MARITIME LINK COMPLIANCE FILING

TECHNIAL CONFERENCE

LOCATION: Westin Hotel, Halifax, NS

DATE: Monday, October 28, 2013

PRESENT: Mr. Rene Gallant (Chair)

Ms. Shellie Woolham

Emera Newfoundland & Labrador

Ms. Nancy Tower

CEO, NSPML

Mr. Rick Janega

President, Emera Newfoundland, Maritime Link

Mr. Bruce Marchand

Chief Legal Officer, Emera Inc.

Mr. David MacDougall

Mr. James MacDuff

Solicitors for Nalcor Energy

PRESENT: Mr. Greg Jones

General Manager of Marketing, Alcor Energy

Mr. Paul Humphries

VP System Operations and Planning, NL Hydro

Mr. John Woods

Mr. Aaron Long

Minas Energy

Mr. Don Regan

Mr. Albert Dominie

Municipal Utilities

Mr. Nelson Blackburn

Small Business Advocate

Mr. S. Bruce Outhouse, QC

Mr. Steve Pronko

Ms. Jocelyn Fraser

NSUARB

PRESENT: Mr. Pelino Colaiacovo

Mr. Brent Walker

Morrison Park Advisors

Mr. Michael Johnston

Heritage Gas

Ms. Nancy Rubin

Ms. Maggie Stewart

Solicitors for Industrial Group

Mr. Ray Ritcey

Lighthouse Energy

Ms. Kaitlin Saxon

Progressive Conservative Caucus

Mr. Gregory Decker

Ms. Nancy Rondeaux

NS Department of Energy

PRESENT: Mr. Stephen McGrath

Mr. Ryan Brothers,

Solicitors for NS Department of Justice

Mr. Ross Stairs

Mr. Keith Cronkhite

NB Power

Mr. William L. Mahody

Consumer Advocate

Mr. David Landrigan

Mr. Wayne O'Connor

Mr. Mark Sidebottom

Ms. Nicole Godbout

Nova Scotia Power

PRESENT VIA TELEPHONE:

Mr. Jim Smellie

Mr. Terry Dalgleish

Mr. Philip Rathle

Mr. Todd MacDonald

Mr. Pat Bates

Mr. Tom Levy

Mr. John Athas

Mr. Paul Chernick

Mr. Seth Parker

Mr. John Adger

Mr. John Dalton

Mr. Tommy Vitolo

Mr. Scott McCoombs

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Per: Ms. Ainslie Moss

(MEETING OPENS)

THE CHAIR: Good afternoon, everyone. Welcome to the Technical Conference on the Maritime Link Compliance Filing. I've tried to come and say hello to everyone. If I haven't got you yet I apologize, but we'll have a chance to chat before the end of the day, I know. We're really glad everyone is here. I wanted to start with a couple of things you should know.

First of all, we have some cameras here at the beginning, and I've been asked to make sure you're aware of them in case you want to be careful about chewing your food on camera, Nelson, or if you're sitting next to someone you don't want to be sitting next to on camera you can address that.

They're just going to stay with us for a few minutes to take some background footage for the media story coming out of today's event. So, welcome, folks. Other folks in the media are here in the seats behind the tables, and so as always we have, to the best we can, an open and transparent process and so I want everyone to be aware that the media is here.

And we have explained that this Technical Conference is for intervenors to understand the Compliance Filing and to ask us questions about the Compliance Filing and about the hearing, and so questions will come from

intervenors, and I know we'll provide appropriate support to folks in the main audience, including media, as necessary after the hearing -- after the meeting.

I'd like to start with introductions and remind you that the Board has directed that we record and transcribe today's event, so we have Drake Recording here with us somewhere, who will produce a transcript of the whole Technical Conference overnight, so in the morning we will circulate it to you. So, we'd like to have all the names on the record so it's clear who attended and who was involved.

It also means, although I'm told it may not be completely necessary, but when you have a question it would be very helpful for the transcription if you could identify yourself each time for the record so that there's no confusion about who's asking the questions when we get to that point. So, I'm going to start here with Nancy in terms of introductions. And use your mike, please, so we can get the recording.

MS. TOWER: Hi, I'm Nancy Tower, CEO of Nova Scotia Power Maritime Link Inc.

MR. JANEGA: I'm Rick Janega, President of Emera Newfoundland and Nova Scotia Power Maritime Link.

MR. MARCHAND: Bruce Marchand, Chief Legal Officer, Emera Inc.

MR. MACDOUGALL: David MacDougall with McInnes Cooper representing Nalcor Energy.

MR. MACDUFF: James MacDuff, McInnes Cooper.

MR. JONES: Greg Jones, General Manager of Energy Marketing, Nalcor Energy.

MR. HUMPHRIES: Paul Humphries, Vice-President System Operations and Planning, Newfoundland and Labrador Hydro.

MR. WOODS: John Woods, Minas Energy.

MR. LONG: Aaron Long, Minas Energy.

MR. REGAN: Don Regan, Municipal Utilities, and with me is Albert Dominie, who just sat down.

MR. BLACKBURN: Nelson Blackburn, Small Business Advocate.

MR. PRONKO: Steve Pronko with the Utility and Review Board.

MS. FRASER: Jocelyn Fraser with the Utility and Review Board.

MR. OUTHOUSE: Bruce Outhouse, Board counsel.

MR. COLAIACOVO: Palino Colaiacovo with Morrison Park Advisors.

MR. WALKER: Brent Walker with Morrison Park.

MR. JOHNSTON: Mike Johnston with Heritage

Gas.

MS. RUBIN: Nancy Rubin for the Industrial Group.

MS. STEWART: Maggie Stewart for the Industrial Group.

MR. RITCEY: Ray Ritcey with Lighthouse Energy.

MS. SAXON: Kait Saxon, Progressive Conservative Caucus.

MR. DECKER: Greg Decker, Nova Scotia Department of Energy.

MS. RONDEAUX: Nancy Rondeaux, Nova Scotia Department of Energy.

MR. MCGRATH: Steve McGrath, Nova Scotia Department of Justice.

MR. BROTHERS: Ryan Brothers, Nova Scotia Department of Justice.

MR. STAIRS: Ross Stairs, Executive Director of Operations, NB Power.

MR. CRONKHITE: Keith Cronkhite, Vice-President of Generation and Business Development, New Brunswick Power.

MR. MAHODY: Bill Mahody, Consumer Advocate.

MR. LANDRIGAN: Dave Landrigan, General Manager, Legal and Regulatory, Nova Scotia Power.

MR. O'CONNOR: Wayne O'Connor, Executive Vice-President Operations, Nova Scotia Power.

MR. SIDEBOTTOM: Mark Sidebottom, VP of Generation and Delivery, Nova Scotia Power.

MS. GODBOUT: Nicole Godbout, counsel for Nova Scotia Power.

THE CHAIR: And I should have introduced myself. My name is Rene Gallant, I'm the Vice-President Legal and Regulatory Affairs with Emera Newfoundland and Labrador, or NSPML. So -- and Shellie?

MS. WOOLHAM: I'm Shellie Woolham, Project Director Regulatory, Emera Newfoundland and Labrador.

THE CHAIR: So, before we get to the agenda and the material we're going to review, I want to turn the floor over to Nancy Tower again one more time.

MS. TOWER: Thanks, Rene. I just wanted to say thank you very much to all of you for coming and for your continued interest in this. On behalf of my colleagues at Nova Scotia Power and Emera Newfoundland and Labrador, thank you for that.

And our objective today, of course -- and Rene -- well, I'll turn it over in a second to Rene -- is really to give you the information on our Compliance Filing to allow you to ask questions on the Compliance Filing. Our objective, of course, as well is to answer all your

questions over the course of the next few hours, and hopefully we will achieve that. So, welcome, and I'll turn it back to Rene.

THE CHAIR: Thanks, Nancy. Could we have the agenda slide. Thanks. So, this is our plan for the time we have together today. We booked it for a few hours and we have some flexibility if we're into a good discussion and you would like to continue. We do have the room for a little while longer than what your invitation may have indicated, but we'll see how the day gets filled.

As always at Emera Newfoundland and Labrador and other Emera companies and at Nalcor, we'll start with a safety moment in just a minute, and then we'll want to walk you through the Compliance Filing just to give you a high level overview of it. We've had a lot of questions about the energy that will be available over and above the fact that we now have commercial assurance that it will be available, and so we have some information to provide to you about hydrology which we hope you'll find helpful.

And then we'll walk you through some of the key components of the Energy Access Agreement, and we'll have lots of time at the end of that agenda for questions and answers. I would invite you to ask questions at any time, but you may find, in light of the topics, that it's helpful to wait until the end. I should say that I had

forgotten we have some guests on the phone, and so they've been put on mute just temporarily, because sometimes when you're on the phone there's a background noise that can interfere with the room.

So, perhaps we'll go to the phones now to let you know who is on the phone, and we'll tell those folks that our preference is that if you're on the phone you could hold your questions till the end so that we can maintain that mute component till the end. So, let's go to the phone, Ben, and we'll ask people -- I don't know who it is, so I'm just going to have to ask you to try to jump in and tell us who you are if you're on the phone.

MR. SMELLIE: Rene, it's Jim Smellie at Gowling LaFleur Henderson, counsel together with yourself, for NSPML.

THE CHAIR: Thanks, Jim.

MR. DALGLEISH: And it's Terry Dalgleish at Davis in Calgary, counsel together with others, for Nova Scotia Power.

THE CHAIR: Hi, Terry.

MR. RATHLE: Philip Rathle of (inaudible) Centre. I'm in Montreal ---

MR. MACDONALD: Todd MacDonald from Lower Power Rates Alliances.

THE CHAIR: Hi, Todd.

MR. BATES: Pat Bates in Sydney.

THE CHAIR: Hi, Pat.

MR. LEVY: Tom Levy with the Canadian Wind Energy Association.

THE CHAIR: Tom.

MR. CHERNICK: Paul Chernick, Resource Insight for the Consumer Advocate. Will you be sending out the slides?

THE CHAIR: We can do that. We can send the slides by e-mail to anyone who registered. Can we do that, Shellie? Yeah, we'll try to get that done. We do have hard copies of handouts for folks in the room, but we'll also send them electronically so folks can pull them up who are on the phone. Thanks, Paul. Good idea.

MR. ATHAS: This is John Athas from LaCapra Associates.

THE CHAIR: Hi, John.

MR. PARKER: Seth Parker from Leviton and Associates on behalf of the Consumer Advocate and Small Business Advocate.

THE CHAIR: Sorry, your name from Leviton, what was your name again?

MR. PARKER: Seth, S-e-t-h ---

THE CHAIR: Hi, Seth.

MR. PARKER: --- Parker.

THE CHAIR: Thanks. Welcome, Seth.

MR. PARKER: Thank you.

MR. DALTON: John Dalton with Power Advisory.

MR. ADGER: John Adger from Liberty Consulting Group.

THE CHAIR: I got John Adger and then someone else.

MR. DALTON: John Dalton with Power Advisory.

THE CHAIR: Hi, John.

MR. VITOLO: This is Tommy Vitolo with Synapse Energy Economics for the Nova Scotia Utility and Review Board.

THE CHAIR: Welcome.

MR. VITOLO: And, actually, is there an e-mail address that I -- I was not able to register for the conference, but I would like the slides. So, if I can e-mail to somebody then they'll have my e-mail address and maybe they could send me the slides.

THE CHAIR: Sure. Shellie, s-h-e-l-l-i-e, .woolham, w-o-o-l-h-a-m, @emera.com.

MR. VITOLO: Thank you very much.

MR. MCCOOMBS: Scott McCoombs here from the Nova Scotia Department of Energy.

THE CHAIR: Hi, Scott.

MR. MCCOOMBS: Hi.

THE CHAIR: Is that it on the phone?

MR. BATES: Mr. Chairman -- Pat Bates -- it would be helpful if all those intervenors would just permits themselves to speak up. Some of the voices are great, others are a little bit distinct.

THE CHAIR: That's a good point, Pat. We'll try to make sure that we remind everyone. So, using the microphones or being on the phone, we need to make sure we've got the right volume so everyone can hear each other.

MR. BATES: Thank you.

THE CHAIR: Okay. So, we are going to go mute on the phones for now so that we can do the presentation and then we'll make sure we re-open them. Ben is going to remind if no one else remembers, but we're going to re-open the phones near the end when we get to questions. Okay, Ben? Thank you. Ben is our technical support here with the audio/visual.

Okay. Let's get into the conference. And we're going to start with a safety moment. If you don't have the slides yet on the phone, that's okay. There's only one slide on the safety moment. So, Shellie, if you could go the next slide. And where are the hard copies? Do we have those accessible.

MS. WOOLHAM: We can pass them around.

THE CHAIR: Sure. Why don't we do that.

MS. WOOLHAM: Okay.

THE CHAIR: Let's get the decks in front of people. Oh, there's Penny. Thanks, Penny. Well, it's October 28th. I don't know how I could resist not doing Halloween safety for a few moments and reminding us all about the safety components of Halloween, and plus there's no way I could resist the pirate dog picture. I had to show you. Just a couple of points.

My kids are now, I think, finally too old to trick or treat themselves but I know that many of us do still have young children or grandchildren, and certainly lots will be coming to our doors on Thursday evening, so just a couple of things to keep in mind about Halloween safety. If you are getting a costume or helping a child with a costume, you might want to try to make sure that you have a costume that fits properly and that's not dragging on the ground that they might trip on as they're running in their excitement to get from door to door, especially with smaller children.

And you should make sure that younger children in particular have brightly coloured outfits. I know I used to make sure that -- when my kids were very young that I found a way to attach one of those light

sticks, those glow sticks, to them, or you might use reflective tape to make sure that they can be seen, and whenever possible pick a costume that uses makeup instead of a mask. In terms of decorations, my tip is don't put a candle inside your pumpkin, you should use one of the LED lights which works very well and is much safer.

Also, if you have a lot of decorations around the outside of your home or on your porch, you may find that you have tripping hazards so you should just watch for those with lots of people coming to your door. And then finally in trick or treating just, mostly for this room, a reminder that kids are going to be -- no matter how many times we try to prevent it and try to tell them not to, they're going to be running across the street and they'll be going in diagonals, and we should try to avoid that if we're in charge of a group of kids.

But if we're out in our cars -- and for many of us going home at exactly the time that trick or treating is happening on Thursday evening -- this time of year when it's darker earlier than perhaps at other times of the year, it can be hard to see these young monsters running out into the street. And so you really need to be alert when you're driving home from work on Thursday to make sure you get home and you're safe and the children are safe. So, that is my safety message for Halloween week, hoping

that there'll be nothing else scary for the rest of the afternoon.

Okay. Let's get into the Compliance Filing. I do want to have my document. So, everyone will have, hopefully, had received by e-mail when the company filed it, or have accessed it on the URB website, the Compliance Filing which we made a week ago today on October 21st. It contains about 20 pages of evidence and then attaches the Energy Access Agreement as an appendix.

This is NSPML's explanation of how it is complying with the six conditions that the UARB put in its decision which it released on July 22nd, and quite helpfully the decision placed all of those conditions that we should meet in the one paragraph and numbered them each, paragraph 366, and the Compliance Filing confirms that NSPML accepts -- agrees with and accepts each one of those conditions.

Some of them didn't require any further activity at this time. They may in future have activity associated with them, but some of them were simply acknowledgements and acceptance of those conditions, and in other cases it explains how we have complied with the conditions. So, this slide, the third bullet, simply identifies some of those items.

I can tell you, for example, on the UARB

reporting requirements we were directed to meet with Board staff to clarify those reporting requirements and then Board staff was to report to the Board by October 15th. We aligned with Board staff on what should be done, when, what should be filed and that oversight requirement, and we believe we've complied with that obligation, that directive.

The key component of the Compliance Filing and really the key condition that required some activity by NSPML was the market priced energy condition, which, in addition to being in paragraph 366, first appeared at paragraph 228. So, if we could go to the next slide. This is the condition, it's a quote from that paragraph. We have all seen it, but essentially:

> "The Board directs NSPML to obtain the right to access market priced energy consistent with the assumptions of the application, noted in UARB IR-37 and Figure 4-4, or some other arrangement to ensure access to market priced energy."

The Compliance Filing refers to other components of the Board's decision, other paragraphs and directions in the Board's decision that in our view were relevant to understanding what this condition was really

directing NSPML to do.

So, if we could go to the next slide. So, we want you to understand that the Board's decision was released on July 22nd and both Nalcor and Emera and NSPML, NSPI, we all immediately, of course, reviewed the decision carefully and we got to work in trying to understand how we would address the condition and the best way to meet the requirements of the condition.

And meetings began really in that first week and continued throughout the time period until we filed the Compliance Filing last Monday. And in those discussions I think it was very clear from the beginning -- and we reiterated and reminded ourselves throughout the course of the dialogue -- that there were certain foundational principles that had to be met by the parties, each from their own perspective and some shared.

And so, first of all, it was very -- it was made very clear from the beginning by both Emera and Nova Scotia Power that Nova Scotia Power and Emera would be acting in the best interest of the customers of Nova Scotia Power and that this would mean, in terms of accessing surplus energy, at a minimum retaining flexibility in Nova Scotia Power for the planning, the issuance, the management of competitive solicitations for imported energy, always with the best interest of customers in mind, and that was a

fundamental principle that drove our discussions.

And, I would say, equally important it was very clear to everyone from Nalcor -- and we were reminded from the beginning -- that Nalcor's foundational principle at a minimum was that it has an obligation as the utility, the generator of energy in Newfoundland and Labrador, to serve its native load with the energy that it generates, and that was a foundational principle that had to be clear and it had to be represented in the agreement, and you'll see it there indeed in the recitals to the agreement.

And we all agreed that there seemed to be no doubt that the condition required commercially reasonable commitments to be made, the condition required commercial assurance, and all parties had to accept that these were reasonable commercial commitments for a party to be making, that the commitments would be -- although they would be new commitments, they would be aligned with the original intent, the work that's been happening all along between Emera and Nalcor and Nova Scotia Power to ensure the development of Muskrat Falls, the transmission of that energy, the construction of Maritime Link and ultimately an application as we presented to the Board in the spring of the year.

And so with these as sort of the minimum requirements, the foundational commitments, we spent time

working together discussing the options, I would say vigorously negotiating the language and the alternatives to reach the agreement that you now have in front of you. So, before I go to that agreement I wanted to speak a bit to hydrology. I've had some questions since we've filed the agreement last week about the energy being available.

Folks have said, "Well, you have a contract but it doesn't really" -- and I've had this said to me -- "it doesn't really prove that the energy is going to be there," which was the concern that intervenors had, will the energy be there? And I wanted to hit that right up front, address that right up front, and respond to that question which may be on your mind, by saying a couple of things.

