YUKON UTILITIES BOARD

IN THE MATTER OF
the *Public Utilities Act*
Revised Statutes of Yukon, 2002, c. 186, as amended

and

AN APPLICATION BY Yukon Energy Corporation FOR AN ENERGY PROJECT CERTIFICATE AND AN ENERGY OPERATION CERTIFICATE REGARDING THE PROPOSED Mayo Hydro Enhancement Project (MAYO B)

P R O C E E D I N G S

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R. Hancock	Board Member
K. Avery	Board Member
J. Woodland	Board Member
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D. Ward	Board Staff
S. Smart	Board Staff
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M. Buonaguro	Utilities Consumers Group
S. Wright J. Pinard A. Middler	Yukon Conservation Society
J. Babyn C. Steinbach	Yukon Electrical Company Limited
D. Gerbrandt CSR(A) B. Ball CSR(A) RPR CRR	Court Reporters

THE CHAIR: Good morning. I would like to call this hearing to order. I would first of all like to introduce the Board panel. To my left is fellow Board members Kathleen Avery and Richard Hancock, and on my right is Bob Laking, who is the vice-chair, and Jody Woodland. And my name is Bruce McLennan and I'm the chair. 09:17

Board counsel is Giuseppa Bentivegna, and Board staff are Dwayne Ward and Sheena Smart, and they're seated over to our left.

Today starts the public hearing phase of Yukon Energy Corporation's (YEC) application filed on December 11th, 2009, with the Minister of Justice, Marion C. Horne, for an energy project certificate and an energy operations certificate for the Mayo Hydro Enhancement Project, also known as Mayo B.

These certificates are applied for under Part 3 of the *Public Utilities Act* as Mayo B has been designated in OIC 2009/220 as a regulated project pursuant to Section 36 of that Act. 09:18

The Minister of Justice referred this application to the Yukon Utilities Board (YUB) for review and hearing in accordance with the terms of reference set out in her letter dated December 18th, 2009. The Minister provided, in part, the following background for the terms of reference, and I'll read through them individually.

A. On July 5th, 2006, the Minister of Justice requested that the YUB carry out a review and hold a hearing on YEC's 20-year Resource Plan: 2006 to 2025. As part of the Resource Plan, YEC proposed planning activities to protect YEC's ability to commit to development of major generation and transmission projects before 2016 to meet the 09:19

needs of the potential major industrial development opportunities.

B. The proposed Mayo B project was identified as one of the hydro enhancement options to be considered regarding grid-related industrial load growth if the Carmacks-Stewart Transmission Project (CSTP) was completed. Completion of the CSTP is expected by the end of 2010 or early 2011. Since the Resource Plan, grid-related industrial growth is occurring with the connection of the Minto mine in 2008, the expected connection in 2010 of the Bellekeno mine, 09:20
and ongoing planning to develop and connect the Carmacks Copper mine.

C. After a public review of the 20-year Resource Plan the YUB issued a report to the Minister of Justice on January 15th, 2007. The Board recommended that YEC continue to monitor potential material load additions and, when warranted, make a filing with the Board when new facilities are required to meet these increased loads.

D. Mayo B will enhance YEC's existing Mayo hydroelectric facilities and increase hydro generation 09:21
capacity installed on the Mayo River from the existing 5 megawatts to as much as 15 megawatts. Mayo B includes construction of a new powerhouse downstream of the existing powerhouse, the construction of related facilities, such as a tunnel penstock canal system, all-weather access road,

distribution line, transmission line, and temporary construction-related facilities and related adjustments to the management of water on the Mayo River systems downstream of the existing Wareham Dam.

E. A proposal for Mayo B was submitted in February 2009 to the Yukon Environmental and Socio-Economic Board (YESAB) under the *Yukon Environmental and Socio-Economic Assessment Act*, a Canadian Act, and is subject to a screening by the Executive Committee of YESAB. This process will lead to a recommendation by the Executive 09:22
Committee and a response by the Yukon government and other decision bodies in the form of a decision document. Any government authorization issued in support of Mayo B, including any energy project certificates or energy operation certificates under Part 3 of the *Public Utilities Act* will have to conform to the decision document of the Yukon government.

F. Mayo B will receive up to $53.3 million from the Government of Canada as part of the Canada-Yukon Energy Corporation Green Infrastructure Fund, an agreement 09:22
for the Yukon Green Energy Legacy Project 2009-2010 through 2011-2012, which is a Federal agreement.

The Minister stated that the general purpose of the review and hearing is to obtain the YUB's report and recommendations on the potential benefits, costs, risks, and

consumer impacts that influence whether Mayo B should proceed as proposed by YEC.

The Board was asked to report on and make recommendations about the necessity for Mayo B and its timing and design with particular regard to:

(a) The public need for Mayo B under the various reasonable electrical load forecasts, including near-term requirements and the affect of the project on the rates of customers.

(b) The capability of existing and currently committed new transmission and generation facilities to provide reliable electric power generation to meet the forecast load requirements. The YUB shall report on:

(i) the implications of approving Mayo B prior to the environmental and socio-economic assessment and regulatory approvals of the Mayo Lake drawdown, including how, if at all, Mayo B's expected impact on YEC and its customers differ according to whether the Mayo Lake drawdown is permitted or not;

(ii) the relationship between Mayo B and CSTP Stage 2 completion; (iii) the effect the completion of Mayo B is

09:23

09:24

expected to have on the ongoing of use of diesel generation at various locations under various reasonable electric load forecasts;

(iv) other implications of Mayo B to the system reliability, customer rates, and economic growth in the Yukon.

(c) The risks facing Mayo B and their potential impacts on rates for customers including but not limited to the risks arising from: 09:25

(i) changes to general economic, market and financial conditions;

(ii) any mitigation measures and/or modifications to project design or schedule required by the environmental and socio-economic assessment and regulatory approvals;

(iii) the timeliness and other conditions contained in the Federal agreement; 09:25

(iv) load forecasts, both industrial and residential not being realized;

(v) unanticipated cost overruns or project financing capability;

(vi) the possibility that the Mayo Lake

drawdown does not proceed.

(d) What, if any, alternatives to Mayo B might be advisable given reasonable load assumptions and risk assessments. In particular, the YUB shall report on:

(i) possible alternative configurations for timing and structure of the Mayo B as proposed by YEC; and

(ii) whether it is prudent to build Mayo B at this time.

The Minister refined the terms of reference in a letter to the Board on February 15th, 2010. In that letter the Minister clarified that the general purpose of the review did not have other more specific purposes. 09:26

Secondly, the Minister noted that the YUB is not required to report and make recommendations on each of the items identified in the December 18th, 2009 terms of reference but should "focus on these items that in its judgment bear most directly on the decision to be made in respect of the application."

Finally, the Minister asks that the YUB submit its report and recommendations to the Minister no later than February 16th, 2010. 09:26

The Board set up the process which has culminated in the start of today's hearing. The process began with the issuance of notice of the application and the

following procedural steps. So I'll read you the action and the due date for each of these steps.

The first one was the application for intervenor status, and that was due on February 8th; notification of intervenor status, which was due on February 12th; information requests to YEC, due February 26th; YEC response to information requests, due March 8th; intervenor evidence, March 16th; information requests on intervenor evidence, due March 23rd; information responses on intervenor evidence, which was due March 30th; and, finally, these oral public hearings, including oral argument and reply that are slated for between 6th and the 9th. 09:27

I will now ask Ms. Bentivegna to proceed to register the parties.

MS. BENTIVEGNA: Thank you, Mr. Chair.

Who represents Yukon Energy Corporation?

MR. LANDRY: Thank you, Mr. Chair. My name is John Landry, that's L-A-N-D-R-Y, for the record, and I represent Yukon Energy.

MS. BENTIVEGNA: Thank you. Who represents City of Whitehorse? 09:28

MS. KELLGREN: Kristjana Kellgren, K-E-L-L-G-R-E-N, on behalf of the City of Whitehorse. I'm joined by Keith Dannacker. D-A-N-N-A-C-K-E-R.

MS. BENTIVEGNA: Thank you. Utilities

Consumers Group?

MR. BUONAGURO: Good morning. Michael Buonaguro, counsel for UCG, and with me is Michael Rondeau from the UCG.

MS. BENTIVEGNA: Thank you. Who represents the Yukon Conservation Society?

MS. WRIGHT: Sally Wright, W-R-I-G-H-T, and I am assisted by Jean-Paul Pinard and Anne Middler.

MS. BENTIVEGNA: Thank you. And who represents Yukon Electrical Company Limited. 09:29

MR. BABYN: Good morning. My name is Jerome Babyn, and I'll be representing Yukon Electrical at these proceedings, and accompanying me is Craig Steinbach, also with Yukon Electrical.

MS. BENTIVEGNA: Thank you. There's no other registered intervenors, but are there any other parties today that wanted to participate?

Seeing none, Mr. Chair, I give it back to you.

THE CHAIR: Thank you.

The process the Board will follow today is as 09:30 follows: As the applicant, Yukon Energy Corporation, will present its case, and its witnesses will be subject to cross-examination by the intervenors in the order in which they were registered. Then Board counsel and the Board will follow. YEC will be given an opportunity for a redirect.

Then the Yukon Conservation Society will seat its witness panel. YEC may cross-examine, followed by the intervenors in the order of registration and then, following, Board counsel and the Board. YCS will have an opportunity for redirect.

At the end of the evidentiary portion of this hearing, the applicant will give its arguments, followed by the intervenors in the order of registration, and the applicant will have an opportunity to reply.

Seeing the number of issues in this proceeding, the Board asks each party to use section 3 on page 3 to its December 18th, 2009 letter as an outline. 09:31

To facilitate efficient marking of exhibits, Ms. Smart has circulated a list of the exhibits received to date. The Board has marked that list as Exhibit A15.

Any further questions with respect to procedures or process should be directed to YUB counsel, Ms. Bentivegna.

And for this hearing, we intend to sit from -- well, from 9:00 to 5 p.m. each day. We plan a mid-morning break of about 15 minutes at around 10:30, and that may be a little bit later this morning, and a lunch break from 12:30 to 2 p.m., and then in the afternoon a 15-minute afternoon break at 3:45 each day. The Board may sit longer, depending on the progress of the hearings. 09:31

I'll remind you that there is an Internet location over on that board in terms if you want to use the Internet at the hotel, and I would ask you to turn off all your cells.

Are there any preliminary matters? If there's not, YEC may proceed.

MR. LANDRY: Thank you, Mr. Chair. Just as a couple of housekeeping matters, Mr. Chair. There have been two filings in the last several days by Yukon Energy, and I would like to ensure that they have exhibit numbers. The first filing was a letter dated April 1st, 2010, from myself to the Board, which contained the curriculum vitae of the panel members. I wonder if that could be marked as the next exhibit, which I believe is B7. 09:33

THE CHAIR: Ms. Smart will get that for you.

MR. LANDRY: Thank you.

EXHIBIT B7 - LETTER DATED APRIL 1ST, 2010 FROM MR. LANDRY TO THE BOARD WITH THE CURRICULUM VITAE OF THE YEC PANEL MEMBERS. 09:33

MR. LANDRY: The second filing, Mr. Chairman, was the opening statement of the panel members, which was filed yesterday, and I wonder if that could be marked as Exhibit B8, please.

THE CHAIR: So, Ms. Smart, are those numbers correct?

MS. SMART: Yes, they're in order.

THE CHAIR: So marked. Thank you.

EXHIBIT B8 - OPENING STATEMENT OF THE YEC PANEL MEMBERS.

MR. LANDRY: Thank you, Mr. Chairman. First of all, I would like to introduce the panel to the Board members and also to the other parties and then ask that the witnesses be sworn after that. 09:34

To your immediate right, Mr. Chairman and Board members, is David Morrison, who is the president and CEO of the Yukon Energy Corporation, and to Mr. Morrison's right is Cameron Osler, who is a principal at the consulting firm of InterGroup in Winnipeg who consults for Yukon Energy.

The panel members will go a little bit further than that, but their CVs are contained in Exhibit B7, as I've indicated to the Board, and perhaps at this time the panel members could be sworn.

D. MORRISON, C. OSLER (For Yukon Energy Corporation), 09:34 affirmed, examination in chief by Mr. Landry:

MR. LANDRY: Mr. Chairman, as I indicated earlier, and it's now been marked as an exhibit, B8, the panel has some opening comments that it would like to make to the proceeding, and I would put it over to Mr. -- oh, yes.

My colleague has indicated we do have extra copies here. It was sent out to all of the parties of record by e-mail last evening, but I do have some hard copies that can be handed out.

THE CHAIR: Did you want to circulate those?

MR. LANDRY: Yes. That's probably a good idea first. Does the Board need copies?

THE CHAIR: You know, I wouldn't mind having a copy. I have it on the computer screen, but it's easier to look at a hard copy, and Ms. Smart should get a copy. 09:36

MR. LANDRY: Mr. Chairman, now that the written opening has been circulated, it's over to the panel now for comments.

A. MR. OSLER: Thank you.

A. MR. MORRISON: Thank you, Mr. Chair.

Mr. Chair and members of the Panel, Yukon Energy welcomes the opportunity today to be in front of the Yukon Utilities Board for the review of the Mayo Hydro Enhancement Project, Mayo B as mentioned earlier -- sorry, for the Mayo B project application that Yukon Energy filed in December of 2009 to the Minister of Justice for an energy certificate under Part 3 of the *Public Utilities Act*. 09:37

Yukon Energy has, over the last number of

months, worked diligently with both the Federal and territorial governments to ensure that Mayo B will be an outstanding legacy asset for Yukon ratepayers, a $120 million renewable hydro enhancement that will cost ratepayers 36 and a half million dollars spread over 65 years, an asset costing ratepayers over these 65 years less than 9 cents a kilowatt hour to displace diesel energy generation costing more than 25 cents a kilowatt hour resulting in cost savings for ratepayers in every year of its operation, an asset that will not increase electricity rates. 09:38

Mayo B will be by far the largest enhancement of Yukon's renewable hydro generation resources since construction of the Whitehorse 4 unit in the 1980s. It will enhance the Mayo facilities similarly to the way that Whitehorse 4 enhanced the Whitehorse hydro plant.

Mayo B's additional 10 megawatt enhancement at the existing Mayo facility will roughly double the amount of annual hydroelectricity that can be generated on the Mayo River downstream of the existing Wareham Dam without requiring a new dam structure. Completion of the 09:39 Carmacks-Stewart Transmission Project Stage 2 by early 2011 will ensure that the added energy from Mayo B can be used as required through both the Whitehorse-Aishihik-Faro and Mayo-Dawson grids. As a result, Mayo B will reduce the future requirement to use diesel generation in Yukon

providing considerable cost savings for ratepayers and reducing greenhouse gas emissions.

During the recent 2008/2009 GRA proceedings, Yukon Energy reported that electricity energy requirements on the two grids will outstrip available surplus by 2012 due to the projected load growth over both the near and longer term and that Mayo B is only one of several renewable generation projects that will be needed to meet future system energy requirements using renewable generation instead of diesel.

At its core, Mayo B reflects an extraordinary 09:40
opportunity to reduce diesel generation in a cost-effective and timely manner to the benefit of ratepayers in the near as well as the longer term.

Forecast diesel generation required to meet the increasing system loads and available no-cost funding from governments both enhance the timing of -- of the Mayo B opportunity today. Yukon Energy has been clear that notwithstanding the forecast load growth, it could not proceed at this time with the Mayo B project without the significant no-cost capital by both the Federal and Yukon 09:40
governments.

Even though Mayo B provides an additional 10 megawatts of winter generating capacity to the grids, the main purpose or need for Mayo B through 2019 and beyond is to provide a source of economical, renewable energy to supplant

base load diesel generation requirements rather than to provide additional capacity. Our cost benefit assessments of Mayo B have focussed primarily on its diesel energy displacement benefits without attempting to quantify its additional capacity reliability benefits.

Mr. Chair, Yukon Energy realizes that the purpose of the current YUB review and hearing is to provide the Minister with the Board's report and recommendations on the potential benefits, costs, risks, and customer impacts that influence whether Mayo B should proceed as proposed by 09:41
Yukon Energy. Our application and our responses to our various information requests from the Board and intervenors addresses these matters and demonstrates the clear material net benefits to ratepayers in both the near and the long term.

YEC's Part 3 Application for Mayo B continues to honour Yukon Energy's ongoing commitment as set out in our 20-year Resource Plan 2006 to 2025 to seek an open and transparent public review by YUB of large capital products.

Recently the Yukon Conservation Society and 09:42
others have raised concerns in the media with regard -- sorry, and with the YUB regarding the timing of this YUB review process, noting that this review is being undertaken before the Yukon Environmental and Socio-economic Assessment Board before the process has been completed and final permits

issued in suggesting that YEC has surprised parties by proceeding to finalize a Mayo B construction contract at this time. In this regard, YCS and others have suggested that Yukon Energy is sidestepping the regulatory process and dodging regulators and placing undue pressure on the YUB to rubber stamp this project.

Yukon Energy fundamentally takes issue with any such suggestions that seek to denigrate the current YUB review. It is simply inappropriate for parties who are a formal intervenor in this process to make such statements 09:43 that totally fail to reflect the record filed in this proceeding as well as in the YESAB proceeding.

Throughout each of the regulatory filings, the approach taken by YEC relating to such issues as the timing of construction and the need to enter into contracts early in 2010 for long-lead equipment and with a contractor which would construct the project have been clearly and transparently laid out both in the application and in -- sorry, both in this application and the YESAB application.

The Board is proceeding in accordance with the 09:43 terms of references set out by the Minister. Its scope and timing was set with full knowledge of the concurrent YESAB process, the no-cost government funding commitments, and the related timing requirements, and the ongoing schedule and timing of YEC's Mayo B project.

In the context of both the Minister's terms of reference and the intent of YEC'S ongoing commitment to seek YUB review prior to construction of any new capital project costing 3 million or more, we note that this hearing is not intended to be either a broad review of Resource Plan options and requirements or a revenue requirement review of the extent to which Mayo B costs have been or will be prudently incurred and should be recovered through rates. Such matters are to be properly addressed in other YUB reviews, including the next GRA for Yukon Energy. 09:44

The current YUB review of Mayo B is part of an orderly process that Yukon Energy initiated in 2005 to address key regulatory issues in the Yukon, including the need to initiate resource planning activities to address future major capital bulk power supply options.

The resource planning process that commenced in 2005 included a review of system capability, forecast system requirements, new facility requirements, resource options, and an assessment of resource options for a 20 -year period, 2006 to 2025, in order to identify preferred options 09:45 to be further defined in the pre-decision planning stages of development.

The Resource Plan is then proposed to also stipulate that before a final decision to proceed with construction of a capital project greater than 3 million,

Yukon Energy would ensure that each of the following pre-decision planning stage milestones were achieved: YUB review through Part 3 or other process; consultation with First Nations and others as required; environmental assessment and licensing; arrangements with project partners, if any; financing planning; final design, costing, and contract approach; and tendering to secure final costs. And that scheme is also worked out in the diagram that is included here.

A balanced approach was proposed to ensure 09:46
that Yukon Energy is sufficiently prepared so as to protect feasible options to proceed with power projects quickly once new industrial loads develop while at the same time not spending more than is prudent today to protect in advance potential power projects by, for example, proceeding to detailed phase feasibility stages based on mere load speculation or industrial development scenarios that are highly uncertain.

The Resource Plan hearing in 2006 focussed at
a detailed level on the short-term capital requirements for 09:46
commitment prior to 2009 to meet capacity demand requirements and to take advantage of opportunities to develop infrastructure, to utilize the current hydro surplus with available low-cost capital contributions to the benefit of ratepayers. The review did not seek approval of costs for

any specific project as before any capital expenditures are put into rates, these would need to be reviewed by the Board as part of a general rate application.

The Board's review of Yukon Energy's 20-year Resource Plan in 2006 resulted in the Board's January 2007 report and recommendations to the Yukon government. Key recommendations were made related to several near-term projects to enhance transmission and generation capacity on the grid.

The report also endorsed the long-term 09:47
planning approach advanced by Yukon Energy in the 20-year Resource Plan noting that when YEC proposes a new facility, YEC is to outline the risk of proceeding, the benefits to existing ratepayers, and sensitivities to existing ratepayers if the economic life of the project is shorter than forecast.

Yukon Energy has been following the planning process commenced in 2005 and set out in the 20-year Resource Plan endorsed by YUB in his reports and recommendations to the Minister January 2007.

Subsequent to the Resource Plan review process 09:48
in 2006 and the Carmacks-Stewart Transmission Project Part 3 hearing in May 2007, it became apparent that reduced available surplus hydro generation due to new or expanding loads on the system was advancing the timing for potential renewed base load diesel generation.

Yukon Energy discussed this concern during the 2008/2009 GRA noting that the current hydro generation surplus at long-term average flows after Carmacks-Stewart Transmission Stage 1 and Minto connection and before any secondary sales would be fully utilized by firm sales on WAF sometime between 2011 and 2014 and the connection of new industrial loads as soon as 2010/2011 could lead to the requirement of 50 to 100 gigawatt hours of base load diesel generation within the 2010 to 2015 time period.

In mid 2007 Yukon Energy initiated an update 09:49
of the studies of hydro sites and enhancements for near-term development. Based on this review, no greenfield hydro generation sites were considered to be competitive with hydro enhancement options due to the fact that enhancements to current infrastructure typically do not involve the same extensive planning timelines, costs and complexities as new greenfield projects.

Mayo B was identified in this review as the largest available new energy enhancement opportunity for Yukon Energy's existing hydro generation facilities and the 09:49
only such enhancement opportunity that could feasibly be licensed and built to be in service by 2012.

Ongoing feasibility and planning work continues to be undertaken for near-term development of Aishihik plant enhancement through the Gladstone diversion

and Whitehorse plant enhancement through small-scale Atlin winter storage and Marsh Lake fall/winter storage.

Both geothermal and wind generation continue to be investigated as potential future renewable generation options for Yukon Energy, but, given the timing and then-existing state of knowledge and experience, these were not considered as feasible near-term alternatives to the Mayo B project.

During the recent 2008/2009 GRA, Yukon Energy provided up-to-date information related to the business case for Mayo B, including a review of estimated costs to date as prepared by KGS Group and YEC, risks of proceeding with the project or not proceeding with the project, ratepayer impacts, alternatives to Mayo B considered, and the level of deferred costs expected to be incurred in 2008 and 2009 to develop this project. In the reasons for decision accompanying Order 2009-8, the Board again endorsed Yukon Energy's planning processes. 09:50

Since the 2008/2009 GRA filing in October 2008, Yukon Energy has engaged in the feasibility and planning activities required to make a decision to proceed with the Mayo B project, including the following key steps prior to filing its Mayo B Part 3 Application in December 2009. 09:51

Let me just go through a few of these. YESAB

Mayo B project proposal was filed February 27th, 2009. The YESAB process is required to be completed with issuance of decision documents prior to issuance of any permits or licences that would allow this project to proceed. The YESAB filing set out and in-service date for Mayo B at the end of 2011 with a construction start by May 2010 and the Turbine/Generator tender in September 2009. By early December 2009 when the Part 3 Application was prepared YEC had removed the Mayo Lake storage enhancement component from the YESAB Mayo B project proposal. The YESAB Mayo B review 09:52
process had advanced to the screening stage and a draft screening report was expected by January 31st, 2010.

The Federal Government Infrastructure Funding Application was filed March 2009, approval of the application was announced May 14th, 2009, and a funding agreement was signed with Canada August 31st, 2009. Yukon Energy in its YESAB proposal and in responses to interrogatories provided during the 2008/2009 GRA made it clear that it could not proceed with Mayo B at this time absent significant no-cost Infrastructure Funding contributions. The Federal 09:53
Contribution Agreement addresses this basic precondition, but it also requires the project to be substantially complete by March 31st, 2012.

May 2009 final planning stages for Carmacks-Stewart Transmission Project Stage 2: The Federal

Minister's approval in May 2009 of YEC's Government Infrastructure Funding Application provided one key precondition to allow YEC to proceed with final planning for Carmacks-Stewart Stage 2 for in-service by early 2011. Carmacks-Stewart completion before summer 2011 was an important requirement within the overall Mayo B construction schedule for in-service by the end of 2011 or early 2012.

The selection process for a memorandum of understanding construction contractor in June 2009. The construction management approach followed by Yukon Energy 09:54
allowed for early competitive selection of a construction contractor in the spring 2009 with selection of Peter Kiewit Sons through an MOU contract awarded in June 2009. Through the MOU with Kiewit, Yukon Energy established procedures to arrive at an open book procurement and construction contract that included an agreement upon construction and development schedule -- sorry, included an agreed-upon construction and development schedule and target pricing formula. This approach was adopted to reduce price and risks of delay and risks related to the lack of contractor participation in the 09:54
early stages of project design.

While working to secure a final construction agreement, the contractor worked with YEC and its design engineer, KGS, in reviewing preliminary designs and cost estimates and the tender process for selecting the

turbine/generator supplier. By early December 2009, YEC had updated capital cost estimates from this process and agreed to commercial terms with Kiewit that formed the basis for finalizing a construction contract.

