence on us to see what we 8 have is effective and it works. So as of 9 December 5th, they have provided limited 10 access to their meters in the fact that we get 11 100 meters to install our device on to do a 12 test trial. 13 Q. Has either of the utilities considered this as 14 a way of people for reading their own meters 15 and providing information to the utility and 16 how much they burn on a monthly basis? 17 A. The trouble with that would be the fact that 18 it's not a basis of charge, and in order to do 19 that, we'd have to be certified by Weights and 20 Measurement Canada. So right now, they could 21 provide feedback to the utility, but they 22 wouldn't, from our perspective, be allowed to 23 enter that say on a webpage, that reading, and 24 then be sent out a bill based on that reading. 25 They would still have to read their own meter.</p> | <p>1 Q. What's in it for the utilities? It seems to 2 me utilities like to make money and the more 3 they make, the better. If they are in 4 conjunction with you decide to embark upon 5 this program, wouldn't a fear of theirs be 6 that people would indeed reduce consumption 7 and ultimately they probably wouldn't make as 8 much as they would wish? 9 A. Yes, and that was our concern, and that is one 10 of the reasons that feedback has had probably 11 such trouble getting into the market, is 12 because it works. If you reduce the revenue 13 of any company by any means, then they're 14 going to do whatever they can to get rid of 15 that. That said, we are dealing a little 16 different with Newfoundland and Labrador 17 Hydro. Their mandate, you can correct me if 18 I'm wrong, is to provide efficient energy to 19 the--or energy to the consumers. I wasn't 20 aware that it was to make substantial amounts 21 of money. That is part of it, no doubt, but 22 providing energy to the customers is first and 23 foremost. So implementing this to reduce the 24 amount of energy consumed means that they 25 don't have to build new facilities. So it is</p> |

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| <p>1 MR. MAURICE TUFF:</p> <p>2 critical to Newfoundland and Labrador Hydro to</p> <p>3 do that.</p> <p>4 On the other side of the coin, you have</p> <p>5 companies like Newfoundland Power where their</p> <p>6 mandate is, they are--they do have</p> <p>7 shareholders and they do have to produce a</p> <p>8 profit. So if something like this is</p> <p>9 implemented and widespread, it could have--it</p> <p>10 will, not could, it will have an impact on</p> <p>11 their revenue. 100 units would be</p> <p>12 insignificant. 100,000 units would definitely</p> <p>13 have an impact. So to get--to be able to use</p> <p>14 100 units by Newfoundland Power is one thing</p> <p>15 but getting a commitment once we prove our</p> <p>16 technology to bump it up to substantial</p> <p>17 numbers, that's when there could be some</p> <p>18 trouble.</p> <p>19 Q. So the 100 that are part of the program you're</p> <p>20 getting involved with with Newfoundland Power,</p> <p>21 how are the 100 customers determined?</p> <p>22 A. The 100 customers are not determined by us.</p> <p>23 We've got the support of the business faculty</p> <p>24 at Memorial University to do an independent</p> <p>25 study. Right now, we are gathering names to</p> | <p>1 supply to that group. They will then decide</p> <p>2 who's in it. We certainly don't want to put</p> <p>3 these in ourselves or pick the customers. We</p> <p>4 give them to all of our friends and have them</p> <p>5 turn their heat off for a month. That's not</p> <p>6 what we want. It's an independent study that</p> <p>7 will be done professionally.</p> <p>8 Q. And will the customers be all electric</p> <p>9 customers?</p> <p>10 A. No. One of the things, one of your biggest</p> <p>11 savings that you can make of course is on your</p> <p>12 heat. Next to that is your hot water, but oil</p> <p>13 customers also have a lot of room to save. If</p> <p>14 they're heating their hot water boiler with</p> <p>15 electricity, well then letting them know that</p> <p>16 their half-an-hour showers every day is having</p> <p>17 an impact, well this device will help out</p> <p>18 there. So there'll be a cross range of</p> <p>19 different energy types.</p> <p>20 Q. You mentioned in your presentation the word</p> <p>21 "psychology" and consumerism and attitude and</p> <p>22 you stated that when you went on CBC to</p> <p>23 promote your device that you got a really good</p> <p>24 reaction. You got somewhat like 100 calls in</p> <p>25 a limited amount of time. And I guess that's</p> |