Firstly, we understand that the Board's direction was to ensure access to available energy by Nova Scotia Power and its customers, on behalf of its customers. The Board did not ask us to go get better evidence about what energy would be available, they didn't ask us to re-litigate our position that the energy would be there. They asked us to go get commercial assurance that energy would be made available, and so that's what we've done.

That being said, I think it's important for folks to understand that we are confident that not only the energy is going to be there, we're confident the energy

will be there to meet the terms of this agreement and more. And so I wanted to remind intervenors and parties to our proceedings about how we deal with hydro generation here in Nova Scotia.

And I think you'll remember that the way we do it is based upon forecasting, based upon average generation of hydrology, and we also have folks here from Nalcor, and you're going to hear from them as well about the Nalcor system and I think you're going to see a very analogous approach in both provinces to hydro generation. If you are on the phone and you do have the slides -- don't have them yet? We're still trying to get them to you. Okay. We will get them to you. So, I will try to describe what we're looking at here for the folks on the phone.

We have -- it's really going to be most helpful when you get the slide, but we have a chart here called "Annual Hydro Generation Nova Scotia" and on the one axis we have, GWH per year, in increments of 200 from zero to 1,400 GWH, and on the bottom axis we have a time period of about 35 years, not quite perhaps, from the late '70s to 2012, and we have a sinusoidal kind of curve with dips and valleys and peaks in a blue line that shows generation, actual annual generation from Nova Scotia's hydro facilities, dipping from -- well, it starts out just above 800 GWH and it goes up above 1,000, almost to 1,200, and up

and down, to a low in one year as low as about 700 GWH.

And then finally you'll see the red line, which is a straight line, where we have the average of these actual results. And that straight line of average hydro generation is at 980 GWH per year. That's what, on average, Nova Scotians can expect from our own hydro system by way of energy, 980. But we're not necessarily going to get 980 exactly -- maybe in that one year -- in very many years, because it's an average. We're going to get ups and downs. It's going to go above it, it's going to go below it.

In Nova Scotia we forecast hydro generation based upon a 23-year average, and we do that forecast to predict what the cost of our energy is going to be. So, it's about -- really about rates. We forecast that we're going to get 980 GWH of hydro production, and that's 980 GWH that we don't have to produce using coal or oil or any other form of generation, and so that goes into our cost forecast.

And if it doesn't show up, like in this year or in this year or in this year, but Nova Scotians need the energy, we use something else, we use whatever other generation we have, thermal generation or otherwise, wind. We fill it in. And that changes the price at the end of the day, the cost of generation that year. If it does show

up and more, like these years where we hit 1,200, or almost 1,200, or 1,100, then we have more hydro which in the year it shows up in Nova Scotia helps reduce costs to customers.

So, we predict using an average and then we get there, we react to whatever actually shows up, but we know because of the long-term data we have that the reliable average that we can use and that the Board relies on when it makes its decisions is this 980 GWH amount.

So, for the Energy Access Agreement it's important for you to understand, as it was for us as we were discussing how to make this arrangement happen with our colleagues at Nalcor -- it's important for you to understand that when you're dealing with hydrology systems you have to think about it in terms of averages and actuals, and so that's why throughout the agreement you'll see that the commitments that are given are based upon averages, because we know that those are reliable commitments that will be fulfilled based upon the long years of data that we have about how the hydrology system works.

Now I want to turn it over to Paul Humphries from Nalcor who's going to speak to their system, and you'll see the parallels. But what I would just let you know as we're turning it over to Nalcor and getting Paul's slide deck up is, as he will explain, it's good for Nalcor

when they have these peaks, because that means they have lots of energy that they can export into the market, but because they will become -- at the conclusion of the Muskrat Falls project and the closure of their last thermal plant, because they will become an all-hydrology system, if they get one of these low years like this, they don't have another thermal generation option to fill in the generation gap.

They have to make sure that with their long-term data, if they get one of these low years, they're producing enough energy through their hydrology system to serve their native load. Remember that important principle that I started with for them, their native load has to be served in any year. So, I won't take it any further, because I'll probably step on your presentation, Paul, but let me get your deck up and you can speak. And just make sure that your microphone is on, Paul. Let me give you -- would you like the ---

MR. HUMPHRIES: Yeah, just in case. Thanks, Rene, and I'd like to say it's a pleasure to be here today. I wonder do the people on the phone have the slide deck yet? Because, if they don't, I'm going to have difficulty trying to explain some of these slides so that they can understand them. Hopefully, with the picture in front of you, I can do a better job of explaining. Thank you.

As I introduced myself earlier, my name is Paul Humphries, I'm the Vice-president of System Operations and Planning with Newfoundland and Labrador Hydro. I've been with the utility over 30 years and my responsibilities include the operations of the Provincial Energy Control Centre, generation, transmission and distribution planning for both the island and Labrador systems, and my latest pet project is leading the integration of the Muskrat Falls Labrador Island Link and the Maritime Link, integrating that into the existing Labrador Island and Maritime power systems. It's quite a challenge. Looking forward to it.

Today what I hope to do is provide a brief overview of the resource planning process in Newfoundland and Labrador and explain why Nalcor is confident in its ability to be able to make available to Nova Scotia on average at least 1.2 terawatt hours of surplus energy per year for the period between 2017 and 2041. When we look at the domestic situation in Newfoundland and Labrador we have a planning criteria that's been adopted by our regulator, the Public Utilities Board, and we are required to verify compliance with that criteria on a regular basis.

From the perspective -- from resource planning we have two parts, we have a capacity requirement, the interconnected system should have sufficient generating capacity to satisfy a loss of load, LOLH expectation,

target of not more than 2.8 hours per year. That's standard utility fare that's common to most utilities in North America. From an energy perspective the interconnected system should have sufficient generating capability to supply all its firm energy requirements with firm energy capability, and this is where we start to become a little bit different.

Because starting in 2017 Newfoundland and Labrador will be a 100 percent renewable jurisdiction, which is -- we're really excited about, there will be subtle differences in the way we manage our energy portfolio. When we talk about the firm, firm is the case -- is the system capability as defined for the lowest sequence of inflows in historical record.

So, that means from a firm perspective we have to take our hydrology sequence, our history, and based on the lowest inflows in history that will determine our firm system capability that will be available to serve domestic load, and that is the basis of which we will plan our system. We will plan based on firm.

So, the domestic scenario is all about firm, and if we look at the picture here, this depicts -- the red line at the top would be our firm capability, so that's the capability that will be available from our hydroelectric resource based on our most pessimistic inflow scenario.

And if we look at our load, if we start from the left and move to the right load will increase, and as our load approaches the firm limit we will be planning to add additional resources to increase our firm so that we can ensure that we have a firm capability to serve our load as we move forward.

This is part of our criteria and what the -- we're managed by the Public Utilities Board and we will bring that data to the Public Utilities Board annually and as we approach the firm we have to plan and have solutions in place to meet all our load with firm capability. And that would involve building new resources, be it hydro or wind or what have you, to -- giving our -- it will be renewable, we are a renewable jurisdiction and we plan to continue to be renewable. So, at the point when our firm domestic load approaches our firm capability we will build.

So, if we want to move to the next slide, we look at our -- this is our total energy picture, and above and beyond the firm, because of the nature of our hydraulic generation, there will be variable energy available on a regular basis, it will be quite a large volume of variable energy. But a couple of points to remember, is because it is variable it's not part of the firm commitment and it's not part of our domestic equation.

It is excess energy and Nalcor will be managing that through market sales. So, because we are renewable and everything we have is a renewable resource, we cannot use this average energy like Nova Scotia would to displace more expensive fuels, we don't have any more expensive fuels, we're all -- we will be all hydro, so this is truly a market based product and it is available for sale to Nova Scotia.

And when we look at the quantities of this, based on our over 60 years of hydrology record, we are confident that we will have available on average in excess of 1.2 terawatt hours per year strictly from this average block. So, we are -- this is why we are confident that we will be able to meet the commitment to supply the requirement of 1.2 without dipping into, or having to dip into, our firm product.

So, just to put that in perspective, if we could just go to the next slide, this -- the hash mark area on this slide depicts surpluses that we will have available, and as it shows in the early years there's lots of surplus, and we will offer to Nova Scotia up to 1.8 terawatt hours per year from what we have available. But neglecting or ignoring the surplus firm, the area under the red line, just considering the area above, we are confident we will have the 1.2 from that and -- by virtue of the fact

that with this commitment we are committing in each and every year of this agreement to offer what we have available up to this 1.8 terawatt hours per year.

So, if there were no surplus firm available at all just by virtue of the fact that we are offering the 1.8, we would catch enough of the peaks to ensure we cover off the values so that over the time we would have 1.2 terawatt hours available. There will always be significant blocks of energy available and we will continue to offer it each and every year. I think, like to look it at from the perspective -- the commitment is not the 1.2 average, we are committing to offer up to 1.8 each and every year. The 1.2 average is going to fall out because of that. It's there, it will happen and we are confident that it will happen.

So, just I guess in conclusion, while the energy is variable it is predictable and we do have 60 years of record that gives us the confidence that it will be available and we are very confident that, as I said, the 1.2 will be available, and together, I guess, Emera and us have committed to do that. But we see there should be no situation where we should not be able to deliver, and even though we are committing with back stops and all those types of things, I never see -- I do not see a situation where we will get into having to invoke those back stops.

So, that's my presentation for today. Thank you.

THE CHAIR: Thanks, Paul. Thanks, Ben, for putting me back on. So, thanks for that explanation of the hydrology. And as I said at the beginning, we felt it was really important that folks understand this but the reality is that there's now a contract in place that, regardless of this information, places the obligation on Nalcor and Emera to ensure that that energy is made available to Nova Scotia Power customers at a market price over the term of the agreement.

So, that information helps you understand why we have the confidence to make those commitments, but the commitments are there and Nova Scotia Power customers will rely on them no doubt. So, here we go to the Energy Access Agreement. I will try to walk you through the key points. I know, especially with the lawyers in the room, that there'll be questions about the details.

I'm not going to try to go through it line-by-line or even paragraph-by-paragraph but just to try to help you understand the framework of the agreement that's going to generate this availability that replies to the Board's condition. And what I've tried to do is just highlight the key points and refer you to the paragraph that delivers that commitment. Of course, there are other relevant provisions, as any contract would have them, in

other parts of the contract.

The first is that Nalcor is going to deliver, are committed to deliver, a monthly forecast of available energy up to 1.8 terawatt hours through the term. It will forecast 24 months ahead so we can see what's coming. And by "available energy" the agreement explains, describes, commits that available energy is simply the difference between Nalcor's native generation and Nalcor's native load.

And so if you had gone back to Paul, if we could -- we won't, but if we could go back to Paul's slide, because I -- it's two different charts, two different presentations -- if we went back to that slide, it would be all that cross-hatched area in any given year. So, that's in paragraph 4A of the agreement.

That monthly forecast will give Nova Scotia Power information about this potential supply of energy that it wouldn't normally have from a supplier, which is the supplier's expectation of what's available in peak and off-peak increments. And Nova Scotia Power has committed to issuing a competitive solicitation at least once annually, which will happen in June, for a contract for delivery of imported energy that will begin on September 1st for a year from that September 1st to August 31st, and this will happen every year.

And we do it in this way for a couple of reasons. One is that at the end of May Nalcor has the best picture of what it forecasts its hydro generation to be at that time. With the spring runoff having happened, the precipitation over the course of the winter and in the early spring, that forecast is the best one to know what might be coming in the upcoming year in terms of available energy and so Nova Scotia Power will have that information. (TECHNICAL DIFFICULTY WITH MICROPHONE)

So, where was I? NS Power competitive solicitations. So, Nova Scotia Power then will issue a competitive solicitation. It's completely free to ask for the market to provide whatever volume of energy in whatever shape and manner it wishes. There are no restrictions on Nova Scotia Power, other than we do have some timing requirements in the agreement for the process. So, if the company calls for the amount that Nalcor has forecast as available, then Nalcor must bid that exact amount.

If Nova Scotia Power calls for less because it sees a year where it doesn't need as much energy imported for whatever reason, then Nalcor must bid the amount that NSP calls for because it's less than the forecast. So, for example, it may have said, "We have 1.7 terawatt hours available," Nova Scotia Power calls for 1.5, Nalcor must bid 1.5 into that competitive solicitation. If

Nalcor says, "We've got 1.3 available this year" and Nova Scotia Power calls for 1.5 because they want more than that, then Nalcor must bid at least 1.3, because that's what their forecast was.

That's their contractual commitment, to bid what they forecast if Nova Scotia Power wants at least that much. There's no restriction on Nalcor contractually from bidding more than what their forecast was if they have it. So, for example, if they said 1.8 and Nova Scotia Power says, "We need 2 this year," they have to bid at least 1.8, but they could bid 2, and there's no requirement that Nova Scotia Power match to what they've forecasted. So, there's complete flexibility in Nova Scotia Power to call for what is needed.

The other important thing to know is although this is one annual solicitation a year calling for energy to be imported for an entire year, it is completely open to Nova Scotia Power to have additional solicitations and other commercial arrangements arise during the course of the year, as they do today. So, they could, for example, put a bid out and not get enough energy because they needed more than Nalcor forecasted or because the price didn't work for Nova Scotia Power at the time. They can keep going back to the market.

There's no obligation on Nalcor after this

one bid to contractually bid into that, but both parties have the flexibility to operate like a normal commercial counter party would. So, essentially the market gets created by the annual solicitation and after that the parties are free to enter into commercial arrangements as you normally would in a market.

So, the next important point to understand is the maximum bid price in paragraph 4C. For all of you who were involved in the hearing, you will know that we modelled taking this imported economy energy, the surplus energy, at a mass hub flat price, no reflection of tariffs one way or the other. We did that to be conservative, to try to understand what the value might be to Nova Scotians of getting economy energy once the Maritime Link was in place.

Nova Scotia Power and Emera believe energy will be available at lower than that price but that's what our modelling showed, and so the result of the discussions in the agreement is that Nalcor has agreed that it will have a maximum bid price. So, if the market were to change and a condition would arise that would normally have allowed it to bid more than the mass hub price, it has committed it will only bid the mass hub price flat.

And if that were to happen and the energy was made available and mass hub was bid every single time,

we would deliver the value reflected for Nova Scotia Power customers by Figure 4-4 because that was what was modelled. There's one exception to the maximum price -- it's actually an alternative maximum price -- and that is if there's a different market that Nalcor has available to it with a customer and a path to that customer at a higher price deducting net back.

If all of that arises, if there is another customer that they could get a higher price from and they can demonstrate that to Nova Scotia Power, we still have the ability to take energy at that price. The way I think about it -- even if it's higher than mass hub. So, even if it's higher than mass hub, it might still be economically beneficial for customers to have energy at that slightly higher price, but the way I think about it is there was a lot of debate during the hearing about should there be a right of first refusal, a ROFR, something like that, where we can have the first shot at all the energy.

And we were saying we will have the first shot at all the energy, it has to go right through, we're going to get the first shot. Well, now we have a commercial commitment that's a lot like that, where if that energy is available and it could have been sold to another customer, it's bid in at the price that other customer is going to pay, we can put up our hand and say, as a result

of the competitive solicitation, "We're going to take that energy at that price." And so that's the maximum bids.

And this is a component that, in our view, was not a requirement to meet the condition but we believe delivers value to Nova Scotia customers and is in accordance with Nalcor's desire to maximize the value of their export sales. There's another component which we think is different from what we would have had if the market had just operated as we were predicting it would that we can deliver added value to the parties, and that's the idea that the interrupted energy could be re-delivered.

So, it's in paragraph 4D, and this principle is that once the bid has been issued and Nova Scotia Power and Nalcor enter into a contract for a volume of energy for that contract year, Nova Scotia Power takes that energy on a non-firm basis. This is economy energy, it can be interrupted. And with any supplier that's delivering you non-firm energy you might not get it for reasons such as hydrology, it doesn't show up, for reasons like there's a constraint on a system and it can't be delivered and that kind of thing.

So, if the energy delivery is interrupted, it's been contracted for but it can't be delivered in the moment that we were expecting it, Nalcor has an obligation, a commitment, to re-deliver it in quantities with an

economically equivalent value. And so that might mean it's a different volume of energy at a different time of day or at a different price, but it would be economically equivalent to the energy that got interrupted.

Those of you who are regular participants in Nova Scotia Power's proceedings, whether it's rates cases or establishment of economic tariffs or those kinds of things, will know from hearing Mr. Sidebottom explain it in various proceedings that this is a calculation that we can do and we do regularly out of our control centre dispatch operations in terms of understanding what is the value of the energy we were going to use -- we have to do that to figure out what's the best unit to dispatch or what's the best energy to use at any given moment -- we can figure out that value and we can also figure out what value will be obtained if we get a certain volume delivered at a later time. And so in most commercial import relationships there's would be no re-delivery obligation, if non-firm energy is interrupted the opportunity to have it is gone.

So, all of this will happen, the forecast, the competitive solicitation, the bid, the contract. And as you've heard from Paul, the result of making available up to 1.8 terawatt hours of available energy on an annual basis is a 1.2 terawatt hour commitment on average, because of the sinusoidal curve it might be that in any given year

but it will be that on average, in fact, likely more.

So, how will we know? Firstly, I should probably pause on that. This is for us the critical commitment in the agreement, that there will be 1.2 terawatt hour on average delivered to Nova Scotia. We believe that that meets -- we are confident that it will be there and that meets the URB's condition in terms of being consistent with Figure 4-4, as it was revised under the low load forecast in Undertaking U-3.

So, how will we know that that's happening? Well, Nalcor is going to deliver progress reports on the achievement of that commitment under paragraph 7A, so we will have an advanced notice on a regular basis of how we're doing meeting that commitment and that report must be satisfactory to Nova Scotia Power and Emera. We can challenge it if we don't believe the science is good or if assumptions have been made or if, God forbid, errors in calculation, simple errors may have been made.

We can challenge that and it has to be acceptable, and there is a dispute resolution process if it's not. But at the end of the day we will know by those progress reports whether 1.2 on average over the term is going to be met. So, we want you to know we firmly believe it will be met. We are very confident it will be met. But, of course, it's a contract and it's a negotiation and

it's important that we're protecting the interests of Nova Scotia Power customers, just as Nalcor is protecting the interests of their customers.

So, we had to make sure that we were in a solid position on the "what if". What if it's not 1.2? What if one of those progress reports says, "It looks like we're only going to be able to get 1.1 or 1.0 on average over the term?" And so the contract, in Part 7, provides for the response to that scenario. First of all, we'll make sure that that's indeed an accurate progress update.