The turbine/generator was identified as the key long-lead equipment for the project that needed to be tendered in the fall 2009 to enable this equipment to be installed on site in the fall of 2011. On September 16th, 2009 Yukon Energy issued an RFP for a turbine/generator supplier, and on February 6th, 2009, this process closed. An award was made after the Part 3 Application was filed. 09:56

The Yukon government designation of Mayo B as a regulated project pursuant to Part 3. While Yukon Energy is committed to seeking YUB review of capital projects greater than $3 million, neither Yukon Energy nor the Board can initiate a public review absent necessary direction from the Yukon government. In this case, the designation of Mayo B by an Order-In-Council as a regulated project allowed Yukon Energy to initiate a Part 3 Application and, pursuant to the process established under the Act, allows the YUB to undertake a public review of the project. 09:56

The additional no-cost funding provided by the Yukon Development Corporation. This no-cost funding was committed in December prior to the Part 3 Application. In combination with the funding provided through Canada, the

Green Infrastructure Funding Agreement, it reduces the cost of the project to be borne by ratepayers from $120 million to $36.5 million.

Following the designation of the Mayo B project as a regulated project, Yukon Energy prepared and submitted its Part 3 Application on December 11th, 2009.

Mr. Chair, with your permission I'll let Mr. Osler carry on from here.

THE CHAIR: Yes. Proceed.

A. MR. OSLER: Mr. Chair, I'm going to give a brief overview of the application and updates that have happened since we made the filings of our material. 09:57

With respect to the application, it provides the information on Mayo B as prescribed by Order-In-Council 2007/50, which sets out what must be submitted for a regulated project application under the Act. It describes the applicant, the project description, the project justification, the consultation undertaken, and other applications and approvals that will be required.

The following are some of the highlights that we think would be useful to highlight today from the application. Attachment A to this Exhibit B8, we've included the tables and figures that I'll refer to from the application. 09:58

The first is Table 1, which appears in the

application at page 12, and summarizes the project costs and financing. Mr. Morrison has said that it's a $120 million cost estimate and the first part of the table shows the funding sources of Federal grants of 53.5 million. That's out of the 71 million in the agreement that's attached. The remaining 17.65 million, Mr. Chairman, goes to Carmacks-Stewart's Project Stage 2.

The second funding contribution is YDC through the attachment to the filing number F, the Minister's letter to YDC. It's 30.15 million towards Mayo B out of a 52.5 million commitment in the Minister's letter. The remaining 22.35 million goes to Carmacks-Stewart Stage 2. 09:59

That leaves, of the 120 million, 36.5 million as the amount to be recovered and funded by YEC. The YDC contribution will be made by way of a contribution to YEC, so that effectively the net rate base on YEC's books will be 36.5 million based on these numbers.

The first note to this table explains that the Federal contribution was based on an estimate of -- a rule of 50 percent of what the government called eligible costs. It excluded costs before the Minister's approval, which was May 14th. It excluded also various owners costs. It was based on estimates that YEC had provided in its application to the Minister, which totalled 106.6 for B, allocated 53.35 million towards this project, Mayo B. That's how the Minister 10:00

determined the amount that would be allocated to 53.35 million towards this project, Mayo B.

The second note said that YEC sought government and industry funds as needed to keep Mayo B levelized costs within a range of 8 to 10 cents. Levelized cost is the cost of energy over the life of the project per unit of energy output in a present value of cents for the net generation, meaning the generation that's actually displacing diesel. 8 to 10 cents was laid out in our application to the YESAB, was laid out in the GRA last year as the type of 10:01
target number that Yukon Energy thought was appropriate to try and get the costs for this down for ratepayers.

Based on the 36.5 million net costs for rate base, the levelized cost of energy over 65 years at the last GRA cost of capital for 2009 of 8.49 percent for return on equity and 5.28 percent for long-term debt, 40 percent of the rate base being financed by equity, 60 percent by debt, which has been Yukon Energy's long-term approach and commitment and realization, including the capital costs, the operating costs as projected, net added secondary sales recoveries, and what 10:01
we call base case forecast net generation, meaning the generation that actually displaces diesel at the base case forecast, which includes the Carmacks Copper mine connected by 2012, and as well as other elements that have been set out.

The result is with the Mayo Lake added storage of one meter, it's 6.69 cents LCOE, levelized cost of energy. That number, Mr. Chairman, is the number that would apply in the first year of operation. Every year thereafter it would increase by inflation, the way these numbers are calculated.

If you did that over the 65 years with the forecast cost, you would pay your operating costs, and you would pay off the capital, and you would pay the capital costs for debt and equity that I just described based on the forecast. Without the Mayo Lake licence change, no drawdown -- extra drawdown -- the same number would be calculated at 7.59 cents. 10:02

The bottom line is that the results came within the range or better than the 8 to 10 cents target that had been set by the corporation as a requirement to go forward.

The final note, which we'll talk about today I'm sure, is flexible debt financing with YDC will cap annual net generation costs at 10 to 11 cents. I'll just say this, Mr. Chairman, the concept that the third note represents is very much a short-term special matter that does not go to the fundamental economics of the project. It goes to trying to help ratepayers not pay -- won't have any rate increase, even though this is a good project, in the short term, the first ten years or so, because a capital project tends to have 10:03

higher costs in the first few years as you write down the rate base.

So this has got nothing to do with the fundamental economics. It's got a lot to do with trying to help ratepayers not be penalized today for something that's going to last for 65 years and will benefit people in the long run.

The next one I would like to turn to is the next page, Figure 1 from the application, which is at page 14 of the application. This gives us a picture of what happens 10:04
over the first 35 years of the 65 years. So if you wanted to see the picture for the full 65 years you have to carry this graph on out to the right, but you get the picture pretty quickly.

It's intended to show what are the costs per year and the savings per year, rather than just looking at the whole thing in a present value sense. So it goes from 2012, first year of operation, through the first 35 years, to 2046.

First of all it shows the Mayo B costs. This 10:04
would be the way we would normally calculate the 36.5 million each year for rate purposes, the net rate base that would be left less depreciation -- that's why it goes down each year -- with a rate base depreciation and the return on capital for interest and equity, as well as a provision for

operating costs each year, increasing by inflation.

This line tends to slope down as you would expect for any capital intensive project, generation and transmission. There are two lines: one is dotted, and one is solid. The dotted line, the higher one, is without any government contributions. That's the full $120 million cost. The bottom line is what ratepayers would see under the application, which is the $36.5 million cost after the government contributions from Canada and YDC.

The line in the middle that goes up, goes down, and then goes up again, climbing off to the right, is the estimate of the savings in diesel generation as a result of Mayo B. This is the diesel that we are estimating is displaced by building this project. It's valued at a price in 2012 of 26.38 cents, which is explained in footnote 42 in the application. I'll go there in a minute. The 26.38 cents, as the footnote will explain, is a fuel cost plus the incremental operating cost. It is not a capital cost for running a diesel. 10:05

The line goes up and then comes down reflecting our forecast that we've assumed in the base case for mine loads. As I said, this includes Carmacks Copper, but it also includes Minto and what we call Alexco, which is Bellekeno in the Minister's term of reference. 10:06

We've assumed in our base case forecast that

there would be no mine loads after 2018. That's why it comes down. We can discuss today the reasonableness of that assumption, but it is, I will say, conservative. It's saying even if there's no mine loads and we just looked at the non-industrial load forecast for the two grids, what are we saving in terms of diesel in the future.

The concept of net generation we'll talk about, I'm sure, during the hearing, but I repeat it is not the total generation from Mayo B, it's the amount of that total generation, the portion of it, that is actually displacing diesel. It varies depending on the forecast loads that are available. Obviously if we had loads too low, we wouldn't be able to displace any diesel. We would just be adding to the surplus. So we have tried to keep that point very much in our minds. 10:07

The only other comment I would make in footnote 42 is that it should be corrected to -- I looked at it today, and it's -- it's at page 29 of the application, and it says, in the second last line, "plus 1.7 cents per litre." That should be cents per kilowatt hour. Then is says the diesel generation costs 26.38 cents per litre. That should be cents per kilowatt hour. For some reason we missed that. 10:08

Effectively the next figure that we've shown is Figure 2 from page 29 of the application. This figure shows the total forecasts of what we call the IS, which is

the integrated system; the WAF, Whitehorse-Aishihik-Faro; and Mayo Dawson, MD, systems integrated, which they will be with Carmacks-Stewart. So we'll be living with this new reality.

It shows, again, the first 35 years. It shows you the contribution from existing hydro resources. It shows the contribution from Mayo B, the little slice in the middle up at the top, and it shows you the diesel that is still left. The bottom line is the years going out to 2046 from 2012.

Now, the purpose of this -- I want to make a 10:09
couple of points. First of all, is this graph as shown does not show Fish Lake hydro. It does not show wind. The loads in this graph have been calculated net of those what we call non-dispatchable generation sources.

The second thing it's making is that Mayo B does not get rid of all the diesel. It makes a contribution, but there's lots left. There's lots more to be done. This is not a panacea, this is a step connected to Carmacks-Stewart development, connected to enhancement of existing hydro, but not the final answer for dealing with 10:10
diesel requirements as the future loads show in Yukon.

In the application, in Attachment D, we show the same graph without Mayo B at page D-5. They do show fish, lake, and wind in that graph, which is a very small line at the bottom. The text around that discusses how much

energy diesel requirements would be without Mayo B, what type of costs those diesels would be, and what impacts they would make on the revenue requirements. The integrated revenue requirement of what consolidated revenue requirements are of YEC and YECL in 2009 with the Minto load for ratepayers in this territory is about $50 million a year.

So when you start looking at diesel costs, it could be 10 to 15 million dollars a year. You're talking about impacts on rates from diesel that are material. And the exercise we're talking about here is to reduce that 10:11
adverse impact from diesel that would otherwise be required by a new renewable resources.

I think the final one we wanted to look at is Figure 4 from page 39 of the application. Figure 4 shows the same type of structure, the figure as in Figure 1. It shows the cost of the Mayo B plant, the downsloping line, the solid line. It doesn't change. It's the same costs whether we have a Carmacks Copper mine or not. What changes is that the "diesel saved" line comes down because we don't have as much opportunity to save diesel. 10:12

The point of the Figure 4 is that the diesel saved each year is still more than the annual costs of Mayo B at the 36.5 million. Ratepayers save money every year, and that's without getting into any flexible debt or other issues like that, just normal ratepayer charges at a 36 and a half

million dollar facility to generate the energy that is used to displace diesel.

Footnote 68 indicates that the long-term -- that the levelized cost of energy from Mayo B without Carmacks Copper is 7.3 cents, and I'm going back to the text at page 9 of the opening statement, Exhibit B8. So it's still well below the 10 cent, even without Carmacks Copper and even if we had no enhanced storage at Mayo Lake, 8.19 cents, it's still well within the 8 to 10 cent target range.

So even if we did not get Carmacks Copper load at the time we're talking about, or at all in the next 65 years, we would still end up with a levelized cost of energy well within the 8 to 10 cent range, even if we never got Mayo Lake enhanced storage. 10:13

Dealing with risks, the application notes at page 34 that the largest single factor likely to affect whether Yukon Energy could proceed with Mayo B was addressed through the Federal Government's Contribution Agreement and the Yukon government commitments for no-cost capital funding through YDC. This funding largely mitigates concerns as to load risks and near-term rate cost impacts. 10:14

Presently the critical risk facing Yukon Energy relates to the assessment and permitting processes which need to proceed in a timely and orderly manner to enable construction to start by June 1st, 2010.

Yukon Energy has been clear since filing its YESAB application that the project requires two summer construction seasons to complete. Today, due to load requirements for 2012 and the timing requirements to be met to be eligible for Federal funding, the project must be complete by March 31st, 2012 for funding reasons, timing reasons, for load, everything, which requires a construction start in June 2010.

Risks related to this regulatory matter, regulatory delay, capital cost increases, and construction risks were outlined in the application. On the regulatory risks, extent that land-base construction activities would be delayed beyond June 1st and are mitigated by the approach we've taken to permitting with the Federal decision bodies working actively through the agreement, Federal Agreement Management Committee, working with DFO, Transport Canada, Infrastructure Canada, meeting with the permitting authorities to move forward as of last fall, and to keep working with them so that things can proceed in a timely way and minimize the risk of conflict between the various agencies. 10:15 10:15

Territorial decision bodies. Continue to work with the territorial regulators during the YESAB screening process to ensure that any issues and concerns with the project are expeditiously addressed.

The Water Board. The Water Board is not a decision body under the YESAB, but the Act provides that the Water Board cannot issue a licence that is contrary to a decision document. To be very clear, our applications to YESAB, and in this process, have always said that Yukon Energy will require a type A water licence amendment for Mayo B and that it will seek it. It needs it.

Yukon Energy has extensive past experience before the Water Board, is aware of Water Board processes and is confident that YESAB's project proposal fully addresses water-related issues and concerns. 10:16

While there are no guarantees that issues or concerns will not arise before the subsequent Water Board process, which includes a hearing, after decision documents approve YESAB recommendations, and the hearing and the process can't occur until YESAB's decision documents are in hand, YEC is not aware of any issues that would lead to difficulty in getting the necessary type A amendment to its current Mayo water licence as required prior to initiating water based construction in 2011. That's the second summer of construction season. 10:17

In addition to consulting with regulators, we've been consulting continuously with the First Nation of Na-Cho Nyak Dun, NND, in order to ensure that project-related issues and concerns are discussed and, to the extent

possible, addressed.

Our constructing and contracting approach Mr. Morrison laid out in the early competitive selection of an MOU contractor to mitigate construction risks related to contractor selection, price, and delay. Positive outcomes to date of this approach are noted in the application between the early selection of the turbine/generator contractor, considerable testing and refinement of project cost estimate, and completion of more advanced preliminary design engineering. 10:17

Economics and feasibility risks. Load risks. Load that didn't occur that we expect would reduce the project's expected diesel generation cost savings. If the integrated system load, the IS loads, fall below the base case forecasts, there will be less than we forecast. The diesel savings will be less than we forecast. However, even absent Carmacks Copper load, the project will continue to provide cost savings every year, as we just went through with Figure 4.

YDC flexible debt financing will provide 10:18 further mitigation to ensure that there is no material impacts on rates during the initial years of Mayo B operation including YDC funding at no cost to YEC for the additional interest rate reductions including cash injections through negative interest rate payments that are required in this

regard to mitigate any delays in connecting the Carmacks Copper load to the grid as we put in the application at page 45.

The delay of the Mayo Lake project you were asked to comment on in the Minister's term of reference would limit the amount of available diesel that could be displaced by Mayo B once it's in service. The application notes, and it's covered at pages 37 and 38, that the additional meter of drawdown would reduce -- the initial meter of drawdown that the Mayo Lake project would involve, extra drawdown on that 10:19
lake, a licensed amendment, that this would allow reduced ratepayer cost for generation that would otherwise be served by diesel by about $1 million a year in 2012 dollars. That's about 4 million kilowatt hours a year. That's explained in pages 37, 38. It's worth about $20 million over the life of this project in diesel savings. However, as amply demonstrated in the application and response to interrogatories, Mayo B remains fully economic without this additional meter of drawdown.

Yukon Energy intends to pursue the separate 10:20
project at Mayo Lake once the additional fuel studies are completed during the next summer season and after we completed the YESAB process and the decision documents for the current Mayo B project. And we note that pursuing this additional meter of drawdown will not require any additional

construction of infrastructure. It's a regulatory amendment without any need for any new facilities.

Finally, the Carmacks-Stewart Stage 2. We needed this project in order to be able to get the power out from Mayo B to both grids and enhance its ability. We needed it secondly to give us as much access to hydro generation during the summer of 2011 when we have to shut Mayo A down in order to hook up the new project. For both of those reasons, we set an internal basis that this project wouldn't go forward without Carmacks-Stewart Stage 2 in place early in 2011. That is the schedule. 10:20

All the required permits and authorizations have been attained. The surveying clearing work has started. The line construction work has started recently. So -- and a transformer contract has been awarded and the $40 million estimated cost is still a budget and that would be totally covered by the government contributions I went through in Table 1.

Rate impacts. The application demonstrates that Mayo B will provide material ratepayer cost savings as regards diesel generation in each year of its life. Based on the base forecasts, average annual near-term cost savings for ratepayers are estimated at 4.3 million on average a year over the 2012, 2015 period with Carmacks Copper and with Mayo Lake enhanced storage. We estimate that's about equivalent 10:21

to 8.5 percent of the combined YEC/YECL consolidated rate revenue requirement in terms of a rate impact. Pages 41, 42 of the application. This ignores any additional impacts for flexible debt financing.

Footnote 73 in the application indicates annual net ratepayer savings of 1 million remain during this near-term period even without Carmacks Copper load and any Mayo Lake enhancement.

As reviewed at page 45 of the application, YDC flexible financing will ensure that over the short term, the net generation costs recovered from ratepayers not exceeding a defined unit cost ceiling somewhere in the range of 10 to 11 cents per kilowatt hour in 2012 dollars. 10:22

Now, just to conclude, Mr. Chairman, with a few updates since the project's application was filed. The first one is everybody now knows the YESAB draft screening report was issued on March 12th, 2010. Our review of the draft report and discussions to date with regulators and the First Nation of Na-Cho Nyak Dun indicates that no major new issues have been identified by YESAB or other parties. 10:23

At a high level, the YESAB report has provided terms and conditions consistent with Yukon Energy's application. Based on our review to date, we see no financial impacts from the YESAB or related regulatory process that would change the overall Mayo B budget capital

cost.

Comments on the draft screening report are due by next Monday, April 12th. And YEC currently sees reasonable basis to expect that the YESAB final report recommendation would be available by the first week of May, 2010. If this timing occurs, and subject to the timing of the YUB's report to the Minister, it remains reasonable. The decision documents and regulatory permits needed to start construction could be in place by the June 1st target, 2010 target construction start date. That's the good news from seeing that report. 10:23

Secondly, the construction contract with Kiewit was signed March 12th, 2010. Kiewit is currently undertaking preconstruction activities to be ready for construction once the permits are issued. The construction contract includes a few things: One, an agreed-upon concept design and project scope from Mayo B consistent with the Part 3 Application; two, an alliance model of open-book contract arrangement where the parties commit to work together and in good faith to address issues that arise on a best-for-project basis and where the major risks to the project would be shared between YEC and Kiewit in accordance with the terms of the agreement. The contract includes all provisions required under the Federal Funding Agreement, including the right to audit by the auditor general. 10:24

The stipulated primary targets of YEC and Kiewit in this alliance are: First, to complete the work at or below the target maximum price of 85.4 million; and, two, to complete the work in accordance with the project schedule, which includes a commercial operation date of December 31, 2011.

Third, overall the construction contract scope wherein Kiewit is to perform the work as described in the agreement, including the specifications to construct the project, but the contract also specifies that YEC, and not Kiewit, will enter into the following other contracts: YEC will contract with the KGS group for preliminary and detailed engineering services from Mayo B; wherein KGS will acknowledge that YEC and Kiewit are working in an alliance model and that KGS has agreed to provide its services to YEC in a way that contributes to the alliance model; contract with the turbine/generator supplier for the ready -- for the supply of the turbines. This will be done by YEC and has been done, as I'll say in a minute. And, finally, YEC will arrange the insurance rated to builders risk and construction wrap-up so that the whole project is covered by one package, which seems to be the preferred approach these days. 10:25 10:25

The fourth major item, construction contract pricing arrangements that reflect projected costs based on Kiewit's estimated costs and contingencies which they've been

working on us with since last June. Contract budgets are consistent with Table 1, Mayo B capital cost estimate breakdown as we have provided in response to the City of Whitehorse, YEC, 1-5 (a), with a contract base target price of 77.70 million and a target maximum price of 85.4 million.

And, finally, the project schedule. Preconstruction start date activities will occur prior to the construction start date targeted at June 1st. 2010 construction activities that do not require any river activities - clearing, pen stock development, tunnel work, foundations for the powerhouse, that type of stuff. 2011, complete the project, have it up and running commercially by the end of the calendar year. 10:26

Another update. The turbine/generator supplier was selected January 15th - ABB, and the final contract was signed with them -- after the preliminary contract, the final one was signed March 31st, 2010. This is the key long-lead piece of equipment for the project.

With the assistance of Kiewit, YEC undertook a competitive process to select a turbine/generator supplier. 10:27 The process was completed in January with the preliminary agreement between Yukon Energy and ABB and the supply agreement was finalized and signed the end of March with a final contract price including preliminary agreement costs of approximately 5.04 million and schedules for delivery

consistent with the Kiewit project schedule.

Finally, the NND Project Agreement between YEC and NND, First Nation. Negotiations have reached a stage where both parties are hopeful that an agreement will be settled shortly, addressing the following matters with respect to both Mayo B and Mayo Lake projects: NND investment opportunity in the Mayo B project; ongoing consultation between Yukon Energy and related to Mayo B and Mayo Lake project regulatory reviews, permitting, and specific monitoring matters; principles under which NND can take advantage of contract opportunities with Kiewit, and funding for NND by YEC. 10:28

To conclude, Mr. Chairman, Yukon Energy's recent 2008/2009 GRA marked the start of a new stage as we've said in the orderly resource planning that began in 2005. This new stage requires participant style to focus on pressing needs to address new energy-based supply issues and to address rate-related regulatory priorities.

Existing hydro generation surpluses that we talked about in the Resource Plan, lasting until perhaps 2019 or so, will be largely utilized within the next few years resulting in the need to develop new renewable supply sources so that high cost base load diesel generation and related greenhouse emissions can be minimized on both grids, the new integrated grid. 10:28

The Mayo B application to be reviewed by the Board in this hearing provides the opportunity to reduce diesel generation in a cost-effective and timely manner to the benefit of ratepayers in the near as well as the longer term. As such, Mayo B has a clear need and justification today, we submit, but it remains that only one of several renewable generation projects will be needed to meet future system energy requirements using renewable generation instead of diesel.

Thank you, Mr. Chairman. 10:29

THE CHAIR: Thank you, Mr. Osler.

I'm wondering if this is the appropriate time to take a scheduled break and then we can move to the first of the intervenors. Is that okay? Okay. We'll take a 15-minute break and resume at, by my watch, quarter to 11.

(ADJOURNMENT)

THE CHAIR: I'll turn it back to Mr. Landry.

MR. LANDRY: Thank you, Mr. Chairman. The panel is now available for cross-examination. 10:47

THE CHAIR: Thank you.

MS. BENTIVEGNA: Sorry, Mr. Chair. Does Mr. Landry want his panel to adopt the evidence?

MR. LANDRY: I guess that would be a good start.

Q. I wonder, Mr. Osler and Mr. Morrison, do you adopt the evidence on the record that has been filed by Yukon Energy which would include the application and all IRs that have been filed?

A. MR. MORRISON: Yes, we do.

A. MR. OSLER: Yes, we do.

MR. LANDRY: Thank you.

MS. KELLGREN CROSS-EXAMINES THE PANEL:

MS. KELLGREN: Good morning, Mr. Chairman, Mr. Vice-Chair, Board Members. 10:48

Q. And good morning, panel. As stated earlier, my name is Kristjana Kellgren. I'm joined by the consultant with the City of Whitehorse, Mr. Keith Dannacker. We're here on behalf of the city.

Perhaps we can start off, panel, if you don't mind, with the issue of diesel. If you wouldn't mind, would you turn to CW-YEC-1-8 (d), Exhibit C1-2.

A. MR. MORRISON: Could you say that again?

Q. 1-8 (d), yes. Your response. So you'll see there -- sorry, do you have it? 10:49

A. MR. OSLER: Just a sec. Yeah.

Q. Thank you.

THE CHAIR: Could you repeat that reference, please?

MS. KELLGREN: Yes, Mr. Chair. It's

Exhibit C1-2. It's CW-YEC-1-8 (d).
A. MR. MORRISON: **It's CW 1-8.**
THE CHAIR: Was it (d)?
MS. KELLGREN: Yes, Mr. Chair.
THE CHAIR: Thank you. Proceed. Thank you.
Q. MS. KELLGREN: Now, in (d) you were asked: (as read)

> "If 30 gigawatt of hours of diesel generation will be displaced, what diesel units will be retired and decommissioned as a result of this project?"

And your answer was: (as read)

> "No specific diesel units are scheduled to be retired and decommissioned as a result of Mayo B. As noted in YEC's GRA application, future decisions about the timing of major capacity sources will be made in light of capacity conditions on the system, and options exist to defer specific Mirrlees refurbishments and instead mothball the unit if the capacity is found not to be required for either overall system

10:51

10:51

support or for local Whitehorse support."

I'm wondering if you could briefly summarize the process of mothballing a generation unit.

A. MR. MORRISON: Well, Mr. Chairman, we don't have any plans to mothball anything, but what we mean is we take the unit out of service; simply that. I think the -- just to clarify here, we're talking about two different things. We're talking about energy requirement and a capacity issue. The question mixes them up. So to try to be 10:52
clear, we're looking for energy, and it's energy that will be -- diesel energy that would be displaced if -- when we put Mayo B on the system, but the system capacity that exists, and especially the system capacity that exists for the -- for back-up purposes, to be simple, exists whether we have Mayo B or anything else on the system.

