Aug 2013 Final Forecast Cost update presented by the Project team to CEO indicating FFC of \$6.9B

The deck provided an indicative level review of Final Forecast cost and the direction that was taking following some early concerns along with reasons for the cost increases. The contractor pricing being received was higher than the estimates and the contractors were using much lower productivity expectations in their bids than those that SNC had included in the estimates for labour . Plus the Contractors were including higher indirect ratios than SNC predicted and tolerance for risk was very low.

Also included in this section was a request from the CEO for the Project team to assess if best practices are being followed regarding PM and Contracting, a series of emails deals with that request.

Page 2



Meetings with Ed Martin Paul Harrington to: Lance Clarke, Jason Kean

Jason/lance

I know that we are all working hard to dive down costs and we have a multitude of initiatives underway and some which have reached a conclusion. I have reflected on our discussion with Ed last Friday and the subsequent phone call from Ed to Jason.

I firmly believe that we need to put the FFC into some other format that puts the costs into perspective and corrects some misunderstandings

For example

1 Just because one contract may have a percentage increase over the budget does not mean that same increase can be applied across the board to all contracts

2 The FFC is a view on where the costs could go based on what we are seeing today from Contractors bids and applying that over future contracts- however we have not stepped through the line items of the FFC to gain an understanding of what assumptions have been made - also we could apply some ranges to show what the costs for a particular contract could be if we come up with scope reduction and other cost mitigations - the converters would be a prime example of this- so we should try and see if there are ranges around some big value contracts costs and present that as a mitigated and unmitigated FFC

3 I feel that the step chart does not work in this situation and Ed struggled with it because he could not align the more modest FFC shown in that with the CH0007 cost increase (in percentage terms)

So I am proposing we meet on Thursday and go though the FFC spreadsheet and make sure that it reflects what we truly believe and add ranges where it make sense- the result should be a range of FFC - assuming mitigation efforts are successful and where they are unsuccessful.

Do you support this approach - if we are aligned I will call a meeting on Thursday and if we can try and meet with Ed over the weekend with a different slant on the FFC.

Pls let me know paul

Paul Harrington Project Director PROJECT DELIVERY TEAM Lower Churchill Project t. 709 737-1907 c. 709 682-1460 f. 709 737-1985 e. <u>PHarrington@lowerchurchillproject.ca</u> w. muskratfalls.nalcorenergy.com

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Thanks

Paul Harrington to: Jason Kean, Lance Clarke, Ron Power, Brian Crawley

08/31/2013 09:42 PM

Bcc: Ed Martin, Gilbert Bennett

I want to thank all of you for all the effort and sacrifices you have made to get this project passed all the obstacles, doubts and struggles to where we are today

A truly team effort

Our meeting with Ed on Friday was not an easy task but you all contributed and stood tall when the hard questions were asked of us, I am very proud to be your Project Director and your honesty, integrity, sheer dogged determination was obvious to all. i am sure Ed felt energized and encouraged by the work you guys have put in and struggled valiantly to achieve both Ed and Gilbert have a heavy burden to carry and we are all on this project because we support them and their vision.

We are at the cusp of major commitments and I feel so confident that we are ready to take on the next big challenge, I would not want to take that on without all of you beside me and all of us behind Gilbert and Ed.

This project is the future of the Province, we all now that and feel every cost increase in our fibre, we know the challenge we face and that we need to drive out costs we cannot afford and changes that we do not and cannot accept.

We have been given a challenge to cut costs as much as we can without cutting into safety, quality, reliability and operability. We are all rising to that challenge and we will succeed.

We will drive on and fulfill the confidence that Ed, Gilbert have in us and deliver the goods My very best regards

Paul

Sent from my iPad

Page 4



Meeting with Ed

Paul Harrington to: **Brian Crawley**

Gilbert Bennett, Lance Clarke, Jason Kean, 08/28/2013 06:16 PM

Ed asked for some thought to be applied to some questions he had, so he was armed with the correct responses to questions that may come up when on his travels next week below, in italics is what he sent-I attach a deck that are my thoughts on how his questions may be answered- these are just some notes for us to mull over - please feel free to add/modify as you see fit

Regards Paul



Ed meeting.pptx

Hi guys,

Just preparing for tomorrow morning meeting, and as part of our discussion could to please be prepared have an "opening" discussion of the following questions. The intent is to begin a discussion, not to have a formal presentation, or have people "work all evening" on this. Based on an opening discussion tomorrow, we can probably schedule something to follow up in more detail in a week or so. This type of work will help in ensuring I am ready to approve the upcoming award of the bigger contracts in the coming weeks

1. How do we rate ourselves at this point compared to best practices for contract prep/bidding/award processes, as well as post-award key success factors?

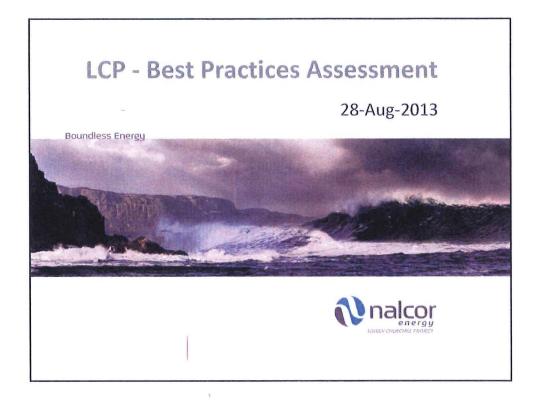
2. How do we rate ourselves compared to main reason contracts are not successfu?