We've challenged the science of it, the data, the calculation, and it does look like, in an unlikely scenario, something has happened that means it won't be met. In that case, firstly, I remind you of what Paul explained. Nalcor has an obligation as its load grows and comes closer and closer to its firm energy delivery to add new capacity, new generation, to make sure that it has a buffer and it can always meet its firm load.

From Emera and Nova Scotia Power's point of view that will mean that the 1.2 is going to get met. But let's assume that it's still not enough. Emera and Nalcor will sit together -- there's a time limit on how long that they can have to work together -- and see if they can work together as partners, as we have been doing on every stage of this project, whether it's the original construction,

the development of the cost calculations, the construction of the projects, the negotiation of this agreement -- we will work together and try to find a solution, because we are both, frankly, on the hook to make sure the energy gets delivered. Sorry, make sure the energy is available. After the contract is signed it will be up to Nova Scotia Power to make sure the energy that's signed up for gets delivered.

So, we both have an interest to make sure that that energy is available to Nova Scotia Power and its customers, and that working together period is not just understanding the nature of the problem and the extent of it, but it's also to make sure at that time, whenever it happens, would it be the right thing, for example, to collaborate and cooperate and build a new wind farm in Newfoundland?

That would be all we would need, that would do it, and we could do that together. That might be the solution and we'd both meet our commitment that way. We don't know. We can't predict the future, so instead we said, first -- I guess, the second step is we're going to put our heads together and try to solve this together like the partners that are today. So, you'll have seen that in the agreement.

At the end of the day if in that time period

a solution is not apparent that we can both agree on, acting independently in our own interest on behalf of our own customers, then Emera has a commitment to deliver 25 percent of that 1.2 terawatt hours and Nalcor will be committed to deliver -- to make available the rest. Emera is not -- we don't have vast stores of hydro or renewable energy. We will have to determine the best way to make energy available to bid into those NSP solicitations, and we've said we can do that up to 300 GWH.

One of the ways we might do it, which is anticipated in the agreement, is through intermittent generation like wind or tidal, depending on when this happens and the state of technology at the time. And because we have the Maritime Link in place we can use the Maritime Link capacity to balance the intermittent nature of new wind generation, because the Maritime Link is not being used to make available surplus energy to the market, that means it has capacity to provide balancing services.

And so we have a contractual commitment from Nalcor to provide those balancing services if Emera constructed wind in Nova Scotia as the right solution to ensure the availability of market priced energy to Nova Scotia up to 300 GWH. And so that's the reasons for those provisions being in the agreement.

I've been asked why does Nova Scotia Power

have the first option to build that wind, and what we were trying to do was ensure that the best of interests of Nova Scotia Power customer were being met. We don't know -- well, first of all, we don't think this is going to happen because we think there's going to be enough surplus energy from Nalcor, but we don't know when it might happen, what the conditions of the market might be at the time.

It may actually be better for Nova Scotia Power to deliver the solution itself because the self-generation, construction and delivery costs are lower than the cost of market priced energy at that time. If that were the case, then Nova Scotia Power has the option to do that, and it would do that by going back before the UARB and explaining, "This is a better solution than anything else we could come up with, it's better for customers."

And they would need UARB approval to do that, of course. But if that's not the best solution for customers, then Nova Scotia Power won't take it and it'll be up to Emera to take the responsibility to make 300 GWH a year available -- up to 300 GWH available to those competitive solicitations, at a market price even if there would be what is otherwise considered to be a loss on that -- on the 300 GWH.

All we were trying to do with this provision is make sure that it's using NSPI as its own generation is

the best answer, that we hadn't eliminated that possibility; in fact, that should be the first thing we should look to. It's usually in the best interests of customers to do that, and if not, then Emera will step up.

And I would say, to answer another question I've had, it seems perfectly reasonable that if Emera has that obligation, and IPP wants to provide market-priced energy in those volumes, that the IPP be competing and win those bids, and deliver that energy, so we have no objection to independent power producers being involved in these competitive solicitations.

Indeed, there are going to be competitive solicitations to the market, and so there's no reason why we couldn't receive bids from lots of entities throughout the whole course of the term of the Agreement. It's market-priced energy, and when the Maritime Link is constructed, there will a market created whereby lots of players will want to bid into the market.

I've walked through the key commitments that Nova Scotia Power customers now have on which they can rely in the Energy Access Agreement. I also wanted to say that there's another provision I don't have on the screen which is that this is a binding contract. I should probably find it. I think it's Paragraph 2; 2(a) speaks of forming a definitive agreement.

This is a binding contract, but the parties have agreed there are some additional provisions which still need to be worked out -- what are the details of the audit rights, things like that, force majeure, all of those technical legal provisions which are important, but which we didn't want to slow down the process of review by trying to work out a formal agreement.

You'll remember that the term sheet for the original Agreements was about 18 months before the formal Agreements were finally completed, and, so, when we had this Agreement done, we said, "Okay, it's a binding contract; they can sue or be sued under it", so that's adequate to comply with the conditions.

We will try to negotiate a formal agreement. There's a deadline for it -- October of 2014. If we don't resolve specific issues, there's a dispute resolution process, so they will get resolved. There's no hanging out there.

But, in the interim, once the Board approves this as a compliant contract with the condition as a reasonable commercial arrangement, then it will be a binding relationship between Nalcor, and Emera, and Nova Scotia Power.

So our view is that the Energy Access Agreement that you have before you meets the URB condition

for market-priced energy, and I think if we were to hit the slide one more time, we'd be at questions and answers.

So I'll just give you a few seconds to gather your thoughts. We have folks on the phone, and I'm just going to leave you on mute for a few more minutes while we let some of the room questions come out, but I will break in, in a few minutes and let folks on the phone have questions, too.

Oh, yes, thank you. Thank you, Rick. Rick reminded me of something which -- can you go back a slide, Shelley? Yeah, I forget to highlight this, and I should have done it. I apologize, but -- do you have the pointer?

So for folks on the phone, I'm on -- back on the slide that says "Energy Access Agreement" with all the commercial commitments made, and you'll see that each one I've identified, that this first commitment, "Deliver the monthly forecast", is throughout the term. The second commitment of "Solicitations" is throughout the term. The "Bidding" is throughout the term. All of these things happen throughout the term. Whoops.

And, so, what we're trying to emphasize here is that there is a commitment to meet an average of 1.2-terawatt hours in each year. If you do the math, if you get 1.8 available every year for the beginning part of the term, then, in theory, you hit the 1.2-terawatts hours

before year 2041. And, you know, it may be a number of years early if that were theoretically to happen, but the commitments continue even if that were to happen.

The 1.8-terawatt hour forecast and bid commitment is in every year of the term, regardless of when the 1.2 average commitment is met. And, so, if it's met early, that means that all the rest of those years are going to add additional energy into the equation for Nova Scotia Power customers, and in fact, increase the value of the commitment beyond what is represented by Undertaking 3, and Figure 4-4.

So this commitment, and as Paul described, and you saw the chart, that the average hydrology data would suggest that, in every year, there will some energy, and in many years it will be more than the average, and some years it'll be closer to the average, but there will be energy that will be forecast and bid, and we would expect that to be in every year no matter when the 1.2 is met.

Is that the point? Yeah. Sorry I forgot that one. It's an important point to all of us.

Okay. Now we're at questions.

MR. MAHODY: Rene, it's Bill Mahody. Just a couple questions about the competitive solicitation that you were referring to. First off, that annual

solicitation, it's at the option of Nova Scotia Power? You're not obligated to issue an annual solicitation, are you?

THE CHAIR: Mark?

MR. SIDEBOTTOM: That is correct. It will be our option.

MR. MAHODY: And, Mark, in the years in which Nova Scotia Power does decide to issue that solicitation, that would be a 12-month solicitation for power -- for energy in both peak and off-peak basis?

MR. SIDEBOTTOM: Yes, it would. Yes.

MR. MAHODY: Okay. And it's done on a term of a -- on a per-month basis?

MR. SIDEBOTTOM: We would see looking for energy both on- and off-peak by month, and that would be classically how we'd look at it.

MR. MAHODY: And in the response that you would receive back from Nalcor, would you be able to select energy -- receiving energy in certain months but not in others?

MR. SIDEBOTTOM: Yes, we'd have the freedom to select amongst all of the bidders, frankly, into that solicitation, including Nalcor.

THE CHAIR: Thanks for those questions, Bill. I know you're going to have more. I'll go back to

the crowd. I just -- I wanted to point out something that maybe I should have mentioned, which is I've been asked why is it -- why is there an annual solicitation for what could be a large amount of energy?

You've heard from Mark how it's going to be done. It'll be done on that basis with monthly peaks and non-peaks, and some months with -- there may be no energy, and other months there'll be lots of energy asked for.

Nalcor, if it forecasts and is willing to bid 1.8 available, Nova Scotia Power might say, "Well, we need 1.2 this year. We don't need 1.8", Nalcor has the freedom, at that point, to take the .6 difference and find other customers for it. So that's commercially reasonable; that it was available to Nova Scotia Power, it didn't want it all, Nalcor has to have the ability to maximize their export sales, and so that extra 600 is now available to them to market elsewhere.

And it might actually be to market to Nova Scotia Power in a subsequent competitive solicitation that comes later if Nova Scotia Power changes its mind, and wants more energy for whatever reason during the course of that year.

So Nalcor can't be, I think, reasonably -- hopefully everyone would agree -- they can't be completely constrained from their own commercial activities. What

they've said is, "We will constrain ourselves up to 1.8-terawatt hours, if that's what you need, but if you don't need that much, we'll constrain ourselves to how much you need, and above that, then, we have the flexibility to market it elsewhere."

MR. SIDEBOTTOM: And maybe, Bill, just to further clarify, it doesn't specifically limit us to the construct I've just described, as well, from the standpoint of peak and off-peak by month. That's just how we'd see doing it at this moment in time. We could construct a different way, by quarter, or we're free to do that in the future, as well.

MR. MAHODY: Yeah.

THE CHAIR: Other questions? Bruce?

MR. OUTHOUSE: Rene, Bruce Outhouse. With respect to the alternative spot market opportunity, the exception to the maximum bid at Mass hub ---

THE CHAIR: Yes?

MR. OUTHOUSE: --- and I know I heard you say that if Nalcor had that opportunity, and was able to identify it in accordance with (c)(ii), that it might be in NSPI's interest to buy it at that price, correct?

THE CHAIR: Yes.

MR. OUTHOUSE: It would, in effect, as you say, create some sort of right of first refusal at the bid

stage, correct?

THE CHAIR: Yeah. Yes.

MR. OUTHOUSE: There's reference in (ii) to demonstrate a liquid trading node, and I guess my understanding of the evidence from the Hearing was one of the possibilities that would create this higher price is that the Nalcor energy would be being sold because it was green energy at a premium price to brown energy, as I'm sure you heard that evidence.

THE CHAIR: Yes.

MR. OUTHOUSE: If that were to be the case, and that's what justified this -- that's what characterized this alternate opportunity, does that mean that unless NSPI had put value on that green energy, could it buy brown energy through that same trading node if Nalcor was shipping green energy somewhere else? Maybe that's not a question for you, but a question for somebody on your side.

THE CHAIR: That -- I just might be confused by the question, itself. Mark, you look as puzzled as I feel.

MR. SIDEBOTTOM: So, Bruce, I think you're asking the question if the market was a green product, and would that be a legitimate price; if it was a liquid product, would that be -- would that count for this premium?

MR. OUTHOUSE: I wasn't so much interested in the premium, Mark, as if the product is trading above Mass hub, there's an explanation for it; probably the one that has been -- was postulated at the Hearing which was that it's green energy, and we'll get a premium price.

My understanding of the evidence at the Hearing, and perhaps I misunderstood it, was if that were happening, NSPI would have the ability because those green electrons notionally were passing by our doorstep to access the Mass hub for brown energy.

MR. SIDEBOTTOM: I see. Yes, now I understand your question, Bruce. So if there was an alternate market that was a premium price driven by a green attribute, and it wasn't economic for Nova Scotia at the time, that means it's flowing past our doorstep, and then that would give us better access to a non-green megawatt flowing in the opposing direction; say, taking something from New England. So that's true.

THE CHAIR: Nancy?

MS. RUBIN: Just a couple of follow-up questions. Going back to the competitive solicitation, what is Nova Scotia Power's current practice in terms of solicitations now, its timing, and its bid quantities?

MR. SIDEBOTTOM: As this is a non-confidential forum, I'll try to stay as helpful, but

not so specific.

We'll go out, in timeframes, anything from two hours ahead out to one month ahead, and in fact, we're looking seasons ahead now, and so that's what's driving most of our solicitation timing at this point, Nancy. And we'll do all form of construct from all hours of the day to peak-only project -- products, and so there's quite a variety of products we'll ask for in the market.

MS. RUBIN: Okay. Does NSPI see that being compelled to do a one-year-ahead solicitation in a window of time from May 31st to June 31st(sic) ties its hands in any way to layer in its portfolio of energy purchases?

MR. SIDEBOTTOM: No, I don't.

MS. RUBIN: Why not?

MR. SIDEBOTTOM: Well, if you take a look at what we do today, we would actually layer in, in some cases, parts of our energy portfolio as far out as four years for some of our products. Buying something like electricity is something you can then optimize, buy and sell more, as the year goes on.

So you could make your very best decision at that point in time, and then as things like load change, you can either buy more if there's more load, or sell some if the load declines at that point. So it's quite a flexible arrangement to my mind.

MS. RUBIN: So, just as I understand it, Nalcor will provide you a rolling 24-month-ahead forecast, correct?

MR. SIDEBOTTOM: That's right, Nancy.

MS. RUBIN: After the May 20 -- May 31st forecast is provided, you've got a month to issue a solicitation?

MR. SIDEBOTTOM: That's right.

MS. RUBIN: Okay. So you make that solicitation, and it has to be for the one year ahead?

MR. SIDEBOTTOM: It doesn't have to be, but we will use all our market information at the time to determine exactly what we'd like to do. The one year ahead expresses the commitment that Nalcor has to bid into that process.

Just to draw an example, if we wanted to go out for two years, the obligation for Nalcor would be for one year of that energy. If we wanted to go out for six months, it would be the proportionate share of their forecast associated with the six months.

So we've got the flexibility to design it at that point in time, as we saw the availability of energy coming up to that year.

MS. RUBIN: Sorry. Just to be clear, if you can clarify, this solicitation -- Clause 5(a) says that:

"Not later than 30 days after receipt of the May 31st Nalcor forecast, NSPI may issue a competitive market solicitation for supply of energy for the coming contract year."

And then Nalcor's only obliged to bid if it's in accordance with the Agreement, so if it is a solicitation for the supply of energy for the coming contract year. Is that right?

MR. SIDEBOTTOM: Well, actually, it captures more of a -- more than that concept. It's a non-firm product energy, so, of course, if we're looking for a firm product, that's a different product, and it is inside that contract year. So we're not compelled to match it perfectly to 12 months. We have, also, the ability to choose the amount by month.

So if you take the concept of it needs to be a 12-month solicitation, some of those months could be zero under the concept. So it's not an intent to box either organization in; it's the opportunity for the two counterparties, one, to offer what they have for the next 12 months, and the other to choose amongst the offerings of energy for the next 12 months. And that's the intent of that clause.

MS. RUBIN: But, just to be clear, it's for

the coming 12 months?

MR. SIDEBOTTOM: That's right.

MS. RUBIN: Okay.

MR. SIDEBOTTOM: Yes.

MS. RUBIN: So, then, NSPI puts out its solicitation for the next 12 months, and as you said to Bill earlier, you specify on-peak, off-peak, and what you need by month, or would you just say, "We need X-amount of energy for the entire year"?

MR. SIDEBOTTOM: I think we'd need to specify the peak and non-peak, at least, and the profile by month, at least. It sounds like my mike just died. Has it died?

THE CHAIR: No, it's still on.

MR. SIDEBOTTOM: No? Okay. Because the way the forecast is presented to us from Nalcor, it is in the peak and off-peak by month, so to have a resolution of more than a month, at least, to characterize the RFP wouldn't be helpful. You -- if -- I don't know if I confused you on that, or helped.

MS. RUBIN: No, no, that’s fine. I just want to understand the process here. So let's say, then -- so Nalcor, then, has 30 days to respond?

MR. SIDEBOTTOM: Yes, as do all the parties that would bid into the process.

MS. RUBIN: Okay. And let's say NSPI has put its forward schedule for the year, and it comes out to 1.2, and Nalcor offers up 1.2, and NSPI then has the opportunity to accept or reject that bid, right?

MR. SIDEBOTTOM: That's right, or components thereof, yes.

MS. RUBIN: Okay. So, whether or not NSPI accepts it, that counts as Nalcor's commitment? It satisfies its commitment if it bids 1.2 -- that satisfies it, regardless if NSPI accepts Point A?

MR. SIDEBOTTOM: Oh, yes, absolutely, because remember ---

MS. RUBIN: Okay.

MR. SIDEBOTTOM: --- our acceptance is based on it being economic for Nova Scotia customers, so ---

MS. RUBIN: Right.

MR. SIDEBOTTOM: --- if market-priced energy at that moment in time is not the right answer for Nova Scotia customers, we wanted the freedom to ensure that we could choose another option.

MS. RUBIN: Okay. So, then, the bid and the sale price is accepted, but the sale price that's accepted may not necessarily be the price in any given month. Is that correct? Or how does Clause (d), or Clause 4(c) work where it says:

"The sale price at the delivery point shall not exceed the greater of the hourly day-ahead price, or any alternative spot market opportunities which are available at any time within one year following the Nalcor bid."

How does that pricing mechanism work?

MR. SIDEBOTTOM: So the concept of the bid is that you need to understand how it's going to be priced. And, so, the first component would be there'd be some liquid market -- let's say it was Mass hub -- you might get a bid from Nalcor that says it's Mass hub, and it could be minus two dollars (-$2), or as an example for a settlement of on-peak for a particular month, and that price is an index price to a liquid hub.

We would use that information to determine if that was an economic choice for Nova Scotia in the future. We could choose, then, actually, to hedge that, or actually wait for expiry, and that will be based on a hedge program, as well.

The second component, in the bidding process, Nalcor would have to provide the line of sight as to the alternate market; in other words, could they get to that market? Is there a legitimate pass to that market? What is the pricing of that market? And that has to be

associated with any netback of incremental transmission associated with getting to that market, as well. There is a clause on some transmission to deal with that, as well.

Again, most likely what we'll see is an indexed priced bid on markets that then would need to be hedged, and it's the premium or discount to that market which then ultimately helps us understand the economics.