So those units that are there and the units that exist have two -- they have a two-fold purpose. They can provide energy if required, but they provide capacity requirements as they sit idle. They're available to back the 10:52
system up. So this is, to be clear, not a connected or integrated system with the southern grid. So we have only that capacity.

So the mothballing is just simply taking the unit out of service. We have no intention of taking any unit

out of service based on current forecasts. So that question asks a "what if" kind of a question, and, you know, to take a unit out, we would have to remove it from the plant, but there's no intention to do that.

Q. So if I could just follow up there. My understanding is that while diesel will be displaced energy-wise --

A. MR. MORRISON: That's correct.

Q. -- that you're not planning on mothballing or decommissioning any diesel generators.

A. MR. MORRISON: Absolutely not. We wouldn't do that because we only have enough current capacity on the system to cover the current LOLE and N minus 1 requirement. Again, we're mixing up energy and capacity, and maybe Mr. Osler might like to add to that. 10:53

A. MR. OSLER: Because the important point overall, there's a lot of diesel capacity on the system, and in earlier hearings we've dealt with the fact that about 14, 15 megawatts of that were Mirrlees at Whitehorse that were at the end of their useful life. And so the choice was either let them be retired or refurbished, which we took the choice to refurbish, and we also went to another Mirrlees unit at Faro which had been taken out, and we decided to put it back in. So that's the history. 10:54

That diesel capability, if we met all this load that I was talking about, would go from a very low

percentage of use to a higher percentage of use, but it doesn't get -- so we displace running those diesels more, but we don't displace the need for the diesels to help us meet the peak capacity.

The only other caveat that's in this answer is we're going to get 10 megawatts added capacity from Mayo B, and I'm sure the Board at some point will be asking YEC, "Well, does this mean you could defer the spending on some of those refurbishments?" And we're just prepared to deal with that question in due course at the right GRA. But it doesn't 10:54 **mean that we wouldn't still want to refurbish those Mirrlees. We might just not do it as quickly. That's the essence of the point.**

Q. Thank you. If you could turn to CW-YEC-1-22 (a). I see there that the Minto diesels are not listed as available at the system peak. What is their status?

A. MR. OSLER: We've explained in the application that the Minto diesel hasn't been allowed by the Board into a rate base, so we didn't include them in the units. We've often provided examples of what would be the 10:56 **effect of the extra 6-point-something megawatts if they were to be included and when they would be included. They're still there. The actual stance on that Mr. Morrison could comment on, but at they're Minto.**

Q. Okay.

A. MR. MORRISON: The units are at Minto. They're certainly available. You know, in that sense whether they're our units or Minto's units, they're available, but they're not listed here, as Mr. Osler said, because we had not resolved with the Board whether they're included in the rate base or not included.

Q. Thank you. So does this response of YEC's in CW-YEC-1-22 set out the capacity conditions that we can expect in 2012 when Mayo B comes fully on line?

A. MR. OSLER: In terms of the existing plant that we are assuming -- I think it includes an issued third turbine. So it includes issued third turbine. The Minto diesel units might have been approved for the Board by that time. That would be one possibility. And then there's 10 megawatts at Mayo B that would be added to this. But yes, in general, subject to those comments, yes. 10:56

Q. Okay, thank you.

So if we add up the existing hydro units listed in CW-YEC-1-22 (a), the hydro generation capacity currently available at winter peak is 66 megawatts; is that correct? 10:57

A. MR. OSLER: I'll accept that subject to checking it, yes.

Q. Okay. Thank you. So I'm going to go through some rather basic math. If I add up the total diesel generating

capacity in this answer YEC has provided, that gives us a total of 47 megawatts of diesel generating capacity. Will you accept that subject to check?

A. MR. OSLER: Yes.

Q. Okay. So if we add the current hydro generation capacity along with the diesel generating capacity, we get 113 megawatts of existing capacity without Mayo B?

A. MR. MORRISON: Subject to check, yes.

Q. Thank you. And with Mayo B, that would make it 123 megawatts; correct? 10:58

A. MR. OSLER: Correct.

Q. Now, if you could turn to YUB-YEC-1-12 (a) and (b). It's Table 1.

THE CHAIR: Could you just repeat that reference again, please?

MS. KELLGREN: Yes, Mr. Chair. That's YUB-YEC-1-12. There's Table 1 in response to sub (a) and sub (b).

THE CHAIR: Thank you.

A. MR. MORRISON: Whenever you're ready, Mr. Chair, we're ready. 10:59

THE CHAIR: Thank you. Proceed.

MS. KELLGREN: Thank you.

Q. So at the top of this column, the generating capacity of the system without Mayo B is given at approximately 76

megawatts; do you see that?
A. MR. MORRISON: Sorry, what?
Q. At the top of this table --
A. MR. MORRISON: Which table are we on again then? Table 1?
Q. Table 1, YUB-YEC-1-12.
A. MR. MORRISON: Oh, I'm sorry. Are you referring to the text line on the right-hand side in brackets "75.7"?
Q. Yes. 10:59
A. MR. MORRISON: Okay. Yes. Thank you.
Q. So can you clarify to me what this figure capacity listed, the 75.7, represents and why there's a difference between the -- the 37 megawatt difference between the 113 megawatts we just discussed, which was in response to CW-YEC-1-22, and this 76 megawatts you've provided in response to the Board here in YUB-YEC-1-12?
A. MR. MORRISON: Well, Mr. Chair, subject to going back to check the numbers, let me explain to you what this 75.7 is so that it will help you. 11:00
75.7 is the total capacity of the hydro system as it stands today. So if you add 40 megawatts at Whitehorse and 30 megawatts at Aishihik and 5.7 at Mayo or 5 -- you know, giving a fraction out of each of them, you get 75.7. So that is what that number is.

What those other numbers are, subject to going back and checking, which you're trying -- I'm not sure exactly, but maybe Mr. Osler has added some numbers. That's what that number is.

A. MR. OSLER: Well, given all the material here and only the two of us, from time to time we're going to need your help to make sure that we're --

A. MR. MORRISON: -- on the right numbers.

A. MR. OSLER: -- on the right numbers.

Q. Of course. 11:01

A. MR. OSLER: If you go to the previous YUB-YEC 11, which was answered first in the sequence, you'll see at the footnote on the second page for that Table 1, which is the same two numbers that you're interested in, 85.7 and 75.7, and it says -- it gives you a footnote that gives you the list of all the units that went into that calculation.

Now, take a deep breath and I'm remembering something here that -- I think the point of this was that we couldn't provide this analysis for the integrated grids 11:01 because we haven't done the LOLE assessment yet for the two grids. So when we were talking earlier in response to your answer we were talking about the two grids together. Here we're talking for some -- I think, looking at the list of -- well, you've got Mayo B still here.

Beyond that, I would have to say that we know what's in the answer and we would have to go away and talk to some people about why the two differences between the two numbers are because it's really -- I know what's in this number, but why the number we were talking about a few minutes ago was a hundred and -- whatever it was, 113 or something -- 123 with Mayo B versus here, I would have to make an undertaking to go and get back to you on what the difference is between the two.

A. MR. MORRISON: We can do that. 11:02

Q. You would make that undertaking?

A. MR. MORRISON: Sure.

Q. Thank you.

UNDERTAKING - TO ADVISE WHAT THE DIFFERENCE IS BETWEEN THE TWO NUMBERS BEING DISCUSSED.

Q. MS. KELLGREN: So staying on this chart at YUB-YEC-1-12, the Table 1 in response to (a) and (b): (as read) 11:02

"YEC predicts that the total system winter peak load in 2012 will be 90.98 megawatts."

So if I subtract this load, projected, from my addition, which was your response, so the 123 megawatts we were talking about, and perhaps this will fit into your earlier

undertaking, but if I subtract this load, the 90.98 from 123 megawatt capacity with Mayo B, that gives us approximately 32 megawatts of generation that won't be needed to meet winter peak once Mayo B is on line. Would you accept that, subject to check?

A. MR. MORRISON: Well, subject to check, but what we're talking about here is there are only 85 -- let me be clear. Without Mayo B there's 75 megawatts of hydro capacity on the system. Subtract from that 16 megawatts from Whitehorse 4, which is not available in the winter, so that 11:03
makes that 24, and if you add 10 back for Mayo B, you get something in the neighbourhood of 70 megawatts of capacity of hydro. All right? Now, what the other numbers are is they represent the available diesel on the system.

So we have capacity. We understand that we have enough capacity currently to meet system peak requirements, but we don't have it in hydro. We have it --

Q. I understand that.

A. MR. MORRISON: -- in hydro and diesel combined. 11:04

Q. So, again, I'm just wondering would you accept that 32 megawatts -- I mean, I understand we're talking capacity, but would you accept that approximately 32 megawatts won't be needed to meet the winter peak once Mayo B -- perhaps if you want to take that as part of your undertaking, if we're

talking about taking a 16 megawatts with respect to Whitehorse 4 off, that still would be less with 16 megawatts of generation that won't be needed at winter peak? Do you follow me?

A. MR. MORRISON: No, I don't.

Q. Okay. So I was referring back to the 123 megawatts we discussed with respect to the undertaking?

A. MR. MORRISON: Yes.

Q. And then we've talked about this 90.98 megawatts, which you predicted as your winter peak load in 2012. 11:04

A. MR. MORRISON: Correct.

Q. Okay. So I'm just wondering, with my very basic math skills, that appears to me to be approximately 32 megawatts of generation not needed to meet the peak that you've projected once Mayo B is on line. Would you accept that?

A. MR. MORRISON: Correct.

Q. Okay.

A. MR. MORRISON: But again, Mr. Chair, I want to be clear, that's diesel. It's diesel assets that are on the ground that are not -- we don't want to turn on at winter 11:05 **peak or any other time because if we turn them on at winter peak or any other time, that's 30 megawatts of 25 cent a kilowatt hour plus energy that the ratepayers have to pay for.**

So yes, the assets are available, but nobody

wants to turn them on, and they're there as a backup.
A. MR. OSLER: And keep in mind that the analysis is showing that given the N minus 1 tests, we still have a shortfall in 2012 even with Mayo B. The point of the table is that.

Now, I would have to go and again review the analysis and come back and discuss it a bit more, but aside from getting confused with whatever the issue was with 123 versus what's here, the point of these two tables -- and they are dealt with -- they are technical tables -- was to deal with the capacity planning criteria and update the information. I put my mind around it to deal with specifics that you're getting into, but just a plain reading of what the table is telling you in No. 12, YUB 12, is that with or without Mayo B, there is a shortfall. 11:06

Q. A shortfall of hydro?
A. MR. OSLER: Of hydro. Well, a shortfall period. This is what it's telling you. And so because essentially you have a total peak with industrial of such and such, you have a N minus 1 peak, the shortfall, or the surplus, that's what it's purporting to tell you, with or without Mayo B, is claimed to be this number. 11:07

Now, I have to go and review what the assumptions were for this particular answer versus the previous answer and all that type of stuff, but just to get

everybody on the same page about what it's saying, given the assumptions that we used to develop this table, it's telling me we have a shortfall for whatever reason. I will have to check what went into the table and the rest of it and I will do that and review it.

A. MR. MORRISON: **If that would be helpful, Mr. Chair, maybe over the lunch hour we could have a look at this and then we could help try and get the right answer.**

Q. That would be very helpful. Thank you.

And just to clarify, when we're talking about reducing generation, or not making use of these diesel facilities, I assume we're speaking diesel only; right? There's no desire or goal to reduce hydro generation in any capacity? 11:08

A. MR. OSLER: **Well, yes, but -- so that we don't get confused, when you integrate the systems and add new capability, you will -- the models we use to forecast it will say that we change the amount of generation we're getting from Aishihik, Whitehorse, and Mayo, and YUB 30 (a) revised gives information on that if you ever want to pursue what I just said further.** 11:08

So no, we're not trying to reduce hydro generation, but the result of adding something new given a level of load will be the model that will distribute the energy that's being generated, different plants of it, and

there will be some reductions at Whitehorse and some reductions at Aishihik, as well as the overall increase at Mayo B.

When we do our assessments of the benefit of Mayo B, we always take off the deductions elsewhere. That gets us to the net generation impact.

Q. I think I understand that. Thank you.

A. MR. OSLER: Thank you.

Q. Now, I understand that perhaps some of my questions are a little difficult given that you haven't revised your LOLE analysis, but may I ask if you're going to complete a new LOLE analysis when the Mayo B comes into service? 11:09

A. MR. MORRISON: Yes, we will. As Mr. Osler just mentioned a minute ago, Mr. Chair, it's part of our system analysis and we have to do that, but it's a task that hasn't been completed on the integrated grid.

A. MR. OSLER: And it's primarily to do with the integration of the grids more than to do with Mayo B and it's scheduled, I'm told by YEC, to be done in the near term. It's not something that we're deferring; it just hasn't been done yet. 11:10

Q. Thank you. Now, if you could turn to CW-YEC-1-26, your response to (a).

A. MR. MORRISON: 1-26, Ms. Kellgren?

Q. Yes. So if I can refer you first to the preamble. We

cited -- I think we're in reference to part of the application and we said:

"To ensure that ratepayers will not be adversely affected, Yukon government will also provide an annual contribution to Yukon Development Corporation for the principal and interest payments related to a portion of the borrowing costs up to 52.5 million." 11:11

Do you see that?

A. MR. MORRISON: Yes.

Q. So it's the word "portion" that caught our attention, which is why in this IR we asked what is the portion referred to in the above quotation? If the portion is less tan 100 percent, who is responsible for the remaining portion. Please explain that. That was our question in (a). I'm just reiterating our IR.

A. MR. MORRISON: I guess what I'm concerned -- I'm just trying to -- wonder if you're looking for more of an answer than we already gave in (a), but I'm not sure. Maybe you could help me on that. Are you looking for something different than what we've given you here? 11:12

Q. Well, I haven't quite gotten to the question yet. I was just giving some background.

A. MR. MORRISON: Well, I guess the question would be I think we've answered it in (a).

A. MR. OSLER: And just for the record, subject to YDC borrowing more than overall magnitude of funds for the project as described in Schedule F, because this quote came from Schedule F --

Q. Yes.

A. MR. OSLER: -- the Yukon government's annual contribution to YDC of the principal and interest will relate to the 52.5 million of the borrowing is our understanding. 11:12

We understand the loans as referenced will be in the name of YDC, and the YEC will only carry on its books those net costs for which it is responsible.

So our understanding of the letter is that it was understood there would be loans in addition to the 52.5 and the government would only be paying principal and interest on the portion up to the 52.5. It wasn't a ratio or anything like that. It's the 52.5, but we all know you're going to borrow more YDC. It's that type of thought. 11:13

Q. Okay. So it's up to and including this 52.5?

A. MR. MORRISON: Yes.

Q. Now, in this same IR, we ask you in (c): How will YEC treat this capital on its own financial statement? I'm not sure if your other response included this, but I'm just

unclear as to whether the entire 52.5 million will be shown on YEC's books as a grant mirrored down from YDC?

A. MR. OSLER: We've said in the application that, to be very clear, YDC will contribute that amount as a no-cost capital contribution to YEC so that our books will show it as a no-cost capital contribution for our purposes. How YDC deals with the government is a separate financial reporting.

Q. No, I understand that. I'm referring to your books.

A. MR. OSLER: Yes. Our books will show it as a no-cost capital contribution. Therefore, the net will offset the rate base cost accordingly. 11:14

Q. Fine, thank you. So you'll have to bear with me. I didn't receive a copy of your opening statement when it was circulated yesterday evening, so if I perhaps misstate something that was clarified in your opening statement, just bear with me.

A. MR. MORRISON: Sure.

Q. So from your opening statement I understand that the Kiewit Construction contract has been finalized? 11:14

A. MR. OSLER: Yes.

A. MR. MORRISON: Yes.

Q. Okay. And I'm wondering, would you undertake to produce a copy of that agreement as executed?

A. MR. MORRISON: Mr. Chair, no, we wouldn't

agree to that. The contract has a number of what I would call details and clauses in it that are commercially sensitive from Kiewit's point of view and I don't believe -- I'm certain from talking to them that they are not prepared to agree to release their contract.

MS. KELLGREN: If I could propose, Mr. Chair, perhaps those clauses Mr. Morrison refers to could be redacted.

A. MR. MORRISON: Mr. Chair, I don't think that's very productive. There would be a whole lot of clauses and not much information provided. 11:15

MR. LANDRY: Mr. Chair, maybe I could join in in this fray a little bit. This is not the first time that a request by intervenors have been made for a contract such as this, and I'll give you the one example that is relatively recent and of some magnitude was the construction contract with Chan Construction for the construction of the Carmacks-Stewart Stage 1.

A. MR. MORRISON: Mayo-Dawson.

MR. LANDRY: Sorry, Mayo-Dawson line. I apologize. I get them all going in my head at the same time. Mayo-Dawson. And again it was requested in that proceeding and Yukon Energy said that it would not supply such a contract, third-party contract, and that was the position it took. It said at the time that it would provide to the Board 11:16

for the Board's review on a confidential basis just for the Board if the Board felt it relevant. In that case the Board did not order production of that document.

This is a consistent position that has been taken by Yukon Energy as far as -- as long as I've been counsel for Yukon Energy, since the early 1990s, and it's not something that is normally provided to intervenors, commercial contracts with third parties, for the very reason that obviously commercial contracts such as this, contain commercially-sensitive information. And this specific 11:17
contract, as most do with third-party companies such as Kiewit, has a confidentiality provision in it.

So for those reasons, Mr. Chairman, I would ask that the Board follow its practice and not require production of the contract. If my friend or other intervenors have questions regarding Kiewit and the contract, they can ask them. If it's commercially-sensitive information, I'm sure Mr. Morrison will indicate that, but that has been the practice of the Board in my experience.

THE CHAIR: Thank you, Mr. Landry. 11:17
Proceed.

MS. KELLGREN: Thank you.

MR. BUONAGURO: Thank you. I'm sorry to interject.

THE CHAIR: Mr. Buonaguro.

MR. BUONAGURO: Thank you very much. Just in terms of the, I guess, the law around whether or not such a document is producible and under what terms, I would like to make a few submissions, if I might, in response to what Mr. Landry set out.

MS. BENTIVEGNA: Mr. Chairman, first I think we should ascertain whether counsel is asking for the contract to be produced and making a formal motion or not before we go into submissions on it. I think Mr. Landry was trying to jump the gun, if I can put it that way. I'm not sure that there was a formal motion. 11:18

MS. KELLGREN: No formal motion as such, no. Thank you.

MS. BENTIVEGNA: All right. There's no motion for it to be produced so I would suggest that you don't need submissions on it.

MR. BUONAGURO: All right. I have to talk to my client. It may come up in our cross, but I'm not sure.

THE CHAIR: You can bring it up at that time. 11:19

MR. BUONAGURO: Thank you very much.

THE CHAIR: Thank you.

Q. MS. KELLGREN: Okay, then if I might, I would just like to ask a few questions about that contract. First I noticed in your opening statement you've set out the target

maximum price of the construction contract is 85.4 million.
A. MR. OSLER: Correct.
A. MR. MORRISON: Yes, Mr. Chair. I wonder, could we get a page reference if you're going to talk about certain specific pieces? I just want to make sure everybody is on the same page with the numbers.
THE CHAIR: Are you referring to Table 1 in the opening statement? Oh, no, sorry, it's not ...
A. MR. OSLER: I think it would be page 13 of the opening statement, and the same numbers were in CW-15, so you could go to either place. 11:20
Q. I just wanted to confirm that we're on the same page.
So your response in CW-15(a), as noted by Mr. Osler, this is the same number 85.4 that was in response to our question as to the construction costs, and I notice that's the same in your opening statement, so I just wanted to confirm, that's a firm cost then, maximum target price?
A. MR. OSLER: It is a firm number in the contract as is the base target price of 77.7 million.
Q. Thank you. So now I also understand that based on your opening statement, and just let me get a -- page 13 again with respect to the turbine generation suppliers, I noticed that you had in CW-YEC-1-5, you had estimated $5 million, but am I to take that this cost is now 5.04 million; is that correct? 11:20

A. MR. OSLER: That is correct, and that is a firm number.

Q. Thank you. So if we could keep on CW-YEC-1-5 and that chart that you provided, Table 1. Just above the line -- oh, I'll give you a moment. My apologies.

UNIDENTIFIED SPEAKER: CW which number?

Q. 1-5.

A. MR. MORRISON: Sorry, Mr. Chair, we're ready.

Q. Thank you. So you'll see just above the line subtotal, there's a line that is called "owner contingencies," about halfway up the page. 11:22

A. MR. OSLER: Owner contingencies of 1.25 million?

Q. Yes.

A. MR. OSLER: Yes.

Q. Can you tell me what those owner contingencies consist of?

A. MR. OSLER: Well, yes. Let me explain perhaps just the table in general because it might help everyone. 11:22

Q. Fine. Thank you.

A. MR. OSLER: The table comes to the $120 million budget and it provides a breakdown of what's in that budget as requested. So the top part -- there's three big sections to the table. One is construction contractor

equipment and detailed -- contractor equipment and detailed engineering costs, which come to a subtotal of 98.01 million. Obviously that's dealing with construction, but it's dealing with contracts, equipment, detailed engineering, and certain contingencies that would be not covered by all the above. That would include, for example, contingencies for any new permitting requirements that we haven't taken into account that don't necessarily affect the contracts that we've laid out here.

For example, we might have to do a bit of work on a salmon rearing channel because that's one of the recommendations in the YESAB report. That might add $300,000 to our cost. They wouldn't necessarily go to Kiewit; they would just be costs that we would build into it. That would come out of the owner contingency budget. So we were making provision in that budget there for anything above this area that isn't already covered off. There are a lot of other contingencies above there that are specific to the Kiewit contract, and the arrangements with Kiewit, and that 7.7 million you see above the target maximum price, and that's the difference between the base target price and the target maximum, are those contingencies. 11:23 11:24

Q. Yes.

A. MR. OSLER: There's also the turbine/generator supply. That's a fixed price, and now at

5.04, as you've said. Detailed engineering is a type of cost that could change, depending on issues that arise. We've assigned a certain amount for the substation, so the rest are contingencies that might arise.

Down below that, we have what we call owner construction costs, which are not related to the contracts directly. They are administration of the contracts. They are owner, administration, staff, insurance that I was telling you about, any land acquisition costs. The normal ES&G costs that they're charged to projects - in this case at .5 percent. Interest in AFUDC allows for funds used during construction after the fourth quarter of '09 is what that estimate is based on. Another contingency to cover off things that we may not have estimated yet or have yet to be nailed down. 11:25

Below that is preconstruction and other permitting and regulatory planning costs, which are the costs been used to date to get this to this stage. Through to about the end of January 2010, plus ongoing costs required to finish off the YESAB permitting and getting -- the YESAB process and any permitting Water Board processes, et cetera. We also included in the total budget 1.5 million for environmental licensing of Mayo Lake as an extra item to get the 120 million, just so we've done this once for the sake of the Board. 11:25

Q. Perfect. Thank you. So if I can just draw you back to the 1.25, the owner contingencies, as I've said halfway down the page, your example had been -- sorry, constructing?

A. MR. MORRISON: A fish channel.

A. MR. OSLER: Right. A fish rearing channel.

Q. Just to be clear, that would fall under construction, contractor equipment, and detailed engineering costs as opposed to owner construction costs?

A. MR. OSLER: No. It would be above the owner construction cost in the sense it's not administration, it's not insurance; it's actually doing something. It's building a fish channel. 11:26

Q. But land acquisition, things like that, in owner construction cost?

A. MR. OSLER: Right. And past a point these things get arbitrary. Somebody way back developed this framework and that's the way the words are used. But if we were doing some physical work, the intent is that it would be part of that top package. If we were doing insurance or we were doing AFUDC or we were doing owner staff or administration of these contracts on behalf of YEC, they're part of the owner administration package. 11:26

Q. Okay. So without getting perhaps too much into detail or arbitrary, you can explain what would fit into the owner contingencies. My concern is under the construction,

contractor equipment, and detailed engineering cost, we've built in this 1.25 million of owner contingencies; however, as we've been told this morning, over 90 million of that is now FERC.

A. MR. OSLER: Well, you have been told this morning that the turbine/generator contractor is a firm price.

Q. Yes.

A. MR. OSLER: I responded to your question by saying that the numbers are nailed down in the contract for what is a based target price and what is a target maximum price. 11:27

Q. Yes?

A. MR. OSLER: I haven't said anything more than that.

Q. No, I appreciate that, but my understanding of this subsection is we're dealing mainly with the construction contracts?

A. MR. OSLER: Right.

Q. And I believe you've confirmed to me that 90 million -- over $90 million is firm construction numbers and those contracts have been signed? 11:27

A. MR. MORRISON: Let me try to -- let me have another go at this. These contingencies are there -- just to be clear, Mr. Chair, on an analysis we've done of risks that

says we should supply a contingency or a -- some spread here in case something happens. So that there is in case. They are not there to be spent unless we need to spend them.

So clearly we still have some regulatory issues that will have to be dealt with through both the Water Board and the finalisation of YESAB. We know that we're going to be required to do some mitigation. We have not been told what that is. So we're trying to make provisions under the construction piece for that.