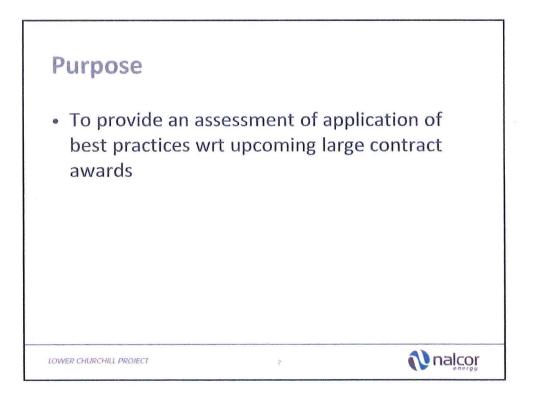
3. How do we rate ourselves at this point compared to best practices for overall project success?

4. How do we rate ourselves compared to main reasons projects are not successfu?

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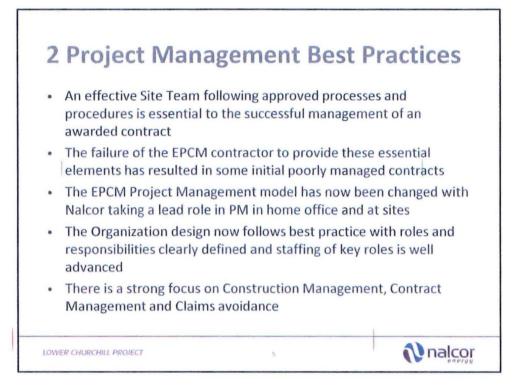


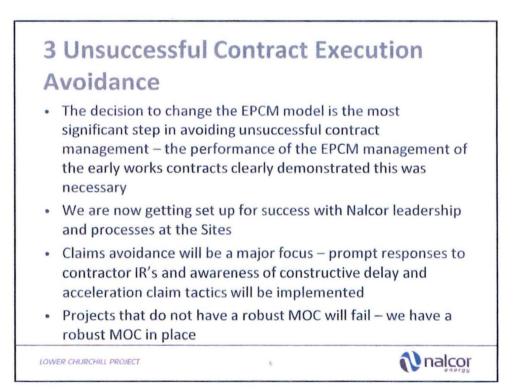
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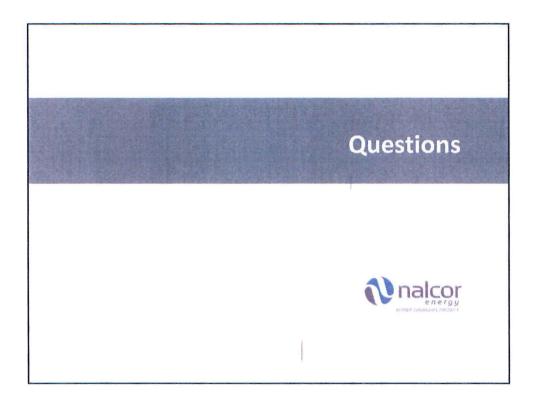
Viender

Page 6











Response to Ed's questions

Paul Harrington to: Gilbert Bennett, Lance Clarke, Jason Kean, Brian Crawley

08/29/2013 10:57 AM

Here is a revised deck with as many comments fitted in that I could manage- we can talk to any I have missed

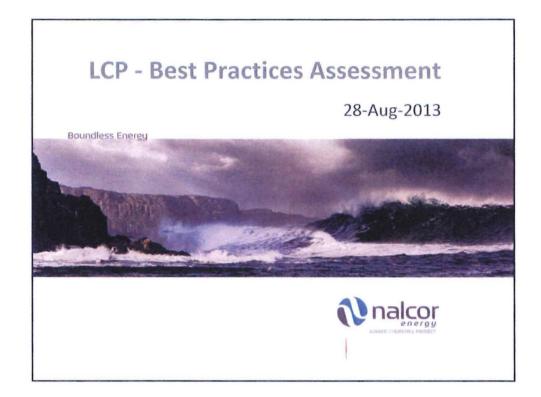
Paul



Ed meeting.pptx

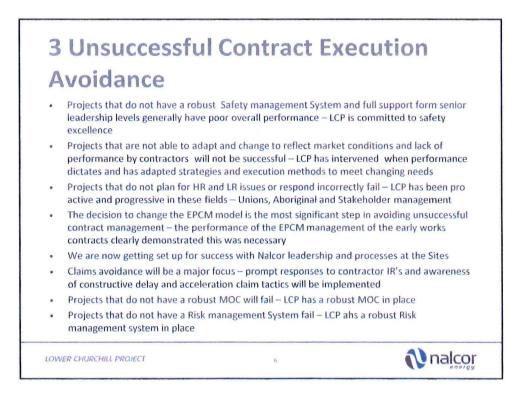
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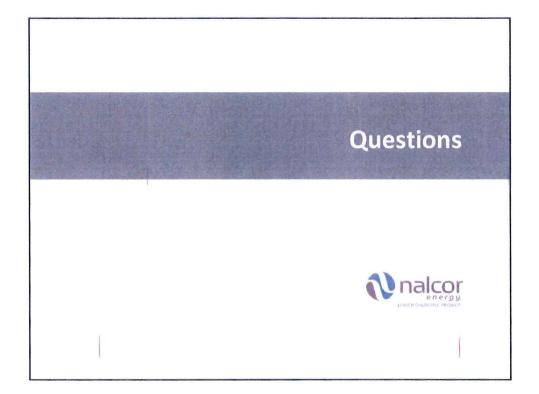
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Re: Meeting with Ed Brian Crawley to: Paul Harrington

08/29/2013 08:29 AM

Paul...