MS. RUBIN: I'm not sure I understand about the spot market opportunities at any time within one year following the Nalcor bid.

So let's say in September there is an alternative spot market opportunity available which is higher than the hourly day-ahead price against which their bid was accepted at the time as compared to other alternatives. Does NSPI pay the higher price?

MR. SIDEBOTTOM: At the time of the bid, Nalcor has to identify the alternate market that has a spot premium to it, so they would have to show us that alternate when they actually bid into the solicitation, Nancy. And, so, there'd also be a path identified at that point so that we could then legitimately say there is a real alternate premium market that would allow them to price that energy at something different than Mass hub.

MS. RUBIN: So at the time of -- sorry to be a little slow on this, but at the time that Nalcor bids,

and the bid is accepted, will you know what the price will be going forward, or the reference point, or is it subject to change if there are spot market opportunities that become available as the year progresses?

THE CHAIR: It's at time of the bid, Nancy. The spot market opportunity has to be available at the time of the bid, so they will bid -- so it may be an indexed spot market price. They'll have to tell us what it is, so we won't -- we might not know the actual price when we get there, but we'll know ---

MS. RUBIN: Okay.

THE CHAIR: --- what the alternative is.

MS. RUBIN: Okay.

THE CHAIR: And they'll have to demonstrate to us that they actually have that market opportunity, and a path to it, and the price, or the ---

MS. RUBIN: When ---

THE CHAIR: --- bid presumably would have to be ---

MS. RUBIN: Sorry. When you say "us", do you mean NSPI?

THE CHAIR: Yeah.

MS. RUBIN: Okay. So ---

THE CHAIR: I didn't leave that long ago.

MS. RUBIN: Pardon?

THE CHAIR: I didn't leave NSPI that long ago.

MS. RUBIN: No, I know, and that's -- I'm -- sometimes I'm having difficulty figuring out who's NSPML, and who's NSPI, because ---

THE CHAIR: I'll try to be more ---

MS. RUBIN: So, then, we're operating under this Agreement that's been entered into, and Clause (d) says that Nalcor can shift around the deliveries?

MR. SIDEBOTTOM: That's right. They can "interrupt and re-deliver" I think are the words that are used in the clause, and so if they choose to, at their discretion, not to deliver the non-firm energy, another obligation steps in which is if that is removed from this -- the agreed-to energy, there's an equivalent value that has to be made up to Nova Scotia Power.

MS. RUBIN: And is it the equivalent to what the energy would have been priced at the time of delivery that then got shifted, or is it priced on the basis of the NSPI replacement energy that it will have to secure?

MR. SIDEBOTTOM: It's more like the replacement -- it is replacement energy or equivalent cost of losing that energy at that moment in time. So ---

MS. RUBIN: So if NSPI doesn't get energy delivered from Nalcor, and has to go out and secure

additional energy in the market elsewhere, and that replacement energy is higher, then Nalcor has to replace it at the value of that higher cost replacement energy?

MR. SIDEBOTTOM: That's right.

MS. RUBIN: Okay. And the last part of that clause on Page 6 says that:

> "The NSPI solicitation contract term will be extended accordingly if necessary."

How does that extension work?

MR. SIDEBOTTOM: We haven't actually set out the details of how the extension would occur, Nancy. That's the details which we would have to negotiate as we get to definitive agreements. The concept that we want is to ensure that the value is brought back to Nova Scotia if Nalcor wants to interrupt the scheduled energy.

THE CHAIR: But I think we can be a little more specific than that. It's quite true we may have some work to do on -- in the -- when we get to the final agreement, but if you look at the language; so, they can interrupt and no later than 365 days following that date, they have to deliver volumes in an equivalent economic energy. So that's the extension.

So let's say they do it six months into the one-year contract then they will have another year to

re-deliver the energy which would make that contract term for that one purpose essentially 18 months instead of a year.

MS. RUBIN: I think I'll just let somebody else take the next round of questions. Thanks.

THE CHAIR: Okay. And just for warning, we're going to have Don Regan ask a question, or however many you've got ---

MR. REGAN: Sure.

THE CHAIR: --- and then we're going to go to the phone so people on the phone have a chance. Don?

MR. REGAN: Thank you, Rene. Given that you have no obligation to issue the solicitation, can you tell us in what circumstances you would do that?

THE CHAIR: What's -- you would issue a solicitation, or you would not?

MR. REGAN: I guess either would be instructive.

THE CHAIR: Okay.

MR. SIDEBOTTOM: As you're asking the question of, you know, why wouldn't we, I think it would be only under circumstances where we saw a clear line of sight that it would be cheaper under other generation resource options. But I think it would be a rare occasion, to be honest, because we don't actually have an obligation to

take the energy. So testing the market for the right answer for energy is probably our most likely outcome.

MR. REGAN: You could choose to run your own generation?

MR. SIDEBOTTOM: That's right. Yes, we'll -- like we do today ---

MR. REGAN: Um-hmm?

MR. SIDEBOTTOM: --- we would look at our options to internally generate and source the power, and would look externally, as well.

MR. REGAN: And, finally, is there any relationship, is there any quantity tied to the 4(c)(ii); that is, if Nalcor's able to identify that there's a spot market for a quantity of energy, would its price be adjusted for only that quantity, or would it cover the entire amount offered for -- in the solicitation?

MR. SIDEBOTTOM: So the -- so there isn't a specific quantity tied to it. The important part of it is that it has to have the equivalent value to Nova Scotia Power. So maybe the -- just to take it down to an example, if there was ten megawatts, and our cost was a hundred dollars ($100), and, you know, that would be a thousand dollars ($1,000); if you got that value back with one megawatt or 50 megawatts, as long as the equivalent value was created, that's what we're trying to achieve.

MR. REGAN: Sorry, Mark, my question was about the ability of Nalcor to go to a higher price under Section 4(c)(ii), because it says if they can find a higher spot price of their liquid market with a site that you concede to.

MR. O'CONNOR: Yes. So it says that they have to be able to demonstrate both a liquid trading market ---

MR. REGAN: Yes.

MR. O'CONNOR: --- and a path to it, so it is limited by those constraints. So it's not for all of the -- well, it could be all of the volume, I guess, presumably, but it's for what they can actually move to that market.

MR. REGAN: Right. My question is how much of the offered amount does that affect?

MR. O'CONNOR: So if ---

MR. REGAN: A balancing amount, or all of the offered amount?

MR. O'CONNOR: It's the actual amount that could get to that market, so in the annual -- let's assume that they have 1.8-terawatt hours available; if 300-gigawatt hours could make it to that alternative market, that would be the amount that would be priced under that mechanism.

MR. REGAN: Thank you.

THE CHAIR: Thank you, Don. Nelson, if I could, I'm just going to go to the phone, but I'll come back to you.

So we're going to open up the phone lines so we can hear you, and I think the best way to do this -- you'll forgive me if this is intrusive, but I'm going to identify specific individuals, rather than have everyone start yelling at once their questions.

So, starting with Paul Chernick, Paul, do you have questions? It may be on mute if you're asking your question.

MR. CHERNICK: Yeah, there we go. Is that better?

THE CHAIR: I can hear you.

MR. CHERNICK: Okay.

THE CHAIR: Can you just make sure you're speaking up, Paul?

MR. CHERNICK: Okay, I will do that. Is that any better?

THE CHAIR: Go ahead.

MR. CHERNICK: Okay. I wanted to follow up on the question that Nancy raised about the pricing of energy in the event that delivery is delayed either due to a variance, or due to the option under -- for Nalcor

re-delivery under Section 4(d), and whether the pricing of energy that's delivered at some time other than when it was originally contracted for would be at the price that would have prevailed at the time of this -- the -- I don't want to say scheduled, because scheduled has another meaning, but the planned delivery -- at the time of the planned delivery, at the times actually delivered.

And I heard you say something about it would be tied to the cost to NSPI of not getting the delivery at its -- at the original time. So could you clarify in those two delayed delivery scenarios what the ---

MR. SIDEBOTTOM: Yes, I can.

MR. CHERNICK: What the pricing would be?

MR. SIDEBOTTOM: Yes, I can. So if the contractual price, by example, was fifty dollars ($50) a megawatt that was expecting to have the energy delivered to us, and it was removed from that hour, and we had to replace it with a seventy dollar ($70) megawatt, there is an incremental cost of twenty dollars ($20) a megawatt associated with the removal of that megawatt from the Nova Scotia Power system.

What would have to happen is that the -- that incremental cost would have to be provided back to Nova Scotia Power at a future time and delivery, and Nalcor and Nova Scotia Power would have to agree to the price that

delivered that value at that future time. So we would have to get back the twenty dollars ($20) that it cost us to allow, or have the energy taken away from us.

So the practice might be that it might be a twenty dollar ($20) discount from the then economic cost of the generation at the time. So if the market was, again, fifty dollars ($50) in a future period, and for the hour, the value of that imported megawatt might be thirty dollars ($30) in price, so that Nova Scotia Power got back the twenty dollars ($20) associated with the re-delivery of that energy.

So that's the absolutes of how it would work. Obviously, the index of pricing would be complex, but you're trying to track the twenty dollar ($20) value loss, and then bring that back to Nova Scotia customers at some later time. And, in theory, that could be over more megawatts. It could be a ten dollar ($10) discount over twice as many megawatts.

So, just to give you an -- it's the twenty dollars ($20) or the value lost that's the most important feature of that re-delivery.

MR. CHERNICK: Okay. And that's true for both of those sections, both for the Nalcor re-delivery, and for the variance?

MR. SIDEBOTTOM: Yes.

MR. CHERNICK: Okay. And one other thing that puzzled me about that is that since the contract that would be entered into after the solicitation is for, say, delivery on-peak in April, how would you -- and both of these situations assume that there'd be -- that the re-scheduling would occur without the -- the delivery would not actually be scheduled to a particular day and hour that this change in plans would occur before the actually scheduling, how are you thinking you would identify the lost value for something like on-peak in April?

MR. SIDEBOTTOM: Typically, when we go out for an RFP, we might describe it as on-peak hours looking like 50-megawatts times the 16 peak hours in the day for the whole month. And, so, although we talk about it being an on-peak in a month, it's really describing it as a series of hours that all add up to the on-peak hours, and so it would look like strips of energy, like 50-megawatts flowing in the on-peak hours.

So I think it would be relatively easy to understand where that day, or those two days came from, and the associated value. So we -- although we describe it as on- and off-peak, we actually do it by saying 16 hours in a day, five days a week for all weekdays.

MR. CHERNICK: But you wouldn't be required to schedule hourly?

MR. SIDEBOTTOM: Not at that point in time. There is an hourly scheduling protocol that we end up going to which starts, and is associated, actually, with the Transmission Utilization Agreement ---

MR. CHERNICK: Right.

MR. SIDEBOTTOM: --- where we start working in day ahead.

MR. CHERNICK: Um-hmm?

MR. SIDEBOTTOM: At that point, the ability to re-direct the energy is limited, at that point, for Nalcor to force majeure events, and they can't ---

MR. CHERNICK: Right.

MR. SIDEBOTTOM: They can't move away from ---

MR. CHERNICK: Yeah.

MR. SIDEBOTTOM: --- this to another market ---

MR. CHERNICK: Yeah. And, so, what's puzzling me is that, at a time when all you've agreed to is that you'll take -- you have the right to take up to an average of 50-megawatt hours an hour in peak hours of April, Nalcor says, "Well, for one reason or another, we've decided we don't want to deliver for a period of four days in there", you haven't specified how much you'd take in which hour of those days yet.

And, so, how would it be determined what you actually would take in what time pattern over those four days, or is that something that would just -- you'd have to come up with some ad hoc negotiation between the parties to try and figure it out?

MR. SIDEBOTTOM: Yeah. So I think the way we'd actually issue the RFP it'd be quite clear what our peak and off-peak energy flows were by hour, although we are doing monthly solicitations. What we'd typically do is there'd be a strip of energy on peak flowing at 50-megawatts. That would be a typical solicitation, especially in a year round environment, so it'd be quite clear how many megawatts would be flowing in each of those hours.

MR. CHERNICK: Okay. That's ---

MR. SIDEBOTTOM: And ---

MR. CHERNICK: --- different than what's -- what's in the Agreement just says that you would specify the number of megawatt hours in, say, the April on-peak, but you're saying you would actually say the contract is for 50-megawatt hours per hour throughout the on-peak period?

MR. SIDEBOTTOM: Yes, and where it is, it's going between the level of detail in this Agreement, and then the practical application of RFPs as you actually go

out into the business. You don't go out into the market and specify "I'd like, you know, X number of gigawatts in the peak." The first question you'll back -- you'll get back from the market is, "Well, is that 50-megawatts all hours?"

They'll very specifically ask that before anyone will bid, so we wouldn't go out to the market asking for something like that; otherwise, we wouldn't get a reasonable bid response.

MR. CHERNICK: Okay. So rather than some lump of megawatt hours that Nalcor would be required to provide as you schedule it during the April on-peak period, the agreement would be that they would give you up to 50-megawatts, for example, if that was the amount that you'd solicited, in each hour, and you would a day before tell them whether you want zero, or 50, or something in between, but you couldn't say, "Oh, and we'll take some of the other megawatt hours that you had promised us for April, and we'll take them on this day at 4:00."

MR. SIDEBOTTOM: Yeah, we would have to, as Nova Scotia Power, commit to the profile we were going to award in that year ahead environment, and then Nalcor would also have to be specific enough to know when the megawatts were going to be requested if they're going to use 4(d), as well; otherwise, there's no way to price this, or put a

value around it.

MR. CHERNICK: Well, I thought that the pricing was -- at spot market prices that it was tied to -- it was basically an index from -- that was either the Mass hub, or it was a -- some other liquid price that was readily available and observable, and that the -- that Nalcor could point to after the fact, and say, "This is what we could have gotten there, and therefore, you have to pay us that much for that hour."

But you're describing it as a much more conventional purchase rather than economy energy scheduled at NSPI's convenience. Does that mean that NS -- would -- so does NSPI have to take what it's committed to in the bid, or would that just be a ceiling, and it could take up to that amount, or it could take nothing in a particular hour?

MR. SIDEBOTTOM: It is a commitment Nova Scotia Power would have to take once we've awarded the bid, just like any other.

MR. CHERNICK: But -- then what's the hourly -- the day-ahead hourly scheduling amount to? If you already said, "We're going to take 50-megawatt hours an hour", then there's nothing left to schedule. That's -- you do your scheduling a month ahead.

MR. SIDEBOTTOM: Yeah, there's a change in

the characteristics from the ability to withdraw the megawatts, and have them enter another market under Section 4(d). After you get into the scheduling protocol, which is the day-ahead environment, that option moves off.

MR. CHERNICK: Okay. That just locks in what you've already agreed to?

MR. SIDEBOTTOM: Correct, yes.

THE CHAIR: Paul, I'm going to make sure that we are giving everyone a chance.

MR. CHERNICK: That's fine. I was done with that issue, and I was about to hand you back the microphone.

THE CHAIR: Thanks, Paul. Staying on the line for another moment, John Athas, LaCapra, any questions?

MR. ATHAS: Sure, thank you. I have a question on just, you know, around the -- what kind of protocol are you going to have between Nalcor and Nova Scotia Power for alternative prices that you get from -- if it's allowed -- from the -- that are above the Mass hub? You know, if you -- you know, what kind of documentation, formal contracts, or the like are you anticipating this agreement will require?

MR. SIDEBOTTOM: We have not set out the specific documentation that will be required. We have the

ability to audit to ensure that these are, in fact, good faith paths, and that we'd expect that, you know, the parties would review whatever information was required to ensure that was the case. So, at this point in time, it is a right to audit to ensure that, in fact, that's the case.

MR. ATHAS: Okay. And that's helpful. One other question around just pricing -- a lot of my questions, some of them are asked already -- is -- just to verify, their substitution of other intermittent resources, or specifically wind as part of the energy available, that does not change the price that we're talking about at all, does it?

MR. SIDEBOTTOM: No, it doesn't.

MR. ATHAS: Okay. And the -- similar to the question on alternative prices, what are the audit rights, if any, that you expect to give, or how would you settle any disputes if NSPI said that a change in scheduling cost them, in your example, twenty dollars ($20) a megawatt hour, and now thought that that was too high in a -- for a given hour?

MR. SIDEBOTTOM: I think it would have reciprocal audit rights on that point. I'd also defer to our legal counsel who can help as it gets more legal here.

THE CHAIR: No, I think that's fair. I mean, both parties have to have the right to test the

positions of each other in those commercial arrangements.

MR. ATHAS: Okay. And that's -- now would -- if you -- if Nova Scotia Power wanted to go after additional solicitations, like, let's just say that the available energy is not taken by Nova Scotia Power at your -- the date that you now wanted in here, but then in -- three months later they -- that you -- Nova Scotia Power wants to out for solicitation, do you intend to pay -- try -- is there any build-in of any obligation, at that point, for Nalcor to have a requirement to re-offer what still is available?

THE CHAIR: No, Nalcor can participate in that subsequent solicitation, but they're not obligated to do so. Indeed they may have already found another customer for their energy for that year by that time.

MR. ATHAS: Well, suppose they're -- suppose they have still available energy ---

THE CHAIR: Then they -- then we would expect that they would want to, as any commercial partner would, participate in a solicitation, but they're not obligated to do so.

MR. ATHAS: But would they have any obligations to put on price ceilings, like, that apply to this agreement that you ---

THE CHAIR: No.

MR. ATHAS: Okay. Is there any particular reason why NS -- Nova Scotia Power is not seeking that?

THE CHAIR: Well, the initial commitment to make energy available, and then to make the forecast of available energy known, and then bid that forecast amount at a capped price is the commitment that creates the market opportunities for Nova Scotia Power and its customers.

But, as a reasonable commercial entity, if Nalcor's energy, at that point, is not taken up by Nova Scotia Power, either because they don't need it, or they don't accept it at the price at which its bid, then Nalcor has to have the flexibility to go back to market, or find another customer for that energy at that time. And if they still have energy available when Nova Scotia Power next goes out to the market, then, like any other player in the market, they can bid in.

The commitment is to make energy available. That was what the Board directed us to obtain, and so that energy is made available at the annual solicitation time.

MR. ATHAS: I understand why Nalcor would -- wouldn't want any -- would want as little requirements on them as possible. I'm just trying to understand why N.S. Power -- Nova Scotia Power wouldn't be -- would only want to have the ability to have that availability at one point in time during the year with any kind of avail -- must

offer. I mean ---

THE CHAIR: Yeah.

MR. ATHAS: --- it strikes me as if -- it strikes me that, you know, one shot at one time during the year, and the availability may have -- it might be beneficial to have some obligations to bid at certain pre-described prices for whatever energy is still available. I'm not about constraining them from selling.

