

MFI – Interview Summary		
Date:	April 19, 2018	
Location:	Grant Thornton LLP – Boardroom – 15 International Place, St. John’s NL	
Attendees:	David Malamed (Interviewer) Scott Shaffer (Interviewer) Angie Brown (Note taker)	Gilbert Bennett (Interviewee) Dan Simmons (Legal Counsel) Dana Martin (Legal Counsel)

This document contains summary notes of the interview held with the above noted attendees. These summary notes are not intended to be an official transcript of the interview. These notes were based on the taped recording of the interview. These notes are for discussion purposes only and should be shared only with the interviewee and his/her legal counsel. The purpose of these notes is to determine if the interviewee believes any responses are factually incorrect based on the interviewee’s recollection of the interview. Based on feedback from the interviewee revisions will be made if determined necessary.

Date of summary: May 15, 2018

Note: Bolded items represent questions asked by Grant Thornton LLP with the interviewee’s response immediately following in point form. Where the response was provided by legal counsel it has been noted.

- **Start at 2:18 pm**
- **Part two of the interview**
- **I would like to go back to some of the questions I asked you before to clarify a few things. Can we talk about the recall power? Can you explain what it is?**
 - Block of energy on the Churchill Falls power contract that is available for use in the province
 - The amount that is not used is exported
 - Basic terms - 300MW 90 percent capacity factor
- **Was using the recall power considered in the options?**
 - Its discussed in the options
 - Used market rates and you included it in the business case as foregone revenue
 - After 2009 we secured transmission rights and sold it to the market
- *Legal Counsel – some is already used in Labrador and is committed to use in Labrador*
 - Towns such as Labrador city, happy valley goose bay, mud lake etc., all receive their power from the recall power
 - Some power goes to IOC
 - The surplus goes to the market
- **One of the things we spoke about were the classes. I had said it was -10/+30 and you agreed with me on this. I’m hoping you can help me understand. This is the DG3 package. Accuracy range of “+10/-10” What does that mean?**
 - It means what it says. You would have to speak with an estimator

- I think it means the level of the definition is quiet high
- What is not talked about here is how the contractor is going to behave when they are asked to price the job
- Good level of engineering defining and there have been minimal change in the scope as defined in the contracts
- If you look at Astaldi – I believe they had all the drawings at the end of the bid process
- **AACE – standard – the guidelines show -10/-20 or -10/+30. Why would 10/10 be chosen in the DG3?**
 - We would have to talk to the estimator
 - I'm guessing it's the level of definition was higher
- **How were those numbers chosen?**
 - I didn't write this so we would have to talk to the person who did
 - There was a conscience decision of the team to provide more engineering
- **We have been told that total project engineering was 50% complete at DG3. But it varied by component 10% for transmission, generation was mostly done. How was 50% determined?**
 - I didn't see the math
- **Are you really looking at a class 3 estimate on the link portion of the project i.e. transmission?**
 - We had a good level of detail but didn't know the contractors market
 - Yes it was a good level of detail
 - If you are in the range of the design and work it could be deemed a class 3
- **You could also call it a class 3 versus class 4 or 5 estimate?**
 - If they are within the range
 - If you look at the estimating methodology you would understand how they arrived at that.
- **When I asked you if anyone came to you and said that it wasn't an option to stop the project, you replied "It's never not an option" Did you ever consider stopping?**
 - I wasn't the decision maker to stop the project
 - I am aware that there are significant consequences
 - In general times the federal loan guarantee there was an event of default if we stopped the project
- **Showed email April 18, 2013 – from you to K. Neal copied C. Bown and E. Martin**
 - This is not our presentation
- **Whose presentation is this?**
 - This is a presentation from a stated opponent to the project
 - That is not the position of Nalcor or any of the consultants that we hired for the project
- *Legal Counsel - He is a private person who has been a public opponent of the project*
 - That was sent to communications because we were dealing with this in the public at the time
- **After this presentation occurred in March of 2013. It was 30-45 days before you circulated it. Why?**
 - Came back from NS utility review board
 - We circulated it for information
- **Up until the time of financial close you could have cancelled the project?**