1. I'm not quire sure of the right way to say this, and hence didn't copy everyone, but there may be merit in acknowledging that there were short comings in the project team due to the quality of the people being brought forward by SLI. I don't like to cast blame as it normally reflects poorly on us, but it is what it is. A conscious effort was made to address this as the EPCM model was changed to better manage the situation. We now augment an already strong team with people from some of the biggest and best companies in the business... Everyone works as one team under the Nalcor brand and there has been a marked improvement in performance at site as a result. I don't think anyone can dispute that or acknowledge that recruiting a world class PM team is best practice.

2. I believe Ed would appreciate a bullet or two on best practice safety performance and the project's relentless commitment in this area. I think you can say with sincerity that the project team is very good at recognizing issues and addressing them in a proactive manner. Problems with blasting is probably a good example. Perhaps we can also say something about the response to the incidents at the CF yard. At any rate you can certainly articulate this much more clearly than I can. My point is that I understand best practice organizations are also leaders in safety. We are well on our way to doing that. I'd also point out the fact that we now get, according to Riffe, 100-150 SWOPS a WEEK from the site. It shows the focus the workforce has on safety. Unfortunately we are challenged in entering them into a data base but this still tells quite the story.

3. While this isn't my area by any stretch, one has to be impressed with the way the project aggressively attempts to mitigate problems when unacceptable bids come in. The work over the last few weeks is a testament to that, and speaks volumes to the quality of people who are managing the process. I don't know if that is best practice but it is certainly leading edge. These points may not fit directly with your presentation but are probably worth discussing with Ed. Perhaps we can all get together for a few minutes this morning to discuss. Thanks

Brian

Paul Harrington		Ed asked for some thought to be applied to som	08/28/2013 06:16:11 PM
From:	Paul H	arrington/NLHydro	
To:	Gilbert	Bennett/NLHydro@NLHydro, Lance Clarke/NLHydro@NLHydro	o, Jason
	Kean/N	ILHydro@NLHydro, Brian Crawley/NLHydro@NLHydro,	
Date:	08/28/2	2013 06:16 PM	
Subject:	Meetin	g with Ed	

Ed asked for some thought to be applied to some questions he had, so he was armed with the correct responses to questions that may come up when on his travels next week below, in italics is what he sent-I attach a deck that are my thoughts on how his questions may

Page 14

be answered- these are just some notes for us to mull over - please feel free to add/modify as you see fit Regards Paul [attachment "Ed meeting.pptx" deleted by Brian Crawley/NLHydro]

Hi guys,

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Tomorrow's Meeting

Ed Martin to: Gilbert Bennett, Paul Harrington, Jason Kean, Lance Clarke

08/28/2013 03:38 PM

Hi guys,

Just preparing for tomorrow morning meeting, and as part of our discussion could to please be prepared have an "opening" discussion of the following questions. The intent is to begin a discussion, not to have a formal presentation, or have people "work all evening" on this. Based on an opening discussion tomorrow, we can probably schedule something to follow up in more detail in a week or so. This type of work will help in ensuring I am ready to approve the upcoming award of the bigger contracts in the coming weeks.

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2. How do we rate ourselves compared to main reason contracts are not successful?

3. How do we rate ourselves at this point compared to best practices for overall project success?

4. How do we rate ourselves compared to main reasons projects are not successful?

Thanks, Ed

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Ed Martin named Energy Person of the Year for 2013 Karen O'Neill to: All Users

08/27/2013 02:13 PM

Good Afternoon,

The Energy Council of Canada announced that Ed along with Chris Huskilson, President and CEO of Emera Inc., are this year's recipients of the Canadian Energy Person of the Year Award. This joint award is in recognition of the major contributions both Ed and Chris have made, and continue to make, to the energy sector in Atlantic Canada and the significance of their leadership within the sector across Canada.

This award recognizes and pays tribute to leaders in Canada who have made a significant impact at both the national and international level with respect to energy.

Ed and Chris were nominated for this award based on their remarkable accomplishments in the energy and business and government sectors, as well as the community at large. Through their forward thinking and innovative spirit, these leaders promote the Canadian energy sector and Canada's role as a major player in the world energy market.

The Energy Council of Canada will present the award to Ed and Chris on October 23, 2013, in Halifax, Nova Scotia. For more information about the award and to view the announcement, please visit the Energy Council of Canada's website: www.energy.ca.

Congratulations Ed; this award is well deserved.



Karen O'Neill Senior Communications Advisor Nalcor Energy - Lower Churchill Project t. 709.737.1427 c. 709.690.2012 f. 709.737.1816 e. koneill@nalcorenergy.com w. nalcorenergy.com 1.888.576.5454

You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

Page 17



Kathy Winsor to: Paul Harrington This message has been replied to. 08/26/2013 01:57 PM

Paul:

Gilbert was thinking about taking Friday off. Did you want him there or can I try for Thursday of this week?