THE CHAIR: Yeah, so, I guess what I would say is I didn't say that we were putting as little commitments on Nalcor as possible. I think, in fact, we're putting some very significant commitments on Nalcor by this Agreement. But I would say that Emera, and I can speak on behalf of Nova Scotia Power on this point, believes that the market will be created by this Agreement, and that there will be market participants beyond Nalcor in any solicitations on an annual basis, and there will be many market participants if Nova Scotia Power decides to go to the market at other times of the year, and on none of those market participants would be there be any limitations or constraints.

They will be free market participants to bid at whatever price they believe will gain them the business, and Nova Scotia Power will retain complete flexibility to take bids that are of value to Nova Scotia Power customers

at all stages, including at the annual solicitation.

So we think that that is actually a proper operation of the market, and I guess I can only be factual that the things that you've suggested could have been in the Agreement are not in the Agreement. The cap for later in the year bids, or that kind of thing, they're not -- you won't find them in the Agreement.

MR. ATHAS: Um-hmm.

THE CHAIR: John, can I just -- I want to -- I will -- happy to keep coming back to people. We have more questions in the room, but I just want to do another couple of people on the phone, and then we'll just take stock ---

MR. ATHAS: That's good. Thank you.

THE CHAIR: --- of where we are. Thanks. Can I go next to -- who should I go to? Seth Parker at Levitan? Seth, do you have any questions?

MR. PARKER: At this point I do not. Thank you.

THE CHAIR: Thanks, Seth. John Dalton?

MR. DALTON: I have no questions at this point.

THE CHAIR: Thank you, John. Todd MacDonald?

MR. MacDONALD: Yes, thank you. I do have a

couple of questions. As we know, the original application called for approximately 1-terawatt of the Nova Scotia black energy and 2-terawatts of the surplus energy which would be priced at a cheaper price, and the combination of those two gave us a weighted average which was the lowest cost alternative.

And now we have Nalcor with an obligation to offer 1.2-terawatts of surplus energy, and I believe my -- it's an unknown volume that Nova Scotia Power will be taking. Would I be correct in saying that the volume of surplus energy that we'll end up taking in the end is unknown at this point?

THE CHAIR: The volume of surplus energy was always unknown. What we did is we modeled surplus energy at Mass hub, and that model forecasted that we would want to take a certain volume of energy, and that was represented in Figure 4-4 which we updated as Undertaking U-3 for the low load forecasts.

So if you take those same components under t this arrangement, we believe that that volume of 1.2-terawatts hours, which was predicted by Undertaking U-3, will be taken up if those conditions remained as we forecasted, and this Agreement allows for that to happen.

MR. MacDONALD: And two follow-up questions on that. The Figure 4.4 which you reference assumed that

you would take so much Mass hub in pretty much every year, correct?

THE CHAIR: Yes.

MR. MacDONALD: Correct. And, so, would this not create the opportunity or possibility that it's offered in some years and not in others when you actually need it, and therefore, the average is not the same as getting the same amount of energy every year?

Are you actually -- is it not possible, mathematically, that you end with less surplus energy than what you forecast you need because of the flexibility offered to Nalcor to only provide it when they have the hydrology, and after they meet their own needs?

THE CHAIR: I think as Paul's explanation explained, we're confident that at least 1.2-terawatt hours of energy is going to be available, so we're very confident that the amounts forecasted in Undertaking U-3 will be available.

MR. MacDONALD: I think my question is, is it mathematically possible that that doesn't happen, given the rights for Nalcor? It's not whether you're confident or not.

THE CHAIR: I don't think that -- but I don't think the rights, or the obligations by either party in this Agreement would drive a conclusion that it's not

mathematically possible.

In theory, it's theoretically possible that something could happen to hydrology generation in Newfoundland that would change the amount of energy it has available, because it could also happen on the load growth side in Newfoundland and Labrador, and ---

MR. MacDONALD: Has there been a risk adjustment for that possibility? Have you ---

THE CHAIR: What ---

MR. MacDONALD: --- assigned probabilities to it at all?

THE CHAIR: What we have done is we have contractual obligations from Nalcor and Emera to ensure that 1.2-terawatt hours is available, on average, in every year of the contract.

MR. MacDONALD: Available?

THE CHAIR: But there will be some years, Todd, no -- you know, no doubt under the probabilities there'll be some years when the amount is less than 1.2-terawatt hours, and many others where it's more.

MR. MacDONALD: Correct, but I guess I must not be asking the questions the right way. In Figure 4.4 from the original application, are there some scenarios where we could end up getting less than that, on average?

THE CHAIR: Less than the total overall?

MR. MacDONALD: Yeah.

THE CHAIR: No.

MR. MacDONALD: How come?

THE CHAIR: Because Emera and Nalcor have committed to ensure that 1.2-terawatt hours are available.

MR. MacDONALD: On average, though; not in per year, right?

THE CHAIR: And if you look at -- yes, and if you look at the data that backs up the Figure 4-4 under Undertaking U-3, you'll see that 1.2-terawatt hours, on average, will deliver or make available -- will make available the same amount as the energy under that forecast.

MR. MacDONALD: I must not still be asking ---

THE CHAIR: So in some of those years ---

MR. MacDONALD: --- the right way.

THE CHAIR: In some of those years, Todd, if you look at the data under Undertaking U-3, in some of those years it's 1150, and in some of those years it's a little more than 1200, but if you look at the total amount of all of that time period that was forecast, then you see energy volumes that are consistent with 1.2-terawatt hours on average per year.

But I think you're quite right. If all

you're trying to say is we won't -- we shouldn't expect to match exactly that figure in terms of the volumes, I think you're quite right, because that figure did not reflect the kind of hydrology information we have today.

MS. TOWER: Rene ---

THE CHAIR: Overall, the energy will be the same.

MR. MacDONALD: I think what I'm saying is you may be offered more than you need in some years, and less than you need in the years that you actually need it, and therefore, the average may be the same, but the value is much less.

And let me -- I'll just move on to my second question here. The lowest cost alternative that you've proposed is for a theoretical unknown price given that Nalcor has the right to find an alternative market participant. Is that accurate?

THE CHAIR: I'm just think -- I'm just processing your question, Todd.

MR. MacDONALD: So let me just take a -- you know, all CEOs that sign big contracts would say, "Take me through a worst-case scenario", so if I said to you the worst-case scenario is, in the first year of this contract after you sign it, Nalcor finds access to a buyer at a much higher price, our price, therefore, for the balance of the

Agreement, which in a worst-case scenario would be all 24 or 35 years, would increase substantially, possibly.

THE CHAIR: Yeah, I understand your question now. And, so, I think, theoretically, the economics would be correct, but there's two things you need to think about. One is that if that were to happen, that means that's the market price. That's the price at which we would have to pay in order to get this market-priced energy.

And, number two, Nova Scotia Power has the ability to say no to that energy because of the price, if the pricing ends up being too high.

MR. MacDONALD: It's -- I think what ---

THE CHAIR: So those two factors will help protect Nova Scotia Power customers from paying too high a price for economy energy, which would have been present even in the absence of this Agreement, we believe.

MR. MacDONALD: But is not present in Figure 4.4, correct?

THE CHAIR: Well, Figure 4.4 models one price index. That's true. The ---

MR. MacDONALD: So there is no risk adjustment for the ratepayer risk -- that the price could actually be substantially higher than that.

THE CHAIR: We believe, Todd, that the Board's condition was very clear that we had an obligation

to ensure access to energy in the volumes consistent with Figure 4-4, and the Board was also clear that it understands the price might change from that that is forecasted in Figure 4-4. We testified in the spring, and we believe firmly today that the market will operate in such a way that much lower prices than mass hub will be available to Nova Scotia Power for these volumes of energy. But time will only tell on that.

MR. MacDONALD: Thank you. And I'll move on to my last question.

THE CHAIR: Okay.

MR. MacDONALD: Regarding the competitive bid process, is that something that all parties will be treated equally, or what assurances do ratepayers have that all bids will be submitted and opened at the same time? Can you talk, please, about the process around that?

THE CHAIR: Um-hmm. It's a good question, and I would say that Nova Scotia Power customers can rely upon the fact that this is essentially a FAM transaction. It's not fuel, but it is imported power, and that it has to be done in accordance with the practices and procedures that ensure a fair and transparent competitive solicitation is in place for the import of this energy, as it would be for all of Nova Scotia Power's commercial transactions. So I want to turn it over to Wayne Crawley, who has

responsibility for -- sorry, I apologize, Wayne, I didn't mean to do that -- Wayne O'Connor, who has responsibility for these transactions.

MR. O'CONNOR: Thank you, Rene. So, Nova Scotia Power goes through many -- and you would know this, Todd -- many solicitations on a regular basis for both solid fuel, natural gas, and electricity, and all of those processes are well documented. We go through a competitive process to get as many bidders as possible, so we can ensure the lowest price outcome for our customers. It's documented and it's open for review from the UARB throughout our regular processes. So we will adhere to that strictly, and we will encourage and welcome competitors, and as many competitors as we can get, quite frankly, into not only the annual solicitation but every solicitation we have after that. Thank you for that question.

MR. MacDONALD: Sure. And under no circumstances has Emera ever been given prior access to the other bids in the competitive fuel process?

MR. O'CONNOR: Absolutely not.

MR. MacDONALD: Thank you. That's all my questions.

THE CHAIR: Thanks, Todd. I'm going to come back to the room now. Let me just take the temperature,

because we've been going for about two hours, and I wonder whether anybody would appreciate a chance to stretch your legs and refresh your coffee, if we can do that. I don't know if there's any coffee out there anymore. Or if we want to just continue if we're coming to an end of the questions. Nancy wants a break. I'm with Nancy. Okay. Folks on the phone, we're going to take a 10-minute break. It's ten after two here in Halifax, so 20 after two Atlantic, we'll resume. So you can stay on the line. We'll keep the line open. Thanks.

--- Upon recessing at 2:12 p.m.

--- Upon resuming at 2:26 p.m.

THE CHAIR: Nelson, we have about another hour, give or take, in the room. We're going to go back to the phones rather than to Nelson, but just before we do that, one of my colleagues made the point that -- you know, we were discussing what kind of commitments have we put on Nalcor here. And one of the things that I wanted to be clear on that I meant to say during the presentation is, one of the significant commitments is that Nalcor is not free to make long-term commitments outside of Newfoundland and Labrador, and in particular, outside of Nova Scotia.

So, you know, one of the things that we heard at the hearing -- one of the concerns was that Nalcor could find a customer, for example, in New England, sign a,

you know, five-year, 10-year or 20-year contract, and that energy just flow through. That can no longer happen under this agreement. They have to reserve the energy for these annual processes, so they can sell the energy we don't take in the one-year bid, but only for the rest of that year. They can't make any commitments beyond that year because they have to always operate under this contract where there's an annual forecast of available energy, potential for a solicitation, and a bid that equals that forecast on an annual basis. I think that's a pretty important factor that I had neglected to make earlier.

I've been asked to go to the phone to John Athas for -- he's got a question or two, and then he might have to leave us. So, John?

MR. ATHAS: Thanks a lot. I appreciate the accommodation, and I'll try to be pretty brief. The first question is around -- you mentioned that if there was problems on delivery and other stuff, that there would be -- that you'd work toward a commercially reasonable solution. And I think that has to do with this economic value process about preserving the economic value. Can you just give me a little better flavour for how much you will try to encode -- you think you're going to try to encode in a contract versus leave open to that kind of clause that's pretty vague and open for interpretation?

THE CHAIR: Mark?

MR. SIDEBOTTOM: Thank you. I think the concept of incremental costs or incremental value are relatively well understood, and we've used a number of methods in our business to calculate that. Marginal replacement cost is one incremental generation. I think the principle is the most important thing to put into the agreement because when we get out to that point in time, we'd have to consider potentially the emission cost or other number of things like that. So I don't think we'd want to codify much more than there is today -- that we need to, in essence, work out the cost of not delivering that energy, and that that value be redelivered to Nova Scotia Power within the 365 days. I think that -- although it's not specific in exact calculation, it is very helpful in giving guidance to how the calculations would be done at that point in time.

THE CHAIR: Remember, John, that one of our driving principles was to ensure N.S. Power had as much flexibility as possible in these solicitations to find value for customers. So each one of these annual solicitations, if they result in a contract, while there is a standard form agreement, has the opportunity for negotiation over terms that might be applicable at the time of that contract.

MR. ATHAS: Okay, thanks. The other question is around the issue of the -- you know, essentially, I think a lot of this is premised on the fact that the power is expected to qualify under the -- for RES in -- for Nova Scotia Power. And there is a part in the filing that you've made, in the appendix, on page 6, that talks about the fact that Nalcor shall retain greenhouse gas credits. And maybe you could elaborate a little bit more as to why that's not in conflict with the -- you know, being able to have this power qualify for RES in Nova Scotia.

MR. SIDEBOTTOM: This energy, in the low-load case, was never required to allow us to qualify for RES consideration. It is an import of a non-firm or an energy-only product, and that was the case actually in the original filing, and it is still the same today. The Nova Scotia block is the firm component which is important in satisfying the RES requirements for 2020 and beyond.

MR. ATHAS: Okay. So if the attributes for RES remain with Nalcor, you wouldn't get them either way. What makes you think that the price would -- that there wouldn't always be a set of buyers that are willing to pay a premium above mass hub and other markets for this power if they get additional attributes that you wouldn't get?

MR. SIDEBOTTOM: I'm not sure if I quite

have that, but the product that's being offered to Nova Scotia Power is a non-RES, non-GHG, energy-only product. That has a fairly clear price in New England, which can be benchmarked quite well. The GHG credits are retained by Nalcor, as set out in the agreement. And if there is a market for those GHG credits, they can do what they wish with those credits, but we are only buying the energy component.

MR. ATHAS: All right. So you would -- so an alternative deal wouldn't allow Nalcor to have -- to use as a comparable a product that has the attributes of capacity in greenhouse gas credits.

MR. SIDEBOTTOM: So that's a different product that's being sold to Nova Scotia Power. What's being sold to Nova Scotia Power and being offered each year is excess energy with no capacity and no GHG credits. So that's the benchmark product that is going to be tested for us.

MR. ATHAS: But when you offer -- so that'll be tested in the market with the mass hub, and so no -- there wouldn't be able to be anything benchmarked that has other attributes in it like those two attributes. So you can't come back with a price that is mass hub plus ten dollars, but in there they get the greenhouse credits. Just want to be clear.

MR. SIDEBOTTOM: Yeah, so it is an energy-only product, so that's the benchmark I would see us using in the comparison. Nalcor is free to monetize the GHG credits, as they are owned by them, in whatever market existed at some future state for those credits independently.

I don't know if there was a second question I heard, which is, you know, why didn't we seek them. I think it was because, you know, we also at this point don't need that, and see the ability to decide whether we need to pay for GHG credits at some later date.

MR. ATHAS: Okay. I think that covers my two. Thanks a lot for squeezing me in.

THE CHAIR: No problem, John. Thanks for joining us. Nelson?

MR. BLACKBURN: Thanks, Rene. I left my reading glasses down in the car, so I'm going to try to blur my way through this.

I just got a question -- again, it's just an extension of what John mentioned earlier. On page 12 of 20 of your evidence, line 18, you say:

"In the event that a Nalcor progress report indicates the actual average annual amount of energy to be made available to Nova Scotia Power over the term will be less than 1.2 terawatt, Nalcor and Emera will work together to find a

commercially reasonable solution such that not less than the average at 1.2 will be available to Nova Scotia Power."

Now, that's not defined anywhere. And I was wondering if you'd be prepared in the agreement to either add a definition or expand on that to -- now if I could just read my notes here that I wrote down -- that:

"To define that any change in schedule and delivery of energy or a shortfall in energy delivery be delivered at a price and timing that produces the same or greater economic value as if the energy was delivered."

Now, wouldn't that be kind of a better definition of commercially reasonable solution? Because that's what the intent is. Or do you agree that's the intent? Because what ---

THE CHAIR: Well, I feel compelled to tell you, Nelson, that the contract is completed, so we presented this contract to the Board for approval. So that's my first point is we're not really anticipating any changes to the contract.

But on the substance of your point, I think what we're saying here is what the contract says, which is that in the event there's a forecast that that much energy is not going to be available, the 1.2 on average, then Nalcor and Emera will work together. The solution to that needs to be commercially reasonable, and if it's not, then

the next step will happen, which is Emera will have to step up for 300, and Nalcor will continue to ensure that 900 is available. But it's availability. You spoke about a couple of things. Price ---

MR. BLACKBURN: But I want to talk about it, though. Like:

"...be delivered at a price and timing that produces the same or greater economic value as if it was delivered."

So isn't that what we're talking about?

THE CHAIR: No.

MR. BLACKBURN: We're not.

THE CHAIR: No. We're talking about energy being available. It creates value for Nova Scotia Power and its customers when Nova Scotia Power accepts a bid that contracts for the energy. But this clause is about what will be available on average over the term. That available energy might not get delivered. It might not get delivered because the price isn't right. It might not get delivered because it's interruptible energy, and it may not show up. Even if the forecast says it will be there, the hydrology could change during the year and we might not get it all. So it's not about price or delivery of the energy. The agreement is about creating the market, ensuring it's accessible.

MR. BLACKBURN: Okay.

THE CHAIR: Okay?

MR. MAHODY: Rene, I wonder if I might just -- I have a different point that I just wanted to get an overview of the Applicants on. Now might be an appropriate time.

THE CHAIR: Is it the same -- is it on the same line as Nelson's?

MR. MAHODY: No.

THE CHAIR: I just wanted to let one more person go before we go around again. Bill, is that okay?

MR. MAHODY: Mine is not coming around again. I'd like to get the Applicants' position on the request for an adjournment. So when you're ready, I'd like to get that ---

THE CHAIR: Thanks, Bill.

MR. WALKER: I just had a follow-up on this discussion that we were just having with respect to the variances. This is Brent Walker from Morrison Park. Can you just describe the variance trigger date and how that would happen? Because the way I interpret the way you've discussed it is it sounds like it's an aggregate commitment. In other words, it's 1.2 terawatts of energy times the number of years in the contract, and whenever that number gets hit -- like, let's say for the sake of argument that it works out to be a 20-year contract. So

what the commitment really is is 24 terawatt hours, and whenever that 24 terawatt hours gets filled up, then the commitment is satisfied, and then it's just available energy from there. Is that accurate or ---

MS. TOWER: So that's accurate as it relates to the commitment by Emera and Nalcor, should Nalcor determine they have no energy. But it is Nalcor's obligation to bid energy throughout the term of the contract if they have that energy. And as Mr. Humphries said when he gave his presentation, you know, he's very confident that there will be energy available. And based on the way they plan their system, it's virtually a requirement that there be energy available. So Nalcor must look at what they have available, what they need for native load, and what they have available against their hydrology forecast obviously, and then we come after that. So, throughout the term of the contract, even if they've satisfied the average, if they have energy, they have to bid it. So if that's clear.