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| <p>1 one part of the spectrum. But the other part</p> <p>2 is as you drive around the City of St. John's</p> <p>3 since November 15th, you see people putting up</p> <p>4 Christmas lights and people seem to have no</p> <p>5 consciousness of the fact that it is a</p> <p>6 commodity in short supply. How do you get the</p> <p>7 message to these people? It seems some people</p> <p>8 are open to the message, but a lot of others</p> <p>9 aren't. Do you have any comment on that?</p> <p>10 A. Well, we had an ongoing joke that if we were</p> <p>11 able to release this by Christmas, we'd, in</p> <p>12 fact, be the Grinch who stole Christmas</p> <p>13 because you wouldn't see a light on. But what</p> <p>14 you would do is that if this is in their house</p> <p>15 when they turn on all their lights, they will</p> <p>16 see a difference in the speed of that disc</p> <p>17 spinning in their kitchen. They'd be more</p> <p>18 inclined to buy a \$9.00 timer perhaps at Kent.</p> <p>19 You provide them with the education to be able</p> <p>20 to do that, so that their lights don't come on</p> <p>21 at 4:00. They're on at 6:00 and they're off</p> <p>22 at 12:00 every night. You also provide them</p> <p>23 with the education and they can see it right</p> <p>24 in front of them that these lights are having</p> <p>25 an impact on the network. Maybe you can wait</p> | <p>1 until December 1st or something of that sort.</p> <p>2 So there's always room to get the customer</p> <p>3 motivated.</p> <p>4 (10:15 a.m.)</p> <p>5 Q. You mentioned the Climate Control Plan for</p> <p>6 Canada and the money that's available in that</p> <p>7 program to assist consumers in reducing their</p> <p>8 energy. Have you looked at that in terms of</p> <p>9 marketing this device? Would that money be</p> <p>10 available to you?</p> <p>11 A. I'll let Danny take that question. He's</p> <p>12 dealing with some of EnerCan's programs.</p> <p>13 MR. DANNY TUFF:</p> <p>14 A. Yes, we've made--by the way, I'm the bookie in</p> <p>15 the business.</p> <p>16 Q. Okay. Give us the goods.</p> <p>17 MR. DANNY TUFF:</p> <p>18 A. Yes. A lot of this has been happening very</p> <p>19 quickly for us, so we've been presenting our</p> <p>20 solution to a variety of government agencies</p> <p>21 on the Federal level and provincial level. So</p> <p>22 we've contacted EnerCan and we've contacted,</p> <p>23 you know, the equivalent department in</p> <p>24 Newfoundland and you know, there's a variety</p> <p>25 of programs, but the delivery mechanism is not</p> |

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| <p>1 MR. DANNY TUFF:</p> <p>2 completely understood, even by some of the</p> <p>3 departments at this point. I mean, there was</p> <p>4 a lot of money allocated for Kyoto, but the</p> <p>5 delivery mechanisms are convoluted and I guess</p> <p>6 that's a timing issue. In many respects, I</p> <p>7 guess, you know, we're doing this at the right</p> <p>8 time because there's some flexibility in</p> <p>9 programming.</p> <p>10 But I guess to answer your question, you</p> <p>11 know, we're looking at that and we're talking</p> <p>12 to officials, but you know, we haven't--it's</p> <p>13 an option to us, but we haven't secured any</p> <p>14 financing or program advantages at this point.</p> <p>15 Q. So you're looking into it?</p> <p>16 MR. DANNY TUFF:</p> <p>17 A. Yes.