- Yes
- The province equity would have been spent
- But we could have stopped the project
- Legal Counsel – Question of whether or not the project could have been stopped in my view, is not within the review of the commission
- **Between phase one and phase two, one of the mills closed?**
 - Stephenville closed in 2007 and Grand Falls closed in 2011/2012 but that's a guess
 - Legal Counsel – CBC reported Grand Falls closed in 2009 - February
- **Between DG1 and DG2 – when the mills closed – were you able to revisit the options that were considered?**
 - The options were all in DG2
- **I understand that waiting until 2041 was an option? One of the problems with that was the result of capacity need?**
 - You still had to get to 2041
 - You still had to meet the demand, replace equipment and do something with Holyrood
 - The paper mills closing was known at DG2
- **Was the alternative of doing nothing and waiting ever considered?**
 - That's the isolated island case
- **We had spoken about Upper Churchill and the idea of control. I think that you had said that Hydro Quebec has the veto power? Is that right?**
 - Legal Counsel – you are going to have to educate yourself about some of the basics about this. I'm gathering that you don't have a basic conception of some of these factors. I'm not the best one to educate you about the intricacies of the Upper Churchill power contract and the history around that. I can go over it in a very general sense. There is a power contract from 1969 which gives most of the power to Hydro Quebec except for the block that is used in Labrador and the 300MW that can be recalled for provincial use. It is owned and operated by CFL Co and the shareholders are Hydro Quebec and NL Hydro (a subsidiary of Nalcor). There are contractual agreements in place in addition to the 1969 agreement for guaranteed winter availability contract (GWAC) and a shareholders agreement put into place around 1998. In that agreement I understand there are some terms in there in terms of the rights of Hydro Quebec in terms of the decisions of CFL Co. Exploring those documents will answer those questions.
- **I'm still trying to understand the estimate and the forecast and movement from the estimate to the budget.**
- *Legal Counsel - Referred to the document RFP Production version B1 July 2013 SNC and Nalcor – excerpt from the entire package – is there something you are familiar with, Gilbert?*
 - Greg Snider who is our engineering manager from SNC Lavalin. Satish and Gokhan are also SNC Lavalin people
 - Who does what when we create an RFP
- **Before the RFP goes out is there an update to the forecast?**
 - You don't have the RFP result back
- **Does forecast or cost get updated as engineering is progressing from decision gate 3 until you send the work package out?**
 - You're at decision gate 3

- This document is July 2013
- The estimate was prepared
- That's on a case by case basis
- You would have to look at the level of engineering done
- **Let's say there was additional engineering done between DG3 to the issue of the bid?**
 - I can't give you a definitive answer to that
- **What would you need?**
 - We would need to pull all the engineering records and go through the change control process
 - The bid document may or may not tell you
 - What you need to see is was there any significant engineering decisions that would change the budget
- **Let's use Astaldi as an example. Estimate was \$690M at DG3 and the bid came in 1.025M?**
 - That was updated when the bid came in at financial close
- **Let's talk about Valard? That base estimate was \$368M and it came in at \$805M. I wonder if the budget was updated for that.**
 - I would have to look
 - The milestones were financial close and then subsequent changes for the authorization for expenditure after that
- **So the budget is not updated until you get the authorization for expenditure from the board?**
 - You would need to see what the basis was for a change
 - The major milestone is when the bids are coming back in
 - At that point you would be updating the budget
- **Would there be internal? Before you went to the Board for additional money what was the internal document to keep track of those costs? How often is it update?**
 - We are going to have to pull the record
- *Legal Counsel – there is a request out there. That's all being collected and we will pass it along to you.*
- **Is it possible that these forecasts are being updated with additional costs and the oversight committee are not being told about it?**
 - The oversight committee didn't exist until after 2013
 - We reported on risks and AFE reports to the oversight committee
 - All of which you can have
- **What are AFE reports?**
 - In order to fully understand this we need to pull the paper work
- **You are updating the forecast as the bids are coming in; correct?**
 - As we get bid information we are updating our numbers yes
- **Did you ever update the forecast as the engineering progressed before the bids came in?**
 - I don't know
 - We have to look at the records

- **Did you update the forecasts as the contracts are executed?**
 - As contracts came in we would look at the contingency
 - We did not execute them if we did not have a budget allocation to deal with it
- **The budget is only revised once the funding was in place for that contract?**
 - Funding has to be available – either an increase in the AFE or a draw on the contingency
- **If you need additional funds?**
 - Seek approval for a new AFE
 - Draw on contingency
 - Or we don't sign the contract
- **This presentation was November 2011 – Lower Churchill phase I – Is that referring to Muskrat Falls**
 - Muskrat Falls yes
- **We saw a cost estimate at financial close a class 2 estimate would have been performed. You would have contracts on 80%. What changed from this to what actually happened?**
 - Let's go back and look at it
- **My understanding is that the class 3 estimate was at DG3 and this says class 2 estimate.**
 - That's what's stated here so that's a question that needs to be addressed
 - You have bid information available and in my experience you would class it as a class 3 estimate
- **Was there a class 2 estimate prepared for the whole project at this time?**
 - Less a question of the estimate but knowing what components of the project had been dealt with, with the bids
 - I'm not suggesting that there was a class 2 estimate
 - But if you had a record in project controls of all the work scopes and they are backed up with bid information or contracts signed then its met the requirements of a class 2 estimate
- **As design of work packages was progressing after DG3 that particular work package would have a class 2 estimate?**
 - We would have the bid back
- **But what never took place is holistically a class 2 estimate for the whole project?**
 - That would be academic
 - You would have all the components of each cost and that would be tracked in each work package
 - You would have the critical one which is 80% of the project
- **Is that what you did?**
 - We can go back
 - But if you want to check it – we can check it against the estimate at the time
 - There is no reason to question it
- **So there is nothing that started to document the estimate of the whole package as a class 2 estimate, rather multiple work packages that are class 2 estimates.**
 - No I am saying the project is a collection of work packages. there are a series of work packages, and there are contracts assigned to each

