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Subject: Fw: HVdc TL Discussion with Ed
Date: Tuesday, February 4, 2014 6:00:40 PM
Attachments: [.png](#)
[HVdc TL Contracting Strategy Review - 4-Feb-2014.pptx](#)

Please treat as confidential.

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PROJECT DELIVERY TEAM

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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?

----- Forwarded by Jason Kean/NLHydro on 02/04/2014 06:00 PM -----

From: Jason Kean/NLHydro

To: Paul Harrington/NLHydro@NLHydro, Gilbert Bennett/NLHydro@NLHydro,

Cc: Lance Clarke/NLHydro@NLHydro, Pat Hussey/NLHydro@NLHydro, Ron Power/NLHydro@NLHydro

Date: 02/04/2014 06:00 PM

Subject: HVdc TL Discussion with Ed

Paul / Gilbert,

Attached is the slide deck I propose to use to support our discussion with Ed on the HVdc TL options.

Please advise of any concerns.

Jason



HVdc TL Contracting Strategy Review - 4-Feb-2014.pptx

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HVdc TL Contracting Strategy Review

4-Feb-2014

Boundless Energy



Take a
MOMENT
for Safety

Agenda

- Purpose
- LCP TL Scope
- HVac Bid Recap
 - Lessons Learned
- Marketplace Issues
- HVdc Available Option Review
- Recommendation

Purpose

- Present outcome from contracting strategy assessment for HVdc TL.
- Present recommended contracting approach.

LCP TL Construction Scope Recap

LTA 315kV HVac TL

- Two 247km lines paralleling existing 138kV CF to HVGB line
- ROW Clearing – by others
- Access: Easy-Good
- Tower Installation: Crane
- Conductor: Moderate
- Tower Size: Moderate
- **Overall considered standard TL scope, with northern elements**

LIL 350kV HVdc TL

- Single 1100km line
- ROW Clearing: Included
- Access: Remote and Difficult
- Tower Size: Large and tall
- Tower Installation: Crane and helicopter
- Conductor: Very large – limited experience in Canada
- **Overall Very Difficult, Logistically Challenging Scope**

HVac Contractor Selection Process (1/2)

- EOI issued in Feb 2012 for 247km AC TL Construction (CT0319) and to serve to confirm HVdc TL strategy
 - 13 respondents
- Eleven (11) pre-qualified for AC scope (i.e. ability to complete 125km section)
 - Abengoa T&D
 - Emera Utility Services
 - Flatiron-Cobra JV
 - GLR Inc.
 - Peter Kiewit Infrastructure Group
 - Isolux-Corsan USA
 - PowerTel Utilities Contractor
 - RS Line Contractor Co.
 - Thirau Ltd.
 - CoenrepriseTranselec-Arno
 - Valard Construction

HVac Contractor Selection Process (2/2)

- RFP issued on 28-Sep-2012
 - Of eleven (11) invited, responses received from 4
 - Abengoa / Inabensa
 - Emera Utility Services
 - Isolux Corsan
 - Valard Construction
 - 1 respondent bid on only 125km of line due to capacity (Emera)
 - 2 respondents rejected due to price – 2x others
 - Of the 2 remaining, 1 respondent evaluated as having an unacceptable execution plan

HVdc Contractor Must Haves

- Technical depth and breadth
- Winter construction and remote access experience and capability
- Proficient in helicopter construction techniques
- Ability to be self-reliant in remote regions
- Access to an experienced labor pool
- Stringing experience with very large conductor
- ROW clearing and access management capacity

Lessons Learned – 315kV AC TL (1/2)

- Few players have the capability or risk appetite to take on large-scale, remote projects
- International contractors have business model which largely subcontract to locals which is cost prohibitive
 - Contrary to this, Valard self-performs the entire scope
- International contractors presented generic execution plans which have inherent risks
 - Limited depth presented by either of Abengoa or Isolux-Corsan

Lessons Learned – 315kV AC TL (2/2)

- Selected contractor offered significant cost reduction opportunities
 - Value engineering and constructability input
- Only one entity demonstrated the capability to undertake the work, planning to almost exclusively self-perform thus removing risk

Marketplace Issues (1/3)

- All potential players were engaged in HVac EOI
- Few companies have the breadth and depth of resources for the entire scope
 - 2 major line contractors in Canada – Valard and RS Line
 - Many smaller players capable of 100 km each
- Significant market consolidation in last 5 years
 - Both within Canada and US
- Difficult to attract US entrants into NL given buoyant renewables market in US

Marketplace Issues (2/3)

- Canadian market is very busy, however current projects are drawing to a close in late 2014
 - BC and Alberta projects are coming to a close
 - No significant scope on radar within Quebec
- Major players will likely be consumed by pending projects
 - Manitoba Hydro's BiPole III – 1400km of 500km HVdc
- ROW clearing largely subcontracted
 - Required scope for HVdc would consume all local capacity + more

Marketplace Issues (3/3)

- Risk perception re Northern Canada leads to significant risk premiums
 - Working in weather, access, mobilization costs, etc.
- Required labor is not available from union hall
 - Working in union (IBEW, CUSW) and non-union settings
 - Significant wage pressure (Alberta 14% increase in 2013)
- Viability of walk-to-walk IBEW questioned
 - Kiewitt is a non-believer (Kiewitt – Isolux Partnership)

Available Options – HVdc

- Option 1: Re-test Market / Bid Entire Scope
- Option 2: Sole-source Labrador to Quanta, bid Island
- Option 3: Negotiation with Quanta for entire scope
 - Open-book exploratory discussions under NDA initiated in late October.