</p> <p>18 Q. These are my questions. I have to commend you</p> <p>19 on your presentation. It's always healthy to</p> <p>20 have someone such as yourselves come forward,</p> <p>21 particularly in an entrepreneurial spirit, to</p> <p>22 market such a device and I comment you on your</p> <p>23 research and on your facts because when you</p> <p>24 say that after 2008 and 2009, we appear</p> <p>25 dependent on thermal and on the Holyrood</p> | <p>1 generating station, which would be the</p> <p>2 opposite of what Kyoto is trying to do, you're</p> <p>3 absolutely correct. Thank you very much.</p> <p>4 CHAIRMAN:</p> <p>5 Q. Thank you, Mr. Browne. Newfoundland Power,</p> <p>6 Mr. Kelly, do you have any questions?</p> <p>7 KELLY, Q.C.:</p> <p>8 Q. Thank you, Chair. I have no specific</p> <p>9 questions. Newfoundland Power looks forward</p> <p>10 to working with Blueline on this pilot project</p> <p>11 to help determine the cost effectiveness of</p> <p>12 these type of devices. Thank you, Mr. Tuff.</p> <p>13 CHAIRMAN:</p> <p>14 Q. Thank you, Mr. Kelly. Industrial customers,</p> <p>15 Mr. Seviour, do you have any questions?</p> <p>16 MR. SEVIOUR:</p> <p>17 Q. Thank you, Mr. Chair. No, I'd like to commend</p> <p>18 the presenters for their presentation, but the</p> <p>19 Industrial Customers do not have any questions</p> <p>20 of the panel.</p> <p>21 CHAIRMAN:</p> <p>22 Q. Thank you very much. We normally afford the</p> <p>23 Board hearing counsel the opportunity to ask</p> <p>24 questions. Good morning, Mr. Kennedy. Do you</p> <p>25 have any?</p> |
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| <p>1 MR. KENNEDY:</p> <p>2 Q. Thank you, Chair and Commissioners. Mr. Tuff,</p> <p>3 just a couple of questions. Your recent</p> <p>4 securing of a test bed with Newfoundland Power</p> <p>5 of the 100 meters, the size of the project</p> <p>6 itself, was that something that you selected?</p> <p>7 Was that from Blueline's perspective the</p> <p>8 appropriate size, 100 customers?</p> <p>9 MR. MAURICE TUFF:</p> <p>10 A. We originally came out with 100 customers.</p> <p>11 Then in order to do a proper scientific study,</p> <p>12 talking to the business faculty, we needed</p> <p>13 upwards of 1,000 customers to trial it with.</p> <p>14 However, given cost constraints, the fact that</p> <p>15 Blueline Innovations is financing this 100</p> <p>16 percent at this point ourselves, that it was</p> <p>17 limited to 100. We can still scientifically</p> <p>18 answer most of our questions, but in order to</p> <p>19 get the cross range of questions that we did</p> <p>20 want answers, we had proposed 1,000 units.</p> <p>21 Q. And I believe you said the unit cost is</p> <p>22 approximately \$100 per device?</p> <p>23 A. That's in economies of scale. The first 100</p> <p>24 units will be slightly higher than that.</p> <p>25 Q. And so the roughly \$10,000 in unit costs, in</p> | <p>1 hardware costs for your test bed of 100</p> <p>2 devices with Newfoundland Power, that's being</p> <p>3 borne solely by Blueline, is it?</p> <p>4 A. Blueline Innovations, and in fact, it's</p> <p>5 greater than \$10,000 because these are beta</p> <p>6 prototypes. They're upwards of \$250 apiece.</p> <p>7 When we go to larger scale production, it will</p> <p>8 be \$100. So that cost is being borne solely</p> <p>9 by Blueline Innovations.</p> <p>10 Q. The devices, I'm assuming that there would</p> <p>11 need to be a demand meter in order for this</p> <p>12 device to be able to measure demand and</p> <p>13 energy?</p> <p>14 A. Yes. If you're going to do--well, actually,</p> <p>15 the demand, you could show them their peak</p> <p>16 demand without having the demand meter.</p> <p>17 Demand meter measures obviously the demand and</p> <p>18 we can do the same thing. Billing it,</p> <p>19 obviously if they don't have a demand meter,</p> <p>20 they will not be billed on the demand rate.</p> <p>21 Q. Okay. So your device would be able to show</p> <p>22 demand as well as energy use, even if it's</p> <p>23 only an energy only meter on the side of the</p> <p>24 house?</p> <p>25 A. That's correct.</p> |

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1 MR. KENNEY:
 2 Q. Okay. That's all the questions I have. Thank
 3 you, Chair.