- We look at the value of that register – if 80% of those have contracts associated with them, we have met the requirements of a class 2 estimate
- **If \$5B is the total work packages you have firm bids back on 4B then that is 80% to keep the math simple? Because of that it's a class 2 estimate because you got the bids back?**
 - Yes
- **Did that take place?**
 - It was expected to be done at financial close
- **Who would know?**
 - Project controls
- **Jason Kean?**
 - Jason would know
 - Tanya could probably find out too
- **These are monthly progress reports – this is January, September and November of 2013. I'm trying to understand the sequence of events here. There is a section regarding CH0007 in the January 2013 report regarding concerns that were raised by the bidders with schedule and production. Does that mean the bid packages were back by then?**
 - I don't know where we were in the bid packages at that time
 - I don't know if that was bid received or discussions through the clarification
- **The September progress report – limited notice to proceed was executed with Astaldi. So they were actually started working at least for mobilization during Sept 2013**
 - Yes they were give the LNTP in order to start
- **November 2013 – delays starting to happen with mobilization with Astaldi?**
 - Yes
- **I know – I heard what Dan said before regarding the terms of reference. Was there anything done at that time to consider the delays and the project? This will impact the whole schedule.**
 - Astaldi to my recollection indicated they were going to meet the dates
- **What did you do to manage that?**
 - Help me understand
- **You tell me it's your project?**
 - We were doing a number of activities to help them get moving
 - Assess preparedness
 - Identifying gaps in planning
 - Team organized to start the work and get moving efficiently
- **Anything else?**
 - High level view
- **Nothing else that you know of?**
 - I am not going to try and delineate all of the things we did
 - There were a lot of things done to help all contractors

- **Was it considered to switch contractors?**
 - We had just signed the contract
- **So that was not considered?**
 - No
- **When was that considered?**
 - A few years later
 - When we signed the bridge agreement
- **Is it fair to say under Ed Martin it was not considered?**
 - I think everyone was conscience of the consequences of changing the contractor and what consequences were if they fail
 - If it might be better to continue work with them or to work with a new contractor
- **Were there discussions with Ed or anyone else about it before Stan Marshall took over?**
 - We did not see a rationale at that point in time
 - To change them out this early wouldn't be considered until we put significant effort into working with them in order to improve their performance
- **Was there ever an analysis cost benefit analysis done at that time in the Ed Martin regime?**
 - I know we looked at it in detail during the completion agreement
- **That wasn't done until Stan Marshall took over?**
 - Wasn't don't until we saw significant risk to the project of them failing and needing to have the concrete steps in terms of signing a completion agreement
 - It was less about individual and more about time
- **Was it Marshall or Martin?**
 - We did it with Stan yes
- **I want to show you an email from Rob Hull. You received this in August of 2013. Do you recall that email or not?**
 - Not off the top of my head
- **Take your time to read it**
 - Ok
- **Did you have conversations with anybody about this analysis?**
 - Other than understanding the concern
 - So - I didn't take it any further than this, no
- **So, you got the email and didn't do anything with it?**
 - I wouldn't say didn't do anything (*paraphrases the email content*)
 - Let's pull the bid package, the bid analysis and review the financial work and make sure it's documented as a risk
 - Again - you know there is a mountain of paperwork – bid recommendations, cold eyes review, financial analysis, creditworthiness – they are all documented

- **What did you do with that email?**
 - I would have to go back and look
- **Do you recall having conversations with anybody about it?**
 - I just said I would have to go back and look
- **You have no recollection of Astaldi being potentially a credit risk?**
 - I think all contractors are a potential credit risk
 - Any contractor is a potential credit risk
- **This one in particular?**
 - In particular compared to whom?
 - Obviously they were a lesser credit risk than Salini was at the time
- **There were other contractors that bid on it too not just Salini, but the other two?**
 - We will go back and confirm that
 - There is credit risk here
 - But as I said there is credit risk with any contractor
- **On the performance bonding there was a statement in here from Rob – performance security – that you would like to see higher. Do you know if there was ever a payment with this case?**
 - There are 2 or 3 credit arrangements with Astaldi – I don't have them off the top of my head
 - A performance bond, and there were multiple levels of credit in place adjusted through the various contract amendments
 - Needless to say we would like to have the most security we can have is what they are saying here
 - Contract is a result of negotiation
- **In terms of that, Rob is saying I understand treasury inquired about obtaining security in the event of default. I understand that was rejected and I would like to know why?**
 - As I understand the batch plant is not Astaldi's, its owned by a subcontractor based out of Quebec
- *Legal Counsel – information that you requested was just uploaded to the commission yesterday. It's several hundred messages but there are other ones in that chain that are included in there.*
- **It also suggests we see the financial statements of the counterparty – he is referring to Astaldi Canada. Do you know if that was ever done?**
 - I don't know off the top of my head
 - I know we get financials from Astaldi today as part of our investigative process
- **Do you recall how much of the risk you covered between letters of credit and performance bonding with Astaldi?**
 - We should look that up
 - My recollection is that there is a \$100M letter of credit and another \$150M performance bond
- **So based on what you said about 25% of total – how does that relate to other contractors greater or less typically?**
 - It varies
 - Negotiated with each contractor and based on the assessment of the investment evaluation team

