Lower Churchill Project

CD0502 Construction of AC Substations

Bid Evaluation and Award Recommendation (4-Jul-2014)

Boundless Energy

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LOWER CHURCHILL PROJECT

Take a MOMENT for Safety

Definitions

As Bid Price	means the Bidders initial commercial and technical offer in response to the RFP as noted in the Bid Opening Record.
Post Proposal Bulletin	means any release of significant technical and/or commercial information by the Company that is issued to all Bidders after receipt of the Bidder's Proposal. The extent of the Post Proposal Bulletin may require the Bidders to update and resubmit specific parts of its original Proposal.
Conditioned Price	means the Bidders revised commercial offer after it has taken into consideration all clarifications, bid clarification meetings, post proposal bulletins, and negotiations. The condition price does not account for any normalization factors.

Bidders

- Alstom Grid Canada Inc.
- Burn & McDonnell Canada, Ltd.
- Elecnor Canada
- Peter Kiewit Infrastructure Co. (replacing ABB Inc.)
- Valard Construction LP

The following Bidders declined to submit an RFP:

- Bechtel Power Corporation
- Siemens Canada Ltd.

Milestones

- RFPs were issued on 16-Jul-2013 with a closing date of 22-Nov-2013
- Bid Clarification meetings were held with the lowest commercial Bidders, Valard and Alstom, on the following dates:
  - Valard - 3-Mar-2014 to 5-Mar-2014
  - Alstom - 11-Mar-2014 to 13-Mar-2014
- The short list recommendation was approved on 23-Apr-2014. The following two (2) Bidders were recommended for short listing:
  - Alstom Grid Canada Inc.
  - Valard Construction LP
- Following approval of the short list recommendation, a second Bid Clarification meeting was held with Alstom on 14-May-2015 and 15-May-2014.

Evaluation Results – Base Offer

Activity	Date	Alstom's price (CAD)	Valard's Price (CAD)
As Bid Price	22-Nov-2013	$274,172,000*	$362,360,639
PPB #1	31-Jan-2014	$297,107,206	$359,928,520
PPB #2	03-Apr-2014	$309,107,206	$389,663,752
Bid Clarification #1	14-Apr-2014	$288,857,206	$331,828,019
PPB #4	28-Apr-2014	$290,407,206	$325,892,466
PPB #5	02-May-2014	$286,907,206	$322,983,691
Bid Clarification #2 (Alstom only)	2-Jun-2014	$284,215,508	N/A
Optimized Price (Valard only)	20-Jun-2014	N/A	$304,053,165

*Alstom's As Bid Price was initially deficient because Alstom's original offer was based on its own alternative substation design and did not follow the single line diagram provided with the RFP (reduced CTs, combined protection and control functions, location of control buildings). This was later rectified by Alstom when it submitted its revised price in response to PPB #1.

Breakdown of Costs

Description	Alstom's Price $millions (CAD)	Valard's Price $millions (CAD)
Project Management	4.1	1.0
Engineering	9.3	15.0
Site Management	16.2	6.0
HV, MV & LV Equipment	61.2	77.5
Civil Works – Mob, Demob & Temp Site Facilities	10.2	10.4
Civil Works – Foundations	87.7	57.9
Civil Works – Buildings	13.6	31.7
Civil Works – Misc. (Fencing, Final Grading, Trenching, etc.)	22.2	30.1
Structural Steel	7.0	29.6
Electromechanical Installation	46.5	35.9
Commissioning	4.4	6.9
Performance Security	1.8	2.0
Total	284.2	304.0

Notes – Alstom

- Alstom's latest offer considers the synergies with CD0501. For example:
  - Shared project organization for some management roles
  - Economies of scale for some subcontractors
  - Shared site facilities
  - Shared local project office in St. John's
  - Reduced interfaces
  - Savings for design reviews and FATs
- Although Alstom have identified a number of potential subcontractors in its proposal, Alstom has not committed to any one civil works or electromechanical subcontractor(s) while preparing its base offer. Alstom's strategy is to select its civil works and electromechanical subcontractor(s) once detailed design is complete.