 4 CHAIRMAN:
 5 Q. Thank you, Mr. Kennedy.
 6 MS. NEWMAN:
 7 Q. Chair, before we move on, Mr. Tuff did make
 8 reference to other surveys that he got copies
 9 of there.
 10 A. Um-hm.
 11 Q. Can you indicate how many surveys there are
 12 there? And we'll just label that MT No. 5.
 13 A. We'll be providing four more studies.
 14 Q. Okay, and all four will be labelled MT No. 5.
 15 Thank you, Mr. Tuff.
 16 CHAIRMAN:
 17 Q. Thank you, Ms. Newman. We'll move now to
 18 questions from the Board. Commissioner
 19 Saunders?
 20 COMMISSIONER SAUNDERS:
 21 Q. Yes, thank you, Mr. Chair. Mr. Tuff, you
 22 mentioned early in your presentation that, and
 23 I understood you to say that Blueline had
 24 developed this piece of hardware that you've
 25 talked about this morning. Is that a correct

1 understanding that I have, that you have, that
 2 Blueline has developed the hardware and
 3 software?
 4 A. Yes, Blueline owns all intellectual property.
 5 We have developed the hardware and software
 6 for this device.
 7 Q. Do you have or anyone in your firm have any
 8 background with the utility industry, having
 9 worked with the utility industry? You seem to
 10 know a lot about the utility industry.
 11 A. Well, we've been at this quite a while and we
 12 had to read up on our facts and figures, but
 13 we do have one gentleman working with us that
 14 has six years experience with Schlumberger in
 15 their metering department. So he's well aware
 16 of some of the technical issues on meters.
 17 Q. The unit itself, you say it attaches to the
 18 meter?
 19 A. That's correct.
 20 Q. Okay. And it can be used indoors or outdoors?
 21 A. That's correct.
 22 Q. Yes. You also mention that you had spent
 23 roughly a year discussing the test you wanted
 24 to run with Newfoundland Power, and on
 25 December 5th, you received approval?

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1 A. That's correct.
 2 Q. And the number of units that you have received
 3 approval to install is not up to the test
 4 level that Memorial recommended as being
 5 effective? Is that--do you have my
 6 understanding correct?
 7 A. Well, slightly. I'll just elaborate on it.
 8 100 units is effective in answering some
 9 questions. When you do a statistical sample,
 10 of course, you need a certain amount and every
 11 question that you add to that, you have to add
 12 sufficient numbers of samples. We had a lot
 13 of questions that we wanted answered to really
 14 prove this device. But since then, because we
 15 are paying for this ourselves, we've reduced
 16 that to some really critical questions to be
 17 answered, but we won't get the cross range of
 18 questions that we originally come out with
 19 that said the 100 study will answer the
 20 significant question of will it reduce
 21 consumption by the consumer. Beyond that, a
 22 lot of the questions have been answered in
 23 previous studies. So just to do another study
 24 may--you know, may not tell us any more than
 25 what's already in the studies.

1 Q. When do you expect to have results from that
 2 test?
 3 A. The units will arrive before Christmas. We'll
 4 have our first beta prototypes. After
 5 Christmas, we'll be, in January, preparing,
 6 selecting, developing this study. February,
 7 March and April, they will be installed in the
 8 homes and then we'll have two months after
 9 that to analyze the data.