- **Were you involved in the negotiation team with Astaldi?**
 - Not until the very end
- **You would get the information from the negotiation team?**
 - Yes – negotiations would be well under way at that point
- **This work package – some are higher, some are lower. Of the four bids in the Astaldi process was there more security on the other bidders?**
 - I don't have the information
- **Who makes the final decision for the final contractor?**
 - Recommendation was made by the team and then ultimately the approval was by Ed
 - It required his signing authority
- **What is the signing authority?**
 - His was unlimited
 - He would go to the board of directors to discuss
 - But he would have the authority
- **Can you authorize that?**
 - 50M individually and 100M with another VP
- **Did Ed sign all the contracts?**
 - If they exceeded mine
- **What did you say yours was?**
 - 50M by myself
 - 100M with another VP, John M, Derek S, and myself
- *Legal Counsel – was it John MacIsaac back then?*
 - No so it would have been only Derek and myself
- **Term strategic risk vs tactical risk – what is strategic vs tactical?**
 - Tactical risk is within the ability of the project team itself to control and mitigate
 - Resolve tactical risks through engineering definition
 - Understanding the scope drawing a better understanding of the job
 - Align what the estimator thinks the contractor will come back with
 - What it should cost and reasonably understand the quantities, scope of the engineering, definition, units of material, tons of material
 - High level strategic lists are ones that are not in their control
 - Reputation of our province for getting work done
 - Risk with our environment that are added on to the project
 - That the team can't directly mitigate
- **Presentation that Westney did from DG3 project costs and schedule risk analysis Oct 2012 approved by Gilbert? Prepared by Jason Kean**
- **Attachment includes Westney presentation page 5**

- **What I am trying to understand is they are saying this is strategic? Why are things like completion bonus, wage rates, time extension - Why wouldn't that be considered tactical?**
 - That is their opinion
 - I'm not going to argue that
 - It is not within the projects team or themselves to control that
 - As time continued and the delay between the sanction and financial close – that is not something that the team can deal with
- **Ok – productivity?**
 - That one – contractor shares a role in that
 - We do not have direct control over that
 - Level of risk that something gets sent back to us
 - There was some consideration by the estimator – their view on what the project should cost
 - The perceived risk of the project is something the contractor determines in their bids
 - While I think there are some factors associated with productivity with regard to what the norms of the work are
 - How the contractor assumes the risk and prices the job
- **And that is something the owner doesn't have control over?**
 - We have no control over what the contractor puts into the project
 - There are things that we did to help address that
 - A considerable amount of effort put into the collective agreement in terms of the flexibility that could be afforded to a contractor in organizing their work to help minimize risks and optimize productivity
 - We tried to take the steps to mitigate it
- **Help me understand – strategic risk is part of management reserve?**
 - Yes
- **I read that in this document. Is that supposed to come out of the owner's pocket? If the productivity falls behind?**
 - If we fall behind or contractors take a very contrary view because of our provinces reputation
 - We ultimately have to fund it
 - Whether we have internal resources or if the province commits equity to us, or we get debt
 - If we need additional funding currently it will come from our shareholder
- **Is it pretty standard that strategic risks not be included in the contingency calculation, that's added to the total costs of the project**
 - That topic is a discussion that was held several times with EY in their reports
 - Ed's view was that he did not want to include additional funding in the project estimate
 - Ed's view on this was that he did not want to simply throw, put, allocate additional funding in the project estimate that he was looking for us to have the maximum level of competition that we possibly could have and not be telegraphing that there was lots of money for this work.
 - He did not want to be telegraphing that there was lots of funding
- **Wasn't the bid process closed?**