Notes – Valard

- Valard will self-perform the majority of the engineering, procurement, and construction services.
- Dashiell Corporation (a Quanta company) will complete the civil and electromechanical engineering.
- Phasor Engineering (a Quanta company) will provide Protection and Controls (P&C) engineering, P&C manufacturing, and commissioning.
- Northstar (a company from Alberta that Valard recently purchased in January 2014) would complete the foundation installation.
- Valard is proposing to use Siemens equipment.

Technical Evaluation Notes

Overall Score

Discipline	Weighted Value	Alstom	Valard
Commercial	60%	55.07%	49.45%
Technical	40%	30.91%	29.03%
Overall Score		**85.98%**	**78.48%**
Health & Safety	Pass/Fail	Pass	Pass
Quality	Pass/Fail	Pass	Pass
Environment	Pass/Fail	Pass	Pass
Risk	Pass/Fail	Pass	Pass

Alternative 1 – GIS at CF and MF

- Alstom proposed to use Gas Insulated Switchgear (GIS) at Churchill Falls and Muskrat Falls as opposed to Air Insulated Switchgear (AIS) as specified in the RFP.
- GIS equipment is more expensive than AIS equipment; however, GIS requires much less land and significantly less civil works (less foundations) than AIS.
- Since the overall savings in civil works is more than the equipment cost, Alstom was able to propose an overall cost savings to its base offer of $6,790,000.

Description	Alstom's Price (CAD)
Base Offer	$284,215,508
GIS Option	($6,790,000)
Total	$277,425,508

Alternative 2 – Civil Works Model

- As with CD0501, Alstom proposed an alternative civil works contracting model for CD0502.
- Using this same approach, applicable for both the base offer and the GIS alternative, the subcontracted amount for civil works would be deducted from Alstom's offer and the associated contracts would be placed directly by LCP.
- This amount would cover all subcontracted civil works, including; foundations, excavation (including excavation for grounding grid), building supply, building services (electricity, HVAC, fire protection, etc.), outdoor cable trenches, etc.
- Alstom would manage these contracts as turnkey, maintaining site management throughout the civil works.
- The actual cost to be paid directly by LCP for the civil works will be subject to potential gain sharing, split equally between Alstom and LCP.

Alternative 2 – Civil Works Model (cont.)

- Results

Description	Fixed Portion (CAD)	Variable Portion covering civil works (CAD)
Base Offer	$180,335,277	$90,152,072
Alternative Offer with 315kV Gas-Insulated Switchgear	$186,068,591	$79,086,590

- Total Cost Savings:

Alstom's Base Offer	$284,215,508
Civil Works Model – Option 1 - Base Offer	$270,487,349
Potential Savings	$13,728,159

Alstom's Base Offer	$284,215,508
Civil Works Model – Option 2 - GIS	$265,155,181
Potential Savings	$19,060,327

Alternative 2 – Civil Works Model - Risks

- To avoid schedule bust, civil works has to be completed during 2015 construction season.
- Alstom has told us it will take 6 months to finalize the civil engineering (geotechnical work can't be completed until site prep is complete at CF and SP mid-Fall 2014).
- This only allows 3 months to issue RFP, evaluate, award, and mobilize the civil works contractor. This may set up LCP for potential claims if RFP process is delayed (or extra costs for winter work to meet schedule).
- Carving out of civil works scope. If contract is not clear on delineation, it may lead to further claims.

Recommendation

- Based on the above it is recommended that CD0502 – Construction of AC Substations is awarded to **Alstom Grid Canada Inc.** for an Estimated Contract Value of **$186,068,591**. This award excludes civil works and is based on using Gas Insulated Switchgear (GIS) at Churchill Falls and Muskrat Falls.
- The target amount of **$79,086,590** for civil works will be bid at a later date following completion of detailed design.
- Both parties will share 50/50 in any savings achieved upon award of the civil works contract(s). Alstom will be responsible for any costs exceeding the civil works target amount.
- Alstom would complete the civil works engineering, manage the civil works contracts as turnkey, and maintain overall site management; however, the civil works contracts would be executed directly with LCP and LCP would be solely responsible for the payment of the civil works contractor(s).

Next Steps

- Issue LNTP to Alstom by 31-Jul-02014
- Meet with Alstom to finalize civil works scope, GIS specifications, and resolve outstanding technical issues that may have a commercial impact (~$1.2M).
- Suggest to Alstom that Valard should be on the Bidders List for the Civil Works. Also, Valard should be given a chance to bid the electromechanical work.