The 1.38 below under the owner's construction costs is again just trying to provide some contingency or risk into the numbers so that we've got an ability to absorb some small increases if and such there are things that come up that we -- you know, that we haven't addressed. We've tried to address everything. We've gone through these numbers over and over and over again. We're very comfortable with them. We're also very comfortable that in every case we should have an appropriate contingency amount. 11:28

Q. Fine, thank you.

A. MR. OSLER: If I could just point out that in the opening statement, we talked about it being alliance model. We talked about the objectives of the alliance to complete the work at or below the target maximum price. 11:29

Q. Sorry. Could you provide a page reference?

A. MR. OSLER: Page 12 and 13. Bottom of page

12 we're saying this is an alliance model. It's not -- as we said way back when we did the MRU, this was a target price approach, it's not a tendered price, fixed, nailed down, the same as it is for the turbine/generator contract. It's always been intended to be an open book process. You keep track of what the actual costs are and you have some target pricing and you have some arrangements for sharing your risks. The parties are trying to get a price as low as possible, below 85.4 million. If they can come in at 77.7 or less, everybody is going to be very happy. The contractor has no right to get 85.4 million unless the costs are actually incurred and go through the process. That's one point. 11:30

The model sharing approach deals with the issue of what happens if we run into difficulties and it's more than 85.4. So we have contingencies in case those things happen.

Q. Fine. Sorry?

A. MR. MORRISON: Just to be clear, the base price is 77.7. 11:30

Q. Yes. Thank you. If you could turn to CW-YEC-1-1. And specifically as an attachment to that in your response you had included YECL-YEC-1-5 revised, which is an attachment to that response.

A. MR. OSLER: From the 2008/2009 GRA.

Q. Yes.
A. MR. OSLER: Just to be clear for the record.
Q. So if you go to page 1 of 12.
A. MR. OSLER: Yes.
Q. Thank you. There you say the cost forecast in the GRA filing from Mayo B total 1.7 million in 2008 and a further 6.5 million in 2009.
A. MR. OSLER: Correct.
Q. Can you tell me where those costs are included in the table we've been working from, which is Table 1 of CW-YEC-1-5? My apologies for the jumping around. 11:32
A. MR. OSLER: No, that's fine. They are included in the preconstruction and other permitting and regulatory planning costs at the bottom of the table. Depending on their timing, they would be feasibility studies up to the time of the YESAB filing, that's February 27th, end of February, 2009, or they would be in the other portions therein after that date. That was the division in the costing. 11:32
We did things in a series of stages and so prefeasibility studies to the YESAB filing of 2.41 million in CW-1-5 is the cost up to the end of February 2009.
Q. Okay.
A. MR. OSLER: Costs after that time that are

part of planning until the end of 2009 were the balance of what you see in the answer to CW -- the one we talked about in the last hearing, and I think we've given you an answer somewhere that says our actual costs to the end of 2009 were somewhat lower than we were talking about in the GRA, but these are all deferred costs, so they haven't gone into rates or rate base or anything else in 2008 or 2009. So they become part of the capital cost of this project that would go into rates only when the project is completed and the Board has dealt with them. 11:33

Q. Understood. Thank you. So on these deferred costs in CW-1-1(b), we had asked you to confirm that the business case, et cetera -- sorry, I might have lost myself here.

With respect to deferred costs, your response was not confirmed. Deferred costs from Mayo B were not placed into rate base in the test years and no such approvals were sought from Mayo B as part of the Yukon Energy 2008/2009 GRA, which is what you just said. So these deferred costs will be added to rate base when Mayo B goes into service and you bring another GRA? 11:35

A. MR. MORRISON: Right. They are part of the total costs, as Mr. Osler said. When we come back to add them into rate base as part of a GRA, they will form part of those costs.

Q. Okay. And until then they stay as deferred costs?

A. MR. MORRISON: That's correct.

Q. Thank you. So given that these costs were built in, as you mentioned, into the earlier chart in response to CW-YEC-1-5, I can assume that they were included in the costs benefit analysis provided to the Board?

A. MR. OSLER: For this application, that's correct.

Q. Yes. Thank you. So going back to this chart, CW-YEC-1-5, I would like to look at preconstruction and other permitting regulatory planning costs? 11:35

A. MR. OSLER: Right.

Q. Before the subtotal it says Mayo B Part 3 review.

A. MR. MORRISON: Correct.

Q. Okay. There's a cost of 300,000 there?

A. MR. MORRISON: Yes.

Q. Now, in response to CW-YEC-1-27 (a), you were asked:

> "Please provide the anticipated regulatory costs associated with this project before YESAB, Transport Canada, Department of Fisheries, and any other regulatory body, including this hearing." 11:36

And your response was:

> "Estimates for all anticipated regulatory costs associated with Mayo B

are included in the 120 million forecast budget costs."

Correct?

A. MR. MORRISON: Correct.

Q. Correct. So the anticipated regulatory costs, including YESAB, Transport Canada, Department of Fisheries, and this hearing itself, that all fits into the 300,000?

A. MR. OSLER: No.

A. MR. MORRISON: No, that fits into the total of 11.5 million. 11:37

Q. Okay. So where -- other than the 300,000 you've identified as the Mayo B Part 3 review, where else would those costs be built into?

A. MR. OSLER: Well, they're built into post-YESAB filing, planning and engineering. They're built into feasibility studies leading up to the YESAB filing because those costs reflect the preparation of the YESAB filing, they reflect preparation of applications to DFO, and Navigable Waters Canada, land use applications to the Yukon government, Water Board hearing provisions in those costs over the time period of the whole planning exercise. 11:37

Q. Okay. So what does the point 3 refer to specifically then?

A. MR. OSLER: Just this hearing.

A. MR. MORRISON: This process.

Q. The Mayo B hearing?
A. MR. OSLER: The Part 3 process which has always been sort of a distinct process, and last time its costs were treated totally separate from, say, the Carmacks-Stewart project. They were sort of a separate application. So this time we were trying to build them into the budgeting process for the project that the hearing is relating to.
Q. Thank you. And I'm wondering if you might be able to provide a breakdown by application - YESAB, Transport Canada, Department of Fisheries, if you could provide a breakdown of costs incurred. 300,000 for this proceeding. I'm wondering where the other -- 11:38
A. MR. MORRISON: Mr. Chair, you know, without -- I mean, we would be happy to do it if it was possible to do it. This hearing is very distinct and it's easy to do. The rest blur together. You know, the YESAB process is a big process that takes into account a whole lot of these other -- they take into account all of those other activities. We just don't have a way to go through and pick out, you know, it was this much talking to Transport and this much -- you know, we're talking in a collective world about all of these things all the time. So it would be a horrendous effort to try to do that, and I don't think that -- I don't really see how much benefit it would be. It's all part of the licensing 11:39

and regulatory process.

MS. KELLGREN: I'm fine with that response. Thank you.

Q. So on this same Table 1 chart, under owner construction costs, there's a line for interest, AFUDC, after fourth quarter '09?

A. MR. MORRISON: Correct.

Q. Okay. And the amount in the right-hand column is 1 million?

A. MR. MORRISON: That's correct. 11:40

Q. Can you tell me how that amount of AFUDC was calculated?

A. MR. OSLER: It is a preliminary estimate based on preliminary cash flows that Kiewit provided us with other estimates for the top part of the table, with other estimates of preliminary estimates of cash flows for the other costs that are in the table.

So on the one hand we're getting some initial ideas as to what the distribution of the costs would be over time. And then analysis was done -- sorry. We need that type of analysis for the Federal Contribution Agreement, for 11:40 **the sort of forward planning by fiscal Federal year of costs in order to update the Schedule B-2 in that table, for example. So we need to keep doing this.**

In order to get the interest rate effects, you then look at the impacts of the funding contributions and

their timing that will pay for these costs. The Federal tend to lag by a quarter and be 50 percent of eligible costs. So you wouldn't include in that context certain owner costs, but you would include virtually everything else and you would take 50 percent of it and lag it by a quarter to see what the assumed contribution date would be like.

The no-cost provincial territorial funds being made available, we assume that they would be a financing done sooner versus later and that the government would be paying for the no-cost interest on that. So we would have a series of money that didn't cost in helping to fund this right now, not just at the end of the process. 11:41

YEC has also been working out with the Yukon government and with banks low cost short-term funding during this time period, so those tentative thoughts were built into it, what would be the cost for monies we actually did have to use. I think that's the fundamentals of it at a high level.

We are currently, now that the contracts are getting finalized, about to go through the process of refining this to a more meaningful level, but we were pretty satisfied when we looked at it late last year based on this type of number that the number was in the realm of a million dollars, not two or three or four and not 500,000. We just locked down for the budgeting purposes of a million for the moment, but in the future when this is updated next, it will 11:42

be based on according to cash flow, the type I described, with the latest control budget of Kiewit's and the type of financing arrangements that YEC will have by that time I hope have made more clear.

Q. So this remains your estimate? There is no updated estimate?

A. MR. OSLER: No, this is an estimate at the moment. This is the best estimate you can get today and you're a month or more away from the next stage of a new estimate on this that would be meaningful. 11:43

Q. Thank you. So if you can turn to CW-YEC-1-1. Again we're going back to that Attachment 1, which is the YECL-YEC revised responses in the context of the 2008/2009 GRA.

A. MR. OSLER: Right.

Q. Page 2 of 12 of that attachment. The last bullet at the top of the page shows AFUDC and ES&G at .05 million?

A. MR. OSLER: Right.

Q. And I'm just wondering is the AFUDC portion of this amount included in the 1.0 million that you've put forward in the chart in 1-5? 11:43

A. MR. OSLER: Essentially the numbers you're seeing here are 2008 numbers, I believe, and therefore no. The one million only pertains from the last quarter -- the third quarter, I believe, of 2009. So no is the short answer.

Q. Thank you. Now, can you tell me what the accumulated AFUDC on deferred costs is to date? Do you have that number?
A. MR. OSLER: Not at my fingertips. There will be a number in YEC'S account somewhere in terms of to date or to the end of 2009, and it will be -- it's been determined based on short-term interest costs, I believe, but I haven't got it at my fingertips at all. Haven't been paying any attention to that level of detail.
Q. Could you undertake to provide us with that number?
A. MR. OSLER: Would you like it to the end of 2009? 11:45
Q. That would be fine.
A. MR. OSLER: I will undertake to get YEC to get me that number.
Q. Thank you.

UNDERTAKING - TO ADVISE WHAT THE ACCUMULATED AFUDC ON DEFERRED COSTS IS TO THE END OF 2009.

Q. MS. KELLGREN: In CW-YEC-1-25 (a) --
A. MR. MORRISON: Yes. 11:45
Q. In that response you say:

"YEC is arranging short-term financing with the Yukon government and its bankers in order to secure low cost, interim financing as required from Mayo

B and CSTP Stage 2."

So I'm just wondering, what is the current cost of short-term financing to YEC?

A. MR. MORRISON: Well, we don't have all of the short-term financing in place so we can't answer it fully, but I can -- I hesitate to give you a number on the part that we do have in place because we have a large -- or a significant portion of short-term financing in place through YTG and the number is --

THE CHAIR: Could you repeat that -- 11:46

A. MR. MORRISON: So the interest rate on it is BA plus 70 basis points. So it's around 1 and a half percent.

THE CHAIR: Banker's acceptance plus how many basis?

A. MR. MORRISON: 70, 7-0. So it's approximately 1 and a half percent.

THE CHAIR: Right.

A. MR. MORRISON: 50 million. Twenty-five, sorry. That's why I'm asking. Twenty-five million. 11:47

THE CHAIR: On 25 million?

A. MR. MORRISON: Yes.

A. MR. OSLER: So it's on 25 million. That's the short-term rate. You now have a complete number. That short-term financing is available at the moment, and I

believe --

A. MR. MORRISON: And we're trying to arrange. Part of that, I mean, as Mr. Osler mentioned earlier, what we can get in terms of the total financing piece on the money coming from YDC, how quickly our Federal payments are going to come, so we're still looking at whether or not we will need additional short-term financing and we are talking to the banks and they don't have a rate.

Q. MS. KELLGREN: Thank you. Sir, remaining on CW-YEC-1-25, we had asked section 6.2 of Attachment E states that claims are to be submitted at three-month intervals. 11:47

A. MR. MORRISON: Yes.

Q. And I'm assuming that's finalized with Kiewit?

A. MR. OSLER: Sorry. Section 62 is the Federal Funding Agreement. And so the claims to Ottawa for reimbursement out of that have to be submitted quarterly, so every three months. I can ensure you that Kiewit does not have a contract that allows them to submit their claims on a quarterly basis.

Q. My apologies. I was -- I misstated that one. So how does YEC intend to finance the projects in the interim between payments to contractors -- as you said, Kiewit probably doesn't have that type of arrangement -- and the receipt of grants? Is that the short-term financing? 11:48

A. MR. MORRISON: Well, there's a number of ways.

So YDC is securing financing that will be provided to YEC, as Mr. Osler mentioned, at no cost. There's money that we have, as I mentioned, from the territorial government at a very low interest rate, the additional monies. And in-between all of that will come this stream of Federal payments. We have already started billing the Federal government. So we've billed them for costs that we've incurred to date, their share of those costs and we continue to bill them on a quarterly basis. So it's a combination of all of those and that's how we intend to finance the project. 11:49

A. MR. OSLER: And the cash flow that I talked about is essentially dealing with the problem you just raised. We need money, albeit less than might otherwise be the case, given some of these other arrangements. We still need cash and we need to have access, therefore, to short-term financing at a low interest rate, and our approach to AFUDC charging is to take the money that we're using at its costs, not build it up based on allowed rates of return and everything else, short-term costs and use that as the AFUDC calculation for major projects. YEC did this first 11:50 with Mayo-Dawson, so it's not a new idea in terms of taking very specific approach to try and help the economics of its large projects.

Q. Thank you. So the deferred costs, which I understand are about $7.7 million -- is that correct --

A. MR. MORRISON: Correct.

Q. -- of Mayo B, have these costs accumulated AFUDC based on short-term financing costs?

A. MR. OSLER: Well, we're going to get you a number to the end of 2009.

Q. Yes.

A. MR. OSLER: Yes. The way YEC does things, all costs that are deferred accumulate AFUDC. This provision that I understand will apply to the ones that have been incurred to date have been adjusted to reflect the philosophy that I just laid out, but I don't know what particular financing arrangements existed in the time period those costs were being incurred, so I can't get any more specific than that. 11:51

Q. Fine. And I'm just wanting to clarify. So then those costs are not based on YEC'S embedded average rate base costs of debt and equity then?

A. MR. OSLER: Correct.

Q. Thank you.

A. MR. OSLER: And I'm not commenting on what the ones that were given in response to YEC-1-5 revised were when I say that. I'm saying the costs that will be the deferred costs that will apply eventually to this project will be the way I described it. I do not have specific knowledge as to what went into the numbers in 1-5. 11:51

Q. Fine. Thank you.

If we could turn to UCG-YEC-1-21. You were asked:

"Please explain how the proposed debt financing maintains the 60/40 debt equity structure of YEC and how ratepayers will ultimately not be paying more for the proposed project over the long term. We're getting into the flexible financing." 11:52

And your response was:

"The flexible financing provisions will operate similar to other flexible financing provisions utilized in Yukon to mitigate risk of rate impacts to ratepayers; i.e. the flex term note and the Mayo-Dawson note."

And you go on:

"See also response CW-YEC-1-27 (e), (f), and (g), which notes that YEC will 11:53 finance this net rate base amount 60 percent through long-term debt and 40 percent through equity, thereby making the equity ratio 40 percent overall."

So from this response, both of those responses,

does this mean that YEC will not be including short-term debt in its capital structure during the construction period?

A. MR. OSLER: I don't think that YEC has ever included in its -- and I'm going to use the word capital structure, used for determination of a GRA, has ever used short-term financing in that to the best of my knowledge. The capital structure that is used for those purposes is usually long-term debt and the equity and any no-cost capital sometimes is thrown in or not thrown in, but I don't recall ever seeing short-term financing of any type in the middle of that. 11:54

The purpose of that "capital structure" for that purpose is to finance the actual rate base. Deferred costs are costs that are not yet in rate base so there's no inconsistency in that approach, if that answers your question.

Q. It does. I just wanted to confirm that going forward YEC would be employing a similar process.

A. MR. OSLER: Yes.

Q. Thank you. So would the sole source of this additional debt and equity be the Yukon Development Corporation? 11:54

A. MR. OSLER: The sole source of the debt and equity for the 36.5 million estimated net rate base cost for Mayo B will be YDC.

Q. Thank you.

A. MR. OSLER: In the sense that YDC in itself may end up with arrangements with NND, but they would still be in the end the financing authority for YEC regardless of what those other arrangements may end up being.

Q. Thank you. If you could turn to footnote 46 of your application, which is Exhibit B1?

A. MR. MORRISON: Which page?

Q. Pardon me. Footnote 46 is page 30. So there you say:

> "Assumed year 1 revenue for secondary sales of .072 kilowatts per hour in 2012 dollars, which is equal to the approved rate for 2009 for YEC; i.e., assumes no escalation in price from 2009 to 2012 consistent with current diesel forecast. Secondary sales volume benefits from Mayo B are determined conservatively at 2.0 gigawatts per hour per year, benefit for all load levels up to 468 gigawatt hours, total firm grid load linearly reducing to 0.5 gigawatt hours per year as grid firm loads approach 575 gigawatt hours and remaining at 0.5 gigawatt hours per year until such time as all Mayo B supply is available to

11:56

11:56

serve firm loads. This is solely the benefit of enhanced summer generation from otherwise spilled water, where there is a market potential to serve the respective power loads. There is also likely a benefit arising from Mayo B in terms of serving secondary loads from some use of stored water in winter under certain load conditions, but no such benefit was included in the above calculations." 11:57

So you described -- or YEC describes its secondary sales forecasts as conservative. Can you please explain how you derived this forecast under the various conditions and perhaps what its more liberal assumptions might be. For example, if the price is -- for example, if the water levels, if they're medium or lower for a given year, would that be a more liberal assumption or a more conservative assumption?

A. MR. OSLER: This is a -- let me just preface it. The secondary sales effects on the overall calculations which would be shown in the models given in response to YUB 1-25, they're not big drivers of the overall answers. They take up a lot of energy trying to explain. 11:58

These numbers reflect looking at the picture,

that you're supposed to do at this stage, in terms of long-term averages that might be reflective of different load levels. They are averages because they average as the best estimate that somebody can provide for a range of conditions, so the type you just described.

The conservative element arises from saying we really don't know all the ways in which secondary sales might materialize. It depends on the market of secondary sales customers, it may depend on a bunch of other things, but here's a conservative estimate that seems to make sense. 11:59

The other way it's conservative is we don't know for sure what the price of oil is going to be, but it seems to be reasonable to play with this type of a number rather than trying to jump around with some other number. I'm not even sure it's totally consistent with somewhat higher oil price that may exist, but so be it. It's close enough that it doesn't matter given the magnitude of the numbers.

Now, will this number -- this average type of number at any one of the load levels, like the 468 gigawatt 11:59 hours, will it be different in reality in the given years? Yes. If there's a flood, we'll have a lot more secondary sales in general, but we only have so much we can sell into the market because there are only so many customers. So it may make no difference. If there's a drought, we will not

have the secondary sales, but we will have a bit more maybe because of Mayo B than we would have had otherwise, and there probably is a market for it as long as we're not running diesel.

So yeah, the numbers will change a bit based on what the actual water flow conditions are, but one thing you get used to with hydro systems is the downside on water flows you always feel. The upside you don't always get to see because the upside doesn't have customers or doesn't have generation capability to grab it. So it's very much skewed towards the down side if you get away from your averages. And the averages aren't just water flows, but the average capability to system to generate electricity given all the rules in the models. 12:00

Q. So am I hearing you correctly in saying your conservative assumptions then were based on lower than average or they were based on averages from the history?

A. MR. OSLER: They're based on the models run of long-term average flows and long-term average energy capability of each of the existing units on the system, on the Mayo B system. In that sense they're average of a range of conditions. The model looks at the full range of low water, high water, and it calculates their average of all the different water -- what they call water years for a given load level. So it's an average. 12:01

Q. Thank you. So in your last general rate application, the annual volume of secondary sales you forecast was 6.954 gigawatt hours. Will you accept that subject to check?
A. MR. MORRISON: Sure.
A. MR. OSLER: I think that's the number the Board approved.
Q. Yes. So is the 0.5 to 2.0 gigawatt hours -- gigawatt secondary sales in addition to the 6.954 sales forecast?
A. MR. OSLER: It's an addition to whatever the model would forecast, would be the sales that would exist without Mayo B. They may be quite different than what the number you just quoted for 2009. There are different load conditions. There are a bunch of different issues associated with the secondary sales numbers eventually approved by the Board for 2009.
Q. Understood. Thank you. So assuming that at least part of this additional 0.5 to 2.0 gigawatt hours of secondary sales -- assuming this increases, I'm not saying by those exact numbers, but assuming it increases the 6.954 currently approved by the Board, and I don't think we've got to this point yet, but if YEC does not have a general rate application by the time Mayo B goes online to change that forecast, so the actual secondary sales are higher than what the Board has approved going forward, will the secondary -- will the incremental secondary sales be added to the

12:02

12:02

secondary sales subsidy that we experienced, such that the 6.954 currently effectively subsidizes and reduces -- if you follow me on that.

A. MR. OSLER: In order to subsidize the firm rates, we have to have an application that brings all the information before the Board and then it redoes rates. So the rates are there until the next GRA.

Q. I understand that. I said if there's no GRA by the time that Mayo B comes online and there's an increase in secondary sales. 12:03

A. MR. OSLER: Well, the rates won't change. So the short answer is if there's not a GRA, rates don't change. I think you don't have to -- I think you can be fairly confident that before this plant comes into operation there will be another application from YEC to do with rates. I mean, that's a long time from now. But the short answer is until there's an application rates don't change.

Once there's an application, by definition the latest information has to be brought into place, then if the secondary sales are still there, if the load hasn't grown so much that there's no secondary sales to speak of, you know for some reason or another, if there are secondary sales there, they would be applied the same way they were in the last GRA to help reduce firm rates. 12:04

Q. I understand that. Thank you.

A. MR. OSLER: Sorry. Just for the record, the secondary sale rate though does change quarterly based on the relationship the Board has approved to the oil price. So the rate changes, but not the calculation of how it affects firm rates.

Q. I understand.

A. MR. OSLER: And the difference between the forecast rate adopted and the last Board GRA and the actual number up or down goes into the rider F account. So it's to the ratepayer benefits or costs, not to YEC's benefit or cost. 12:04

Q. Thank you. So in YUB-YEC-1-25 (b), if you could turn to that for me. On page 3 of 5 there, the first bullet.

A. MR. OSLER: Yes.

Q. You say: (As read)

> The face interest for this flexible debt, i.e. the rates charged when the interest rate or reductions apply, will be set above YEC's then applicable long-term borrowing costs as required 12:05 in order to enable YEC an opportunity to earn an overall present value return on the loan over its life equal to YDC's long-term borrowing costs when a flexible debt is established."

A. MR. OSLER: Yes.

Q. Okay.

MS. KELLGREN: Now, Board, if I might, I would like to adduce an aid to cross that perhaps we could enter as an exhibit.

THE CHAIR: Sure, go ahead.

MS. KELLGREN: Thank you.

THE CHAIR: Ms. Smart will give you an exhibit number.

MS. BENTIVEGNA: Maybe if counsel can show YEC counsel, just in case there's any issue with it. 12:06

THE CHAIR: Mr. Landry?

MR. LANDRY: Mr. Chairman, I've spoken with counsel, and I'm sure counsel will correct me if I'm wrong, but what this document appears to be is the use of an Excel document that was provided by Yukon Energy in response to an information request, and through my friend's colleague they have effectively put in different numbers into the different cells to come up with a new table.

This type of an approach is a very difficult approach, as I've told my friend, to deal with in cross-examination when neither Mr. Morrison nor Mr. Osler have had a chance to review this. It's a fairly lengthy and very detailed Excel spreadsheet. It's not something that I would present to the Board as something that Yukon Energy, 12:09

from my perspective, could accept as a way of cross-examining witnesses without providing some pre -- time to go through it.

What I've suggested to my friend, and she has agreed, is that instead of marking it as an exhibit we will mark it for identification purposes. Perhaps through the questioning we can see whether or not there are any areas that require further review with the witnesses in terms of what this document does or does not do vis-á-vis the Excel document. 12:10

As you can see, neither party has their computer with them so they don't have the Excel software program in order to be looking at the various cells, et cetera. So I think my friend is in agreement that we can at least do it that way and we'll see how we make out with the questions, if that's okay with --

MS. KELLGREN: If the Board is amenable to that.

THE CHAIR: That's okay.

MR. LANDRY: I would ask that it only be marked for identification purposes, not as an exhibit yet. 12:10

MS. KELLGREN: And if I may, Mr. Chairman, Board, and panel, these charts are simply to assist some questions that I'll be asking, just so you can follow my train of thought.