- Yes – but if we were advertising that we had a higher budget
- That in itself was a message to the contracting company
- We were looking for value at any opportunity
- We would not be communicating that we had large amounts of money
- **So you're saying Ed felt that by adding additional 467M to the base estimate to DG3. This would telegraph having more money?**
 - The message to us and everyone was that if the issue arises we would make the funds available in order to complete but would not simply put the funding within the control of the project team
 - I think it's a message everywhere, that, it was a message to us as well that this was a particular, if this scenario were to arise we would make the funding available in order to complete but, would not simply put the funding within the control of the project team
- **Did you agree with that?**
 - I accepted it
- **But did you agree with that?**
 - Whether or not I agreed with it I accepted the explanation
 - We see two different styles today. Stan has taken a different perspective
 - Today Stan wants a higher level of certainty in the estimate and he wants it communicated, and I understand the reasons and have no difficulty with the reasons
 - I also understand Ed's position and explanation
 - I won't say one is right or wrong, they just have different perspectives on it
 - They are both valid
- **Was anyone outside of Nalcor communicated that there could be an additional 467M of potential costs**
 - I know there was discussions that there could be a requirement for additional funding
- **Was the 467M included in the CPW calculation?**
 - CPW was completed before this
 - I don't believe this was in there
 - But there were other risks not included in the isolated island that had one went down that road there would be similar additional costs
 - Ed would be looking for the degree of certainty for the risks that were included in the CPW
- **Was tactical included in the contingency?**
 - Yes
- **Ed didn't want the bidders to know the budget?**
 - It was desirable to encourage competition
 - Also encourage project team focused on mitigating risks without spending the cash
- **Was there an internal and external estimate?**
 - No - in terms of a new estimate?
- **What I am hearing is keep the estimate low to encourage competition?**
 - If you mean was the strategic risk included in the base estimate- not directly no

- It was a base estimate plus our tactical contingency at a P50 level of confidence
- **Do you know why Nalcor used SNC for the base estimate, Westney for contingency, and validation estimating for escalation instead of using one company for all of them?**
 - SNC was EPCM for base estimate so that was part of the job they do
- **Why wouldn't they calculate the contingency while they are doing that?**
 - Westney had a good track record and good view of the project with risks
 - Good to have a second view into the estimate
 - For escalation – I believe they were selected from the RFP process
- **Besides Westney was there anyone else that looked at the contingency?**
 - I stand to be corrected but I didn't think there was
- **Anyone else look at the escalation?**
 - Not that I am aware of
 - If there was a check done, I am not aware of it
- **Document reference – I assume it was prepared by Westney**
- **Risk workshop was done May 23 and 24 2012 and the result of the workshop was the risk matrix that had a worst case and the best case scenario. Those numbers were given to Westney and then they ran the model into the Monte Carlo to calculate the contingency.**
 - That is consistent with my understanding
- **The last sentence caught my eye – “consistent with a class 2 estimate”**
 - That was Westney's opinion
 - That's my understanding
- **What were the conversations?**
 - I reviewed this document and accepted their perspective
 - As opposed to an assertion from someone else
- **If it were a class 3 estimate would that change their opinion?**
 - If it was a class 3 I would think there would be a change in the buckets in their analysis
- **Would the contingency have gone up?**
 - It is likely
 - I can't argue with that
- **Was any calculation done?**
 - They looked at the various packages and the range and probability distribution
 - The probability distribution would have been linked to the estimator confidence of the estimate
 - Then fed into the Monte Carlo analysis
 - If skewed higher than that would drive a higher number
- **They would have been fed numbers on a low and high range?**
 - They typically participate in the process
 - They comment on the reasonableness

- **If it as a class 3 estimate the contingency would be higher?**
 - I think if you concluded that the numbers that make up the estimate were deemed to have lower accuracy or less definition, therefore the contingency would have skewed higher
 - Not because of the class of estimate
 - But the level of definition and the probability of each range would have skewed higher
- **Paul Lemay wrote an email to Jason Kean regarding schedule of concrete. It says he suggested to put a time or money contingency plan for the aggressive schedule. Do you know if that was ever done?**
 - I don't
 - I think by the time we – this would have been cleared and concluded at financial close
 - I don't know where this went
- **Who initially set the schedule for the concrete pour of 36 months like that?**
 - First I would expect that to be the estimating team SNC
 - I don't know the dialogue between Tony and the other folks
 - Ultimately the contractor schedule is fed into the project
- **Why was it so aggressive?**
 - I think we need to get Jason to figure that out
 - Those peak production numbers and higher was reached during productions
- **Any consideration of this risk and the impact on the other work streams and the risk? Was there a linkage when the contingency was calculated?**
 - What were the knock on effects if this package was delayed?
- **Right.**
 - Not to my knowledge
- **Risk register – Westney. Each work package was isolated. Consideration was not given to other work streams?**
 - I'm not in a position to say that you have to get the details
- **The risk workshop was May 23 and 24 of 2012. – Results was Nalcor's risk status report. Would this help you answer the question?**
 - Keep going
- **Did you want to show me?**
 - No – I'm not sure where you are going
- **Attachment B10 - This is what I'm talking about the low and the high – I assume this was fed into the Monte Carlo simulation?**
 - I believe so
- **Were these considered in isolation or was there a linkage?**
 - Based on this information – I can't help you with that
 - You would have to talk to those involved in the detail
 - Production rate that we just talked about is here: A-F – covers the accelerated schedule
 - Production rates is based on B-J – that's Hydro Quebec's experience