 10 Q. Thank you, Mr. Chair. Thank you, Mr. Tuff.
 11 A. Thank you.
 12 Q. Very interesting and informative presentation.
 13 Thank you.
 14 CHAIRMAN:
 15 Q. Thank you, Commissioner Saunders.
 16 Commissioner Whalen?
 17 COMMISSIONER WHALEN:
 18 Q. Yes, thank you. Good morning to both of you
 19 and to you, Maurice. Nice to see you again
 20 and see you doing so well. I just have a
 21 couple of questions. I'm wondering about the
 22 status of similar kinds of initiatives across
 23 the country. I remember hearing you on CBC
 24 Radio and it was following up on an interview,
 25 I think, with a gentleman from Woodstock

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| <p>1 COMMISSIONER WHALEN: 2 Hydro. 3 A. Woodstock Hydro. 4 Q. And he was talking about smart meters, which I 5 understand are a different kind of--that's a 6 prepurchase kind of card. You buy however 7 much power you want to use and use that and it 8 just ticks down. That's what I understood 9 that to be. What you have here is a 10 consumption meter which just measures real- 11 time consumption of power. Are there other 12 kinds of DSM technologies that would employ 13 that kind of sort of real time, either 14 countdown or count up, depending on what 15 you're doing, I guess, technology in the 16 country? 17 A. Currently we haven't identified anyone 18 implementing that sort of technology, other 19 than smart meters, prepayment meters. The 20 psychology behind the prepayment meters is 21 pretty well the same. You get immediate 22 feedback. You know how much you're consuming, 23 therefore they've recognized a 20 percent 24 saving. The trouble, of course, with 25 prepayment meters, the majority of customers</p> | <p>1 don't like it because they like to pay after 2 the fact and the other thing is the expense. 3 The utility has to go out and install those 4 meters. Feedback, there are other types of 5 feedback being used. I'm going to say New 6 Brunswick Power, I don't know for sure if 7 that's who's doing it, but they put feedback 8 on the bill. So they'll compare it to say 9 last year or this time last month or relative 10 to another household of similar size. They 11 use these sort of initiatives. Once again, 12 it's feedback, but the loop is too far 13 removed. So with regards to our particular 14 device, we have not identified an offering 15 yet. We do know that there is competition 16 coming out in other countries and we've made 17 contact with those companies also. 18 Q. Are you currently marketing your technology 19 outside the province to other utilities 20 outside - 21 A. Yes, we are. Right now NATE (phonetic) is in 22 Chile and they have product brochures gone 23 with them to market this in South America. 24 Q. And are you meeting with other utilities in 25 the same way that you'd be -</p> |
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| <p>1 A. Our presentation, as we've given here today, 2 is a template to go on and meet with other 3 utilities. Of course, the big customers are 4 Hydro One in Ontario. You go down into 5 California, those areas, is a lot bigger and a 6 lot more lucrative than Newfoundland. Being 7 from Newfoundland, it provides an excellent 8 opportunity to prove both the technology and 9 show the impact on an isolated system. 10 Q. I guess your answer kind of precludes my next 11 question which was really whether there had 12 been any studies of the impact of this kind of 13 technology on the system in terms of deferring 14 capital cost, but I guess, if it's not in use, 15 to a large extent, it's (inaudible - 16 coughing). 17 A. That is tough to answer if they don't do it, 18 but one of the things, of course, is you have 19 to look at the percentage of energy consumed 20 by, say, if this was just for consumers' 21 households, then how many of those do you have 22 to hit in order to defer the capital 23 expenditures. We have done some analysis of 24 that based on Newfoundland Hydro's 25 predictions. The energy right now, I think,</p> | <p>1 is--30 percent of energy consumed in 2 Newfoundland and Labrador is by households. 3 Then you extrapolate that to say, well, how 4 many meters do you have to install at your ten 5 percent and that sort of thing. And you can 6 defer within a reasonable base by at least a 7 couple of years, the intensive capital 8 expenditures that would be required, say, to 9 build a new hydro generating facility. 10 Q. In terms of your company, are you doing any 11 other similar kinds of technology developments 12 or is this your single focus right now? 13 A. Without giving away too much because, of 14 course, this is all very competitive, I will 15 say that we are going into water metering. It 16 provides the exact same concept. There is 17 competition out there for that also. When 18 consumers are given, are billed for their 19 water, which right now in Newfoundland, we are 20 not, but in a lot of places, they are, this 21 sort of psychology of feedback has the exact 22 same impact. So, it doesn't matter about the 23 commodity, it matters about the feedback and 24 we're going to address all those. 25 Q. Thank you. Thanks very much to the both of</p> |