THE CHAIR: Ms. Bentivegna, is that an acceptable approach?
MS. BENTIVEGNA: Yes, Mr. Chair.
THE CHAIR: Thank you.
MS. BENTIVEGNA: And basically we won't mark it as an exhibit until the end of the questions.
THE CHAIR: Okay.
MR. LANDRY: I think, Mr. Chair, that the normal approach would be -- because it's always hard to deal with records after the fact in the transcript -- we're marking exhibits by counsel number. Perhaps we could mark it a different way in which -- and I'll leave it to the Board Staff to do it, so that at least on the record you know when one is reading the transcript that we have some sort of a number that we're identifying with, but it's not an exhibit until it's formally tendered as such. 12:11
THE CHAIR: Fair enough.
A. MR. MORRISON: Mr. Chair, this may sound -- I hope you don't take this the wrong way, but I can't read this. It's too small. 12:12
THE CHAIR: I was just going to say, could you have made it any smaller?
A. MR. MORRISON: It's going to make it much, much more difficult.
THE CHAIR: Well, I would lend you my

glasses, Mr. Morrison.
A. MR. MORRISON: I've got glasses. It's still not going to help.
THE CHAIR: I can read them, but they are small.
MR. LANDRY: Why don't we mark it for identification purposes. I'll leave it to the staff to decide how the numbering is and let's go and see how we make out because I did have a bit of trouble reading it, but let's see how we make out. 12:12
MS. KELLGREN: My apologies for the size of the font everyone.
MS. BENTIVEGNA: Mr. Chair, I suggest we call it Hearing Exhibit 1, and we'll refer to it that way.
THE CHAIR: Did you need a copy to proceed?
MS. KELLGREN: I believe so. I think some of the intervenors --
THE CHAIR: We can share up here.
MS. KELLGREN: Oh, thank you. 12:13
Q. So if I can perhaps first refer you to the spreadsheet that YEC provided to the Board in response to YUB-YEC-1-25. There's some charts there.
A. MR. MORRISON: Right.
Q. So in line 54, it's entitled "Dollars Per Kilowatt Hour

Net." Is it correct that the value on that line, on this line 54, for any --

A. MR. MORRISON: Sorry, where?

A. MR. OSLER: In the printed sheet, unlike the Excel sheet, it doesn't tell me what line 54 is.

MR. WOODLAND: About two-thirds of the way down --

A. MR. OSLER: Thank you.

Q. MS. KELLGREN: So is it correct if the value on that line for any particular year is greater than 11 cents per kilowatt hour, then the flexible financing kicks in? 12:14

A. MR. OSLER: Yes. The general concept is that the line -- we gave you an answer to CW-13 where we did some examples that could be read --

Q. Yes.

A. MR. OSLER: -- that showed from the cases that we had made of this type of a line of the costs per kilowatt hour that ends up being the cost of the project divided by the number of kilowatt hours of net generation that we're displacing diesel in that year. 12:15

So the total amount of money in year 2012, Mayo B total cost, net of contributions, is 3.155 million. That's what all the calculations in the table are doing. Then it's saying well, what's the next generation contribution? Go up to the top of the table, grid load, you

get a line called "Net Generation Contribution From Mayo B," 26436 megawatt hours. So the 1193 is the division of 3.155 million by that net generation number. That's what we mean by net -- no, cost per unit of net generation.

The actual output from that plant may be higher than that, but that's the amount of diesel displaced. That's what the model is telling us.

So yes, the idea behind the flexible debt concept that -- discussed in the application is that if this number goes above the unit range of, let's say, 11 cents, the 12:16
flexible debt mechanism would kick in.

Q. Thank you.

A. MR. MORRISON: Can I just have a minute?

A. MR. OSLER: So Mr. Morrison is just reminding me of all the various ways we all get confused with these numbers -- and one of the ones I just want to make sure, so that everybody in the room doesn't suddenly say people up here have been talking about 6 or 7 cents levelized costs and why are you at 11 cents all of a sudden, you got to carry that line along through the table through all the years 12:17
of its life, and you will find that it goes down -- and it goes up for a bit when the load goes down, around 2019 and stuff. Then the number over time gets to be lower. So by the end of that first page, in the 22nd year, it's down to 7.7. By the end of the next page it's down to 5.3. By the

end of the last page it's down to 4.49.

So the levelized costs that we've been talking about in the presentation is looking at this whole life of 65 years and trying to get you a present value upfront. Now we're talking about, Mr. Chairman, the issue of well, that's all nice, but what about the guys that are having to buy power in the first year, the second year, and the third year when the costs may tend to be a bit higher because the capital costs haven't been written down yet, or whatever, that's what we're talking about. It's more to do with rates in the first 10 to 15 years than it is to do with the economics or the cost benefit of the total project. 12:18

Q. And my understanding is you'll keep that in the short term between 10 and 11 cents?

A. MR. OSLER: Yes. The concept is to do that, yes.

Q. Okay.

A. MR. OSLER: To cap it at, say, 11 cents for the sake of discussion. I think in CW-13 we ran examples at 10 and a half cents just to be in the middle range. 12:18

Q. So on this 10 to 11 cents, I'm just wondering, what is YEC's goal? Is it to achieve, as we used as an example, 10.5? Is it to achieve 11? 10 to 11 cents seems in the grand scheme of things a rather large -- so I'm just wondering is there a specific target within maybe a tenth of

a cent or something that is the goal here or is it just to get it between these two numbers?

A. MR. OSLER: We're at early days in dealing with how we would develop this with YDC and everything, but conceptually the goal is not to play with small numbers, which is one cent. It is to make sure that if there was a major issue that had the number 14 or 15 cents, that we are making sure that ratepayers aren't paying a lot today for a legacy asset that's good over time. It's an unusual step. It has precedence with other things we've done in the Yukon, but frankly we're trying to make sure that the short-term -- this project is as rate neutral as we can make it, it doesn't go up, it doesn't go down. That's the objective.

12:19

The concept -- I use the words rate neutral because when YEC has discussed the concept of rate neutrality it's around -- what they're trying to do with the flexible term debt, they're trying to make it so that -- with Carmacks-Stewart we were trying to get a rate decrease, and that was delivered. We are not trying to deliver a rate decrease. We're trying to prevent costs from going way up, but we're also trying to mitigate against concern that might be there that costs can go up in the near term, even though they're nice in the long term.

12:20

And we're also covering in the traditional sense load-related risk that could drive this type of cost up

if Carmacks Copper, for example, wasn't on the system. So we are saying YDC will cover that risk in the short term for the ratepayers.

Q. So just in response somewhere between 10 and 11 cents, that's the goal?

A. MR. OSLER: Yeah.

Q. There's no more specific finite number --

A. MR. OSLER: No, there isn't. There's also a doability problem. Regardless of what YEC would like to do in terms of nice thinking, it gets ridiculous the lower you make the number. So from my point of view 11 cents -- given what a good project this is, 11 cents is a very good deal. And whether we should be 10 and a half or something, somebody will have to work out how it all works, whether we can afford to go below 11, but 11 is a pretty good number.

12:21

Q. It's a cap?

A. MR. OSLER: It's a cap, yeah.

Q. So in a year where the unit costs of Mayo B generation is lower than 10 cents, I understand the face interest for the flexible debt will set above YEC's then-applicable long-term borrowing costs; is that accurate?

12:21

A. MR. OSLER: Let me explain this one. We are assuming that no matter how we look at the world, even with Mayo B and Carmacks Copper on line, which is the example you took me to, we're still going to be in a negative

situation and that this situation will return when all these mines go off. So we're not assuming we start off with anything but a need for some flexible debt interest.

Now, the concept originally here is that this is not meant to be a subsidy. It's meant to be a redistribution of costs from today to tomorrow so that the flexible term instrument when finalized would set a face interest rate high enough that people would believe there's a reasonable expectation over time. The interest will recover the cost of the debt. 12:22

Say the cost of the debt was 5 percent, just for the sake of example. You might have to set the face interest rate at 7 or 8 or 9 or higher in order to have a chance to recover the years that you didn't get the full amount, recover them over their life. Once you have achieved -- as far as my understanding of the intent here, and again we're in early days, nobody has developed the actual instrument yet. The intent would be once you've recovered the interest, if you ever do, that gets you back to the cost that you wanted, there probably would be provision 12:23 that you don't keep charging people the higher face interest. But that's a detail to be worked out, and it's many -- looking at the numbers we look at, it's not going to happen in the next 10 or 20 years. It's going to take a long time to recover.

Q. But just to clarify my basic understanding, it's if -- as you say, in the first years we're worrying about we're in a negative situation, but in the long term when the cost does go below 10 cents, essentially it's brought up in order to compensate YDC eventually for this --

A. MR. OSLER: Right.

Q. -- is that correct?

A. MR. OSLER: Yes. And take my example for the sake of numbers, without trying to pretend they represent any modelling, if the cost of borrowing for YDC for the bond it secures for this project is, say, 5 percent or 5 ½ percent, that would set a benchmark. The face value of the interest for the flexible debt would have to be higher than that. It might have to be as high as, say, 10 percent.

The cap we apply each year, say it was 11 cents, but as the ability to pay not zero, or even have a refund, but to pay interest, it would keep going and going until it hit 10 percent. Then it would stop. That it would be the amount of interest you'd pay. And you would keep paying that until you got the ability to get a long-term present value back to 5 percent, which in some runs I've seen takes 65 years.

12:23

12:24

Q. Understood. Thank you.

A. MR. OSLER: But the effect on your -- if you look at these numbers here, if you go out 10, 20 years,

it means your -- the rate that people are paying has been depressed in the short term down to this cap, and it's been raised a bit in the long run, but it's still less than the 11 cent amount in inflation. It's always less than that. In fact, it gets quite dramatically less than that, as you expect with a hydro facility, once you go out 20, 30 years.

Q. 10 to 11 cents in 2012 dollars.

A. MR. OSLER: Yes. Exactly.

Q. Okay. So speaking of a number, I know you say the instrument hasn't been finalized yet, but do you have an idea of what return YDC will expect? 12:25

A. MR. OSLER: No, we don't.

Q. And would you expect this instrument to be finalized?

A. MR. OSLER: It has to be finalized before -- well, it would be in YEC's interest to -- best interest to finalise it before the next GRA. It has to be finalized before the plant goes into service so that it's part of the long-term debt arrangement. So somewhere between today and the time the plant goes into service and probably before the next GRA just so that they can answer questions simply on it. 12:26

Q. Thank you.

THE CHAIR: I was wondering where would be a good place to break.

MS. KELLGREN: I was thinking the same thing.

This would be fine, Mr. Chair.
THE CHAIR: So will you be using this exhibit?
MS. KELLGREN: Briefly, yes.
THE CHAIR: Okay. So if --
MR. LANDRY: Mr. Chair, perhaps if I may, before we go off the record, we've taken a look at this document. I can't say I completely understand it. I'm having a hard time reading it myself, especially some of the grayed-out areas? Can I assume -- and I'm asking you and my friend -- that it would be okay for me to discuss it with my panel during the break? 12:26
MS. KELLGREN: Please, yes.
THE CHAIR: You don't happen to have an electronic copy of this that you could make available to our staff.
MS. KELLGREN: I could circulate that right now.
THE CHAIR: Okay. That would be handy. Are you going to e-mail it? 12:27
MS. KELLGREN: I will.
THE CHAIR: Thank you. So we'll take a break now for lunch, and we'll be back at 2:00, if I'm correct. Is that the plan? Yes, 2:00 we'll resume. Thanks very much.

(LUNCH ADJOURNMENT)

THE CHAIR: I hope everybody had a good break.

Mr. Landry, did you have any undertakings you wanted to return at this time, or do you want to just ...

MR. LANDRY: Yes, Mr. Chair, we do have one of the -- or, I guess, it was unclear whether there were two or three undertakings, but the first one or two we do have an answer to that, if Mr. Osler could provide that. And then we -- I've spoken to my friend off the record regarding the spreadsheet, and I can speak to that after the undertaking is -- 14:04

THE CHAIR: Okay. Sure, you can proceed, if you would like.

D. MORRISON, C. OSLER (For Yukon Energy Corporation), previously affirmed, undertaking responses:

A. MR. OSLER: Thank you. Mr. Chair, we were asked this morning to -- or undertook to confirm that the diesel and hydro capacity numbers that were discussed with respect to CW-YEC-1-22, namely, 66 megawatts of hydro and 47 megawatts of diesel for a total of 113 megawatts available during the winter peak period, we were asked to confirm that, and we can, first of all. 14:05

Secondly, we were asked to confirm with respect to YUB-YEC-1-12 what the reference -- how that number

I just gave is consistent with the reference in this answer to Mayo B without -- well, the capacity during winter without Mayo of 75.7, without Mayo B.

And the answer is that, first of all, there's a footnote at the beginning of that answer, no. 12, as there was -- that I referenced in no. 11 as to what units are assumed, and you can go down that list, and it will come to the same answer in terms of all of the capacity at different plants and the diesel, less the Haines Junction. It will come to the same numbers as we had just discussed in CW-YEC-1-22, except for the difference in the exclusion of the Aishihik facility, with 37 megawatts in CW-YEC-1-22 and zero in YUB-YEC-1-12. So that is the difference between the two tables. 14:06

The rationale for that difference is in the capacity planning criteria, which is reviewed I believe in YUB-YEC-1-6. And the point of these two YUB questions, we were answering nos. 11 and 12, which was to deal with the N minus 1 portion of that capacity planning criteria and provide numbers going forward into the future consistent with the base forecast we were using. 14:07

So the table in the answer to YUB-YEC-1-11 reflects the N minus 1 calculations in accordance with our current capacity planning criteria. The table in YUB-YEC-1-12 is a variation on that compared to YUB-YEC-1-11

only due to the inclusion in the YUB-YEC-1-12 table of industrial load, which we do not include in our current calculations of the N minus 1 criteria.

Other than that, the two tables in the two answers, YUB 11 and YUB 12, are the same. And the difference between having a surplus capacity as is shown in YUB 11 versus a shortage in no. 12 is solely due to the inclusion of the industrial load. Nothing else has changed between those two cases.

And I guess I'll just say finally that why are the 37 megawatts at Aishihik excluded from both these two tables, YUB 11 and 12, and that's because in the N minus 1 criteria what we're protecting against is the single worst event that could occur during the peak on the grid, in this case the WAF grid. 14:08

And at the moment, and in the Resource Plan hearing, that single worst event is an interruption of the transmission connection between Aishihik and Whitehorse, and in the event that we can't rely on that, we lose all of the capacity, and therefore we can rely on none of it at Aishihik. And Haines Junction is a different thing, the same issue. 14:09

And effectively, given the vagaries of the world, we no sooner did that then such an event occur. So we want to be very careful what we talk about in the future for

fear that it will lead to the issue that we're worried about. So I hope that helps explain the relationship of these various numbers. It took me a while to get my mind back around it, but that's it.

MS. KELLGREN: It does. Thank you.

A. MR. OSLER: Thank you.

MR. LANDRY: So, Mr. Chair, that means there is still one undertaking still on the record, and we hope to have that after the break this afternoon or first thing tomorrow morning. 14:09

THE CHAIR: All right. Thank you very much.

MR. LANDRY: Now, in terms of what was marked as hearing Exhibit No. 1, which was sent by e-mail by my friend, just because of some difficulties in understanding what was put in and not put into the Excel spreadsheet, the spreadsheet that was provided by Yukon Energy in response to a question, I've spoken to my friend, and we've agreed that she will ask the questions she would like to ask, and if she needs to give the panel assumptions that they can then run 14:10 through the Excel spreadsheet, she will do that and then will file, if that's the way it goes, as undertakings after that point.

So the result of that would be that this hearing -- what's called a hearing Exhibit No. 1 will not

become an exhibit on the evidence.

THE CHAIR: Okay, thank you for clarifying that.

I will turn it back to you, Mr. Kellgren.

MS. KELLGREN: Good afternoon.

MS. KELLGREN CROSS-EXAMINES THE WITNESS:

Q. Panel, I just want to work a little bit on this flexible financing. Specifically I want to look at how the rate mitigation mechanism from the flexible financing operates. So if we take the base case, meaning YEC being responsible for 36.5 million, and the target price from Mayo B power is to be below or at 11 cents, do I modify the rate of return on debt financing -- I modify the debt financing to reach that target; yes? That's how the flexible financing operates? 14:11

A. MR. OSLER: Yes but qualified, if I could.

Q. Of course.

A. MR. OSLER: If you look at the answer to YUB 25 that we were looking at earlier, the table, the table actually shows, down near the bottom, two lines: one called 10 cent index and another one called 11 cent index. 14:12

Q. Yes.

A. MR. OSLER: And then below that it shows annual project costs as compared to the 10 or 11 cent price index absent flexible debt mechanism, and then Mayo B net costs savings at 10 cents versus 11 cents.

So taking your question at 11 cents, the analysis shows that the difference between paying only 11 cents and paying what's in the model is $247,000. Okay? And it shows that same number plus or minus for every other year. And we took those numbers calculated that way and gave them back to you in a much simpler form in the answer to CW --

Q. 13.

A. MR. OSLER: -- 13.

Q. Yes.

A. MR. OSLER: Okay? And that was called the base case. 14:13

Q. Yes.

A. MR. OSLER: Now, the question for those who have to design the flexible debt instrument is how do we manage to do this and cover off all the range of possible cases, which can be quite infinite.

And, in principle, you would not set one new interest rate in advance because that would be too inflexible. You would have to set a rule, similar to the rule that we've used in the Canada flexible debt, which would say, according to some ground rule but in simple language, if the cost calculated is above 11 cents then all of that extra amount necessary above the 11 cents will be forgiven in the interest that year. You wouldn't set a new interest rate so much as you would provide for forgiveness on a permanent 14:13

basis so that the actual interest charge legally required of the company in that year would be after the forgiveness. Okay?

In this case, unlike the Whitehorse flexible debt, we're not talking about any affect on the principal. The principal would remain the same. It would be whatever it is according to the rules. It probably would be a declining principal each year over, you know, probably like 40 years or something like that, like we've done on other ones.

So that would probably be -- although it 14:14
hasn't been done yet -- the mechanism that would be used, and that mechanism would therefore be flexible. If the answer wasn't 247,000 but because of some other situation was a lot larger number -- such as some of the numbers we gave you in the answer to CW-13, where for that first year, in the range of cases you gave us, that number changed from being 379,000 to potentially being 1.3 million or 2.3 million or indeed a potential saving of 346,000.

Well, if there was a saving, in principle we wouldn't be doing anything in the flexible debt market. We 14:15
would be finding a way to have the debt essentially be what it would have been without all of this. If there was savings from day one, we would be in a very happy state, and we would find a way not to have all this stuff to make our life complicated.

But in all the other situations, the flexible instrument has to somehow be capable of dealing with it and offering forgiveness of interest, and if interest forgiveness isn't enough, going beyond that in some way or other in terms of how to meet the commitment or the target of capping it at 11 cents. And if the interest amount chargeable in that year is reduced accordingly, then the calculation of what the ratepayers have to pay will work its way through and come out to the right answer.

So that's how you deal with it on a year-by-year basis, and that's why it isn't so much just you go back and plug in a new interest rate. It's you forgive as required. 14:16

Q. And bringing you back to you said the case whereby forgiveness wasn't enough and that would be figured out some way or another, could you perhaps expand upon that and how that would work?

A. MR. OSLER: In the opening statement I used a phrase that I just want to get back in my head. On page 11 of the opening statement, I was talking about load risks. I used the phrase -- the sentence was, under "Load risks": 14:16

> "YDC flexible debt financing will provide further mitigation ..." et cetera, "... including YDC funding at no cost to YEC for the additional

interest rate reductions (including cash injections through 'negative' interest rate payments)."

That's the part of the sentence I was trying to deal with the point you were talking about. Effectively you would have to go in that direction if forgiving interest isn't enough.

Q. Thank you.

A. MR. OSLER: And in the case of some of the scenarios without Carmacks Copper load for some of the years, if it was deferred, it would seem that that type of statement is necessary. 14:17

Q. Thank you. So if you take the first year of Mayo B operation 2012 with the numbers you provided in YUB-YEC-25 --

A. MR. OSLER: Right.

Q. -- and to have the cost within 10 to 11 cents, the flexible financing return would be approximately -- your chart says 5.28; is that correct?

A. MR. OSLER: Sorry. Where do you see -- well, we start off in the base case, and in all of the cases, by assuming the cost of capital for the 2009 GRA; a long-term debt of 5.28 percent, equity at 8.49 percent, 60 percent debt, 40 percent equity, et cetera. 14:18

In the spreadsheet on YUB 1-25 there is a calculation each year of the average midyear rate base amount on the 36.5 million, and then the equity return on that

amount and the debt return on that amount, and in year 2012, for example, the debt return on that at 5.28 percent on the midyear rate base is 1,147,000, et cetera. That's done every other year.

So that is the base case calculation. What has to happen in a flexible debt instrument is that that number, 1,147,000, if we want to cap it at 11 cents, has to be reduced in that year by $247,000. If you did that and you reran the calculation, you would come up with a capital of 11 cents. 14:19

The effective interest rate I haven't done, but you can do. It would be -- reduce the 1147 by 379, and it will reduce the effective interest rate for that year from 5.28 percent to some other lower number.

But the mechanism for doing this would be forgiveness of interest rather than resetting an interest rate, as it is with the Whitehorse flexible debt at the moment.

Q. So in the case you just mentioned, the base case 2012, we did do those numbers, and would 4.12, 4.13, subject to 14:20 check, make sense? Or perhaps you could undertake --

A. MR. OSLER: Yes, it would make sense it would be somewhere -- it's not -- you know, you've still got a fair amount of the costs left. You haven't got rid of most of them. It makes sense, subject to check.

Q. Thank you.
A. MR. OSLER: Now, that number for that year, though, as I repeat, the next year the reduction required is only 6, according to this line. So you could almost pay the full 5.48 percent. And if I want to recover the amount that we gave up earlier, I'm going to have to charge more than 5.48 -- or 5.28 percent, sorry, in some future year in order to get back to a level playing field.
Q. Understood.
A. MR. OSLER: But all we want to do is get back to a level playing field, not extract more than is necessary to achieve. If the real number is 5.28 that YEC could borrow the money for, that's the number we want to achieve. 14:21
Q. Fine. Thank you. So these are the numbers that I was hoping to run by you just so we have a better understanding of how this flexible debt works. In one of the cases you responded to, in CW-YEC-1-13, we talked about 10 percent overrun.
A. MR. OSLER: Right. 14:21
Q. And working with the numbers you provided in YUB-YEC-1-25, that, in my estimation, in 2012 would be a rate of approximately 1 percent. So, as you say, the rate is not reset, but it would be a forgiveness up to --
A. MR. OSLER: Well, yes. If you looked at

the increase of the costs by 10 percent, you have to -- what your question was pointing out is that it's 10 percent cost increase on the 120 million. It's not 10 percent cost increase on the 36 and a half million.

Q. Yes.

A. MR. OSLER: So the 36 and a half million that the ratepayers are picking up would jump in that context to we said 48.5 million. Okay? So that's a pretty big jump. And the result is that -- we said in the answer to your question no. 13, that even at 10 and a half cents we would have to pick up $1.3 million worth of interest forgiveness. Well, that's more than the interest costs.

So if you're saying the cap is 11 cents, it will be probably -- it would be reasonable to say, without me trying to double-check everything, that there might be some interest paid, but it wouldn't be very much. 1 percent, subject to check, wouldn't be far off.

Q. Thank you.

A. MR. OSLER: If that's where you're going --

Q. It is. 14:23

A. MR. OSLER: And, again, the answer would vary for the subsequent years --

Q. Of course.

A. MR. OSLER: -- like it did before.

Q. Understood. In your application at page 45 --

A. MR. OSLER: Are you going to be going back to this? Can I take my finger out?

Q. I think you're safe.

A. MR. OSLER: Okay, good. 45 in the application?

Q. Yes. There YEC describes the following aspects of flexible financing: (as read)

> "The YDC/YEC flexible debt arrangement will also include YDC funding at no cost to YEC for the additional interest rate reductions, including cash injections through negative interest payments required in this regard."

I go on: (as read)

> "The face interest for this flexible debt, i.e. the rate charged when no interest rate reductions apply, will be set above YEC's then applicable long term borrowing costs in order to enable YDC an opportunity to earn an overall return on the loan over its life equal to YDC's long-term borrowing costs when the flexible debt is established."

So this is going over what we just discussed.

14:24

14:24

A. MR. OSLER: Yes.

Q. Okay. And in footnote 84, which I believe is on that page, you say: (as read)

> "These no cost arrangements for YEC would apply in the short term for years before the Carmacks Copper assumed operating load of approximately 50 gigawatt hours per year is being supplied from the grid."

Yes? 14:25

A. MR. OSLER: Correct. And what we're -- we're threading another fine point here, but there are two different thoughts in what we've just been talking about. One of them is what I would call a straight-forward flexible debt financing, if there such an animal, where assuming we had Carmacks Copper load and everything else there, but let's say we had just 10 percent overrun you were talking about, or some other factor that bumped the cost up, this is there to protect in the short term, but the intent is to set a reference rate, interest rate, that would be high enough to 14:25 **give a reasonable chance to recover that interest over the life of the loan.**

A separate independent thought is that if the Carmacks Copper load is not there or it's delayed, that is a risk, a very specific load risk. It's a big number, and in

that particular case the concept is that we would not be trying to seek to recover in the long term the lost interest due to that event.