Kathy



Kathy Winsor Executive Assistant Nalcor Energy t. 709 737-1805 f. 709 737-1782 e. KWinsor@nalcorenergy.com w. nalcorenergy.com

Paul Harrington	Kathy I know Ed's week is getting booked so pls	08/26/2013 01:44:04 PM
David H	even eten /NL Lh dre	

From: Paul Harrington/NLHydro Kathy Winsor/CRP/NLHydro@NLHydro To: Cc: Bev Tucker/NLHydro@NLHydro 08/26/2013 01:44 PM Date: Subject: Fw: Meeting with Ed

Kathy

I know Ed's week is getting booked so pls see if you can get an hour on Friday this week - or what options are there next week

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From:	Bev Tucker/NLHydro		
To:	Paul Harrington/NLHydro@NLHydro,		
Date:	08/23/2013 05:39 PM		
Subject:	Re: Meeting with Ed		

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Hi Paul, I'm not in the office until Tuesday if that's okay. If you would like to get something booked sooner then either Audrey or Kathy could help on Monday.

Bev

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Paul Harrington Bev Can you set up a meeting with Ed -Friday... 08/23/2013 04:48 PM NDT

Fwd: Overall Commercial Actions Jason Kean to: Paul Harrington 08/28/2013 05:28 PM Hide Details From: Jason Kean/NLHydro To: Paul Harrington/NLHydro

Sent from my iPad

Begin forwarded message:

From: "Lance Clarke" <<u>LanceClarke@lowerchurchillproject.ca</u>> Date: 28 August, 2013 10:31:17 AM NDT To: "Jason Kean" <<u>JasonKean@lowerchurchillproject.ca</u>> Subject: Overall Commercial Actions

Jason

There are several different areas of work going on of course so I have been trying to create an overall list/game plan with actions, actionees, dates, etc. I will have it in good form when I get back but thought I would send you the starting raw list which we will build on as it may help with the deck you and Paul are doing for tomorrow. This is not everything by any means but gives a good feel for the work we are doing. The deck we used for the contracts discussion with Keating and company is likely a good starting place but I am sure you have already started that.

Commercial strategic issues Action List

Strategic issues are -Civil contractor pricing as subs Hot transmission market Get CH 0007 going smoothly Claims management

Actions, component, target dates, priority, actionee

Send prospective civil bidders to sync condenser bidders Review contracting strategy for these packages- do we self execute civil Options are - stay as is, go to target price model for civil aspects, find civil contractors for main bidders- could be CH 007 for Muskrat, separate civil and we take on the packagescould be CH 007 for Muskrat, self execute the civil, do design bid build on construction and keep equipment LS. Constrained on time. Need to understand how much time we have. Call schedule meeting- are there opportunities? Speak with powerhouse bidders on extra work Call meetings with all AC Switchyard and sync condenser bidders to discuss union agreements, productivity and getting out of the box Read article on how Norway is now competing with Korea for lessons Call in HJ O'connell's to discuss competitiveness and claims Attack scopes Present to Ontario Construction Association Hold industry session in the fallon productivity in Conjunction with construction association

Do review of CH007 with Ron looking for opportunities

Have Risk and optimization discussion with CH007

Meet with unions to explain situation and how we need their support

Key message- we know there is opportunity in our set up and we want some of it, not having it all go to the contractor

Hold senior level meeting with Italians

Finalize transmission contracting strategy for HVDC, likely bid but may need another option

Have CEOs meet from Quanta and Valard

Hold productivity review and share with bidders on civil

Need game plan in place for CH 007 and unions for quick start

Confirm bidders do not have extra cash built in for wages

Rgds

Page 21



Meeting with Ed Martin - FridayPaul Harringtonfoilbert Bennett, Lance Clarke, Jason Kean,
Brian Crawley08/29/2013 05:17 PM

Our meeting with Ed Martin today did not go ahead as planned and was deferred until Friday PM - we did get to discuss with Ed a few things and he wanted to have some data regarding the large contracts that we will be putting to him vert soon now. He wanted to know some attributes that have resulted in us choosing the contractors we have chosen - things like, International experience in difficult areas, Canadian /cold weather experience, technical bid quality, ability to execute, solid execution plan etc- so I have added in three slides to provide an assessment of the preferred bidders for CH0007, CT0319 and CH0032 - showing why we chose them and why we believe they are the right choice and that they will be successful

Ed did not want a deck I know but we have to be able to ground our thoughts in a cohesive manner so I attach a deck that attempts to capture those ideas So have a look and get back to me

Thanks Paul

Ed meeting 3.pptx

Paul Harrington Project Director PROJECT DELIVERY TEAM Lower Churchill Project t. 709 737-1907 c. 709 682-1460 f. 709 737-1985 e. PHarrington@lowerchurchillproject.ca w. muskratfalls.nalcorenergy.com

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Hide Details

Review Upcoming Contract Award Recommendations - Time and Cost

Thu 08/29/2013 12:00 PM - 1:00 PM

Attendance is required for Paul Harrington Chair: Kathy Winsor/CRP/NLHydro

Rooms: LVL6BRD1/Hydro Place@NLHydro No Location Information

G This entry has an alarm. The alarm will go off 5 minutes before the entry starts.

