



**LOWER CHURCHILL PROJECT
 BID EVALUATION AND AWARD RECOMMENDATION
 CD0502 – CONSTRUCTION OF AC SUBSTATIONS**

	TITLE	NAME	SIGNATURE	DATE
Prepared by:	Contracts Administrator	Anthony Jackman	<i>[Signature]</i>	24-Jul-2014
Reviewed by:	Package Leader	Steven Crane	<i>[Signature]</i>	24-Jul-2014
Reviewed by:	Project Controls Lead – HVdc Specialties	Tanya Power	<i>[Signature]</i>	24-Jul-2014
Reviewed by:	Project Controls Manager	Ed Bush	<i>[Signature]</i>	28 July 2014
Reviewed by:	Area Manager	Mohamad Makky	<i>[Signature]</i>	24-Jul-2014
Approved by:	Project Manager – HVdc Specialties	Darren DeBourke	<i>[Signature]</i>	28-Jul-2014
Approved by:	Supply Chain Manager	Pat Hussey	<i>[Signature]</i>	29 July 2014
Reviewed by:	Deputy Project General Manager	Jason Kean	<i>[Signature]</i>	1-AUG-2014
Approved by:	Project General Manager	Ron Power	<i>[Signature]</i>	01-AUG-2014

Reviewed by: Deputy Project Manager – HVdc Specialties Trina Troke *[Signature]* 25-Jul-2014


	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

TABLE OF CONTENTS

1.0 PURPOSE..... 2

2.0 DEFINITIONS..... 2

3.0 RECOMMENDATION..... 2

4.0 BIDDERS LIST 3

5.0 RFP MILESTONES..... 3

6.0 SCOPE 3

7.0 EVALUATION TEAM..... 4

8.0 EVALUATION CRITERIA..... 4

9.0 SHORT LIST 4

10.0 POST PROPOSAL BULLETINS..... 5

11.0 BID CLARIFICATION MEETINGS 5

12.0 POST PROPOSAL CLARIFICATIONS ISSUED..... 6

13.0 COMMERCIAL EVALUATION..... 6

 13.1 SCHEDULE OF PRICE BREAKDOWN 6

 13.2 LIQUIDATED DAMAGES..... 7

 13.3 THIRD PARTY MARK-UPS 8

 13.4 TRADE LABOUR RATES (UNION RATES) 8

 13.5 ENGINEERING RATES (NON-UNION RATES)..... 9

 13.6 CREDITWORTHINESS AND PERFORMANCE SECURITY 9

 13.7 ARTICLE EXCEPTIONS 10

 13.8 PRICING SUMMARY 14

 13.9 NORMALIZATION 15

 13.10 ALTERNATIVE GAS INSULATED SWITCHGEAR (GIS) OPTION 15

 13.11 ALTERNATIVE CIVIL WORKS MODEL..... 16

14.0 TECHNICAL EVALUATION 17

15.0 HEALTH & SAFETY EVALUATION 17


16.0 ENVIRONMENTAL EVALUATION..... 17

17.0 QUALITY ASSURANCE EVALUATION 17

18.0 BENEFITS EVALUATION 17

19.0 RISK MANAGEMENT EVALUATION..... 17

20.0 ATTACHMENTS..... 17

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

1.0 PURPOSE

The purpose of this document is to provide the results of the Bid Evaluation and to recommend a preferred Bidder for CD0502 – Construction of AC Substations. The Award Recommendation is based on evaluating the following criteria:

- Commercial
- Technical
- Quality
- Health and Safety
- Environmental
- Risk Management
- Benefits

The Bid Evaluation was completed in accordance with the approved Bid Evaluation Plan dated 21-Oct-2013.

2.0 DEFINITIONS

As Bid Price means the Bidders initial commercial 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 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.


3.0 RECOMMENDATION

The Overall Scoring Matrix is included in Attachment 1. Bidders are ranked as follows:

1. Alstom Grid Canada Inc. [REDACTED]
2. Valard Construction LP – [REDACTED]

Based on the above, and in accordance with the included evaluation, it is recommended that CD0502 – Construction of AC Substations is awarded to **Alstom Grid Canada Inc.** for an Estimated Contract Value of **\$187,836,734**. This award excludes civil works and is based on using Gas Insulated Switchgear (GIS) at Churchill Falls and Muskrat Falls.

A target amount of **\$78,811,326** for civil works has been removed from Alstom's price and will be

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

bid at a later date following completion of detailed design. 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). 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.

Details of the comparison to budget, specific and non-specific growth, and escalation considerations are included in Attachment 2.

4.0 BIDDERS LIST

RFPs were issued to the following approved Bidders:

- Alstom Grid Canada Inc.
- Bechtel Power Corporation
- Burns & McDonnell Canada, Ltd.
- Elecnor Canada
- Peter Kiewit Infrastructure Co. (replacing ABB Inc. – see note below)
- Siemens Canada Ltd.
- Valard Construction LP

The following Bidders declined to submit an RFP:

- Bechtel Power Corporation
- Siemens Canada Ltd.