Q. Okay.

A. MR. OSLER: It would be forgiven, but it would be forgiven in concept form permanently by YDC. So that the risk of the Carmacks Copper load not occurring according to the schedule we've got here, not the risk after it comes and goes, but the risk of it not occurring in the time period we're talking about, is, in that respect, borne by YDC in this proposal.

The rest of it is just a question of rebalancing costs between today and tomorrow, and it's not intended to be that the shareholder YDC is ultimately absorbing any cost in the long-run sense. It's just doing its job to manage the thing over time in a way that the shareholder thinks it wants to do.

Q. Fine. Thank you. So I'm just wondering, the flexible financing, does it act to increase YDC's return in the case of a cost underrun?

A. MR. OSLER: No.

Q. Okay.

A. MR. OSLER: We're not guaranteeing ourselves anything like that. If there's a cost underrun, then we don't have to worry about some of the things we're

talking about, and the interest rate will be reflecting the long-term borrowing costs that YDC has achieved if we don't need the YDC flexible debt.

Now, I'm saying all these things. These are the principles. Then we have to go into a room and work out how to do this. The Board will get to see that in the next GRA.

Q. So I lied; let's go back to YUB-YEC-1-25 for a little bit.

A. MR. MORRISON: No, we can't, Mr. Chair. 14:28

Q. Oh, I shouldn't have said "lied" on the record.

A. MR. OSLER: Yes. We're there.

Q. Excellent. So at the top of each business case, as you pointed out, the cost of equity is 8.49 percent?

A. MR. OSLER: The cost of equity, yes, is the return on equity approved in the 2009 GRA, yes.

Q. Yes. And I understand that was based on the 2009 BCUC general cost of equity; is that correct?

A. MR. OSLER: Well, it was approved by this Board, but it was based on the approach that was -- I think 14:28
it was accepting the approach adopted in British Columbia less 50 basis points for the Order-In-Council directive that applies to the YEC.

So the BCUC formula would have given you that answer plus 50 basis points --

Q. Yes.
A. MR. OSLER: -- based on whatever they come up with in the late November/early December of last year.
Q. Do you know what the --
A. MR. OSLER: Or the year before that, sorry. Anyway, go ahead.
Q. Do you know what the 2010 BCUC cost of equity is?
A. MR. OSLER: No.
A. MR. MORRISON: No. They do it annually. So they don't do it until November/December every year. 14:29
A. MR. OSLER: Well, they may have done it at the end of 2009, though.
Q. Yes. That would have been late 2009 that they --
A. MR. OSLER: No, I had been busy on other things. I haven't done it.
Q. Understood. Perhaps we can turn to CW-YEC-1-21, move on to an entirely new topic.
A. MR. OSLER: CW 21?
Q. Yes.
A. MR. OSLER: Yes. 14:30
Q. So I just want to confirm that the Yukon government funding commitment to YDC, as set out in Attachment F of your application, is the 30.15 million figure from Table 1, which was part of your response -- pardon me, I should back up here for a second. Let me pull up ...

THE CHAIR: Could you just repeat the reference number for that?
MS. KELLGREN: Absolutely. CW-YEC-1-21 sub (f), their response.
Q. There you said that the 36.5 million in Table 1 of the application reflects the Yukon government funding commitment to YDC as set out in Attachment F of the application.
A. MR. OSLER: Sorry, say that again. I'm not sure you were correct.
Q. Okay. Your response in (f) of CW-YEC-1-21, you said: 14:31
(as read)

> "The 36.5 million in Table 1 of the application reflects the Yukon government funding commitment to YDC as set out in Attachment F of the application."

A. MR. OSLER: You're -- it's puzzling us all because it sounds like it should have been a reference to the Federal government number, but --
Q. Which should -- 14:32
A. MR. MORRISON: Can we just take a second?
Q. Of course.
A. MR. OSLER: I think the answer misspeaks, and it should be referencing Federal government funding commitment in Attachment E, just to be clear, because it's

got nothing to do with -- and you were asking about in the question, though -- this is partly where the whole thing starts: (as read)

> "Please reconcile the difference between the $36.7 million total contribution to Mayo B as shown in Schedule B-2, Attachment E, and the $36.5 million estimated ..."

at Table 1 in the application, which is the same table I used on the presentation. 14:33

So I think the intent of the answer was simply to say if there's a difference it's just because we're now doing it based on all the factors you see in Table 1, period, including -- and this is probably where the Yukon government funding contribution came into the response's thought process, including the actual amount and the commitment wasn't made until December 2009, the Yukon government contribution.

The application made some assumptions as to who was contributing what about what, and it was based on 14:33 earlier numbers as to eligible -- you know, the eligibles cost and everything else. So there isn't any logic that would say the two should be the same with respect to the YEC portion of the total. The point that you would expect to see concurrence is as to the Federal funding.

The Yukon government funding was not committed until we received the letter and wasn't firm as to what it would be until we received the letter.

Q. Thank you. Sorry, and just to confirm, perhaps there was some confusion -- or perhaps this is mine alone -- in this response, but I thought the YEC commitment was 30.15 million, not 36.5.

A. MR. OSLER: You're right, and that's what was driving us to distraction here, but effectively the amount of the -- how much did YEC end up putting into rate base is a residual number. 14:35

Q. Yes.

A. MR. OSLER: It depends on the Federal contribution and the 30.15, which wasn't a number that was resolved until we got the Yukon government commitment. So the answer as to how much the rate base would be for YEC is totally dependent on not just the Federal number, which is fairly straightforward, but also the Yukon government number.

Q. Of course.

A. MR. OSLER: So we didn't have any particular basis for assuming anything in the application Schedule "B" for the Federal contribution, and that's all you see there. So it does make sense in the end, the answer, but it's -- all of us are having difficulty seeing the path you have to follow to get there. 14:35

Q. Agreed. So I would like to discuss the issue of carbon credits. If you turn to page 20 of the application, and the first bullet there references there will be a displacement of 700 tonnes of greenhouse gas emissions per gigawatt hour of electricity generated; correct?

A. MR. OSLER: Yes.

Q. Okay. Are hydro generation facilities entirely free of greenhouse gases?

A. MR. MORRISON: Well, depending on what kind of a hydro facility you have, the answer may be no, but these are small storage facilities, and we haven't done an assessment as to whether or not they have greenhouse gas emissions. 14:36

Q. So you don't know whether Mayo B --

A. MR. MORRISON: I doubt if it's any, if it's very much. It doesn't have a big storage pond. It has a natural lake that it uses for storage. So what you're talking about and what your reference might be is that in some large storage ponds there are some greenhouse gas effects. This is using an actual lake. We've never looked at it as a significant issue. 14:37

A. MR. OSLER: If you're thinking about operational in your question, if we're looking at large hydro facilities, such as in my home province Manitoba where people are getting reviews of these things for new projects, you've

got to have some pretty material effects such as Mr. Morrison was talking about to get into operational greenhouse gas issues, but they do exist, and people do estimates on them. They're trivial relative to the savings if the energy is used to displace carbon-based fuels, but they do exist.

The other type of carbon credits -- carbon greenhouse gas issues that, in big projects, people are being asked to think about are the issues coming from the use of equipment and stuff during the actual construction, and those who do this for a living can give you estimates of what that is. But, again, relative to even a new greenfield project of the type that they're talking about there, which has more affect on the water regime than anything we're talking about here, we're working within an existing enhancement of a facility. The effects are very, very small relative to the total that's saved if the energy is displacing carbon. 14:38

Q. So it would be fair to say that, if any, there's negligible greenhouse gas emissions associated with Mayo B.

A. MR. MORRISON: That's correct. That would be our understanding. 14:38

Q. Thank you. So if we could turn once again to YUB-YEC-1-25 Attachment 1.

A. MR. OSLER: I should have put a permanent bookmark there. Okay.

Q. There's a bold heading. Under the bold heading "Costs."

A. MR. OSLER: Yeah.

Q. Do you see the line "Carbon credits" marked as zero dollars?

A. MR. OSLER: Yes.

Q. Can you tell me why the dollars would be zero?

A. MR. MORRISON: Well, that's fairly simple, from our perspective. We have no knowledge or have no -- maybe "knowledge" is the wrong word. We have taken the carbon credits as zero because we have no agreement with anybody nor do we know of anything specific in Canada that 14:39
allows us yet to trade carbon credits in Canada.

Now, we have done some preliminary work on that matter, but it's very preliminary and we have talked to companies that are in this field and who do look at this, and we've gotten some advice, but we have not advanced the issue of carbon credits. That's not to say that we will not advance the issue of carbon credits, but -- and we are actively doing that, trying to find a way -- trying to get information as to how we might realize some value for these credits, not only from Mayo B but for other projects that we 14:40
have in the system. But at today's date, the number would not have any -- you know, we wouldn't be able to attribute it in any way, and so at the moment we've used zero.

A. MR. OSLER: And we looked at it from the point of view of, at earlier stages of the project, would

this number be something that we should put all our energy into trying to firm up in order to -- could really swing the difference, and the answer we got back is it would be useful to get and we should keep pursuing it but it wouldn't be the determinative thing that would affect a "go" or "no go" for this project.

Just to be very clear, the commitment is that the carbon credit benefit goes to the process -- I mean, it reduces the costs, it reduces the cost to ratepayers, or helps offset the need for the flexible debt cap, you know, 14:41
because the costs wouldn't be as high because of carbon credits.

So the zero does not mean Yukon Energy's forecasting that it will necessarily be zero or that if we get some there won't be a number plugged in there. Whatever YEC can get and they're actively trying to get it, will go to the credit of the project and therefore the ratepayers.

A. MR. MORRISON: Mr. Chair, I just would like to clarify that whatever number goes in improves the economics and improves the business case. We've been very clear that 14:41
the business case stands on its own and the economics are there. So this is -- as Mr. Osler has said, would be an added bonus. It would help reduce or offset other costs, and they would be for the benefit of the ratepayers. But we felt, you know, that it was important for us not to try to

provide a number that we weren't able to put some firm guidelines around, and we can't do that at this point.

Q. But just to confirm, just because there's no number there doesn't mean this isn't something you're pursuing.

A. MR. MORRISON: That's correct.

A. MR. OSLER: We're very definitely pursuing, and the reasonable expectation is that there will be something there because there are carbon credits in this world, and people are paying attention to them, companies are securing them, and YEC is actively, and has been for some time, looking at them. So -- but we just don't feel comfortable putting a specific number in there. 14:42

Q. Good, thank you. So I had some questions regarding an upcoming general rate application, but I think we've kind of discussed that generally throughout the cross-examination. So maybe if I could just confirm a few things.

Your understanding is that a new application will be brought before Mayo B is online.

A. MR. MORRISON: We've been, I think, very clear, not just for YUB but for all these projects that we're talking about at a licencing or permitting stage and we were clear, I think, in the opening remarks. This is a process to go through an energy certificate process. This is not a GRA where we're looking at the costs being included in rate base, and there definitely will be an application to do that at a 14:43

date when we have all those costs. That's correct.
Q. Thank you.
MS. KELLGREN: Mr. Chair, Chairpersons, I believe that concludes my questions.
THE CHAIR: Thank you very much.
MS. KELLGREN: Thank you.
THE CHAIR: I understand that UCG would be the next presenter. So when you get the chance to switch here, you can do that. Thank you very much.
You can proceed any time you're ready. 14:46
MR. BUONAGURO: Thank you very much.
MR. BUONAGURO CROSS-EXAMINES THE PANEL:
Q. Good afternoon, panel. I wanted to start with some clarification questions that resulted from the cross-examination that preceded me. And the first one that we were curious about was the discussion on secondary sales and the relationship between secondary sales, forecasts, actuals, and the rate rider F.
What we understood and what we want to try and understand is how it is that the difference between forecast 14:47
and actual secondary sales are reconciled somehow in rider F. At least that's what we heard, and that's why we're asking, because we're not sure what that relationship was.
A. MR. OSLER: The relationship that exists today and was reviewed in the GRA relates only to price and

not to quantity. So the extent to which -- I was responding or making a point that the actual secondary sales rate does vary quarter by quarter, even though there's a forecast number adopted in each GRA, and then I added: But the differences between the quarter-to-quarter price variance and the GRA-approved number goes into the rider F for the benefit of ratepayers. It doesn't go to the cost or the benefit of the utilities.

The secondary rate -- price that gets adjusted is treated in that way the same way the fuel oil prices -- the fuel price is treated for diesel, but it's offsetting. It goes in the other direction when there's a fuel price -- when there's a general change in fuel price.

Q. Thank you. That helps. So in terms of the volumes, there's a certain volume of secondary sales that are embedded in base rates. 14:48

A. MR. OSLER: Yes.

Q. To the extent that those volumes vary, which would include the additional volumes you're looking at generating as a result of this project, that variation doesn't affect the credit that's related to secondary energy sales until you've updated the forecast through a revenue requirement application. 14:48

A. MR. OSLER: The rider F calculations do not protect or benefit the company with respect to variances in

volume. So the volume only gets taken into account for rate-making purposes when you have another GRA. Then it goes either way, you know, whether the volume was less or more than was in the GRA.

And the point I tried to make earlier was I was reasonably confident that before we got to another GRA -- before we got to this project being in service, there would be another GRA, at which time the forecasts would be reviewed, and if 2012 was a test year, they would be reviewed with the forecasts for a secondary that reflected Mayo B. 14:49

So the rates would be set based on a new forecast reflecting new realities.

Q. Thank you. You mentioned a theoretical rebasing for 2012, and I think we touched on the fact that at some point you're going to have to rebase in order to capture the capital costs associated with this project and presumably other projects in updated forecasts and such. But you haven't been -- and I don't mean this in a negative way. There's been no commitment to a particular time frame. Is that because you simply -- or YEC simply doesn't know when 14:50 they're going to be rebasing?

A. MR. MORRISON: I take it you mean a new GRA.

Q. Yes.

A. MR. MORRISON: Yes. No, we don't have a time frame, but, you know, with the Mayo B project we will

obviously have to come back to the Board fairly soon. So I don't have a specific timeline.

Q. But I think it is possible, for example, for 2012.

A. MR. MORRISON: It is possible.

Q. Thank you. You were just having a conversation with my friend on carbon credits.

A. MR. MORRISON: Yes.

Q. And I can tell you I don't believe I had any cross prepared on carbon credits, but I had a couple of questions. My understanding is that a large part of the justification for this project was the reduction of emissions and the resulting environmental impacts resulting from the displacement of diesel generation in the Yukon; is that correct? 14:51

A. MR. MORRISON: That's correct.

Q. My understanding of carbon credits -- or at least the money that's available through carbon credit trading is that you sell your carbon credits for having reduced your emissions to somebody else so that they can emit more?

A. MR. MORRISON: You know, I think that's a general concept of the cap and trade system, but I don't know whether it is what -- I don't know that it encompasses the entire breadth of carbon credit sales that are out there. 14:51

Q. I think, notwithstanding that, you retired business cases on the basis that there is no money coming in from

carbon credit trading.

A. MR. MORRISON: That's correct.

Q. Thank you. I would like to talk about a high-level view of what this application represents and some of the key components of it. And I would like to start with what I think is not a controversial concept, which is that at a $120 million price tag YEC was never going to apply for approval of this project.

A. MR. MORRISON: Well, in general, that's what we said, that we wouldn't go ahead at $120 million. 14:52

A. MR. OSLER: In terms of ratepayer costs.

A. MR. MORRISON: From ratepayer costs.

Q. Right. Thank you. And that's because, generally speaking, at $120 million, based on the existing context of the Yukon Energy requirement and load and so on and so forth, it's simply not cost effective to spend that kind of money and put that cost on ratepayers; is that correct?

A. MR. MORRISON: It would be too high a cost to put -- to relate to rate base, yes.

A. MR. OSLER: And Figure 1 that we used this 14:53 **morning shows relatively graphically how for the first 15 years at $120 million and the loads that we were talking about, even with Carmacks Copper, ratepayers wouldn't be able to save money. After 15 years, they would.**

Sorry, I make two caveats to that statement.

One of our problems is we don't have enough load in the Yukon. We don't have export grids and things like that to sell all the energy we produce. If we could, our answer might be quite different, if we were living in B.C., because the situation would be that we could sell a lot more of it at a good price, and maybe the project would make sense today, period. But we're in Yukon, we've got the loads we've got, and we do not have a grid to export.

So all of those things were taken into account in making that statement, that we would not proceed with the project unless we could get Infrastructure Funding assistance such that the cost to ratepayers would be reduced considerably.

Q. Thank you. Now, moving from that initial idea of the project, which is that at a price of $120 million, based on the context of the Yukon as it exists, the way I put it it hasn't been cost effective, you were able to obtain $53 million or so from the Federal government.

A. MR. MORRISON: Correct.

14:53

Q. And I take it, based on the nature of the funding, that the criteria that was employed by the Federal government and, indeed, the basis upon which you would apply for that money, was not on a cost-effectiveness basis. Cost-effectiveness wouldn't have been the criteria you were employing. It would be along the idea of environmental impact.

14:54

A. MR. MORRISON: Well, there was a couple of things. We applied for the project based on a need to go forward to build a project to meet a growing load on our system and that the alternative that was available to us at that time, at this point in time, was either diesel or Mayo B.

And in addition to that -- so when we looked at that and we said: "All right, we know we have this project; we know we have increasing loads; we know that the alternative other than Mayo B is diesel; Mayo B costs $120 million, we would like some -- there is a program out here; we would some of those funds for that project." They didn't look at the business case of whether it was affordable or not affordable.

In addition to that, and one of the criteria for this from the Federal programs framework, was that it was also reducing potential greenhouse gas emissions, and therefore it fit their criteria. So we were able to take it forward on two fronts.

14:55

Q. I think what -- the point I was trying to elicit from you, and I think which is more in the second half of what you were saying, it relates specifically to the Federal government's involvement.

14:56

The Federal government, as I understand it, got involved for those last two reasons: The environmental

aspects of the project. They didn't say $120 million is cost effective; they said it costs $120 million, but based on a view of the environmental impacts of this project or the environmental benefit to this project, we are able to produce that $53 million out of the fund?

A. MR. MORRISON: No, I think it was clearly what I said to you in the first part of the answer. The Federal government program was an infrastructure program so they were funding infrastructure projects. So Mayo B is an infrastructure project. It's called a Green Infrastructure Fund. So they were looking at it from both points of view, not primarily the environmental or primarily one or the other, it was both. It was infrastructure. It contributed to the infrastructure requirements in the territory, I think in their opinion and our opinion significantly, and it also met the green requirements or the environmental requirements of the program. So it met both.

14:56

Q. Okay. Perhaps you can turn, this is in your application, at Attachment E?

A. MR. MORRISON: Attachment E?

14:57

Q. Yes. It's the agreement for the Yukon Green Energy Legacy Project. And I'm looking at specifically -- it's labelled Attachment E-14. At the top it says "Section 12 Special Conditions."

A. MR. OSLER: Yes.

Q. I'm looking at 12.1, project results, and beginning of the second sentence, it says:

> "As such, the Recipient covenants that the Project will result in one or more of the following outcomes. These outcomes shall be integrated in the reporting as outlined in Schedule C.1.1.g."

And point 1, "increase the availability and/or reliability of Canada's clean energy supply; point 2, "increase the availability of renewable and other clean energy"; point 3, "improve air quality"; and point 4, "reduce greenhouse gas emissions." 14:58

A. MR. MORRISON: Correct.

Q. Now, that part is sort of clear to me. It's a project that in order to qualify, it has to meet these sort of conditions. Can you point to me or explain to me more the first part of it what you're talking about, which it has to be an infrastructure project?

A. MR. MORRISON: Well, the name of the fund is an infrastructure fund. 14:58

Q. It's called the Green Infrastructure Fund?

A. MR. MORRISON: Right.

Q. I understand the "green" part. You're saying build infrastructure that's green?

A. MR. MORRISON: Mr. Chairman, I'm trying to help, but I'm not sure what the significance is. It's an infrastructure project and it's green and it has to be both.

Q. Okay.

A. MR. MORRISON: It can't be a program that's green. It has to be an infrastructure project, and it has to be green. So that's the point here.

Q. All right. I mean, the simple point I was just trying to make, and perhaps you can agree with me if I put it to you this way, is that when the Federal government approached the funding request, at least one of its major considerations was these environmental impacts that we've set out in the project results section, and that that's something that they've considered aside from or in priority to the cost effectiveness of the project? 14:59

A. MR. MORRISON: As I said before, yes, they considered the green aspect of the project and that it was an infrastructure project.

Q. Okay. Thank you. Now, that's the first $53 million in funding. The way I understand that is that the Federal government has made a policy decision in producing this green investment fund -- or this Green Infrastructure Fund and in that policy distributed $53 million in particular to the Yukon. Is that a fair characterisation? 14:59

A. MR. MORRISON: Well, I would characterise it

that the Federal government created a program for infrastructure projects and within that program they provided $53 million to the Yukon for Mayo B.

A. MR. OSLER: And to be clear, the program has some rules, which you've looked at some of them, including how much they can contribute of eligible costs, which are some more rules. So they received an application for a transmission project and a hydro generation project, called together a legacy project. The application had to meet the tests that it was infrastructure and that it would provide green benefits. Having done that, the government looked at it and made a decision that it would approve funding up to the maximum allowed amount of 50 percent of eligible costs, so accordingly announced. This same fund I think is being used in the Federal commitment for a major transmission project in northwestern B.C. 15:00

So they have been using this fund for certain purposes not analogous to what we're talking about here. It has a little bit more generous timelines than the infrastructure funds that all have to end I think this calendar year. It's got ability to deal with infrastructure in the way that the other infrastructure funds don't, but it does have the requirement that it has to be green. 15:01

Q. Thank you. I think that's helpful. Before I leave this page, what I didn't find, and maybe I missed it, were any

kind of specific targets in relation to these categories. So, for example, a reduced greenhouse gas emissions, it doesn't say on this page certainly any particular targets or any kind of achievement levels that need to be done. Can you help me with that? Is that not part of the criteria? Is it more of a general ability to achieve these concepts?

A. MR. MORRISON: Well, I think we were in just referencing earlier that the projection for Mayo B is that it will be 7,000 tons of greenhouse gas per megawatt of installed capacity. So that's the target or that's the commitment we made, but the program itself doesn't require us to meet any target. 15:02

Q. So if you meet half that -- I'm sure -- I think you're telling me that when you presented the program, that's what you were telling them in the application, but the Federal government hasn't come back and said, well, if you only get half that or 80 percent of that, it's going to affect your funding?

A. MR. MORRISON: There's no condition in the contract with the Federal government that gives us a specific target or requirement to meet a standard. 15:02

A. MR. OSLER: And in this case I don't think there's much concern about the eligibility of the project given what it's designed to do and given the nature of diesel and everything else in the territory. So in this case the

test we had to meet to be called a green fund didn't have those types of threshold levels that you're thinking about. There's nothing in the contract that ties the funding to any specific level or target and I don't think we're going to have any great difficulty if the project is developed and build and being able to meet the type of test that the program was actually intended to meet that there will be material greenhouse gas savings as long as we're displacing diesel.

So I think in this case those types of rules didn't pose a great challenge. They might in some other projects that the fund is looking at. I don't know. That would be a different challenge for the Federal government. 15:03

Q. Thank you very much. So from that, I would like to move to the 30 million or so in YDC funding related to the project. I believe that's described in Attachment F of the application.

A. MR. MORRISON: That's correct.

Q. If I can maybe characterise this and you can agree or disagree with me and correct me. This looks to me like a -- well, it is a letter from the office of the Minister to the Chair of the Yukon Development Corporation, and it basically sets out the terms under which the Yukon Development Corporation will receive -- I guess we will call it no-cost capital for the use in the two projects: The Part 2 15:04

Carmacks-Stewart Transmission Project and the Mayo B project?

A. MR. MORRISON: I wouldn't characterise it that way, no.

Q. Sorry. Then, by all means characterise.

A. MR. MORRISON: Well, what this does is this provides the government's commitment to fund up to $52.5 million of borrowing that the Yukon Development Corporation would make, which it will, in turn, provide to the Yukon Energy Corporation as no-cost capital for Carmacks-Stewart and Mayo B projects. 15:05

Q. Am I wrong that's the basis of the $30 million that we're talking about with respect to the Mayo B project?

A. MR. OSLER: The $30 million that we're talking about in respect of Mayo B is part of that 52.5 million.

Q. You scared me there for a second.

A. MR. MORRISON: You asked me if you would characterise it and I would agree with you and you did and I didn't.

Q. Thank you. Thank you for correcting me. 15:05

In looking at this letter, the first paragraph, when he's talking about the Stage 2 project in the Mayo B project it states at sentence No. 2:

> "These projects will support economic development, avoiding increase in

future greenhouse gas emissions, increase diesel generation and provide long-term rate benefits to the ratepayers."

And I'm taking from that that aside from, or in addition to any kind of cost-effectiveness test, i.e. what are they going to get in a pure cost benefit analysis from an economic point of view for the $52 million for both projects, they've had the added criteria of supporting economic development, avoiding increase in future greenhouse gas 15:06
emissions and avoiding increased diesel generation as reasons why it's a good idea to spend this money? Is that fair?