Brian Marsh/NLHydro@NLHYDRO, Ed Martin/NLHydro@NLHydro, Gilbert Required: Bennett/NLHydro@NLHydro, Jason Kean/NLHydro@NLHydro, Lance Clarke/NLHydro@NLHydro, Paul Harrington/NLHydro@NLHydro

Description

Lunch will be provided

Personal Notes

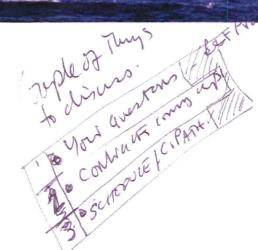
Page 23

Final Forecast Cost Update

Presentation to Executive Management 29-Aug-2013

Boundless Energy







Purpose

· · · ·

- To provide a Management-level with an "indicative" level review of the Final Forecast Cost (FFC) for LCP based on actual contract pricing and applying to upcoming contracts/PO's.
- To outline key mitigations be assessed to manage FFC exposure going forward.



Key Messages (1/2)

- We are forecasting the FFC to be ~\$6.9B which is ~10% beyond the DG3.
 - The FFC includes some growth allowance
 - Several strategic actions have over the past 2 months to reduce this exposure
- Bid prices for civil works are high
 - Contractor's view on labor productivity and performance Long Harbour and Hebron driving the perception
 - Market conditions favour larger margins/profits- especially converters and transmission
 - No/low contractor risk appetite for work in NL



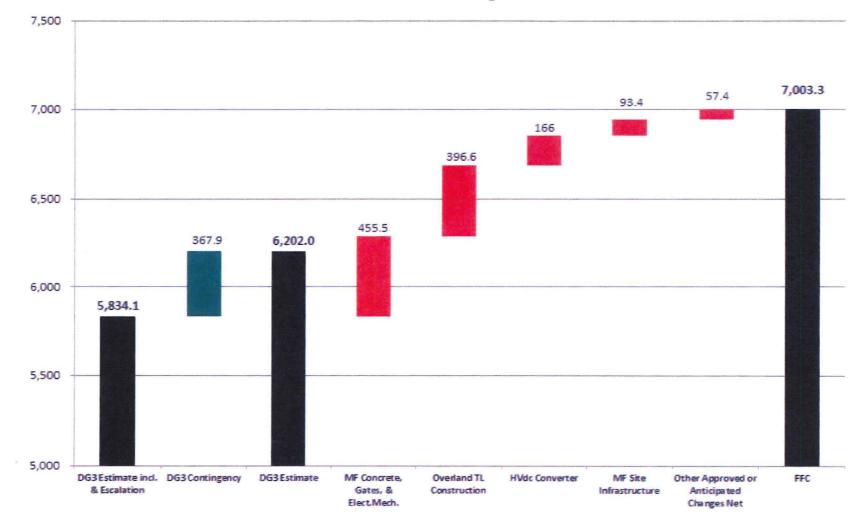
Key Messages (2/2)

- Cash flow has shifted out since DG3 uncertain of impact on overall In-Service Cost
- Equipment Supply cost have been either better or comparable than DG3 estimate
- Overall quantities to be installed has generally remained steady
- CDN \$ weakening against USD, however not seen as large exposure
- We are directing attention on how to mitigate this and future exposure





FFC Outlook – late July





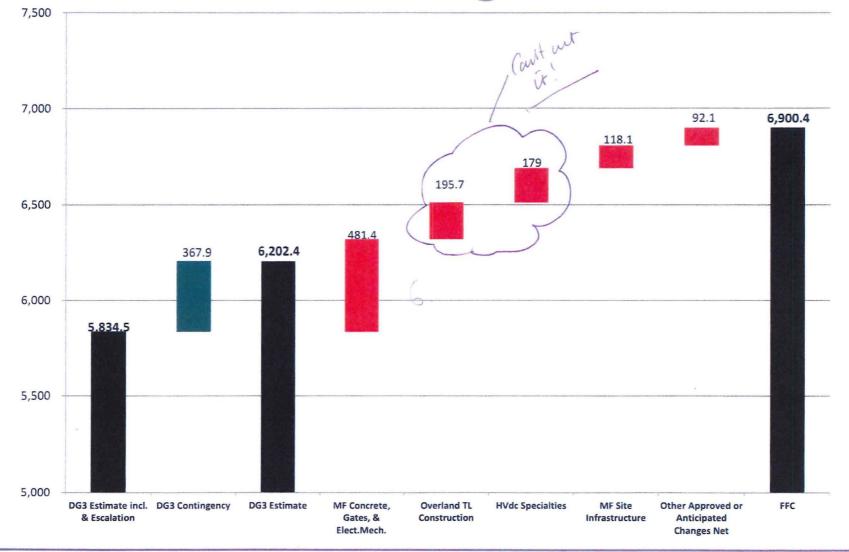
LOWER CHURCHILL PROJECT

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FFC Outlook – late August





LOWER CHURCHILL PROJECT

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Mitigating Actions

- Evaluating alternate contracting models
 - E.g. partnership arrangement for transmission construction
- Alternate commercial models
 - Target price and KPIs
- Expand local civil contractor market
- Finding ways to avail of our good labor agreements
- Optimizing construction schedule
- Mitigating areas of potential change order exposure
 - Transmission material availability and issue
- Reviewing contract risk transfer strategies
 - Are we getting what we are paying for?