NOTE: During the RFP process, ABB indicated they would not be submitting an RFP. Alternatively, ABB asked if they could assign the RFP to Peter Kiewit (and ABB would be a subcontractor to Kiewit). Since Peter Kiewit was originally pre-qualified based on their Bidder Selection Application, but declined due to other work commitments at that time, it was decided that Peter Kiewit could be reinstated to the Bidders List.


5.0 RFP MILESTONES

RFPs were issued on 16-Jul-2013 with a closing date of 22-Nov-2013. All proposals were received before the closing date and time and were opened on 25-Nov-2013 at LCP's office in St. John's, NL. The Bid Opening Record is included in Attachment 3.

6.0 SCOPE

Generally, the scope of work for this package is for an Engineering, Procurement and Construction (EPC) turnkey solution including design, engineering, manufacturing, supply, delivery, construction, erection, commissioning, trial operation, turnover, and training for the following facilities:

- a) A new 735 kV substation extension at Churchill Falls;
- b) A new 735-315 kV substation at Churchill Falls;
- c) A new 315 kV substation at Muskrat Falls; and,

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

d) A new 230 kV substation at Soldiers Pond.

7.0 EVALUATION TEAM

The Evaluation Team was comprised of the following individuals:

<u>Evaluation Team</u>	<u>Representative</u>
Commercial	Anthony Jackman (Lead) / Mohamad Makky
Technical	Steven Crane (Lead) / Luis Chavez
Project Controls	Tanya Power
Quality	Ken Morrison
Risk	Carlos Fernandez / Mohamad Makky
Benefits	Maria Moran
Health and Safety	Bill Otter
Environmental	David Haley

8.0 EVALUATION CRITERIA

The following weighted evaluation criteria was agreed by the Evaluation Team and used to assess Bidder’s Proposals.

<u>Criteria</u>	<u>Weighted Rating (%)</u>
Commercial (including Benefits)	60%
Technical	40%
Quality	Pass/Fail
Health & Safety	Pass/Fail
Environmental	Pass/Fail
Risk Management	Pass/Fail

For Health and Safety, Bidders had to obtain a score of 70% or greater to pass.


For Environmental, Quality and Risk, Bidders had to obtain a score of 60% or greater to pass.

9.0 SHORT LIST

The purpose of the short list process was to provide the results of the preliminary bid evaluation and to recommend a short list of Bidders. The short list recommendation was based on the lowest commercial and technically compliant proposals. A short list recommendation was prepared and the following two (2) Bidders were recommended for short listing:

- Alstom Grid Canada Inc. (Alstom)
- Valard Construction LP (Valard)

The short list recommendation was approved on 23-Apr-2014. Commercial and technical evaluation of Bidders that were not recommended for the short list was discontinued at this point.

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

10.0 POST PROPOSAL BULLETINS

Two (2) Post Proposal Bulletins (PPBs) were issued to all Bidders during the RFP evaluation process:

- PPB #1 was issued on 17-Jan-2014 with a closing date of 31-Jan-2014. PPB #1 included the removal of the Utility Building at the Churchill Falls 735-315kV Substation and the removal of the 138kV switchgear at the Muskrat Falls Substation (including associated post insulators and related civil works). Bidders were required to update and resubmit its price proposals.
- PPB #2 was issued on 14-Feb-2014 with a closing date of 3-Apr-2014. PPB #2 included an option for dead tank circuit breakers at Soldier's Pond. Bidders were required to submit a separate price proposal for this option.


Four (4) PPBs were issued to Valard and Alstom only:

- PPB #3 was issued to Valard on 10-Mar-2014 and Alstom on 14-Mar-2014. PPB #3 included updated earthworks drawings for each site, a new granular fill specification, the removal for the requirement of sulphate resistant concrete, a revised Exhibit 9 – Schedule, and a revised Exhibit 12 – Site Conditions. PPB#3 had no closing date and was issued for information only following the Bid Clarification meetings.
- PPB #4 was issued on 21-Apr-2014 with a closing date of 28-Apr-2014. PPB #4 included a revised Schedule of Price Breakdown which requested the Bidders to provide separate pricing for project management and site management costs.
- PPB #5 was issued on 2-May-2014 with a closing date of 8-May-2014. PPB #5 included further updates to Exhibit 12 – Site Conditions where by Company would provide air transportation services to the MF and CF sites, as well as bussing services from the Goose Bay Airport to the MF site.
- PPB #6 was issued on 22-May-2014 with a closing date of 30-May-2014. PPB #6 requested Bidders to provide optional pricing for the following items:
 - Supply of 150mm of insulating gravel and 150mm granular fill at Churchill Falls and Muskrat Falls;
 - Increased creepage distances for 230kV equipment;
 - Fire suppression system within each control building battery room;
 - Optimized Control Building Layout;
 - Reduced number of 735kV capacitive voltage transformers at Churchill Falls Switchyard;
 - The addition of a raised floor and related underfloor cable trays in the control building telecoms rooms;
 - Common fence at Soldier's Pond; and,
 - Potable Water Storage Tank at Churchill Falls.