MR. WALKER: Okay. I have a follow-up on that then. So, but I was just focused on the 1.2 terawatt hours aspect of it. I'm trying to understand, if there's kind of an aggregate commitment to provide a minimum amount of energy, does that imply then that really this variance trigger date isn't something that's going to happen until

quite late in the contract, effectively?

MS. TOWER: That's -- yeah.

MR. WALKER: Because you won't really know, because it's like a two-year forward forecasting process that you're talking about. And then, I guess, after the two years, you just assume 1.2 for the balance of the contract. And so does that mean that you've got three or four years left at the back end that has to get made up or ---

THE CHAIR: I just -- I think we might need to correct your point on the forecast. It's different from the progress report. So the forecast provides a 24-month rolling forecast of what's going to be available.

MR. WALKER: Right.

THE CHAIR: There's a separate provision on the progress report which will -- I'm sorry, I'm just looking for it. Right. So the progress report comes annually, and that's the report -- it also delivers the outlook for the following two years, but the progress is progress against the commitment. And so the reason we targeted the 1.2 as the minimum, as the target, is because that is a line that's consistent with the volumes undertaken through using the low-load forecast.

MR. WALKER: So the progress report will always make a report that the commitment is going to get

met based on that progress report, and it would only be at a point in time when both parties say it can't be met.

THE CHAIR: Right.

MR. WALKER: So there's 50 percent less water in Labrador or something like that that happens. But that's what has to happen is there has to be some agreement at some point in the future that that commitment cannot be met over the term of the contract.

THE CHAIR: That's right. An agreement -- I mean, it's likely to play out that Nalcor will tell us in the progress report we're not going to make it, and we will challenge that.

MR. WALKER: Yeah.

THE CHAIR: And then it'll be tested, and the outcome of that challenge, which could be actually by a dispute resolution process by an independent expert -- the outcome of that will be it does appear that there is going to be a variance.

MR. WALKER: Okay. Thank you.

THE CHAIR: Okay. Now, let's come -- sorry, Maggie.

MS. STEWART: I just wanted to ask a quick follow-up question on language. It's Maggie Stewart of the Industrial Group. I've heard you use interchangeably that 1.2 is a minimum amount and an average amount, and I think

those have sort of different meanings. My understanding is that 1.2 is an average amount over the years, but in any given year, based on hydrology, for example, or the native load for Newfoundland and Labrador, the amount that is actually bid by Nalcor could be below 1.2 terawatts in any given year. Is that correct?

THE CHAIR: That's correct.

MS. STEWART: So it's not actually the minimum in any given year.

THE CHAIR: Not in any given year, but over the ---

MS. STEWART: Okay. Thank you.

THE CHAIR: --- life of the contract, it is, yeah.

Okay, let's come to Bill's question. Do you want to restate it so ---

MR. MAHODY: Sure. Thank you, Rene. We've heard from you that the Applicant, Nalcor, had been working since the release of the decision, so somewhere around three months, on putting together the terms of this agreement and the evidence that you filed last week. Since filing that evidence, there has been a request from at least two intervenors that they be given more time to respond. From the Applicant's perspective, Rene, what is the urgency of requiring such a prompt response, if there

is one?

THE CHAIR: I'm just pausing on "two intervenors." So I know LPRA raised the concern.

MR. MAHODY: I understand that Mr. Leasee this morning had directed ---

THE CHAIR: Oh.

MR. MAHODY: --- a similar inquiry to the Board, but ---

THE CHAIR: Yeah, he has. Sorry, I got confused because -- I saw that, but he's not an intervenor, but that's okay. Thanks.

Well, firstly, we are going to reply -- respond to the Board's request for input by noon tomorrow, so we will have that in front of the Board by noon tomorrow.

But to give you the high level of that, firstly, we take the Board at its word in its decision that there would be an expedited process to address compliance with the conditions, and we believe that the process in place is -- while it is expedited, it is a very thorough process. I think it's quite unusual for a compliance filing to have a hearing, although we support in this case having this hearing on these days because it will give the opportunity for a full review of the agreement and the compliance with the conditions.

But in terms of the time pressures that would cause us to resist any delay in the schedule that's already been established, there are a number. Probably the most important one for customers is related to obtaining the federal loan guarantee. That work has been in progress and it continues, but it's a very significant financing of the Nalcor projects and the Maritime Link. The way -- as you'll have seen from the formal agreements and the sanctioned agreement, the way that it works -- and the federal loan guarantee agreement, of course -- the way that it works is Nalcor is working to meet the commitments and the conditions of the federal loan guarantee. And David, I'm not sure what level of confidentiality you have over some of that work, but I will try not to go too far, and you can stop me at any time if you think I have. But the time pressures on the project and obtaining that is that that needs to be expedited, that work, that there are significant decisions to be made about ---

MR. MacDOUGALL: --- Rene.

THE CHAIR: Sorry, did you interrupt me, David?

MR. MacDOUGALL: Yeah. I think we should respond in your submission tomorrow on that, in the process that's set out.

THE CHAIR: Sure. Yeah. So what I was

going to say is that there are significant time pressures that we need to address that we'll be able to explain in our letter tomorrow with the federal loan guarantee. And Emera's responsibilities under the federal loan guarantee agreement follow quickly upon those, as you'll have seen from reviewing the agreement yourself.

In addition to the financing, which is a significant value to customers that we be able to actually obtain that, Emera is at the stage very soon of making some very significant contractual commitments to be able to complete the necessary components of the Maritime Link. And so we're trying to ensure that we are able to meet all of those without putting success and cost of the project in any kind of jeopardy -- to keep the costs as low as possible for customers.

So we'll speak to that in our filing tomorrow, but those are the key components today that would suggest to us that this is a reasonable time for the process to be completed and leave the opportunity for a Board decision so that we know we are in fact going to be able to proceed with the project because we have Board approval. Okay?

I'm sure there are more questions ahead. There were a couple of people on the phone, but I'll give one more chance in the room before I go back to the phone.

MR. OUTHOUSE: Rene?

THE CHAIR: Bruce?

MR. OUTHOUSE: I guess I just want to be sure of a couple of things. I may or may not know the answer, but since this is perhaps going to be the only record that's before the Board other than evidence.

The term of the agreement -- of not this agreement but the Link agreement is 25 -- 35 years. This agreement expires in 2041, and of course, the economics were run on a longer period than that. Why does this agreement not extend 35 years, but terminate with, in effect, the end of the Churchill Falls arrangement between Nalcor and Quebec?

MS. TOWER: From our perspective and certainly what we heard during the hearing was that there didn't seem to be much doubt that there was going to be lots of market energy available in 2041 once all the energy came back from the Upper Churchill. And so we felt that the condition really required us to ensure there was market energy up until that time, and so it was -- that was the agreement we came forward with, the agreement we made with Nalcor, and of course, continue to be confident that once 2041 is here, that there will be lots of market energy.

THE CHAIR: And the other point on that, Bruce, is that Figure 4-4 and undertaking U-3 align with

that time period. They both went to 2040.

MR. OUTHOUSE: I have some other questions, if others have none, but I don't want to monopolize others' time because I don't think we're going to end sharp at 3:00, but if others have questions, I would urge them to ask them now rather than leave it unsaid and have to appear at a hearing in a week's time.

THE CHAIR: Thanks, Bruce. Nancy, you're reaching for your mike?

MS. RUBIN: Yeah. I have some additional questions. The presentation from Nalcor, I take it that is not new information to you?

THE CHAIR: Not new information to NSPML, Emera and Nova Scotia Power?

MS. RUBIN: Yes.

THE CHAIR: Well, new as of when? It's new since the Board's decision.

MS. RUBIN: When did you -- when were you made aware of this graph, this type of -- the availability, the hydrogeology?

THE CHAIR: Since the Board's decision.

MS. RUBIN: Okay. And can you provide copies of those graphs with the years?

THE CHAIR: They're illustrative, Nancy. It's not -- they're not data-based graphs, so there's no

years and energy amounts forecast in those graphs. They're designed to demonstrate the -- am I right, Paul -- they're designed to demonstrate the concept of how their system works.

MS. RUBIN: Oh, it's just illustrative. Okay. Well then I was going to ask you a question about where the Nova Scotia block fit in the graph, but ---

THE CHAIR: It's considered part of the Nalcor firm load in that graph.

MS. RUBIN: Okay. And would the ---

THE CHAIR: And the Nalcor folks are ---

MS. RUBIN: And would the 1.8 ---

THE CHAIR: --- nodding in agreement, for the record.

MS. RUBIN: Sorry, I didn't mean to ---

THE CHAIR: Go ahead. No, no. I just wanted to make sure that was on the record that Nalcor is agreeing with my statement on that. Go ahead.

MS. RUBIN: Okay. And the 1.8, is that one of those high peaks of your -- of the graph?

THE CHAIR: Go ahead, Paul.

MR. HUMPHRIES: No, actually, the high peaks are higher. Those high peaks can be as high as 2.4, 2.5, even 2.6.

MS. RUBIN: Where does 1.8 come from then?

MR. HUMPHRIES: Well, 1.8 is the number that we've determined that as long as we offer the 1.8, we would be assured of achieving the 1.2 average. In certain years, there still may be more beyond the 1.8.

MS. RUBIN: Okay. So you're going the other way. So you're assuming that it could be as little as .6 in any given year?

MR. HUMPHRIES: Yes. Or lower.

MS. RUBIN: Or lower. Now, Morrison Park had asked a question about the variance in the progress reports, and it's likely if there was found to be a variance, it would be near the end of the term of the -- it would be near the end of the term? Is that correct?

THE CHAIR: We think that that is the likely scenario, but it is not theoretically impossible that it could be sooner than the end of the term.

MS. RUBIN: Right. And one of the options to address the obligations of Emera is for Nova Scotia Power to elect to build wind? Is that right?

THE CHAIR: That's an option, yeah.

MS. RUBIN: Why would Nova Scotia Power building wind satisfy Emera's obligations?

THE CHAIR: Well, it comes down to economics, is really all it is. If the economics would show that wind generation at that time fits into Nova

Scotia Power's system and delivers a volume of energy cheaper than importing for the remainder of the term at a market price, then Nova Scotia Power would want to bring that before the Board and stakeholders and have a debate about that.

MS. RUBIN: But the alternative is -- let's say it was the last three years of the term to secure market price energy versus building a wind turbine that would be in effect for the next 25 years. Is that the comparison that's going to be made?

THE CHAIR: I'm hesitating about your fact scenario, because I'm not sure we know what comparison will be made because we don't know when it's going to happen. So, working with your theory, we have three years to go, and we've determined that 300 GWh is needed ---

MS. RUBIN: Um-hmm.

THE CHAIR: --- for the remainder of -- in order to meet the commitment.

MS. RUBIN: Yeah.

THE CHAIR: And would we be saying N.S. Power is going to build a 25-year wind farm to ensure we have three years of energy?

MS. RUBIN: Yeah.

THE CHAIR: So I think you're setting up what probably we can all see is commercially not probably

the best option.

MS. RUBIN: But that's what's contemplated under the agreement, that that could happen and it would satisfy Emera's obligation?

THE CHAIR: It could happen, and if it's in the best interest of customers, and the Board would approve that, then the obligation would be satisfied, yeah.

MS. RUBIN: Okay. The attachment has a balancing agreement, and it says:

"Emera will pay Nalcor an annual fee of eighty-seven thousand, six hundred dollars ($87,600) per megawatt, escalating at CBI for the Nalcor balancing service."

THE CHAIR: Yes.

MS. RUBIN: Can you provide the backup for how that fee was calculated?

THE CHAIR: Mark, do you want to speak to the eighty-seven thousand, six hundred price?

MR. SIDEBOTTOM: So the first part of that, it's offered to Emera, but it's inclusive of what they would have to bid into the market. In other words, if it was going to bid in and support the RFP, that would be inclusive of the price into that market.

Now, to speak to the costing, in a wind farm, that might look like a thirty dollar ($30) integration cost, and when we did our work with GE, we saw

integration costs as high as sixty dollars ($60) as putting in parts of the wind system. So it represented about half the cost of what we thought integrating wind might be in Nova Scotia in the future. So that was one of the ways it was compared. Because actually, it's not a product that you can buy in the market. It's a combination of balancing and storage, which are two attributes of this particular product. And so we couldn't find a comparable product in the market. We looked around a fair bit for that. So we went back to what we did have, which is what it would cost to integrate wind, and it's 50 percent of the cost of what the integration of wind at the high end would be in Nova Scotia.

MS. RUBIN: So that eighty-seven thousand, six hundred, was it a negotiated amount?

MR. SIDEBOTTOM: Yes.

MS. RUBIN: So this is set. So, at the time, NSP can't go out to market and see if there is balancing services available elsewhere at a better price?

MR. SIDEBOTTOM: It's an option to take. It's not mandatory to take. So if there is a better option at that point in time, Nova Scotia Power can go out and get that service for that market price at that time. So it's an option at the time. It's offered to ---

MS. RUBIN: Sorry. It's an option or is it

mandatory?

THE CHAIR: It's an option.

MS. RUBIN: So Emera pays Nalcor the fee, but ---

MR. SIDEBOTTOM: It has to be nominated, so it gets nominated and then you get to pay it and receive the service. You cannot nominate it, and you don't pay for the service.

MS. RUBIN: Sorry, I ---

MR. SIDEBOTTOM: Maybe, Nancy, I could direct you to -- sorry, my glasses are missing -- Appendix 1, paragraph numbered one:

"Emera/NSP may nominate a maximum of up to 100 megawatts of balancing service, and such nomination match in flow rate to apply to the following calendar year."

And what it means, Nancy, is that each year, we get an opportunity to decide if this is the right price structure and service for us, and Nalcor is obligated to provide that service.

MS. RUBIN: Okay. One of the forgivable events is a greater need for -- I don't think I have the language in front of me, but it's to serve the local -- the Newfoundland native load and hydrology events in Newfoundland and Labrador.

THE CHAIR: Yes.

MS. RUBIN: Is that made up, those forgivable events? Like, in any given year, are they obliged to make it up?

THE CHAIR: Remember that available energy is the difference between Newfoundland and Labrador generation less Newfoundland and Labrador load. So if there's a change in load, that would mean it would be a change in the available energy, so it's a forgivable event. If there is a change in hydrology, that changes the generation, makes it lower, then that would mean available energy would be lower, so it's a forgivable event. That's really the theory. It could happen during the course of the year after -- a forecast could come out, and then later in the year, the forecast could change because something has dramatically changed to affect hydrology that wasn't anticipated, or load could change.

MS. RUBIN: But how does that offer any certainty, if those are really the two key variables is the hydrogeology and the increased native load, if those both constitute forgivable events?

THE CHAIR: That's right. And remember it's non-firm economy energy, so it's energy that can be changed by circumstances like that.

MS. TOWER: The certainty really comes from Paul's graph, right, the top part of Paul's graph, which

showed the firm to average surplus that needs to be available for system planning reasons over the term of the contract. So that, in addition to Muskrat surplus and other surplus.

MS. RUBIN: Okay, I had another -- this was my last question. On page 9 of the agreement, clause 6 that deals with the Emera and Nalcor commitment, it says: "The amount of energy made available by Nalcor to NSPI in each calendar year used to determine fulfilment of the contract shall be calculated as the sum of..."

And as I look at that, if you sum each of those things, it over credits Nalcor. Can you just explain whether these are supposed to be layered and overlapping or if they truly are summed, how that works?

THE CHAIR: On page 8, in paragraph 6, Roman Numeral I, II, III, IV ---

MS. RUBIN: So you got the -- let's take it back to this scenario where you've got a solicitation for 1.2. They respond and offer -- or they respond, say, with 1.4. NSP says, "We'll take 1.2." So clause 1 would have the 1.2 supplied energy.

THE CHAIR: Assuming all of that is, in the end, supplied, yes.

MS. RUBIN: Right. Assuming it was all supplied.

"Any energy supplied by Nalcor during such year..."
So that would be any additional energy.

THE CHAIR: Right. So, during the year, NSP issues more solicitations, and Nalcor wins those bids and supplies us more, yeah.

MS. RUBIN: Right.

"Nalcor-bid energy to the extent not accepted by or supplied to NSPI."

So you would add on the .2?

THE CHAIR: Yes.

MS. RUBIN:

"Nalcor-forecast energy which exceeds the solicitation for the year not supplied to NSPI."

So, let's say, in May, Nalcor said, "We've got 1.4 available, or 1.8 available." NSP only bid 1.2.

THE CHAIR: Right.

MS. RUBIN: Do you then add on another .6?

THE CHAIR: Yes.

MS. RUBIN: So you've got 1.2 plus .2 plus .6?

MR. SIDEBOTTOM: No.

THE CHAIR: No.

MR. SIDEBOTTOM: You don't add the .2 and the .6.

THE CHAIR: Yeah. It should get to .8. The

.2, under your final scenario was ---

MS. RUBIN: You have "Nalcor-bid energy to the extent not accepted by..." So you have -- we forecasted 1.8, NSPI bid 1.2 ---

THE CHAIR: Called for 1.2. Nalcor bid 1.2, right? In that scenario, they have to bid 1.2, not 1.4. So the .2 doesn't happen in that scenario.

MS. RUBIN: But I'm saying they bid 1.4. Does their bid have to match? They can bid more than what's solicited.

THE CHAIR: We've only called for 1.2. They can't bid more than that. If they bid more than that -- I don't know why they would -- it doesn't count. It's not part of the Nalcor bid as that term would be defined.

MS. RUBIN: They can't bid any more than what's solicited?

THE CHAIR: Right.

MR. OUTHOUSE: Rene, can I just follow up on Nancy's question?

THE CHAIR: Yeah.

MR. OUTHOUSE: I think what she's really concerned with is there a pyramiding here, if I can call it that?

MS. RUBIN: Yes.

THE CHAIR: The way that I think about

it -- and I over simplify it, perhaps -- but all of these add up to their forecast. Plus if there's anything more than their forecast that they end up bidding into, other solicitations that happen during the course of the year, those two things would count. Because if they forecast, they have to bid that amount, unless we don't call for it. But it was available to us, so that's what these should get at.

MR. OUTHOUSE: Okay. But just to be clear ---

THE CHAIR: David, did you want to help?

MR. OUTHOUSE: --- the sum of these parts cannot exceed 1.8.