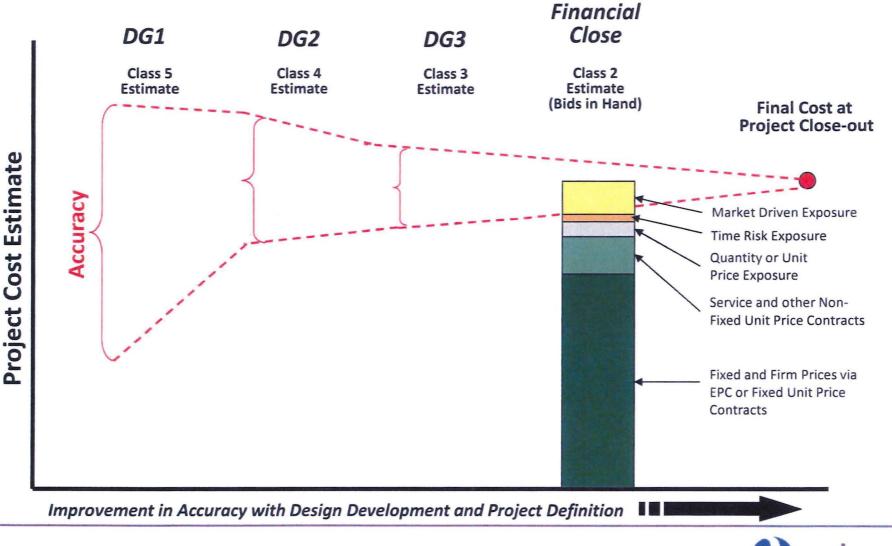
Page 30

Exposure if Mitigations are Successful

- Potential reduction in FFC by ~\$100 million
 - Converter equipment specification and alternate civil construction approach
- FFC would be reduced to \$6.8 B.



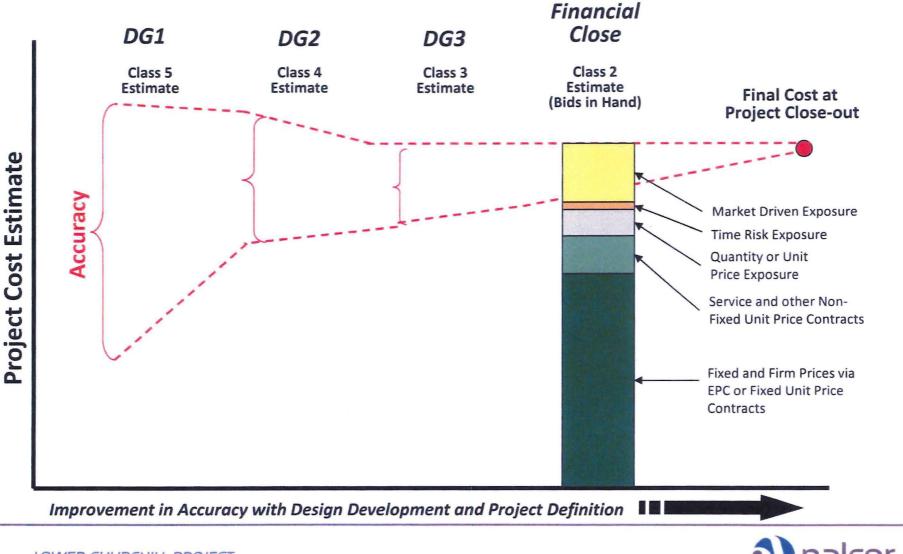
DG3 Estimate + 18 Months View: Expected





Page 32

DG3 Estimate + 18 Months View: Actual





LOWER CHURCHILL PROJECT

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What is Driving the FFC (1/5)

1. Powerhouse Concrete and Civil Works (i.e. CH-0007)

- Our largest contract and will be presented for approval in late August
- 4 bids received; wide variance in bid prices between N. American and European firms. Focusing negotiations with 2 bidders, however both are beyond DG3 estimate.
- Approx. 1/3 of FFC delta attributable to design development
- Balance attributable to contractor risk perception. Contractors view NL as a difficult and expensive place to carry out work, plus the civil/local contractors are feeding this with high pricing and productivity concerns
- Contractors have concerns with the large quantities of concrete, the availability of labour and the complexity of the undertaking
- Target Cost Model introduced to facilitate sharing of labour risk
- Have relaxed diversion window in order to help contractor be successful



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What is Driving the FFC (2/5)

2. Transmission Line Construction

- HVac bids were 30% higher than DG3 estimate. Trend included for HVdc in FFC.
- Bid prices reveal significant delta on productivity for tower erection
- Contractor margins beyond typical, reflecting heated market there are limited contractors who can execute the large, complex scope and they are very busy within N. America – they dictate price
- Contractors are including risk premiums to cover concerns of labour, regulatory, aboriginal, civil works, access and local contractors
- Increase tonnage due to inclusion of tower loading safety margins
- Project Team is exploring alternative risk sharing execution frameworks with major transmission contractors
- Mobilizing additional construction management expertise to the team through specialist Construction Management consultants



What is Driving the FFC (3/5)