A. MR. MORRISON: That's what -- these are some of the reasons why they're providing this funding.

Q. Okay. And that takes you to the remainder of the $120 million for the project, which is $36.5 million. My understanding is what we're doing here and what the YUB is being asked to do is actually look at that remaining $36.5 million projected expenditure and apply a cost-effectiveness test to it. To look at that and say from a ratepayer 15:07
perspective, is spending $36.5 million in additional money to get this project online worth it from a cost benefit analysis. That's my sort of simple view of what we're doing here today. Would you agree with that? Would you like to add to that?

A. MR. MORRISON: Well, part -- yes. Part of what we're doing here today is to look at whether or not on the basis of public interest and necessity whether or not $36 million -- or whether the Mayo B project is a project that should -- it should go forward and as part of that discussion we're having and that review is that it's our analysis that the $36 million -- $36 and a half million will provide ratepayer benefit over the long term and therefore this project should go ahead, yes.

A. MR. OSLER: And I think you're fair to say that the focus in this hearing is not a review of Federal or Yukon government decisions, it's a focus on what's the implication to customers and everybody of what's left, the 36 and a half million, and all the risks and everything else that go with it. So I think in that sense it helps focus what we're looking at here compared to what they look at elsewhere. 15:08

Q. I think we're agreeing with each other, because when I think about the Federal government funding and the YDC funding that comes at the behest of this letter from the government, the territorial government -- I almost said provincial government -- sorry, I'm from Ontario -- the territorial government, we're at a point where those two levels of government have made what I call policy decisions, to put this money towards this project. And right now we're 15:08

talking about in terms of the remaining expenditure of $36.5 million, we're talking about an economic regulator to determine whether or not ratepayers should be paying that much money for the benefits they're going to accrue as a result of that expenditure.

A. MR. OSLER: Well, the caveat that we keep making, of course, is that we're not in a GRA, but the terms of reference from the Minister talk about effects on rates of customers. So I think you can safely assume that the Board is being asked to, given its expertise, given the nature of the subject, to look at what we can learn today about the risks and costs and benefits to ratepayers, among other things, that are in the Minister's letter, yes. 15:09

Q. You mentioned the GRA and I've noticed in your opening statement at page 3 -- sorry, I didn't label mine. I'm assuming that's Exhibit 1?

MR. LANDRY: B8.

MR. BUONAGURO: Sorry, it's Exhibit B8. I thank my friend for that.

Q. At page 3 you're talking about the Part 3 is not a Resource Plan or a general rate application. Again I think we're on the same page on that. What we're really looking at is a business case for a project. Would you agree with that? 15:10

A. MR. MORRISON: Well, I would agree that we're -- you know, I'm not sure where we're going with the

fact that this is a fairly clear, clearly-defined hearing under Part 3 and the terms of reference for that hearing were read by the Chair earlier today and part of that will look at some of the business case, but it is not a GRA and it doesn't have the breadth and depth of information that a GRA would have. So other than agreeing on these things, I'm not sure where we're going to advance anything here.

A. MR. OSLER: And the only -- the word business case in the lexicon of the GRA has taken on a certain meaning in a certain line of questions so that people are not wanting to get into that discussion. 15:11

The terms of reference of the Minister covers subject matter that are very similar to what the Board has said in the past would be required for a business case, but our focus, nonetheless is on what the Minister asked for and we're not going back to past Board orders because we've got to satisfy the Minister through the Board in the end.

Q. Thank you. It might be easier if we don't worry too much about where I'm going because I think you may be attributing too much forethought into where I'm going and it seems to be causing you some consternation. 15:11

Just looking at this paragraph, I just wanted to confirm what it says, which is, for example, we're talking about $36.5 million in the context of this project in this proceeding as justification for obtaining a project

certificate. I think it says it right here in this paragraph. The Board isn't engaged in actually approving the prudence of that spending. We're not giving you a two-year advance prudent review of that spending. It says right here that would occur when you come back in for rebasing to determine whether the money you actually spent on the project after the fact was done prudently, for example. That distinguishes this proceeding from what would happen in the GRA?

A. MR. MORRISON: Mr. Chair, I'm only having a problem because I'm not sure there was a question there to start with or which was a question on the several points.

So yes, we are coming back for a GRA. Yes, the $36 and a half million is part of the costs.

15:12

Q. Would you also agree that the prudency of what was actually spent, it would be the subject matter of the GRA, for example?

A. MR. MORRISON: Yes, absolutely.

Q. Right. And you don't expect this Board at this time in advance of the project to say that the $36.5 million is prudent. Rather you're looking at the project economics as a business case and saying if we can achieve this level of benefits for $36.5 million from a ratepayer perspective, it's a good project to try and undertake?

15:13

A. MR. OSLER: Yes, but let's all get in the

same boat here. The point of YEC making a commitment years ago to have this type of a hearing and doing its best to try and facilitate this type of hearing is to give the opportunity at this stage in planning for a judgment as to the justification and need of a project so we're not debating it later on after it has already been built. We may debate later on on the prudence that the cost was actually incurred but we should not presumably be debating the justification and need for the project if the Board has already said in advance based on the best evidence we all had at the time that we put a shovel in the ground that it was justified and needed and recommended the same to the government. 15:14

So the word prudence can have a lot of different meanings, but in the context of the prudence of the costs as incurred, that's for a GRA. In the terms of the justification of taking on this risk and the need for it and all that type of stuff, that's, in my opinion, of reading the Minister's letter and the intent of YEC several years ago is exactly what this hearing is all about, so we don't debate it later on when the water has been spilled and it's under the bridge, whatever you want to take. 15:14

Q. Thank you for that. Now, I would like to take you -- well, actually there's some questions that arise from your discussion on the flexible term note that I would like to talk about. First of all there was a distinction that you

made. You said -- or we thought you said that there were two things that were happening with the flex term note. In one case certain costs were being forgiven and then in the other case certain costs were being deferred. And I think specifically you said that the risks of the Carmacks Copper not coming online was something that was being forgiven by YEC and presumably not something that will not be recovered on the line.

That's what I heard, and perhaps I want to give you an opportunity to talk more about that or explain what you meant by that; or tell me that I've got it completely wrong. 15:16

A. MR. OSLER: We were asked questions about what was said on page 45 of the application and the footnote 84, so just to give the transcript a focus, and we were asked to explain what footnote 84 meant, that these no-cost arrangements for YEC. What no-cost arrangements? Well, they were talking about -- also included in the sentence above:

> **"... YDC funding at no cost to YEC for the additional interest rate reductions (including cash injections through 'negative' interest rate payments) required in this regard ... to mitigate any delays in connecting the Carmacks** 15:16

Copper mine load to the grid."
So the footnote:
"These no cost arrangements for YEC would apply in the short term for years before the Carmacks Copper assumed operating load of approximately 50 gigawatt hours per year is being supplied from the grid."
So it's a very specific set of thoughts around the Carmacks Copper load, which is a very big load, and whether it occurs at the time period we assume for the base case or a bit later or indeed never; and in that context I was trying to get the point across that the commitment that -- the approach YDC was taking is that in crafting this flexible term note the intent would not be -- the intent would be, I'll put it positively, to forgive the extra interest that has to be forgiven to account for the impact of that load delay and not to seek to recover it through interest payments later on in time.
Q. Thank you for that. So that's a very specific different than I think what I understood the general idea of the flex term note to happen. 15:17
A. MR. OSLER: If the Carmacks Copper mine was up and running like Minto and everything else or being built like Alexco, or Bellekeno as it's called, we might have a different comment here, but it isn't under construction at

the moment. It's just finished a Water Board hearing.

So in the reality of being there -- and it's a big load, it's not a small load. So very specific thought processes were applied to that particular risk.

If we didn't have that risk, that mine was up and running, the intent of the flexible term note otherwise is to have some short-term relief but recover it down the road so that the YDC board of directors and people could say "We're getting the cost over time. We're just distributing it a bit differently." 15:18

Q. Now, does that mean that because of the flexible term note and because of the way it operates the way you've just described it to me, as I understand it, that because you are actually forgiving amounts related to the delay or nonload from Carmacks, as opposed to simply deferring those amounts, that when we look at things like YUB-YEC-1-25, Attachment 1, which is the table that -- it's one of the tables that has various scenarios. I will say from this point when I refer to an IR response, I'm going to just say the first part and the second part and not the middle parts because I think 15:19 everything is YEC-1 in the middle. So YUB-25 Attachment 1.

So when we look at the different scenarios that include Carmacks Copper, it sounds like from a ratepayer perspective, because of the way the flexible term note operates, the benefits will accrue as if Carmacks Copper was

on no matter what, whether it is on or not? Because if it's on, then the benefits will accrue the way you had predicted and the flex term note will operate other ways, how it would anyway; and if Carmacks Copper is not on, you're going to forgive as though Carmacks Copper was on. So you've basically eliminated all scenarios where there is no Carmacks Copper from consideration. That's what it sounds like to me.

A. MR. OSLER: From the perspective of the ratepayer you are correct.

Q. So the up side of that is from the perspective of YEC -- 15:20
forgive me if I mix up who gets -- whether it's YEC or YDC, but from the perspective of the company, with Carmacks Copper you're going along with your scenarios as they're set out here with Carmacks Copper. Without Carmacks Copper you're basically eating some debt costs for all time?

A. MR. OSLER: YEC, the company -- I mean, let's get three layers here. We've got the ratepayer, we have YEC, and we have YDC, the Crown corporation that owns YEC Holding. YDC is the one whose board of directors on behalf of the government is adversely affected if Carmacks 15:21
Copper is delayed. Its financing is affected, its returns are affected, et cetera. YEC as a company, like the ratepayers it serves, is not.

Q. Okay. Thank you for that clarification. I think I understand that. Now, does it go so far as to the scenario

where Carmacks Copper doesn't come on at all? So if we look at these tables and you look under Carmacks Copper you just had 000, 000.

A. MR. OSLER: Yes, but as they say, let me take this opportunity to once again return to that infamous YUB 25, as you want to call it.

The base case that's reflected in this table has Carmacks Copper assumed to be online in 2012; and as I discussed earlier, even then we still have some flexible debt matters, but they -- when you look down at the 11-cent line at the bottom of the table on the first page, it's not very big a deal to meet the 11-cent cap. You have one year 247,000 forgiveness, the next year is $6,000 forgiveness, and then you're okay for several years. But if Carmacks Copper and all the other mining loads started to go off the system starting at 2017, 2018, so we have no mining loads on the system, and then you see the cap would require in 2019 $1,153,000; right? At the bottom of the YUB 12 table in Attachment 1 for the year 2019.

15:22

Q. Sorry. Is that 1,315,000?

15:23

A. MR. OSLER: Well, it's 315 at 10 cents and 1,153,000 at 11.

Q. I thought I heard 1.9, that's all. Thank you.

A. MR. OSLER: And then it goes down again as the load growth, which is about 5 million kilowatts a year

without any industrial load, and then it brings it back up again.

Now, two things: We're not talking about treating specially the fact that Carmacks Copper only lasts six years. That's planned. That's part of the base case. That's all part of full recovery. It's a question that if Carmacks Copper itself is deferred or delayed.

And I guess to be careful in the best interests of YDC, if another mine comes along and does the same job as Carmacks Copper, we're not worried about what it's called, we're worried about another industrial load that gives us the same benefits, if we could just put it that way. 15:23

And thirdly, in a reasonable load there will be mine loads in 2019 and 2020, but we just haven't gotten into the discussion about what they may or may not be and therefore these numbers may be quite different. In fact I would reasonably expect them to be different absent a bunch of extreme assumptions.

So we are talking about 50 gigawatt hours of load from a particular customer, or its equivalent, being permanently or slightly deferred and the shareholder bearing that risk rather than the ratepayers. So in that context the customer cost implications are -- assume the base case from the point of view of Carmacks Copper. You are quite correct. 15:24

Q. Okay. So just to follow up from that --

A. MR. OSLER: One moment, please. Okay, that's a different issue.

Q. Okay. So again looking at this table, what that basically means is that this very specific risk assumption by YDC applies to the 58.6, 58.6, 58.6, 58.6, 58.6, and 14.7 between 2012 and 2018, and even though it's labelled Carmacks Copper it's assuming a mine load of that nature?

A. MR. OSLER: Right. Of that nature. And if there was some mine load that was half that, it would be the balance, that type of thing. I mean, those are the details that reasonable people work out and they don't hold each other to the fine wording that you used one morning trying to get at this.

15:25

Q. I think I understand the concept. That was very helpful. Thank you.

Just one last thing on that. When you say that YDC is assuming the risk, my understanding is that you're talking about the downside risk. So that if Carmacks Copper comes on and then another undefined company comes in halfway and adds mine load beyond what you forecast that's not part of this operation, then it might serve to otherwise change how much flexible term note relief or deferral you have to do because of the added benefits, but it's not part of the specific -- there's no specific upside risk that is being taken on?

15:25

A. MR. MORRISON: I'll let Mr. Osler answer, but I think just because you've made the point, I think, Mr. Chair, it's really important to understand that all of these -- all of this analysis and all of the business case for Mayo B has only in consideration a Carmacks Copper load, an Alexco mode, and a Minto load. It has no other mining load. We are trying in that sense to be very conservative.

We are talking with several other potential mining customers and they will add to the system requirements. They will certainly enhance the business case at Mayo B, but they will also potentially push us into further requirements for more energy within the system. 15:26

So we are being very conservative, but yes, Carmacks Copper has been used as an example here because we've been in discussions with them over the years about whether or not there is a mine load -- or a mine there and they have been through a YESAB process, they are in a Water Board process.

So from the utilities point of view, when we start to look seriously at whether or not we'll have a customer, one of the tests that we use is whether or not the company has been or is being permitted; and if they've made reasonable advances in that regard, we start to get pretty serious about whether or not that load is going to be real and whether it's going to be on the system. 15:27

A. MR. OSLER: If I could, in the question you asked, yes, I think I agree with what you said. You put the caveat in your question accepting the flexible term arrangements and recoveries and all that type of stuff, and that's an important caveat, but in trying to put together a project of this magnitude and the challenges in it, the fundamental thinking goes through many stages. What we're dealing with in the flexible term debt is the icing on the top of the cake. It's the last set of details, which in many cases the company would never do because most shareholders would not contemplate that type of situation, but this is a Crown company and it has been interested in this arrangement in the Yukon now for several different cases. It seems to be a process that works in terms of using the strength of a Crown, whether it's Canada initially or Yukon now, to provide the underpinning to make things happen that otherwise would not happen because of the fear of the risks, but it's a detail in terms of ratepayer protection relative to the fundamentals that had to be tested first. 15:28

You don't make the project work because of flexible debt financing. You have to pass a bunch of tests before you can get there, but you can make it a lot more palatable and a lot easier for people's review. We're at that stage where we start discussing this. We haven't worked out all the details yet, as Mr. Morrison keeps reminding me 15:28

before I go too far.

Q. Thank you very much. A couple of more questions on the flexible term note. My understanding is that it applies to the $36.5 million that goes into rate base?

A. MR. OSLER: It applies to the 60 percent of that, that would be the debt that would clearly be used to finance that portion of the rate base.

Q. Sorry. That's what I meant even though I didn't say it. But it is tied at a high level to that 36.5 and it manifests itself in terms of the debt component related to that amount? 15:29

A. MR. OSLER: Right. If you go through famous table, you will find an interest rate portion that reflects the 60 percent of assumed financing. So we're assuming that the flexible debt financing, as we did for Mayo Dawson, will be the instrument used to finance the 60 percent of the 36.5.

Q. Right. I think in this table, too, I think you talked about this before, for the purposes of the comparison, the interest rate that you're using here is the normal cost of capital? 15:30

A. MR. OSLER: Yes.

Q. But in reality, assuming that the flexible term note is the way you go, it could be something else?

A. MR. OSLER: It could be something else, but Yukon Energy will borrow the money that they're talking about

borrowed. Yukon Development will borrow the bond, or whatever the financing is, reasonably near term. That will set for all of us the interest rate that the market is charging. So that will be, presumably, a bit different than whatever we used here.

That will become the benchmark and then the flexible debt interest rate arrangements will be working off that as we described. There will probably be a reference interest rate that's considerably higher and an actual interest charged in any one year that could be negative even. So, I mean, it doesn't depend on whatever the referenced interest rate is. 15:30

Q. Thank you. Over on page 14 of the opening statement you talk about the NNDFN project agreement.

A. MR. OSLER: Yes.

Q. My question on this: Does the opportunity for this type of investment from the NNDFN investment, is that part of the 36.5 million?

A. MR. OSLER: Yes.

Q. And my understanding is that even though it would be investment coming from a party other than YDC, for the purposes of rates it has no effect? 15:31

A. MR. OSLER: That is correct.

Q. They would be earning the same equity and the same debt that the company would be having made the exact same

investment?

A. MR. OSLER: We're assuming that the arrangement would be between YDC and them so that it would be an arrangement that would not affect our appearances before this Board or dealing with it at all. So that the flexible debt instrument, the Board's return on equity, everything else would be done exactly the same as though NND hadn't invested, and then the NND arrangement would work off those realities. I don't want to go any further than that.

Q. That's where I was going on that. We were curious as to how it could impact on the flexible term note, but I think your explanation is that it's done at a higher level so that all of the $36.5 million comes from YDC even though they got it from -- in part from the NNDFN. Thank you. 15:32

We talked about this very specific Carmacks Copper related true forgiveness situation on the FTN, but I think the genesis for the FTN and the way it's supposed to generally work is a deferral, in the sense of a deferral of interest. So at the front end where you have these positive numbers, which are net costs in the early years of the program, you're deferring payment of that by reducing the interest payable on the note for those payments and then collecting them further up down the line? Is that basically how it works? 15:33

A. MR. OSLER: Well, yes, in a sense, but

there are some various rules that I just listen to people telling me that they are the rules, I'm not an expert on the rules.

Forgiveness means essentially that it's forgiven and therefore you don't have anybody looking over your shoulder saying you should somehow or other still charge it because it's been incurred. Deferral can get you with someone looking over your shoulder saying maybe you should still account for it because you've incurred it. That's one thought I give you to think about. 15:34

So the technique -- if you're worried about that, you like to make sure that it's clear and certain that it's forgiven and you've set arrangements that work to achieve your objectives down the line by a higher interest rate that would be legally required at that time and it will all work out properly by some rules that you have to set down.

I think -- one thing I would like to really emphasis from YUB 25, because it gets lost in the intricacies of flexible debt financing, is this same table above the 10- and 11-cent numbers index talks about the benefits in terms of diesel costs without any flexible debt financing at all each year of the case. As you have just said to me, essentially ratepayers are going to be protected against the Carmacks Copper load risks so you don't have to worry about 15:34

these things being radically different from a Carmacks Copper load point of view if you're a ratepayer.

We're talking about a line that says here's the diesel price each year, 26.4 cents, and a line says total cost to supply the same load with diesel, 6.9 million. Mayo B net costs savings from diesel in Year 1, 3.8 million; Year 2, 4.3. Those are ratepayer savings without anything to do with the flexible debt issues at all. The flexible debt applied in those years, those savings would go up.

So when I talk about the fundamentals, before we start playing with the icing on the top of the cake, that's the fundamentals. That's what drives the cost benefit of this project, and without that we wouldn't have any opportunity to be discussing how to devise the flexible debt type of ground rules. 15:35

The $15.1 million, which are total costs without Mayo B, is the total cost of the diesel that would be required in that year, at the top of the table, which is shown under "No Mayo B Diesel," 57 million kilowatt hours of diesel that year without Mayo B. That would cost us about $15 million extra on rates and a $50 million consolidated rate base. You can do your calculations as to what that's worth in terms of a percentage increase in rates two years out from now. 15:36

So, you know, this type of thing -- these are

the fundamentals that we're talking about; why we have to develop projects; why we have to get this project; why we have to do some other projects. This is not, as I said in my opening comments, the panacea.

This is a step towards dealing with these types of realities, and the flexible debt financing is a detail to try and do what we can as -- through an owner who's a Crown to facilitate certain risks so we don't get distracted and deterred from doing what we should be doing in the long run for legacy purposes and everything else, and, secondly, shift some of the costs from today to the future when they can be much more easily borne if there is an issue. 15:37

But for somebody who has been busy with this thing trying to deal with the fundamentals first, the details later, the fundamentals are above that line, not there down below, just so --

Q. Okay.

A. MR. OSLER: Then Mr. Morrison can stop telling me I should get the key point out.

A. MR. MORRISON: It took him a long time. 15:37

Q. Thank you. I appreciate that in the grand scheme of the project it is a detail, and truly I'm asking the questions just so I understand how the detail operates.

A. MR. OSLER: I appreciate that. We're here to answer.

Q. Right. So just take an example from the same line because I don't think it matters which example you use. But, for example, let's assume that it was -- that you were taking your index at 11 cents in year 1, assuming that Carmacks Copper actually did come on line as predicted and everything else was the same, you would be deferring $247,000 --

A. MR. OSLER: Essentially, yes.

Q. And in year 2 you would be deferring 6,000, and then in year 3 you would be recovering 193,000 of that --

A. MR. MORRISON: That's right. 15:38

Q. -- deferred. Is it that straightforward?

A. MR. OSLER: I wish it was, but, given the rules that I was talking about, I think we will be instructed to find a way to do that without calling it a deferral and keeping a nice, neat track of it the way you were. If I could do it that way without upsetting the accounting profession, it would be a lot easier.

Q. Well, it's interesting that you seem to shy away or have been told to shy away from the word "deferral" because I do a lot of my work in Ontario and I've never seen anything like 15:38 the flexible term note, but I see all kinds of deferral accounts.

A. MR. OSLER: Okay.

Q. And it strikes me that the simplest way to do this would be through a deferral account; that you would track the

247,000 in the first year in the deferral account; you would track the 6,000 in the deferral account in year two; then you would net it off against the 193,000 in year 3; and that you would get to a point where it's -- it nets out or there's only benefits left, and you would stop using the deferral account.

A. MR. OSLER: Right.

Q. And that would avoid that appears to be a very complicated undertaking in terms of crafting the flexible term note. And -- 15:39

A. MR. MORRISON: Are you offering to deal with our auditors on this? I'm happy to take up your offer.

Q. I'm inviting you to tell me why it is that that isn't why you would do it. And it's only -- it may be a function of my experience, being that deferral accounts are very common in the jurisdiction I spend most of the time.

A. MR. OSLER: And I've seen other in jurisdictions you try and work with what people are accustomed to, and the flexible debt financing is relatively distinctive to the Yukon, but it has been used now in a 15:39 **couple of different cases so people think that way.**

We have seen totally different arrangements. Manitoba development of its northern hydro is done through a Federal government owning a transmission line and leasing it back at very favourable terms with long-term recoveries, not

short-term recoveries. So there are certainly different techniques that could be used to achieve the same objectives.

For the point of view of this hearing, we have not developed the specific mechanism. We've laid out the principles that we think should apply. Our attention has not been focussed in great detail on that, it's been focussed on other things, and we are always looking for the easiest way to achieve these principles, not the most complicated ones. So we'll probably look into -- we may even want to talk to you at some point. 15:40

Q. Thank you for that. So it sounds like the concept here is the important thing, and the flexible term note is one tool that may bear out that concept, but if you can think of something else that will achieve the same ends simpler, you would entertain that.

A. MR. OSLER: I think that's fair.

Q. And I think all of this in terms of when it actually would have to be finalized, we're talking the next rate application.

A. MR. OSLER: Well, we're talking about in practice it has to be in place by the time long-term debt is in place, and it would be in YEC's best interest to have it in place before the next rate application so it can deal with everything, and I assume the rate application would occur before the in-service occurs. 15:41

Q. Thank you.
A. MR. OSLER: In the case of Mayo Dawson, some of these things were finalized, you know, later in the day but by the time it was brought into service, and the hearing took place later on in terms of reviewing it. So, yeah.
Q. Thank you.
MR. BUONAGURO: I can't recall what the schedule was for breaks.
THE CHAIR: We were going to recess at 3:45. So I'll leave it up to you in terms of whether you're switching a line of questioning now or close to switching or whether you want to complete the flexible term note question. 15:41
MR. BUONAGURO: Well, maybe I'll just ask another couple of small clarification questions.
Q. Okay, sir, I characterise these as simply I don't understand and maybe you can help me. On all of the scenarios you have a 10-cent index and the 11-cent index, and at certain scenarios in the evidence you do a 10.5, which presumably is because falls directly between the two -- 15:42
A. MR. OSLER: Exactly.
Q. -- and I maybe just haven't read the right part of the evidence, but I don't understand why there isn't just one index. Can you explain why there's a 10 and an 11, why sometimes you use 10.5 and why you haven't been able to

simply say "This is the index we're proposing and this is why"?

A. MR. OSLER: Basically because we've not settled the detail, and there is desire to leave some flexibility to think it through as to what the implications would be at one level or the other level. We sort of thought that's probably the range of latitude that we have to think about it. It wasn't much more complicated than that.

It's a concept that, I repeat, it has to go through a lot more detail that it hasn't gone through yet. So if you're busy discussing it internally in the context of all the other things we have to deal with, people just weren't -- they're comfortable going this far; they weren't comfortable going a lot further.