- They talk about it and reach a conclusion
 - **Was there any consideration on if production slips in this category what the impact would be on other categories downstream?**
 - Installation of turbines and generators
 - As I went through it I didn't see an assessment on if there was a delay on one and an extension of the timeline
 - It may have been in the discussion and I don't know how it was dealt with
 - But I didn't see that here
 - More about effort as opposed to time
 - **Independent Project Analysis – they were consultants Nalcor hired for what exactly?**
 - IPA
 - Advice on team functionality, process, organization, how we are doing things etc.
 - Generally looking for advice to see if we were doing the right things
- In their presentation they have a slide that says what we have learned from Alberta. It says sanctioning cannot happen without bids in hand. I assume that didn't happen at sanction?**
- Financial close bids were in hand
 - Sanction – effort under taken in the field after sanction was quite limited
- **Sanction cannot happen without bids in hand?**
 - This is a gatekeeper question
 - Our expectation was that we would have bids in hand before the final decision was made
 - We could look at what contracts were awarded at sanction and what ones were at financial close
 - **Was there any discussion about this?**
 - That was his perspective
 - The Astaldi contract was not signed until late 2013
 - Financial close – effectively was the decision to go and commit funds - takes place with Ed's authorization
 - **That is your opinion?**
 - At sanction – we passed DG 3
 - We still need to get to financial close before we make an irreversible decision to go
 - **When reading this – do you think sanction means financial close?**
 - I don't think IPA knew the distinction between sanction and financial close when they wrote this in 2011
 - The expectation is the funds were available at sanction
 - **Westney are saying the firm bids should be in hand at sanction. You are saying sanction is financial close. To me DG3 was sanction and they didn't have firm bids at that point.**
 - Technical definition of sanction is the decision to tell the project team to go
 - That happened when we secured the funding and we had the bids in hand
 - **DG 3 – talks about engineering completed – range 10/10 percent is. When you say significant do you mean 50% is complete? Or more?**
 - The range that was discussed in the AAEC document says 10-40% and the team was saying they had 50% done

- **At the time of sanction engineering is still in progress? Would you say 50% progress?**
 - Yes
- **Sanctioning is really when funds are secured?**
 - Critical point on sanction is when you tell the project team to go to work
 - You are released to go manage all your contractors and start the work
 - You are not started
- **But Astaldi did start before then?**
 - LMTP very limited authority to start – they did not have the authority to go to work and order everything to run the job
 - They said at the time that it was enough to get them started
- **So the contract with Astaldi was executed the day you got the financial close done. November 29, 2013**
 - Not sure of the dates
 - Absent the funding there is no way we could enter into a billion dollar contract
- **Was there any delay with the financing?**
 - Yes – there was a delay in closing compared to when they were supposed to start
- **So when you did close financing, does that mean you were right on schedule?**
 - Yes – there was a greater level of risk there is no question
 - but the contractors had schedules in place
 - They said they could keep their schedule
 - It turned out they had difficulty with that
- **When the financing is secured there is a discussion when contractors are ready?**
 - Contractors give us their schedules during the bid process
 - At that time we manage to the contractor schedule
- **Financing is secured with a delay. Are the contractors aware of the delay?**
 - Yes – the contractors are aware they have a signed contract
 - It's not relevant of what the financial close thought the schedule would be
 - At that point in time it's the negotiations with the contractor
- **So if Astaldi is signing the contract on the same day the financing is received would they go ahead and start?**
 - They would start according to their schedule
 - Financial close is happening in parallel
- **I would have thought they would have revised their schedule?**
 - Well if they thought it was necessary to revise they would have as part of negotiations
 - Reality is when the contract was signed they had a deal with their commitments with time
- **Were some of the issues a result of a shorter time period for the contractor?**
 - I'm not sure I follow

- **So if Astaldi believed they were starting two months earlier – was there additional pressure to complete the contract in a shorter period of time?**
 - I would have thought that when they signed the contract they were comfortable with the commitments they were making and they were comfortable in achieving it
- **Did your team go to them and ask if they were going to be able to complete it in a shorter time period?**
 - We asked them to confirm that they could achieve the milestone dates in the milestone agreement - that they were fine with achieving that
- **Did you team assess that?**
 - They are the contractor
 - They signed up with milestone dates
 - We asked them to confirm that they were satisfied with their dates
- **Who were managing them on behalf of Nalcor?**
 - The contract was signed in 2013
 - We were working as an integrated team with SNC at that time
- **So Nalcor at that time?**
 - Both Nalcor and SNC
- **But at that time SNC were no longer EPCM**
 - They were E, they were involved in P, they providing personnel to C
- **Have you heard of John Holloman – owner of elevation estimating?**
- **He wrote an article in 2007 called The Monte Carlo Challenge – The Federal Approach**
 - I'm not familiar with that
- **Were any other methods other than Monte Carlo considered for estimating the contingency?**
 - We looked to expertise for contingency assessment and we were comfortable with Westney's work
 - May have happened within the team
 - I'm not aware of it
- **Who on the team would have made the decision to estimate the contingency based on the Monte Carlo versus expert judgement, predetermined guidelines, or econometric modelling**
 - I think it's fair to say it was in the decision gate terms of reference
- **Was that Ed Martin?**
 - If he had a concern with the approach he certainly would have said something
 - He signs off on it
- **Did you have a concern?**
 - Not at that time
- **You weren't aware of this article?**
 - Not at that time no
- **Independent Project Analysis – article in 2004 paper - IPA authors found that despite decades of discussions and development contingency estimates on average are getting further than the contingency required**