MR. MacDOUGALL: That's correct. There is no double counting in these.

THE CHAIR: Well, could it -- so isn't there one circumstance, David -- this is a good discussion -- maybe I'm not clear -- where it could exceed 1.8. If Nalcor says we have 1.8, but you know you actually have two because it's one of those high hydrology years, we call for 1.8, you bid in, you win it, then there's another bid later on in the year for 200, you bid in, you win that, then the actual amount is two, right?

MR. MacDOUGALL: The amount can be higher if we bid in later on a subsequent call, but for the 1.8

amount, it cannot be higher than the 1.8.

MR. OUTHOUSE: You could choose to buy more than 1.8.

THE CHAIR: We could choose to buy more than 1.8.

MR. OUTHOUSE: And if you actually bought it, you'd be charged with whatever you bought over the 1.8.

THE CHAIR: Correct.

MR. OUTHOUSE: But you can notionally get beyond 1.8 by saying, "Well, our forecast was 'X'." You only -- you bid a lower amount, but you've got to count the full forecast. And you've got another bid here, and get yourself under one, two, three and four, beyond the 1.8, unless you actually buy it.

THE CHAIR: Right.

MS. RUBIN: Just to clarify, I think based on the notes that we had here, Mark had said that there was no restriction on Nalcor bidding more than the 1.8 terawatt hours or more than the Nalcor forecast.

THE CHAIR: Only if we're calling for more than the forecast.

MS. RUBIN: But in response to a solicitation.

THE CHAIR: That calls for more than the forecast.

MS. RUBIN: Can Nalcor bid more than the solicitation?

MR. MacDOUGALL: No.

THE CHAIR: Not and have that extra amount count.

MS. RUBIN: It could, though.

MR. MacDOUGALL: No, it can't. That's not the intention. So if the solicitation is for 1.2, we wouldn't bid in more than the 1.2. But if we had forecast 1.8 available, and they only asked for 1.2, and we bid in 1.2, the 1.2 would count, but the .6 between the 1.8 and 1.2 would also count because we had it available. But there would be no situation where you would double count some number in the -- that's not the intent.

THE CHAIR: So the definition of Nalcor-bid energy which prevents the situation you've described is in 4B.

MS. RUBIN: Let's say that NSP solicits -- okay, your forecast is 1.8.

MR. MacDOUGALL: Um-hmm.

MS. RUBIN: NSP solicits 1.2. You bid 1.2. NSPI doesn't accept it. So you get sub-clause 3, "the bid energy to the extent not accepted by," that's 1.2.

MR. MacDOUGALL: Correct.

MS. RUBIN: Plus "the forecast energy which

exceeds the solicitation and not supplied," that's 1.8.

MR. MacDOUGALL: No, that's .6. It's the difference between the forecast and the solicitation. And you add the .6 to the 1.2, and you get 1.8.

THE CHAIR: The forecast which exceeds the solicitation.

MR. MacDOUGALL: It's the amount by which the forecast exceeds the solicitation. 1.8 minus 1.2 equals .6. You add it to 1.2, you get 1.8.

MS. RUBIN: Okay.

MR. MacDOUGALL: And that is the intention.

MR. McGRATH: Can I just jump in for a clarification on this as well? In terms of energy that's not delivered because of a forgivable event, is that backed out somewhere in this formula or is that included in any event as part of the 1.2 commitment as well?

THE CHAIR: I'm just struggling to remember off the top of my head. David, do you ---

MR. McGRATH: Because it looks like, in paragraph 3 there ---

THE CHAIR: Where is your reference, Steve?

MR. McGRATH: It looks like, in paragraph 3, this is "Nalcor-bid energy to the extent not supplied to NSPI in such year."

MR. MacDOUGALL: It's backed out, Steve.

MR. McGRATH: It's backed out when ---

MR. MacDOUGALL: If it's not supplied ---

MR. McGRATH: Where is it backed out?

MR. MacDOUGALL: --- it doesn't count to the 1.2.

MR. McGRATH: Sorry?

MR. MacDOUGALL: If it's not supplied, then it won't count to the 1.2.

THE CHAIR: Right. It's that "not accepted by or supplied to."

MR. McGRATH: Okay. So it's backed out there? Thank you.

MR. MacDOUGALL: That's the intention.

THE CHAIR: Thank, Steve. Good question. Nancy, sorry that's confusing. I got lost in it too when we were negotiating it. Other questions?

MR. MAHODY: And Rene, I know that Paul Chernick has a number of questions if you want to go back to him.

THE CHAIR: Okay. Let's go back to the phones. Before we go to Paul, there were a couple of others that haven't had a chance yet. I should just make sure. John Adger?

MR. ADGER: No questions.

THE CHAIR: Tommy Vitolo, I think it was,

from Synapse?

MR. VITOLO: It is Tommy Vitolo. I think since we're running short on time, that we'll let Bruce Outhouse follow up in person perhaps after the meeting. I want to make sure I get a chance to hear everyone else's questions as well, and I don't want to soak up too much time now.

THE CHAIR: Thank you. Philip Rathle?

MR. RATHLE: Yes. Can you hear me?

THE CHAIR: Yes. Go ahead.

MR. RATHLE: Hi. I do have several questions. If you'd start, please, on page 11 of the compliance filing, at the top, you state that, quote: "The Energy Access Agreement provides Nova Scotia Power with the opportunity to contract for energy in volumes consistent with Figure 4-4 under low-load planning assumptions."

I believe you're referring here to the Excel sheet presented in undertaking 3.

THE CHAIR: Yes.

MR. RATHLE: In that low-load case, the average NL surplus imports are indeed 1.2 terawatt hours, but in the base case in Figure 4-4, they're 1.5 terawatt hours. Is that right?

THE CHAIR: I think that's right.

MR. RATHLE: So can you explain to me why, in your view, this meets the Board's condition which made specific reference to NSUARB 37 and not to undertaking U-3?

THE CHAIR: Well, you have gone to the reference that we think explains that, but the Board concluded that the proper planning forecasts or the realistic scenario was the low-load forecast. I would also say, with 1.8 terawatt hours being forecast and bid, that there is still an opportunity to hit the base load even if we get base load growth.

MR. RATHLE: But in the passage that follows the quote that you took from paragraph 106, the paragraph ends:

"However, as was pointed out, a number of factors could impact load in a way which would cause it to be higher."

And then in the next few paragraph, the Board refers to some of those options, and then in paragraph 109 says:

"It's known today that today's forecasts will not be correct in 10 or 20 years' time. The Board needs to be satisfied the project was assessed over a reasonable range of load assumptions."

Doesn't that suggest that both the low-load and the base-load scenarios are essential?

THE CHAIR: Well, I mean, we do think that

the low-load and base-load scenarios were quite helpful to the Board and to parties in making the determination that the Maritime Link is the best economic long-term option for customers. So we think that that was the purpose of having those different load forecasts. For the purpose of ensuring access to available energy, we understood that the planning assumption, the target we should use, was the low-load forecast, based upon the paragraph we've referenced there.

MR. RATHLE: Okay. If I could move on to paragraph 4(E)i of the agreement, it's been discussed at several points today. Well, I think in the last few questions, it became clear that since -- that Newfoundland and Labrador native load is a forgivable event, so in the event that load growth results in a situation where the supplemental energy is not available, there's no obligation to provide it. Is that a correct understanding?

THE CHAIR: The obligation is to forecast and bid the energy that's available, which is the difference between generation and load.

MR. RATHLE: Right. Now, in the evidence, I don't know if your room is set up to show it, but there were graphicals in my evidence and in Morrison Park's evidence. The references are, if it's easy for you to see them, at M46, page 31, and in M48, page 32 of the PDF,

which showed that in the event that new generating resources are not built in Newfoundland and Labrador during this period, that towards the end of the period, that surplus energy becomes scarce and eventually runs out. So, is my understanding correct that if the future that's described in those charts were indeed to come to pass, that Nalcor would not be under any obligation to provide the amounts of energy that we're talking about here?

THE CHAIR: I think I can answer your question in two ways and try to be as helpful as I can to you. And Paul was here -- is here today, and he explained to the group -- and I recognize, on the phone, it's very difficult to get the full flavour of it, but through his presentation, he explained the energy above firm surplus energy, which is variable from year to year, but will provide at least 1.2 terawatt hours of energy to be available for export, and on average, over the course of the contract.

In the second piece, which I think is helpful, is that the contract itself commits Emera and Nalcor to ensure energy is available, even in the face of that evidence that you describe. But you know, I need to be intellectually honest with you that the answer to your question is, yes, if there is no energy, then there'll be no energy forecast and no energy bid. That's quite true.

But that's not the scenario that is -- we're confident that's not the scenario we're going to experience. Did I misunderstand the questions?

MR. RATHLE: No.

MR. MacDOUGALL: Just to clarify, based on Paul's graphs earlier, in any event, regardless of that, there will be the firm to average amount of 1.2.

THE CHAIR: Yes.

MR. MacDOUGALL: And then, as load grows, planning will occur to an order to make sure that Newfoundland and Labrador meets its firm needs, upon the top of which will be the 1.2 firm to average spread.

THE CHAIR: Yeah. So what you're saying is that scenario can't happen.

MS. TOWER: Maybe just to put a finer point on it, if I may, we didn't talk about this during the hearing, this particular concept.

THE CHAIR: Right.

MR. RATHLE: If we could look at -- I'm looking at page 4 of the Nalcor presentation. I think that's what you're referring to.

THE CHAIR: Go ahead with your question.

MR. RATHLE: Okay. Well, first, just the straight line of the -- I guess you'd described -- the term you used is "firm system capability," "hydro firm system

capability." Can you put a number on that? I know the curves are not data, but the system capability, I would think, is. Do we have a figure for that?

THE CHAIR: I don't think that we have that data today, Philip.

MR. RATHLE: But it's basically existing hydro capacity on the island and Muskrat Falls. Is that the correct understanding?

THE CHAIR: Do you want to answer the question, Greg? It might be easier.

MR. JONES: Yeah. Greg Jones. What's on the firm generating capability in the province is the firm generating capability of all resources in the province, on the island and in Labrador. And in Labrador, of course, it extends beyond Muskrat Falls into the Churchill project and what we have available from that project as well.

MR. RATHLE: Right, okay. But it also includes your thermal capabilities.

MR. JONES: No, we have no thermal capability. This is a post ---

MR. RATHLE: Today you do, but ---

MR. JONES: This is a post-2017 project in which Muskrat Falls is completed and Holyrood is decommissioned. So there's no capability.

MR. RATHLE: Okay. In the event that, due

to load growth, those resources are inadequate to you, I understand that the -- you know, the plan is to build renewables, but given that those thermal -- that Holyrood, in particular, exists, it's not inconceivable that it could be called on to serve future load as well.

MR. HUMPHRIES: It's Paul Humphries here. No, actually, Holyrood will be retired shortly after the commissioning of the Maritime Link and Muskrat Falls, and a little portion of it will be retained for synchronous capability, but the generating capacity will be retired, so that when we do have a requirement for additional firm, we will build renewables and -- because of the nature of renewable, there will be a variable content with that as well, so it's important to point out that that 1.2 terawatt hour variability above the firm line will actually increase as we move forward and build new resource.

MR. RATHLE: I understand that's your intention, but it's also conceivable that you will build thermal resources in 2030. No one really knows. But let's assume that it is renewable. This includes Muskrat Falls. Now, my understanding is that there's a water management agreement, which means that -- which changes very much the surplus firm output of Muskrat Falls. Can you tell us what you're attributing as firm and what as average with respect to Muskrat Falls?

THE CHAIR: So, just before we ask for an answer to the question about the water management agreement, I think we need to reflect on the record, Philip, that your suggestion that thermal generation is possible in the future is directly contrary to what we've heard today from Nalcor, who have said that they are going to become an all-renewable system once Muskrat Falls is connected and Holyrood is decommissioned.

MR. RATHLE: Right.

THE CHAIR: So we have a question about the water management and how that might affect the output at Muskrat Falls. Paul, can you help us with that? Or Greg?

MR. HUMPHRIES: Yes. Actually, water management will not materially impact the firm to average spread that we anticipate having post-2017.

MR. RATHLE: So the firm output of Muskrat Falls with and without the water management agreement is the same?

MR. HUMPHRIES: Yes. From an energy perspective, yes.

MR. RATHLE: I would like more explanation to that, but I don't know if we have time. I don't want to impose on -- can you explain that a little bit without -- why that would be the case?

MR. HUMPHRIES: No, I think that's beyond

the scope of this inquiry here right now.

MR. RATHLE: Okay. I think this is my last question, which concerns the Emera variance in Section 7(E)i. Just let me get there. As I understand the agreement, the hypothesis is that, in this scenario where there is a variance, that Emera would have the obligation to provide the energy, and assuming -- I know there's a possibility it could be produced in Nova Scotia from wind farms, but the other option, I imagine, is that Emera provide that energy from markets elsewhere. Is that the -- is that a correct understanding?

THE CHAIR: We've tried to create an agreement where all options remain available to ensure that that energy is available to Nova Scotia Power.

MR. RATHLE: Okay. But if the energy does not come from either Newfoundland or Nova Scotia, it would have to be imported over the New Brunswick intertie. Is that correct?

THE CHAIR: Well, not necessarily. It could still be imported over the Maritime Link, but go ahead with your question.

MR. RATHLE: Okay. Well, my question is if -- because I remember discussions in the hearings about the capacity of the New Brunswick intertie, and my understanding was that the imports -- the New Brunswick

imports that were in Figure 4-4 already essentially occupied the available capacity. And so the question is if you have confirmed that there is sufficient additional capacity via the New Brunswick intertie to allow these additional imports if there is a variance and if the way that Emera chooses to meet it is with imports.

THE CHAIR: Mark, I'm not sure if you want to answer that question. I guess what I heard in the question -- and I'm not sure I followed it completely, Philip, is -- so the scenario that's been created is that Nalcor is not making the average 1.2 terawatt hours available over the Maritime Link, which would mean that there would be capacity over the Maritime Link. I'm not sure that your recollection of the evidence about the use of the New Brunswick tie is completely accurate, but there will be -- because of the Maritime Link being connected, there will be ability to import energy into the province above and beyond whatever Nalcor is providing under this agreement. But Mark, do you want to try to fill in the gaps?

MR. SIDEBOTTOM: I think there are times where the New Brunswick tie can offer energy and it wasn't utilized. It was based on economic choices and the modeling at the time. So it wasn't at 100 percent of its capacity is my recollection from the modelling work.

THE CHAIR: That's my recollection as well, Mark. Philip?

MR. RATHLE: Yeah. If I could just follow up a little bit. In any given year, the available energy offered by Nalcor can go as low as zero. Correct? There's no four. The average is meant to be 1.2 terawatt hours.

THE CHAIR: Only theoretically, but theoretically.

MR. RATHLE: Yeah. And so, assuming that for a number of years it's below average, then I imagine there's a balance that's accumulated that sort of indicates how much cumulatively needs to be supplied. And I think this is where the point came from earlier that it will only be somewhere towards the end of the agreement that that balance becomes -- could become large enough that one would say, well, it's really not possible to meet it in the future. Is that a correct understanding of the way that it would be managed, the way it would develop?

THE CHAIR: Well, I think that that's what we expect to be -- firstly, we don't expect that this will happen, but if it were to happen, then that's a reasonable view.

MR. RATHLE: Okay. That's all my questions. Thank you very much.

THE CHAIR: Okay. Thank you, Philip. We

have a couple of other folks on the phone, I think. Pat Bates. Mr. Bates, are you still with us?

MR. BATES: Yes, I am, Mr. Chairman. And just a brief question, if I may, coming back to the federal loan guarantee. There's a high level of interest in Newfoundland, which I share, in the timing of a complete project update of costs that's inclusive of both Muskrat Falls and Maritime Link. There's an expectation that there would be some bumpers available around the end of October. Given that I understand the loan guarantee is capped, I'd like to know if there is some plans for a relatively-soon complete update of project costs inclusive of both projects.

THE CHAIR: Our report on project costs is due December 15th, Mr. Bates.

MR. BATES: Thank you, Mr. Chairman.

THE CHAIR: You're welcome. Someone is using their phone and dialling a lot of buttons, which we're getting a lot of feedback from, so if we could just be careful about that.

Have I got anyone else on the phone that was desiring to ask questions that hasn't had a chance?

MR. LEVY: Tom Levy with CANWea.

THE CHAIR: Tom. Did I ever go back to Paul Chernick? Okay, so after Tom, we'll go to Paul. Sorry,

Paul. Tom?

MR. LEVY: I'd like to ask a question about the eighty-seven thousand, six hundred dollars ($87,600) per megawatt, and I didn't quite understand the response. I'm just wondering if we could just briefly go back to that and provide a little bit more detail or more flesh on the bones on that one.

THE CHAIR: Well, what Mr. Sidebottom said was that it was a negotiated price between the parties, that there's not a product presently on the market that provides all of the elements of the balancing service that would be provided in this case and that it is half of the cost of wind integration costs that were assessed by the GE study of Nova Scotia Power's wind system which was before the Board. Those three points.

MR. LEVY: Okay. So the GE study made reference to what integration costs? I was trying to find those as well as -- once that reference to the GE study was made. I couldn't quite locate them. Is someone able to point me in the right direction on that?

MR. SIDEBOTTOM: I must say I don't have it off the top of my head. I'll have to go back and find that reference. But it's also provided in the Board ruling, as I think there was forty-eight dollars ($48) to sixty some dollars wind integration costs were acknowledged in the

decision as well as outcome of the GE work.

MR. LEVY: If there's any way you can point it sometime -- not now obviously if you don't have the study in front of you -- to where in the GE study it speaks to the integration costs, that would be very helpful. I'll obviously continue to look myself.

THE CHAIR: Isn't the GE study about wind integration? So maybe we're thinking of something more general, and you're thinking of something very specific, Tom, but ---

MR. LEVY: Yeah, I just -- I couldn't find it, and I'm just trying to reference the integration costs that were -- or trying to locate the integration costs that the GE study itself discusses ---

MR. SIDEBOTTOM: We can maybe take that offline and see what ---

THE CHAIR: Sure. Mark is willing to look at it for you ---

MR. LEVY: Okay.

THE CHAIR: --- and we'll be in touch.

MR. LEVY: Lovely. Thank you, Mr. Chair. Thank you. No more questions.

THE CHAIR: Thank you very much. Okay, Paul. The energy in this room is really high right now. Not. It's not. So we're going to turn it over to you to

see if you can perk us up.

MR. CHERNICK: Okay. I'll see if I can kick it up a notch for you.

THE CHAIR: Okay.