From my point of view, an 11-cent number is a lot more likely to be doable in terms of achieving all the objectives we're talking about, but it may not be as low as a 10-cent number from the point of view of other things. So I guess people would like to see whether it's doable to do something less than 11-cent, might be a way of putting it, and what the implications of it are. But, you know, if the flexibility to achieve all the objectives we're talking about requires 11 cents, then at least we've covered that in our discussion.

15:43

15:43

Q. So is it as simple as sort of an esoteric discussion

about balancing how much mitigation you want to provide versus how much mitigation YEC can absorb in any particular year?

A. MR. OSLER: Well, certainly we have to go to YDC Board and explain it in more detail that they've heard yet, and yes, from a practical point of view of them signing off on a flexible term debt and we're going to have a chance to recover this and you just show me how we're going to do that at this number versus that number, in fairness to that board of directors, they're entitled to that type of a discussion. 15:44

So -- and on top of that, fundamentally, the point I was asked to drive home is: And we're doing all this while we're saving millions of dollars for ratepayers, so please don't put the overall financial health with what we're dealing with at all in jeopardy by trying to put this icing on the cake.

Q. Thank you.

MR. BUONAGURO: That might be a good time to break. 15:44

THE CHAIR: Okay. We'll take a 15-minute recess right now. So we'll return back at 4:00.

(ADJOURNMENT)

THE CHAIR: So UCG counsel, do you want to continue?

MR. BUONAGURO: Thank you very much.
Q. I want to ask you some questions about the timing of the application steps. I'm looking again at your opening statement, or a copy of the opening statement, Exhibit B8, at page 6 which sets out how the YESAB Mayo B project proposal was filed in February 27th, 2009.
A. MR. MORRISON: Yes.
Q. Now, it's not in this specifically -- sorry. The time in which Yukon Energy Corporation applied to the government for the project certificate isn't in here specifically. 16:06
Could you remind me what that date is?
A. MR. MORRISON: Certainly. It is in here.
Q. I may have missed it. I apologize.
A. MR. OSLER: December 11th.
A. MR. MORRISON: December 11th. And it's on page 8, kind of two-thirds of the way down the page.
Q. Oh, I'm sorry. My confusion was the date at which you applied for the certificate versus the date that the government actually required a Part 3 proceeding. That was my -- 16:06
A. MR. OSLER: You're talking about Mayo B?
Q. Yes.
A. MR. OSLER: Okay. So we've applied for the certificate and we made the application. The date for that is December 11th, 2009.

Q. Okay.
A. MR. OSLER: We could not apply until there was an Order-In-Council designating it, which was November 25th, 2009.
A. MR. MORRISON: That's also on page 8.
Q. Okay. And then prior to that -- I mean, I guess I'm assuming that the Yukon government is reacting to something from YEC in terms of making a designation on November 25th?
A. MR. MORRISON: No. Let me try to be kind of clear on that. 16:07
Q. Okay.
A. MR. MORRISON: It's the Yukon Government's decision under the Act whether or not they'll designate any project as an energy project, and based on our experience with Carmacks-Stewart, we certainly assumed that they would designate Mayo B as an energy project for the purposes of an energy certificate. So they were, as far as I'm aware, not waiting for anything from us specifically before they did that. Their timing was their timing.
As Mr. Osler said, we can't apply for an 16:08
energy certificate until the government has designated the project an energy project. So it's their timing. They make those decisions. They're not waiting for anything from YEC.
Q. Okay. I'm trying to get familiar with the process here. I understand what you're saying, that the government is going

to decide whether something is going to be designated. In the absence of a direction from the government do you just go along as though it's not going to be designated?

A. MR. MORRISON: Well, until somebody makes a decision we do -- as I said to you, we prepared ourselves as if we were -- as if we were getting an energy certificate designation and the question was when would we get it.

Q. Okay.

A. MR. OSLER: If you look at it from the point of view of decision steps with a project like this, obviously your filing for the YESAB application is a very key step. I think it was about Stage 2 in our planning process.

The next key step related to -- because that was February -- relates to, in this case, finding out whether there really was going to be some funding contributions to resolve the issue we were talking about earlier or whether there weren't, because otherwise YEC would have to spend a lot of money in the summer of 2009 on fieldwork and other things and it started to get to the point where if there wasn't some commitment for some money that might be a very difficult choice. So in this case that was an important issue for -- what I will call the third stage or phase of planning. There was also all the issues that go into picking the MOU contract or getting the planning for the summer work, et cetera.

16:09

16:10

The thought about putting together an application for what we're talking about here would not be high in one's mind yet because you wouldn't have the information much more refined than what you had for the YESAB application. Okay? The Board and others have thought they would like to see preliminary engineering and things like that. So we knew that we had to complete the summer work and pretty well get through the turbine tender, at least putting it out, with the preliminary engineering, which was targeted for September. It didn't occur until a little bit later in terms of the process. We knew we wouldn't be in a position to be ready to file with something that people would want to see until October or so. This was not a secret. Anybody that wanted to find this out would find it out.

Q. Sorry, just to interject. When you say "We wouldn't be able --" you wouldn't have had anything until about October that anyone would want to see, are you talking in terms of a Part 3 -- or sorry, a Part 3 --

A. MR. OSLER: I'm talking about the information requirements to do a useful Part 3. If somebody asked me last spring when would be the appropriate time to have an application that could be ready, I would have said after we've got the preliminary engineering relatively in line, given what the Board said last time, and we had a turbine/generator tender out because that requires certain

16:10

16:11

specific information.

So I would have hypothesized, based on a plan that we put to the YESAB people, that would be in the October time period at the earliest, given all the other things we have to do first. So it would have been nice to get in that context, you know, clarity at that point.

But you're moving along doing a lot of things one way or the other and everybody's got their own responsibilities. We can't prepare an application until it goes through the cabinet process and issues an Order-In-Council. 16:12

Q. I'm just looking at this question more in terms of future applications just to see if there was something that could have been done in retrospect to YESAB (phonetic), because it appears, I think you would agree, that this process is from start to finish is much shorter than I think most people would have anticipated for a Part 3. Maybe you would disagree.

A. MR. MORRISON: You know, the process is whatever the process is, and that's laid down by the Board and I'm not sure that our comment on that is appropriate. 16:12

The point I think that's important is we had filed the YESAB application. We knew we were getting money from the Federal government. We were continuing and in our -- in the back of our heads, or maybe even closer to the

front, we anticipated that we were going to get an energy project certificate designation from the government because that was our experience in Carmacks-Stewart. So we had a lot of work that had to get done regardless of whether we got that designation or not related to the project.

All of that work was necessary in our minds before we could file anything with this Board, whether it was a Part 3 Application because we had been designated an energy project or because we had to come in front of the Board on our own. So I don't see that we would have been ready much sooner than October or so, as Mr. Osler had indicated. There was geotechnical work that was still getting done all summer and there was a whole -- and that made a big, big difference to what we decided we were going to do in terms of going forward with a canal, a penstock, or a tunnel. 16:13

So all of that had to be completed first, and those decisions were made and they're part of this application; but the big turning point, as I've said, is once the government made its decision to designate this and once they issued that, we were ready and filed our application within a few weeks, but we had to wait until the project was designated. 16:14

A. MR. OSLER: And to be helpful, my comments were made in the context of what you might think last March or February or something looking forward. We had pretty

clear ideas of the stages way back in 2008, and the stages have unfolded in a fairly orderly manner as we laid them out then. The timing of getting specific things finished sometimes has not followed that, and I said we didn't get the turbine/generator process at quite the same pace. The preliminary engineering was probably -- if we had to put an application in reality together in October, we would probably be saying we better wait until November.

We weren't really in a position to do what this application is until late November, early December independent of the government process in itself, what its timing was. 16:14

And every project -- what I'm learning from this is it's hard to generalise. The transmission project is quite different than this one, and that's another conversation. I'm getting more and more concerned about making broad statements rather than trying to discuss what's the best way to do it for each particular situation as it's unfolding.

In reality we could not have put together this application much sooner than we did, even if the government had come out with an application and had the type of information the Board wanted because we didn't solve certain things until late November that are in here and we were really very absorbed in trying to solve those thing, and they 16:15

helped this application a lot.

We also needed the funding commitments, by the way, of both governments, not just one, in order to be able to put the application that you have in front of you.

Q. Okay, thank you. At page 13 of B8, Exhibit B8, part 4 you're talking about the construction contract pricing arrangements, and specifically the Kiewit estimated costs and contingencies.

A. MR. MORRISON: Yes.

Q. You obviously had a discussion about this this morning I think it was, about the base target price and the target maximum price, and I wasn't sure I understood precisely what was meant by these terms so I wanted to follow up with it. 16:16

When I read the term target maximum price of $85.4 million, that does not mean to me that there is no circumstance under which you may end up paying Kiewit more than that. Am I wrong? So is it possible that things may unfold over the course of the project where Kiewit will be claiming more than $85.4 million?

A. MR. MORRISON: Well, I'll let Mr. Osler add to this, but let me just say a couple of things. The base target price is the price that Kiewit -- of $77.7 million is the price that Kiewit is going to work towards. We have spent six months, maybe a little longer than six months, with Kiewit, our engineers, YEC advisors and consultants going 16:17

through every cost and every possible way of reviewing those costs, including having Kiewit and our engineers get pricing on -- bid type pricing -- not formal bid, but bid-type pricing from subcontractors and suppliers for this project. We nailed -- as Mr. Osler mentioned and we've talked about in our material, we've set the firm price for the turbine/generator. We've looked at these numbers I would say every which way and tried to look at what the risks were in terms of these costs going over those numbers, and that risk is reflected in the difference between 77.7 million and the 85.4. We've made provision for contingencies based on risk analysis that have been done by both Kiewit -- all three: Kiewit, ourselves, and KGS, our engineers, as to whether or not those are reasonable contingencies and carry reasonable risks associated with the increased costs of the project. 16:18

So yes, anything can happen and prices can go up or costs can go up, but we're very confident that these numbers have been looked at in such great detail that they're very good numbers for the purposes of going forward.

They're also bid numbers. So a commitment that we have previously made to this Board and I've made to my Board and we've made publicly on many occasions is we would not go forward, we would not make "go" or "no-go" decisions until we had bid numbers that were firm. And that's been the case in this situation and in previous 16:19

situations that we've been involved in. We did not make a "go" or "no-go" decision on this project from a corporate perspective until we had this number, until we had the engineering number, until we had the turbine/generator number. All of those numbers are in hand.

We can talk, and I'm sure Mr. Osler will want to add something, but risks -- we've looked at the risks. We've looked at the risks I think as best we possibly can, but I don't have a magic wand or a crystal ball so I don't know what can happen out there. 16:20

So the short answer is yes, there are possibilities where it can be more than that, but we think there are a few.

A. MR. OSLER: First of all there hasn't been a final "go," "no-go" decision just to be technical because we haven't got the permits, we haven't got all the final items.

A. MR. MORRISON: That's right.

Q. I'm sorry. I didn't --

A. MR. MORRISON: We don't have all the permits. 16:20

A. MR. OSLER: We don't have all the checklist of items that are in the same opening statement that the board of directors would need to make a final decision to go forward. So although there has been some confusion about this. Although there's a construction contract and a

turbine/generator contract, there's no commitment that we're going to pay ABB $5 million regardless of whether this project is going forward.

Q. That's fine.

A. MR. OSLER: I mean, there are time schedules, there are commitments that they'll get paid for their costs reasonably incurred and documented if indeed we cancel the project, the same with Kiewit, but people do use common sense in doing this type of thing in order to meet all the objectives. They're fairly standard commercial terms. 16:20
And we've done the long-term contracts before with transformers and other things like this.

The fact that someone has a contract in place in order to meet a schedule and all the other things to keep the costs down doesn't mean that you're going to pay the full price if the thing doesn't go forward. It means you're exposed to the risks if it doesn't go forward at a certain level of costs.

Having said all that, this is a firm contract. It emerged from the competitive tender process last spring. 16:21
Another point that some people keep missing. This is not a sole source contract by a long way. It required YEC to be satisfied that it could reach satisfactory commercial terms with Kiewit or it would have gone to a tender process. That was protected.

As we've said in written response to IRs, on December 1st YEC and Kiewit reached satisfactory understanding as to the commercial terms. That means that before that date they hadn't. And satisfactory understanding of the commercial terms boils down to what you're looking at here: A base target price that both parties are satisfied is reasonable and the target maximum price that the constructor thinks he can beat, so he can do better, and we think is reasonable.

But to answer your question, the constructor and YEC share in the alliance model the risks that the actual costs and circumstances, because that is a base target price, could come in higher, and they're committed to working together to make sure it doesn't. Both parties will share some of the pain if it doesn't. 16:22

Q. Thank you. Thank you for all of that. I think that's useful, but it does sound to me like the contract -- the terms of the contract contemplate the possibility of increasing payment on the final contract price beyond 85.4 under certain circumstances. Is that fair? 16:23

A. MR. MORRISON: Well --

Q. I understand that you're very, very, very confident that that won't happen. Sort of summarizing what you've just said, based on all of the work you have done with Kiewit to actually come to the base amount and the target maximum

amount, but it does sound like there are provisions in the contract which, depending on the facts surrounding what happens during the course of the construction, the price could go up. I think you've agreed that that's true?

A. MR. MORRISON: Well, I didn't necessarily agree to that's true. I said that I don't have a crystal ball so I can't tell you that it isn't true, but what we're talking -- in any reasonably constructed contract there will be provisions that outline what happens if costs are greater than the costs are contemplated, and there's either a process for arbitrating or there's some methodology.

So I would say to you, to answer your question, there are processes in the contract that will deal with those issues if and when they happen, but there is no contemplation in the contract in any sense that the project costs will be greater than what they are.

Q. Thank you. Can you describe what those processes are in this particular contract?

A. MR. MORRISON: Well, as Mr. Osler mentioned to you, there's a process where -- if the costs are greater than certain threshold levels here, that there is a sharing of the cost of those -- of that burden between the parties.

Q. Can you describe how that sharing would be achieved?

A. MR. MORRISON: I can't off the top of my head, no.

16:24

16:24

Q. Can you provide that by way of undertaking?

A. MR. OSLER: Let me do this step by step. This is an alliance modeling. It's an open-book contract. There's no secrets. The costs are tracked, et cetera. So we're not sitting here worrying about what we don't know or anything else. That was the nature of the MOU tender last spring for anybody that took it on. That's the nature of the contract.

There are agreed-upon general administration overheads for all costs that are not what you call direct 16:25
site costs as defined. So the actual site costs are defined. There's an agreed-upon general administration overhead applied to that for the stuff that's not on the site, and there's an agreed profit. And you can figure them out by looking at Table 1 in CW 1-5.

These provisions for applying those things apply up to the base target price. After that there is no provision for an automatic profit on any more costs. By the time you get to the target maximum price there's no provision for even general overheads. In fact if the costs went over 16:26
that for the next 1.2 million, there's 50 percent of the direct costs be borne by Kiewit, not by YEC. In other words it would be split 50/50.

So Kiewit has no desire to go above the target base price. That was a big consideration internal to them.

They don't like to see a profit locked at the level we're talking about and they don't want to see it going over that number.

If we come under the target maximum price there's an incentive that's shared. So the Kiewit team has lots of incentive. They had to sit down and think through what was reasonable. We had to listen to them and debate back and forth, but the structure is everybody is working their heads off to come in under the target maximum price. YEC saves money, Kiewit earns a bit more. If we go over it, 16:27
there's hell to pay on both teams and that essentially is the structure.

Now, you go and look at normal commercial contracting dealing with this type of a situation with the risks, there are a wide distribution of risks that people sat and talked about and defined. Some of them are owners' risks that would be reasonably borne by the owner to do with the specification, the design, or the engineers, everything else. Some of them are weather and contingency risks. Some of them are commodity risks, like the purchase of the steel for the 16:27
penstock. They range all over the place. Rather than fighting over who -- we looked at various options, but rather than fighting over who is going to take which of those risks --

Essentially what -- the alliance that we've

taken is that we didn't sort of say those are yours versus these are ours, we said we're working as a team under the ground rules I just laid out, but it's different fundamentally than the turbine/generator supply contract where you put a lot of certainty, it's all been hammered out as to what we're getting, when we're getting it. It's all nailed down and we're not going to change our mind as to what those are and the price is locked down accordingly too. The issues there are what happens if you have delays or you have polity problems, and those are questions of what damages we would be entitled to recover, how we're protected that way, but they're not issues to do with unforeseen risks of whether us changing our mind or things like -- or running into new site conditions, geotechnical conditions that you just don't know until you actually do it. Tunnel work is rampant with issues that you don't know until you actually build a tunnel what you're running into. You have good hypotheses. Some of the rest of the site has similar issues of that nature. 16:29

So all of those things have been taken into consideration when talking about the contingencies listed under the Kiewit contract. 16:30

Q. So in terms of the risk that the work related to the Kiewit contract is in excess of $85.4 million, I believe the answer is if that happens or if it appears to happen, presumably there's a burden to show that that's actually

happened? Kiewit is going to have to prove that they had to spend more money than that?

A. MR. OSLER: Right. And there's a management structure that is joint and reviews this very regularly with going up to very senior people, and if there's any issues they normally get flagged. They have to be shown. They're audited regulated requirements. Trust me.

A. MR. MORRISON: I just want to make the point -- I want to emphasize a point that you've just made. This is an open-book process. We will be part of a process that looks at all costs -- every cost in detail prior to it being paid and/or incurred. Sorry, I mean -- I mean, obviously the costs will be incurred, sorry, but prior to being paid, and once we get to certain stages any costs over and above the base price will be approved by a management committee. 16:31

Q. Okay. So between 77.7 million and 85.4 million there are specific scrutiny -- I'll just --

A. MR. MORRISON: Yes.

Q. What you've described I'll just call scrutiny, and then above 85.4 you still have scrutiny. On top of that you have 50/50 sharing of cost. And the same on the down side, there's incentive. I don't think you told me what the split is on the down side. If they come in under 77.7 -- 16:31

A. MR. OSLER: Well, if they come in under

85.4 there's a saving, and I said it's shared 50/50.

Q. Sorry. Under 85.4?

A. MR. OSLER: Under target maximum price.

Q. Okay.

A. MR. OSLER: If we realize -- if we manage to get this job done for all the costs and we don't have to spend $85.4 million, we'll split the savings. That's what it comes down to.

Q. Okay.

A. MR. OSLER: And it would apply whether it comes under 77.7 as well. We'll all have a big party, I guess, or something. Or somebody will, I may not. 16:32

Q. And one last question on this. You talked about -- well, I'm looking at CW-5, the way I call it, the Table 1 that you referred me to, which has the breakout of all of the different components of the contract culminating at a target maximum price of 85.4 million.

This is for clarification. Presumably -- my understanding is that any of these could be subject to increase and possibly pushing the price over 85.4, is that correct, or are there some items that they simply can't move? 16:33

A. MR. MORRISON: Well, let me just kind of reiterate a part of the point I made before. The base price is $77.7 million. We've got 7.7 or $7.8 million in contingencies there that will take us up to the $85 million,

but the price that they are working towards is 77.7. We did an analysis of a whole series of risks on different items, could the costs go up here, could the costs go up there, and that's what the $7.7 million is there to fund. So --

Q. Yes, it may be a simple point. I just want to identify -- I think what you've told me is that overage could occur in any one of these areas. You've gone through and you've tried to estimate what the overage of 77.7 could be and you've come up with a contingency of 7.7 million as a reasonable estimate of where you might end up if things go mildly wrong or mildly not according to what you expected. I'm just trying to confirm that in the contract -- and you will recall that I haven't seen the contract. In the contract that kind of overage could be in any one of these categories or any category or even categories that aren't here? 16:34

A. MR. MORRISON: Well, let me go back to -- maybe it is just how you're -- and Mr. Osler will add something, but it's maybe just how you're characterising it. So yes, there is provision for the use of these contingencies if they have to be used and yes, they could be in several different of these areas, except for -- well, although I get -- sorry. I was going to say the turbine/generator, but it's in the lower categories. No, it could be in a number of those areas. 16:34

A. MR. OSLER: Let me help you this way: The contingency is intended to be in the contractual terms general. It's not -- you know, there's only this much contingency for that and that much contingency for this. The estimates were based on that type of thinking, but in reflection we said no, let's keep it under our control as a general contingency.

Secondly, in preparing the estimates of the contingency, it covered most of the areas you were talking about. Some of them weren't a big deal. You're dealing with 16:35
price that could affect the penstock, you're reflecting geophysical that could affect the penstock or the powerhouse location, the turbine/generator install might run into some extra issues. Site preparation probably not a big deal. Constructing, maintaining access roads, not a big cost, not a big issue. You go down -- there could be extras they run into in doing the balance of plant, mechanical engineering. I don't think transmission distribution lines is a big issue. Indirects incurs things that the contractor could run into.

So yeah, they covered a lot of the subjects, 16:35
but contractually they're a general contingency to be applied as required by the management committee, which is the two parties.

Q. Thank you. Thank you for that.

I wanted to ask you some questions about --

confirming questions about the mines, the three mine modes that are in your scenarios. Obviously the Minto mine is operating and has a purchase power agreement. Presumably the forecasts that are included there are based and they're on their existing usage in the power purchase agreement. Is that generally how you would get those numbers?

A. MR. MORRISON: Excuse me, existing use?

Q. The existing forecast?

A. MR. OSLER: Well, they're based on updated conversations with them about their plans for expansion, as explained in Attachment D. So -- or attachment -- yeah, I think it's D.

So it's their current power purchase agreement, purchase power agreement, and the ongoing conversations required thereunder as to what their plans are for going forward, and they are busy doing expansion and other things. We took those into account.

16:37

Q. Okay. I think we've talked enough about Carmacks Copper for the moment. The one thing we haven't talked to about, or I haven't talked to you about, was Alexco. First, can you confirm these projections here. Would that put Alexco in the industrial customer class?

16:37

A. MR. MORRISON: Yes.

A. MR. OSLER: Yes.

Q. Thank you. Can you give me an idea of where you are

with Alexco with how firm their coming on would be?

A. MR. MORRISON: Well, as I mentioned earlier, when we start looking at new loads we look at them over a longer period of time in different -- we see them in different categories in our eyes, and somebody talking about a mine doesn't really get us too excited because all kinds of people talk about mines, but we watch this process and we work with new customers on a basis of as they advance through the stages of development we advance our thinking and our planning, and we've been doing that for several years. 16:38

Alexco is also a mine that has been through regulatory processes, has a quartz mining licence, is under construction at this point in time. Still I think needs a Water Board permit, don't hold me to that, they may have got it in recent weeks, but they're constructing the mine. Because they are that far down the process we have for a few months been in power purchase agreement negotiations with them because as a new mine customer we will need a power purchase agreement before we connect them to the grid.

Having said that, in the case of Alexco, I just want to put brackets around before we connect them to the grid. They are already connected to the grid. They were connected to the grid before we started this process. There has always been a line there and they've had power, but mind you a tiny little bit of power, but they've had it for some 16:39

time. So the connection or at least the line is there.

My point on this is that these power purchase negotiations are at an advanced stage. I would think that they're fairly close to being finalized. Fairly close might mean -- it might mean a month and it might mean two months in the sense that they've got things that they're doing and we're very committed right now in terms of this Mayo B project.

So in terms of time they're a serious customer. We're a hundred percent certain that we have them as a customer. 16:40

A. MR. OSLER: I would just say that on top of all those things they are busy building their mill and their target was to be up and running at the end of June. I think they're a bit deferred, but I'm still waiting for an update. They might be deferred until August, but they're building it. They've got their money. They've got their permissions.

The mine is already connected to the system. The mill is the new element. This is going to be an industrial customer where the power purchase agreement has to look at the possibility over time of several different mines and maybe even in time various mills. They're not all at one location. 16:40

So mine No. 1 might go for five years, mine No. 2 might come along and use the same mill, go for another

five years. That's their business plan. They're working in an area that of course was heavily mined before so they have a lot of patience for this.

The mill is the thing we're talking about that they have to get built. They're well into building it and they have to connect it to the system, and they're well into all of the arrangements for that. So I would assume at the moment that sometime later on in this year they're going to actually be connected in both cases and be a bona fide industrial customer given everything we have at the moment. 16:41

Q. Thank you.

MR. BUONAGURO: Mr. Chair, I'm at the point in my cross where I could soldier on or I could stop, take the time to reduce what I have based on what I've heard and probably reduce my -- the remaining cross by significant numbers, and I would suggest maybe that now would be a good time to break for the day.

THE CHAIR: So how much time would you -- without doing that do you think it would take you to go through the questions that you have? 16:42

MR. BUONAGURO: It would be approaching two hours.

THE CHAIR: Okay.

MR. BUONAGURO: I'm thinking that if I can take the time to go back over the transcript when I have --

and pick and choose it would be significantly reduced, more like an hour or less. That's what I'm thinking. I'm in the Board's hands.

THE CHAIR: Does anybody else have any concerns or objections? Hearing none, we'll break for the day and we'll resume tomorrow at 9:00.

MR. BUONAGURO: Thank you very much. I appreciate it.

A. MR. MORRISON: We'll hold you to that.

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