- I think we are seeing that
- I'm not aware of the paper today
- I was not aware of the paper then
- **Are you familiar with John Hackney – control management capital cost**
 - Not familiar
- **His book – control management of capital costs**
 - Not ringing a bell
- **1981 study by Edward Merrill**
 - No
- **The construction institute 1998 study about early estimate and contingency development**
 - No
- **In the course of developing the contingency analysis estimate was there any comparison to other projects in terms of budget at sanction vs where the actual costs came in at**
 - I don't think that was discussed no
- **Do you know why?**
 - In terms of overall performance at the basis of estimate SNC previous experience was useful and informative
 - Getting a view of other projects was challenging
 - Members of the team would have brought their experience
 - We didn't look to other projects specifically
 - There were factors from other projects considered
 - Some of the DC converter project challenges were discussed from other jurisdiction
 - Specifically comparing initial capital cost to other projects I don't recall seeing a document
- **Is it fair to say that looking at the total cost at sanction was looking at other mega projects? Here's budget vs actual? And compared to contingency?**
 - Looking at those risks and addressing them from a tactical risk area
 - Change management and lack of engineering definition
 - Poor design
- **Did anyone on the team try to go out and find articles?**
 - You can talk to the experts
- **No that Nalcor did that you are aware of?**
 - I'm not chasing their research activities
 - For Jason
 - Project controls
 - SNC
 - I am not aware
- **You didn't do it or direct your team to do it? And you didn't do it yourself?**
 - No

- **Pacesetter evaluation done by IPA in 2008 – do you remember seeing this?**
 - I think so yes
- **Page 34 of 2008 presentation**
- **Would your team have defined what a successful project looks like?**
 - Our objectives are to manage to cost and schedule
 - Deliver a safe project
 - We can look at that definition through the objectives, safety, cost, schedule, quality
 - Is there a one sentence vision statement – there probably is one but I can't recite it for you
- **I'm seeing there are documents we could go to**
 - You are talking to someone that is responsible for millions of documents
 - If you talk to one level down you will get the experts to refer you to the specific documents
- **You never had a meeting and described what success looks like?**
 - We have had discussions on what we effectively need to do to complete the project successfully
- **The +10%/-10% would be success compared to this?**
 - No question
- **Gilbert, we now have an understanding that various folks at Nalcor saw that report back in April 2013 and had discussions over it?**
 - You saw the report – I'm not aware of that
 - Had discussions over it back in 2013
 - Discussions over?
- **The SNC report**
 - Specifically the report? That the report was in the house?
- **Yes, tell me what you know about it?**
 - I saw the report when Stan Marshall showed it to me
- **So there's no discussions that you had with anybody back in 2013?**
 - About the report, about this report?
- **Yes**
 - I'm not aware
 - If you looked at the items that are discussed in the report, there are many of these items on our risk register, no question about that
- **As far as that particular report back in 2013 – you didn't have discussions with anybody about it**
 - I'm unaware of having a discussion on this report , no
- **Any emails?**
 - Couldn't find them
- **About that particular report?**
 - This particular report, no
- **No emails about the discussion of the report?**

So the first time you learned about this was in 2016?

- First I learned about this report was in 16 when Stan showed it to me
- Like I said, the various risks in here and subject matter in the report are not unique
- Some of these are not new, there are ones that had been discussed throughout the evolution of the project and the risks that we're mitigating
- No question, Man power availability, DC converter, performance – these are risks that we had talked about , these are risks that had active mitigation plans

• **Do you have any idea what caused SNC to write that report?**

- Not sure

• **Had you seen that report would it have changed your decision going forward?**

- I think it would have reinforced the work that we were already been doing, go back and make sure we had identified risks, had mitigation strategies around them and would properly completely identified the risks that we should be thinking about

• **Would it have created a pause?**

- I don't know about that

• **But even though costs potentially could have gone up another \$2.4B – the organization would have stepped back and look at this again?**

- I think we would have looked at these risks and said, you know, are they effectively mitigated? Are there other things we could do for mitigation? I don't think we simply would have sat back and said okay lets add all these contingencies.