3. HVdc Converters and Transition Compounds

- 3 Bids recently received, all of which are significantly higher than budgetary prices each provided for DG3. Lowest bid included in FFC.
- The HVdc converter market is very active and the pricing reflects the dominant position that the suppliers currently enjoy
- The contractors view NL as a difficult and expensive place to carry out work and have built in large risk premiums in their bids, plus the civil/local contractors are feeding this with high pricing and productivity concerns
- Despite meetings at Senior levels with the bidders local contractor civil costs continue to drive up the contract prices disproportionately
- Project is reviewing design and ways to cut scope and overall costs





What is Driving the FFC (4/5)

4. Muskrat Falls Infrastructure

- Many IBA related contracts involved which are proving to be costly and challenging
- Permanent camp is delayed contractor performance and sub supplier Chapter 11
- Temporary camp and services required because of delays to permanent camp
- Inadequate SLI Construction management required Nalcor intervention and command and control
- Site services have been badly managed by SII requiring Nalcor intervention at a late stage
- Demonstrations, site disruptions and forest fires have all contributed to loss of productivity, delays and claims from the contractors which are built into the FFC



Page 37

What is Driving the FFC (5/5)

5. All Other Items Net FFC Impact

- Reflects market premiums for other civil works, incl. North Spur Stabilization, Synchronous Condensers, and Switchyards
- Site Services and CM costs resulting in from movement of First Power from target of mid to end of 2017
- Switch from EPCM to EPC model for Synchronous Condensers and Switchyards
- Removal of Holyrood Synchronous Condenser Conversion Scope
- SOBI Cable crossing savings, incl. reduced route, embedded fibre



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Bid Prices incl. some amount of Strategic Risk Exposure

Performance Risk Exposure

Competition for Resources

Schedule Risk Exposure

The performance rates /norms and indirect estimates used in the estimate, including the estimate contingency, are based upon historical performance for similar hydro-projects and are predicated upon achieving the envisioned labor strategy and rare much better than what is being experience in Long Harbour (restrictive work practices). Contractor mark-ups for unit price agreements could be excessive if there is a perception risk that the labor strategy will not materialize. Experience front-line supervision, a key to performance, is now a world market and will likely experience high demand during this project.

The estimate for MF is based upon the labor rates in the Hebron Agreement. Given that the total project has approx. 18 million person-hours of labor requirements (including Owner + PMT + Services), it is likely to **compete with Western Canada for labor**. The wages used for estimating are slightly lower than Western Canada, but NL have larger union premiums resulting in lower take-home compensation. In addition completion bonus are planned for Western Canada.

Escalation allowance assumes between 3 and 3.5% annual increase in labor cost.

There is a **potential time or schedule risk exposure for beyond the plan due to the weather and volume of work in the powerhouse**. The current schedule for MF assumes achievable performance in the powerhouse concrete, however the sustainability of the required production rates for placement of the ~460,000 m3 of concrete through-out several winters will be challenging.

Maintaining a October 2012 start of Bulk Excavation is considered critical to maintain the overall program.







Supplemental Information





FFC Review Basis

- Considers cost reporting up to 30-Jun-2013
- Leverages insights from all RFP submittals received up to same period



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Anchoring Back: DG3 Estimate

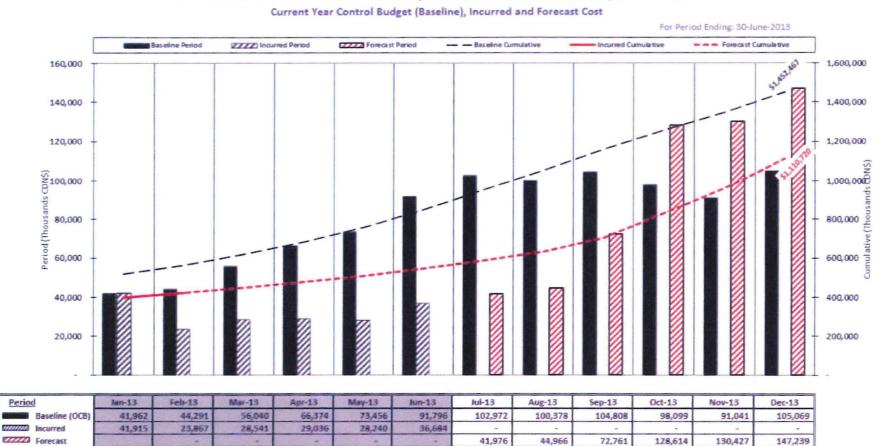
LCP Phase 1 (Excluding Maritime Link)			
DG3 Estimate Summary (millions Jan 2012 CDN \$)			

	MF	LTA	LITL	Totals
Base Estimate	\$2,511.92	\$601.31	\$2,359.61	\$5,472.84
Contingency	\$226.69	\$54.83	\$86.48	\$368.00
Escalation Allowance	\$162.54	\$35.44	\$163.66	\$361.64
Totals	\$2,901.15	\$691.58	\$2,609.75	\$6,202.48

CIMFP Exhibit P-01821



Expenditures & Progress Significantly Lag DG3 Plan



LCP Phase I - Muskrat Falls Generation, Lab. Island Transmission Link, Lab Tx Asset

Jan-13

518,143

398,370

Feb-13

562,434

422,236

Note 1: OCB = Original Control Budget reflects Nalcor Energy LCP's DG3 Approved Capital Budget

Mar-13

618,474

450,777

Apr-13

684,848

479,813

May-13

758,304

508,053

Jun-13

850,100

544,737

Cumulative

Baseline (OCB)

Incurred

Forecast

-

-

.