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| <p>1 COMMISSIONER WHALEN: 2 you. It's nice to see you again. 3 (10:30 a.m.) 4 CHAIRMAN: 5 Q. Thank you very much Messrs Tuff. First of 6 all, let me commend both of you, as well, on 7 this initiative. It's great to see young 8 Newfoundlanders and Labradorians, like 9 yourself, pursuing a business opportunity of 10 this nature. And I'd also like to thank you 11 for and commend you for coming here this 12 morning to present to us. Certainly, as a 13 Board, we're always interested in initiatives 14 in this area and initiatives like this. So, 15 we, indeed, thank you very much for this and 16 we'll certainly be considering it as part of 17 the body of evidence before us for this 18 hearing. 19 I have just a couple of questions. I 20 think the bulk of them had been taken so far. 21 It always happens at the end of the question 22 period, but if you'll just bear with me, I 23 think I do have a couple here. Ms. Whalen 24 asked about, I guess, what might--the actual 25 circumstances apart from demonstration</p> | <p>1 projects and test projects, that might be 2 operative or active in other areas of Canada 3 or the U.S. Am I understanding you to say 4 there are none? Are there any in Europe or 5 anywhere like that and is there anywhere--I 6 guess the real questions is, is there anywhere 7 where there's a substantive market penetration 8 of your product or similar products and what 9 reaction is that met with? 10 A. We've identified a competitor who creates a 11 very similar technology, but they use current 12 transformers that requires an electrician to 13 install it in the fuse box. We went to them 14 and asked--they agreed to co-brand their 15 device if we'd offer that also. So, we'd have 16 our device and we'd offer their device. Just 17 to give you some of the numbers of demand for 18 what they had. Their limited order was 5,000 19 units per order and they also said that they 20 wouldn't be able to meet our supply because 21 they are backed up for several months. This 22 is happening in Europe. 23 Q. In terms of marketing the product, I can 24 clearly see down the road, there'll be other 25 development of marketing strategies. What</p> |
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| <p>1 role do you see in terms of the utility itself 2 in working in conjunction, or indeed, on their 3 own in relation to a product similar to this? 4 A. Well, there's two ways you can do a product 5 like this. The meter, where we need 6 permission from the utility to get on the 7 meter which makes it very accessible by all 8 consumers, if they give blanket permission, 9 once they see that the device is very robust, 10 if they give blanket permission, then the 11 consumers themselves may take it upon 12 themselves to go out and purchase this. But 13 until that happens, the utility's role would 14 be to offer it to the consumers, to get them 15 to reduce their consumption. So, if you go 16 into a community and you offer this or you 17 send out leaflets to offer it as part of a 18 payment on your bill, giving them the correct 19 information, saying this will reduce, studies 20 have shown this will reduce your consumption 21 by 20 percent and here's how to use it. 22 Provide it to them free of cost, if they don't 23 start reducing their consumption within a 24 certain amount of time, then they can take it 25 back. There's all sorts of issues that the</p> | <p>1 utility could get involved with to do that. 2 Their prime concern, of course, should be with 3 demand side management. It seems that supply 4 side management is their forte of--they're 5 just going out and building and trying to make 6 things more efficient on that side, but their 7 role has to be to grab up demand side 8 management as an effective means of a supply. 9 It is a supply. For every unit that you save, 10 it's the same thing as producing it. So, the 11 utility has to use this as a supply. 12 Q. Thank you. Just in relation to the cost, I 13 just jotted down some numbers here when you 14 were talking earlier. And I think you 15 indicated that as far as the unit itself is 16 concerned, that you're somewhere in the order 17 or \$100.00 or something less than \$100.00 and 18 you seem to comment on the installation as 19 being relatively incidental as well. You 20 talked about, I believe, the sensing method 21 that you saw initially was really reading--you 22 would have a device that would read the meter 23 and send the data back to you. And then you 24 would actually advise the consumer then of 25 that, in an immediate way. Was I</p> |