• **Because the Monte Carlo simulation already took that into consideration?**

- That is one reason
- One would reasonably expect that all these risks wouldn't simultaneously rise to 100% probability

• **As I understand that document, they did the high and low end probability piece.**

- I don't think this included the probability
- I added it –the top ten list of risks

• **When?**

- I thought I ran down through these
- These were risks that we know about

• **You are saying that had you known about that you wouldn't have paused because the Monte Carlo simulation took that in**

- I would have said that we would have looked at the new risk
- Reviewed how we considered those risks and the mitigation strategies and view of those risks continued to be reasonable

• **Do you disagree with this?**

- No – I'm not saying that
- I'm not convinced that this should have resulted in piling on the contingency or if there was a more effective means in mitigating the risks

• **Looking back at the Hollman article – do you still feel that way?**

- *Legal Counsel - he hasn't read the article*
 - Everyone has a different point of view
- **Given there has been no studies looking at budgets vs actual on mega projects done in the organization. Do you still feel that way?**
 - I'm not an estimator
 - It's fair to say owners are struggling with predicting capital costs
 - We are all seeing that
- **Given all that you would still not adjust the contingency?**
 - I'm not sure
 - I'm not going to speculate
 - Today we are dealing with a higher level of certainty
 - P50 to P75
 - We can have that debate – about comparative analysis and how effective we are at predicting costs
 - The right approach – effort mitigation or contingency, keeping pressure on the project team
 - Identifying the requirement for a reserve
 - Those are all factors we need to talk about
- **But back then when this was written – had you received it back then would you ignore it?**
 - We try not to ignore anything
 - What course of action would have been I can't speculate
 - Keep an open mind on the information
 - We would have wanted to ensure the risks were considered and they are on the register
 - We might differ in professional opinion but we would not have ignored the risk
- **What did you do with it?**
 - I looked through it
 - Considered if there were some that didn't materialize
 - Some of them did
 - Some of them had mitigation strategies on them
- **Some weren't in the register?**
 - No I didn't say that
 - Some didn't materialize
 - Some were mitigated for significant costs
 - Some of them didn't
- **As an integrated team wouldn't SNC share this with the team?**
 - I wish they did
 - They could have
 - It would have been in Aconex

- Legal Counsel – it isn't in there
- **Who would have put it there**
 - They could have
 - They could send an email to Aconex– they had access
- *Legal Counsel –all of the contractors have access to it – that's how they exchange information*
- **We don't know why they didn't put it in there? Your team hasn't gone back to them?**
 - We have it now
- *Legal Counsel – it doesn't change what you do go forward it's only a question of looking back*
- **There was no action of seeing this after the fact?**
 - A view of risks from 2013
 - We have an active risk register today
 - We will continue doing an assessment of risk from where we are today
- **You said I wish we had it in 2013**
 - More information is always better
- **Your team has reviewed this and nothing has happened?**
 - No specific action coming out of this
 - They have looked at these
 - Camp accommodations - We were able to mitigate that risk for one construction season for one tenth of that cost without impact on contractors
 - Pool of contractors – there was a lot of effort put into identifying
 - Labour recruitment worked relatively well
 - What's the size of these risks today?
- **If you found out today that someone knew about the report and didn't tell you how would you feel given your position?**
 - That is a difficult position to be in
- **Why would they bury it?**
 - I don't know that it is buried
- **But you didn't know about it?**
 - No I didn't know about it
 - I think we had conversation about many of these risks yes

- **You read this document before today?**
 - Yes I have seen it
 - I read it – this table is hard to read
- **Your document management system – if it's not in the document management system could it still be in the system?**

- *Legal Counsel – The Aconex system is put in place as the official record keeping. Documents could be transferred by email, USB drive, not supposed to, there are shared drives and the document search team has access to it all those including backups*
- **Document search team?**
- *Legal Counsel – yes it's an organized endeavour to find all of these documents needed*
- **Have you searched for that document?**
- *Legal Counsel – there have been searches, we are still completing some searches, and we are working with counsel on that as well. The commission has issued summons*
- **Was one of the commission requests that report?**
- *Legal Counsel – we have a multipage document summons related to the terms of reference. This one is related to that*
- **Was there an internal investigation? Once this report was brought to your attention?**
 - I asked the project team if anyone had seen it an nobody had
- **There was not an electronic search?**
 - There is one there now
- **Harrington and below?**
 - Yes
- **Did they know about it?**
 - They said they didn't see it
 - I asked if they knew about an internal SNC Lavalin report
- **Again – we may need to ask you some question down the road**
- **Please keep this confidential what we are discussing**
- **What happened here in your opinion? Why did it go haywire? What caused it?**
 - Astaldi poor performance is a big factor – 1B there easy
 - Transmission side there were significant investments in reliability – focus on reliability in 2014
 - Legal Counsel – after the big power failure
 - That had a significant cost impact as well
 - Understanding labour
 - Understanding how the work was priced
 - Material costs were actually quite close to budget
- **Labour rate or hours?**
 - Both
 - No way to work without rates that were competitive with other projects out west
- **Was there ever an analysis to try and figure out what happened?**
 - You could probably back into it from the information from change control and various AFE's where the funds went
 - Not at this point – no one has done that
 - We would have gotten to the lessons learned closer to the end of the project

- *Legal Counsel – knew the inquiry as coming has been known for a year now*
- **Between knowing this was coming and now – did you guys not do your own**
 - We are spending 2B per year in the field day to day getting the job done
 - That is the primary focus today
 - This is the most critical time in the project
 - Transmission is coming to the end of the construction and commissioning
 - We are fully engaged in that
- **Stop 4:28pm**