Option Review

Option 1: Re-test Market / Bid Entire Scope

Pros

- Transparent process
- May get interest from companies who did not respond to HVac TL

Cons

- Marketplace interest in bidding
- Contractor contingency risk
- Time to bid
 - Would likely lose fall 2014 start
 - Nalcor would have to contract ROW and Access separately
- Removes further opportunities for constructability input in final material selection and design
- Could result in loss of capacity current pre-qualified contractor has available
- Loss of potential synergies with AC
- If successful, requires larger Nalcor CM team to oversee multiple contractors

Option Review

Option 2: Sole-source Labrador, bid Island

Pros

- Contractor-of-choice
- Ensures spring-2014 start for Labrador
- Synergize with HVac TL
- Quanta manage access and clearing in Labrador
- Reduction on contractor contingency by open book discussions

Cons

- Valard could not bid Island
- Lack of competitive bid for Labrador
- Time to bid
- Uncertain of who can perform Island
- Removes further opportunities for constructability input in final material selection and design
- Nalcor would have to move ahead separate on ROW and access construction for Island

Option Review

Option 3: Open-book Negotiation with Quanta

Pros

- Contractor-of-choice with a solid plan
- Ensures spring-2014 start
- Most flexible construction program
 - i.e. spreading resources across AC and DC, synergies on indirect
- Constructability input opportunities maintained
- Reduction on contractor contingency by open book discussions
- Presents most commercial opportunities for Nalcor
- Reduced CM oversight resources required

Cons

- Lack of competitive bids
- Limited ability to close price gap against budget

Option 3: Status (1/2)

- Open-book discussions initiated in late October
- Preliminary view presented in mid-December
 - Sound execution plan with capacity demonstrated
 - Good constructability and value-engineering input resulting in execution risk reduction
 - Appreciate the complexity of the job
- Valard view our productivity assumptions as aggressive given location and conditions combined with the size of towers and hardware.

Option 3: Status (2/2)

- Agreed that Valard would bid ROW clearing, Nalcor hold the paper, Valard manages
 - Removes mark-up and provides opportunity for all locals
- Quanta willing to discuss profit
 - Currently 15%, but suggest 10% may be acceptable
- We expect we could get the price to ~\$1 B or within 10% of our budget

Variance Against DG3 Budget

Parameter (millions CDN\$)	HVac TL	HVdc TL
DG3 Budget	204.4	734.7
Scope Changes & Transfers	<u>28.2</u>	<u>138.8</u>
Revised Budget	232.6	873.5
Contract Value	258.2	1,000.0
Variance	25.6 11.0%	126.5 14.5%

Note: \$6,531 Reforecast includes ~\$800 million for HVdc TL

Recommendation

- Sole-source negotiations with Quanta for entire TL construction scope
- Optimize framework for ROW and Access construction
 - EOI for ROW with Valard managing
 - Access – Valard self perform + EOI for portions
- Explore commercial models with Quanta
 - Opportunities on switchyards
 - Opportunity sharing on productivity
 - Strategic alliance arrangement for Quanta's support in commissioning and start-up

Back-up Material

Quanta Value Proposition

Our Needs

- Competent TL contractor that we can align with
- System Commissioning Expertise
- Deep resource base to call upon.

Quanta's Capability

- One-stop solution for TL build
- Depth of technical capability and resources to support integrated commissioning
- Synergies with the Switchyards

Lessons Learned – Current Major Projects in Canada (1/2)

- Northwest Transmission Line (NTL), BC Hydro
 - ROW and Access by BC Hydro lead to delay claim
 - Line construction by Valard – to be complete in Spring 2014.
 - Mandatory Aboriginal Employment Targets
- Lower Mainland, BC Hydro
 - EPC Awarded to non-traditional TL consortium (Flatiron – Graham)
 - Project was delayed heavily at the start
 - BC Hydro has requested support from Valard.

Lessons Learned – Current Major Projects in Canada (2/2)

- WATL, Altalink – 500kV
 - SLI as prime EPC contractor, with RS Line as constructor
 - Poorly organized and managed. Chaos.

- EATL, Atco – 500kV
 - Valard as line constructor, with Atco as PM.
 - Project going very well. To be complete by fall.

Sharing our ideas in an open and supportive manner to achieve excellence.

Teamwork

Open Communication

Fostering an environment where information moves freely in a timely manner.

Honesty and Trust

Being sincere in everything we say and do.

Relentless commitment to protecting ourselves, our colleagues, and our community.

Safety

Respect and Dignity

Appreciating the individuality of others by our words and actions.

Leadership

Empowering individuals to help, guide and inspire others.

Holding ourselves responsible for our actions and performance.

Accountability