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| <p>1 CHAIRMAN: 2 misunderstanding that? 3 A. So, the sensor sends wireless signal to the 4 device in the home. 5 Q. In the home. 6 A. And it updates it instantly, so they now know 7 exactly how much energy they're consuming. 8 So, if they go around the house and turn back 9 their heat and heaters kicked it and it stops 10 running, then they can come out and they can 11 look at their device and they'll see 12 immediately the impact of that. 13 Q. So, is there any ongoing cost for that as far 14 as your company is concerned? 15 A. Absolutely not, unless utilities pick up the 16 cost of getting us, contracting us to come up 17 with appropriate energy advice to give the 18 consumer to work with this device to lower 19 their consumption. 20 Q. So, if it's \$100.00 per unit, incidental costs 21 plus presumably no ongoing costs, you're 22 talking about 10 percent. If somebody is 23 consuming \$200.00 a month, they save \$20.00. 24 I mean, you're talking about six, eight, ten 25 months pay back, something as that--are those</p> | <p>1 the figures that we're talking about? 2 A. Absolutely, that is one of the big things, 3 that it pays for itself very quickly. 4 Q. I see. Just bear with me now. The test that 5 you're looking at conducting with Newfoundland 6 Power, the hundred units, are there any small 7 business units that you're likely or units 8 that's installed in small businesses or are 9 you just looking at residential at this point? 10 A. Well, if they're using, right now, the same 11 electromechanical meter similar to an I70, it 12 can be any of those electromechanical meters 13 at this point. If they're using the same one, 14 not using the demand meter, right now, 15 absolutely, they can use it. We haven't 16 addressed that specifically to say we're going 17 to go into a business, but it's something we 18 certainly can consider. 19 Q. Those are the questions I have. Thank you 20 very much. Once again, it was a most 21 interesting presentation and wish you every 22 success. Thank you. I guess that--we did 23 have a second presenter today, as well, who 24 perhaps due to weather or other circumstances, 25 we've not been able to contact that</p> |
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| <p>1 individual. So, that brings, I guess, to 2 conclusion today's proceedings. Perhaps I 3 could just comment a little bit. It is 4 unfortunate, I think, that we don't have more 5 people here today, given the response that we 6 did receive last week throughout the rest of 7 the Island and Labrador because there are all, 8 indeed, measures of consumers, be it small 9 business, municipalities or non-profit groups 10 that will be impacted by this application. 11 And I think it would have been nice to hear 12 from more of these groups actually in this 13 particular area. Notwithstanding, the 14 opportunity does exist for letters of comment 15 to be made by the Board and the specific 16 impact of this application prior to the close 17 of the hearing which is likely to be in the 18 order of the middle of January by the time 19 final argument. We will be concluding at the 20 end of this week, breaking for Christmas and 21 reconvening for a day or so around the middle 22 of January for final argument. And the 23 opportunity exists for anybody in any 24 organization or group that wishes to, indeed 25 submit in written form, a letter of comment by</p> | <p>1 that time. 2 Once again, I'd like to thank the 3 presenters, thank you very much, this morning 4 and everybody for participating in these 5 proceedings and we'll be reconvening at 9:00 6 tomorrow morning continuing the evidentiary 7 phase of the hearing for the remainder of the 8 week. 9 BROWNE, Q.C.: 10 Q. There is a letter of comment from Mr. Neil 11 Cleary of 1 Shaw Street in St. John's and I've 12 file that with the Board. 13 CHAIRMAN: 14 Q. Thank you, Mr. Browne. We'll see you in the 15 morning. Thank you. 16 Upon concluding at 10:40 p.m.</p> |

1 CERTIFICATE

2 I, Judy Moss Lauzon, hereby certify that the
3 foregoing is a true and correct transcript in the
4 matter of Newfoundland and Labrador Hydro's 2003
5 General Rate Application for approval of, among
6 other things, its rates commencing January, 2004
7 heard on the 8th day of December, A.D., 2003 before
8 the Board of Commissioners of Public Utilities,
9 Prince Charles Building, St. John's, Newfoundland
10 and Labrador and was transcribed by me to the best
11 of my ability by means of a sound apparatus.
12 Dated at St. John's, Newfoundland and Labrador
13 this 8th day of December, A.D., 2003
14 Judy Moss Lauzon