Dec-13

1,452,467

1,110,720

Jul-13

953,072

586,713

-

Aug-13

1,053,450

-

631,679

Sep-13

1,158,258

704,440

Oct-13

1,256,357

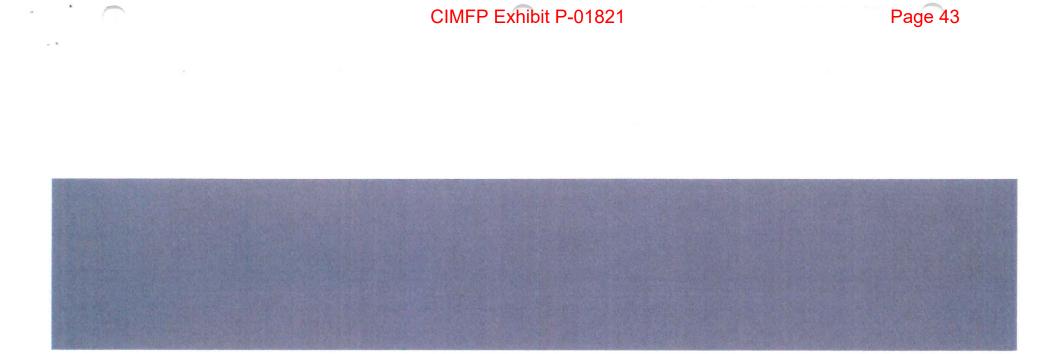
-

833,054

Nov-13

1,347,398

963,481







Contract Update Fri 08/30/2013 2:30 PM - 3:30 PM

 Attendance is required for Paul Harrington

 Chair:
 Ed Martin/NLHydro

 Sent by:
 Kathy Winsor/CRP/NLHydro

 No Location Information

😭 This entry h	has an alarm. The alarm will go off 5 minutes before the entry starts.
Required:	Brian Crawley/NLHydro@NLHYDRO, Jason Kean/NLHydro@NLHydro, Lance Clarke/NLHydro@NLHydro, Paul Harrington/NLHydro@NLHydro
Optional:	Gilbert Bennett/NLHydro@NLHydro

Description

Personal Notes

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31-AUG -2013



Thanks

Paul Harrington to: Jason Kean, Lance Clarke, Ron Power, Brian Crawley

08/31/2013 09:42 PM

Bcc: Ed Martin, Gilbert Bennett

I want to thank all of you for all the effort and sacrifices you have made to get this project passed all the obstacles, doubts and struggles to where we are today

A truly team effort

Our meeting with Ed on Friday was not an easy task but you all contributed and stood tall when the hard questions were asked of us, I am very proud to be your Project Director and your honesty, integrity, sheer dogged determination was obvious to all. i am sure Ed felt energized and encouraged by the work you guys have put in and struggled valiantly to achieve both Ed and Gilbert have a heavy burden to carry and we are all on this project because we support them and their vision.

We are at the cusp of major commitments and I feel so confident that we are ready to take on the next big challenge, I would not want to take that on without all of you beside me and all of us behind Gilbert and Ed.

This project is the future of the Province, we all now that and feel every cost increase in our fibre, we know the challenge we face and that we need to drive out costs we cannot afford and changes that we do not and cannot accept.

We have been given a challenge to cut costs as much as we can without cutting into safety, quality, reliability and operability. We are all rising to that challenge and we will succeed.

We will drive on and fulfill the confidence that Ed, Gilbert have in us and deliver the goods My very best regards

Paul

Sent from my iPad





Meetings with Ed Martin Paul Harrington to: Lance Clarke, Jason Kean

09/03/2013 04:44 PM

Jason/lance

I know that we are all working hard to dive down costs and we have a multitude of initiatives underway and some which have reached a conclusion. I have reflected on our discussion with Ed last Friday and the subsequent phone call from Ed to Jason.

I firmly believe that we need to put the FFC into some other format that puts the costs into perspective and corrects some misunderstandings

For example

1 Just because one contract may have a percentage increase over the budget does not mean that same increase can be applied across the board to all contracts

2 The FFC is a view on where the costs could go based on what we are seeing today from Contractors bids and applying that over future contracts- however we have not stepped through the line items of the FFC to gain an understanding of what assumptions have been made - also we could apply some ranges to show what the costs for a particular contract could be if we come up with scope reduction and other cost mitigations - the converters would be a prime example of this- so we should try and see if there are ranges around some big value contracts costs and present that as a mitigated and unmitigated FFC

3 I feel that the step chart does not work in this situation and Ed struggled with it because he could not align the more modest FFC shown in that with the CH0007 cost increase (in percentage terms)

So I am proposing we meet on Thursday and go though the FFC spreadsheet and make sure that it reflects what we truly believe and add ranges where it make sense- the result should be a range of FFC - assuming mitigation efforts are successful and where they are unsuccessful.

Do you support this approach - if we are aligned I will call a meeting on Thursday and if we can try and meet with Ed over the weekend with a different slant on the FFC.

Pls let me know paul

Paul Harrington Project Director PROJECT DELIVERY TEAM Lower Churchill Project t. 709 737-1907 c. 709 682-1460 f. 709 737-1985 e. PHarrington@lowerchurchillproject.ca w. muskratfalls.nalcorenergy.com

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