MR. CHERNICK: Okay. The first question is sort of a conceptual one about what you were trying to do with the agreement. The Board condition referred to Nalcor market-base-priced energy consistent with the assumption in the application, and you know, in the application, there were market-priced energy deliveries from both over the Maritime Link and from the New Brunswick tie. Were you trying to be consistent with the assumptions about the market-priced energy in total or only with the deliveries directly over the Maritime Link?

THE CHAIR: The agreement targets deliveries over the Maritime Link.

MR. CHERNICK: Okay. So you see that as being -- it's only tied to the assumptions about the Maritime Link delivery in the application. I know that you're assuming that it's going to be delivered by Nalcor, but in terms of meeting the consistency requirement, you see that as just requiring the -- matching up the assumptions about imports from the east, not necessarily from the west.

THE CHAIR: Well, we weren't going to try to

enter into an access agreement with Nalcor about energy that was going to come over the New Brunswick tie, and so we targeted the energy that was going to flow over the Maritime Link. The energy that's going to flow over the New Brunswick tie, I don't think there was any doubt that that is available to us and will be available over that tie, most of which was taken in off-peak hours.

MR. CHERNICK: Oh, and -- yeah, that would be -- is there a breakdown in the record of the deliveries by on and off-peak hours from Maritime Link and from the tie, the New Brunswick tie?

THE CHAIR: We're kind of looking at each other here, Paul. Mark, do you have any insight on ---

MR. SIDEBOTTOM: Unless the -- it would be associated with the working papers, possibly with Figure 4-4. And I just can't recall if ---

THE CHAIR: So that would be in IR-37, the data in that IR.

MR. CHERNICK: IR-37 doesn't break it down by period. It sounded like you were familiar with that breakdown.

THE CHAIR: Well, we understand that imports over the New Brunswick tie will be, practically speaking, off-peak imports. Mark?

MR. SIDEBOTTOM: So we are familiar with the

breakdown by year. Our underlying models would have about two-thirds of the energy coming in in the off-peak hours and one-third of the energy coming in in the peak hours. Our models have that information. I just can't recall if they're in one particular place in the filing. It's definitely incorporated in the detail of the model runs and the strategist's work.

MR. CHERNICK: Okay. And just to get clear, the undertaking 3 shows 1.2 terawatt hours or a little bit more of actual delivery of economy energy, not just offers of economy energy. So are you saying that offering 1.2 terawatt hours is equivalent to -- is consistent with actual delivery of 1.2 terawatt hours in the application?

THE CHAIR: What we're saying is that the Board's condition was about insuring energy would be available. It would be up to Nova Scotia Power whether to take the energy at the price that's -- that shows up at the time of those energy offerings. Wayne?

I'm sorry, I thought you were reaching for your phone. Go ahead, Paul.

MR. CHERNICK: And this is sort of a little follow up on what Nancy was getting into earlier, if the Nalcor bid is priced under Section 4(C)() that is based on some alternative use and NSPI declines that energy, that quantity would still count towards the available energy

obligation is that correct?

THE CHAIR: Yes.

MR. CHERNICK: Okay. In Section 4(D) there's some language about the timing of delivery and Nalcor's option be interrupted and re-delivered. And I was wondering is there a standard definition for "as soon as commercially possible?"

Does that have to do with price, cost to Nalcor or ---

THE CHAIR: I would say there's not a standard definition of that phrase.

MR. CHERNICK: But what do you have in mind.

THE CHAIR: Mark?

MR. SIDEBOTTOM: I think what we'd be doing is working closely with each other as soon as there is a call for energy to be pulled away from the bid and knowing that ultimately there's a backstop of one year.

But as soon as the two parties could come to that agreement they would do that. I mean ultimately there is more and more risk for Nalcor the closer that we get to the 365th day because they are then reliant on making up that equivalent value in a shorter period of time.

So you know again the intent is to expedite the re-delivery within that timeframe.

MR. CHERNICK: But Nalcor could just

interrupt supplies for a week or two if they had a better market temporarily and then sit down with NSPI and work out a re-delivery schedule?

MR. SIDEBOTTOM: That's correct and what that -- also comes with that decision to pull the energy away is knowing they've got an obligation to provide the equivalent value back to Nova Scotia.

So keeping Nova Scotia whole through the transaction. And so that allows Nalcor to take advantage of a premium market and at the same time keeping Nova Scotia whole through that process.

THE CHAIR: And Mark, once it's scheduled that day before basis?

MR. SIDEBOTTOM: Once it's scheduled on a day before basis it goes down to simple force majeure. There is no right to pull the energy away at that point?

MR. CHERNICK: Okay, in the alternative pricing language in Section 4(C)(2) I'm -- I've been trying to wrap my head about what would be required to demonstrate the liquid trading node.

For example if -- there's obviously liquid trading in New England and there's a market for renewable energy credits and if the energy from Nalcor were eligible for the credits under some future scheme would that constitute a liquid trading node, the combination of the

existence of those two markets?

MR. SIDEBOTTOM: Nalcor has retained the renewable attributes or the GHG credits associated with that energy. And I would assume that they would partake in the markets that those GHG credits would qualify them for.

So the actual energy that delivered to Nova Scotia Power is an energy without a GHG credit. And therefore it would look more like a traditional energy only product that would be seen as a comparison.

MR. CHERNICK: No, I understand the greenhouse gas credit being stripped out but in order to get renewable energy credits in the New England markets for example it's necessary to actually deliver energy to New England and my question is if the -- what constitutes a liquid trading node.

Would the New England market for RECs and energy be sufficient? Could Nalcor just say look that market exists and our energy is eligible for it now and we want to price our power at the Mass hub plus the REC price that our energy can get plus -- minus transmission charges?

Is that a sufficient demonstration that there's a liquid trading node, just the fact that it exists, that somebody trades those commodities?

THE CHAIR: We're trying to make sure that we give you a full answer to your question, Paul, but I'm

not sure we can add much more to what we have said about the way that this particular provision might work.

They're going to have to demonstrate to us that they have an actual market at this alternate mode. I mean we thought of it as the potential New York price. So that ---

MR. CHERNICK: So supposing that ---

THE CHAIR: --- were to happen they'd have to have a customer there. They'd have to have path and be able to get it there. They'd have to deduct the transmission costs from that price.

And then we'd have an opportunity to take it at that price.

MR. CHERNICK: Okay, so when you say they have to have a customer, I didn't see anything saying -- in the agreement that said they would have to have a customer. There would just have to be a market into which they had an expectation of being able to sell.

THE CHAIR: Right. Presumably you don't have an expectation to be able to sell unless you have someone to be able to sell it to. But ----

MR. CHERNICK: Well ---

THE CHAIR: --- I take your point.

MR. CHERNICK: Okay. I mean what -- but are you saying that you would -- that in your view

demonstrating that there's an opportunity requires that you be able to name the counterparty who buy the power? Or is it just sufficient to say well look there's active trading of energy in New York?

And there's a hydro -- large hydro import credit of thirty dollars ($30) a megawatt hour that we'd be eligible for and so there's our liquid node and we can get the New York City price plus thirty dollars ($30) minus some transmission.

And if NSPI wants to buy at that price they can and otherwise we'll sell it there. Is that -- I'm just trying to figure out what it means to demonstrate the opportunity that's all.

MR. JANEGA: If I might just -- Rick Janega -- I think you need to be able to demonstrate access to the market that you're forecasting you would have the sale. So Nalcor would have to be able to prove a route to market, that they would be able to access and secure.

And that the market would be transparent. Liquid markets generally are either traded or able to be audited in some manner from that visibility. That would -- that was the intent of terms like that, it was being able to demonstrate a path, demonstrate a market exists.

MR. CHERNICK: Okay, so it's just the fact that there's a market. You don't need a customer. And the

other thing that confused me was that it said something about a market available within one year, opportunities within one year.

So is that a matching requirement that you can -- if there's a market starting in July of next year that you could start -- you could price for July based on that alternative market but you couldn't price that way in June.

It would have to be -- or is it that if there's a market at any time during the contract year then we can using this pricing formula?

THE CHAIR: Well the provision reads that it's -- it has to be available to Nalcor at any time within that year following the bid.

MR. CHERNICK: Okay. So if the market were available for even one day during that contract year then Nalcor could use that pricing formula for the entire year?

MR. JANEGA: To the extent of that opportunity.

MR. CHERNICK: Well that's another question.

MR. JANEGA: Just for clarity ---

MR. CHERNICK: Yeah.

MR. JANEGA: --- Paul, it would not -- it would need to be demonstrated that they could attain that market value through the two parameters mentioned earlier

that it would be a market price they could achieve for the period that they had access.

So if they didn't have access but the market prices were there then that price wouldn't apply for that period and vice versa. If the market price wasn't there when the path was there then that wouldn't be a match either.

MR. CHERNICK: Okay so they could say look we have this market off peak and we can charge this price but on peak we have to use them as sub because we can't get to this other market. Is that ---

MR. JANEGA: That's the intent, yes.

MR. CHERNICK: Okay.

MR. JANEGA: Yes.

MR. CHERNICK: Okay. That makes sense. Now, in -- would Nalcor need to demonstrate that it can sell all of its surplus into that market or just that it can sell some of its surplus in to that market?

It says an opportunity. It doesn't say an opportunity for all of the energy.

MR. SIDEBOTTOM: Yeah so it would be for as much energy as they could get into the market. Not for all of the energy. So if there was a ten megawatt opportunity you can price 100 megawatts at that price.

It's a real amount of energy through a path

through time. And that would be the extent of the amount of energy that would be priced because that would be the real opportunity.

The intent here was that it is to reflect real opportunities that Nalcor could avail itself of.

MR. CHERNICK: Okay. And then my last question probably just has to do with my not looking back at all of the other documents filed in the case. There was a definition of the delivery point as being the delivery point.

What's the delivery point?

MR. SIDEBOTTOM: Woodbine, Nova Scotia.

MR. CHERNICK: Okay, thank you. I think that's all my questions for now.

THE CHAIR: Thanks Paul. I do -- in all that conversation about the pricing mechanism I do remind everyone that is -- those are maximum prices and not necessarily the prices we will see.

The prices we will see can and we anticipate at Nova Scotia Power and Emera will be lower than those maximum prices. Nancy are you reaching for your mike?

MS. RUBIN: Just a quick follow up question on that delivery point question. In the case of the Emera variance amount it can be at any point in Nova Scotia. Why is that and what does that do to pricing?

That's page 10() sub-section ---

MS. TOWER: Yeah, so the idea was for Emera to be able to satisfy the condition by getting energy and not be restricted to where that energy would come from. Unlike Nalcor we don't have energy necessarily and so it was to give some flexibility.

But the pricing -- the same rules apply to Emera as they do to Nalcor in terms of the pricing.

MS. RUBIN: But does it affect the transmission cost depending on where it's taken for NSPI for line losses or anything?

MS. TOWER: So we have to bid in at the Mass hub price or another price plus transmission but not on cost so same rules. Those two clauses apply to Emera.

THE CHAIR: Are there other questions on the phone?

UNIDENTIFIED MALE: No.

THE CHAIR: Other questions in the room? I have one light on. Is that you Bruce?

MR. OUTHOUSE: Rene, I just want to be clear about first of all the forgivable events. While it's my understanding the forgivable events apply to the forecast and the bidding it's my understanding from clause 6(A) that that does not affect the commitment by Emera and Nalcor to the 1.2 terawatts per year on average over the term.

Is that correct?

THE CHAIR: Yes.

MR. OUTHOUSE: And that commitment is subject only to 7(E), (I) and to force majeure events, correct?

THE CHAIR: Yes.

MR. OUTHOUSE: And force majeure is not yet defined in this contract?

THE CHAIR: That's right.

MR. OUTHOUSE: But it is defined for example in the document dealing with the basic block?

THE CHAIR: Right.

MR. OUTHOUSE: Correct? And is it anticipated that that force majeure clause will be like that clause subject to necessary changes because of the concepts in this agreement?

THE CHAIR: That's what we would expect.

MR. OUTHOUSE: And is it correct that under that agreement even though there may be a force majeure the effect of that force majeure unless the project is ultimately abandoned is that the basic block is still to be delivered at a later point in time?

THE CHAIR: Yeah. Yes.

MR. OUTHOUSE: So that concept would apply to forgivable events as well? That the 1.2 terawatt hours

has to be delivered on average during the term of this agreement?

THE CHAIR: Yes.

MR. OUTHOUSE: Okay. All right.

MR. MACDOUGALL: Outside of force majeure subject to the force majeure clause ---

MR. OUTHOUSE: Well ---

MR. MACDOUGALL: --- as stated in seven.

MR. OUTHOUSE: But force majeure could delay it and there is an aspect of the force majeure if there's an ultimate failure of the project. But otherwise force majeure events create delays not absolute relief and obligation?

THE CHAIR: Oh, I was following you until the last question Bruce and then ---

MR. OUTHOUSE: Pardon?

THE CHAIR: You lost me on your last question. I wasn't making the connection you were trying to make. No, that's not -- that's actually not how it works with the Energy Access Agreement because it's about availability.

If there's a force majeure the energy wouldn't be available so it doesn't just delay the delivery of energy if there's a force majeure.

MR. OUTHOUSE: Well I guess I'll go back to

my original question, it's a force majeure clause such as we find in the basic agreement for the block?

THE CHAIR: Yeah I -- so -- but you also said subject to being amended to and be -- in accordance with this -- the terms and conditions of this agreement. So that's the detail that needs to be negotiated as how exactly will that operate.

Will it be exactly the same as in the other agreements, it could be but not likely because this is economy energy interruptible energy.

MR. OUTHOUSE: I don't have the agreement in front of me but force majeure is fairly broadly defined in the original agreements. That definition would be acceptable because in lots of those force majeure events there's still to be delivery as I understand it of the basic block, notwithstanding the force majeure over time.

Force majeure may last for two weeks, a year but ultimately there was to be delivery of basic block in most events other than if the project failed in effect?

THE CHAIR: Yeah. And the basic block's firm power that we're paying for ---

MR. MACDOUGALL: Yeah. Sorry I was just going to say that provision is in that agreement because that's pre-paid for energy which must be delivered. That concept isn't being carried over into this agreement.

So Bruce you were talking about the force majeure event. The force majeure events may be similar. Circumstances, what will happen during force majeure are not. This clause is subject to force majeure.

It's not the same principle. It's a total -- this is excess surplus energy and this is not a purchase commitment such as the Nova Scotia block.

MR. OUTHOUSE: So the effect would be then that that energy would not -- the 1.2 would not ultimately deliver -- be delivered in the event of force majeure events?

THE CHAIR: It could interrupt that -- yes, it could interrupt that ---

MR. OUTHOUSE: Not only interrupt, it might mean the average wasn't met?

THE CHAIR: Yes, that's correct.

MR. OUTHOUSE: All right.

THE CHAIR: Other questions? We are pushing the Westin's time period and I want to stay here as long as I can but pretty soon I'm not going to be able to stay.

MR. MAHODY: Rene, just two follow up questions. In relation to sunk transmission there's a definition in the agreement that it means Nalcor's long term transmission reservations.

Was there any consideration given to what

was representing long term?

MR. SIDEBOTTOM: Long term under tariff is typically one year or more of commitments.

MR. MAHODY: And on a related point that had arisen earlier regarding the term of the agreement you had on your screen earlier Rene paragraph 228 of the Board's Decision.

THE CHAIR: Yes.

MR. MAHODY: A couple of paragraphs before that in 226 the Board said:

"The Board will impose the condition relative to the availability of market priced energy over the thirty-five year term."

Is it your position that that -- you weren't seeking to fill a thirty-five year term? The twenty-four still fulfills that condition?

THE CHAIR: I think what we would say is that after 2041 the market price energy will be available and I think the Board said that as well. The term of the original contracts, the formal agreement says the thirty-five year term and I think the Board appropriately used that reference for thirty-five years.

We believe that market priced energy will be available in the volumes needed to serve Nova Scotia Power through this agreement plus the energy that's going to be

available in the market after 2041 for the rest of the thirty-five years.

MR. MAHODY: But beyond that belief in what we have in the agreement that's been signed there's nothing that runs beyond -- to take us from year 2040, year thirty-five is there?

THE CHAIR: No, that's right. The agreement ends in 2041 and nothing that takes us to the rest of the thirty-five year period but it's -- I mean the Board's -- the Board has concluded that energy will be available after that time. Bruce?

MR. OUTHOUSE: Rene, if nobody else has a question I do and it's really for NSPI. The -- this agreement contemplates the possibility of either front-ending or back-loading the average.

And I'm wondering what impact that has on NSPI's ability to get the same value out of the surplus energy purchases as was contemplated in the low load case in U(3)?

MR. SIDEBOTTOM: So there's an ability to have access up to 1.8 gigawatts a year, not unlike our hydro systems we would use an average through time and most intermittent resources are best estimated using that methodology, Bruce.

So those are -- give us comfort that it's a

very reasonable ability that we'll get the same value or very equivalent value. It might come in different years. In the years where there's excess or more energy available market pressures will also provide more opportunity on the pricing which is not reflected.

So there's a number of factors that also allow us to see that there'd be benefits when there's excess energy. And there'd be years when there'd be shortfalls and we'd find other options internally.

MR. OUTHOUSE: Mr. Sidebottom just to -- in more general terms, is it NSPI's position that this agreement gives them sufficient flexibility to solicit and utilize this energy as it was contemplated at the time when you were in the original application and purchasing surplus energy?

MR. SIDEBOTTOM: Yes, it does.

THE CHAIR: Okay. It looks like we've run out of steam or energy. We're not supposed to run out of energy, right Paul?

MR. CHERNICK: Right.

THE CHAIR: But we're done for the day I think which is just in time before the Westin marches us out of here. I almost would have had to ask you to take a chair with you for them. Anyway thanks very much for being here this afternoon and for your questions. Very

thoughtful.

I hope we were able to give you some answers that were helpful to you in preparing for the hearing next week. I do want to remind you that this has been recorded and we will transcribe it -- have it transcribed overnight and I will make sure it's available to everyone in the morning so you have a record of it.

Thanks very much.

--- Upon concluding at 3:55 p.m.

CERTIFICATE OF COURT TRANSCRIBERS

We, Gwenyth Smith-Dockrill, Janine Seymour, Diana Saxby and Sandra Adam, Court Transcribers, hereby certify that we have transcribed the foregoing and it is a true and accurate transcript of the evidence given **MARITIME LINK COMPLIANCE FILING - TECHNICAL CONFERENCE**, taken by way of electronic recording on Monday, October 28, 2013.

G. Smith-Dockrill

Gwenyth Smith-Dockrill

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Halifax, Nova Scotia

Tuesday, October 29, 2013