11.0 BID CLARIFICATION MEETINGS

Bid Clarification meetings were held with Valard and Alstom on the following dates:

- Valard - 3-Mar-2014 to 5-Mar-2014
- Alstom - 11-Mar-2014 to 13-Mar-2014

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

Following approval of the short list recommendation, a second Bid Clarification meeting was held with Alstom on 14-May-2015 and 15-May-2014.

12.0 POST PROPOSAL CLARIFICATIONS ISSUED

Type	Alstom	Valard	Kiewit	Elecnor	BMcD
Commercial	57	43	10	14	7
Technical	228	75	73	38	49

13.0 COMMERCIAL EVALUATION

13.1 SCHEDULE OF PRICE BREAKDOWN

See detailed bid tabulation included in Attachment 4. Since Alstom was lower than Valard following the short list process [REDACTED] it was decided that the focus would be on Alstom for further bid clarifications meetings; however, Valard was still issued all Post Proposal Bulletins following the short list process. This was to ensure Valard was current with all changes in the event discussions/negotiations with Alstom failed.


The table below illustrates the effort by both LCP and the short listed Bidders to reduce the As Bid Price during the evaluation process by reducing Bidder’s risks associated with perceived assumptions, clarifications, and improved scope definition.

Activity	Date	Alstom’s Price (CAD)	Valard’s Price (CAD)
As Bid Price	22-Nov-2013	\$274,172,000*	[REDACTED]
PPB #1	31-Jan-2014	\$297,107,206	[REDACTED]
PPB #2	03-Apr-2014	\$309,107,206	[REDACTED]
Bid Clarification #1	14-Apr-2014	\$288,857,206	[REDACTED]
PPB #4	28-Apr-2014	\$290,407,206	[REDACTED]
PPB #5	02-May-2014	\$286,907,206	[REDACTED]
Bid Clarification #2 (Alstom only)	2-Jun-2014	\$284,215,508	[REDACTED]
Optimized Price (Valard only)	20-Jun-2014	N/A	[REDACTED]

*Deficient – did not follow single line diagram provided with RFP

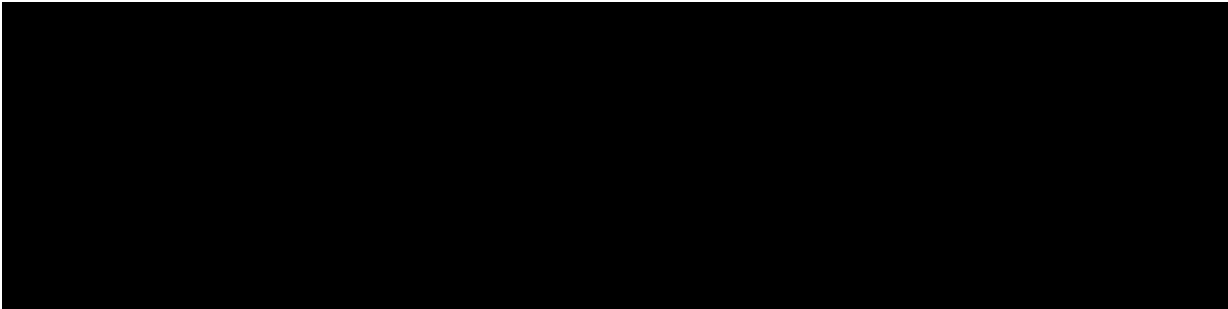
Alstom Grid Canada Inc.

- 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.
- Alstom’s latest offer (2-Jun-2014) considers the following synergies with CD0501:
 - Shared project organization for some management roles
 - Economies of scale for some subcontractors
 - Shared site facilities

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

- Shared local project office in St. John’s
- Shared security at Soldiers’ Pond
- Reduced number of site vehicles (for H&S and for site manager)
- Reduced lodging and travel expenses
- Single control system platform for HVdc and ac Substations
- Reduced interfaces
- Savings for design reviews and FATs
- Coordination between two packages managed by Alstom (integrated project team)
- Savings on maintenance and training, as same equipment will be used for both packages
- Optimized spare parts (circuit breakers, disconnect switches, relays, etc.)
- Better efficiency for static checks / dynamic commissioning
- 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.

Valard Construction LP


- 
-
-
-

13.2 LIQUIDATED DAMAGES

When the RFP was issued, the Company’s position for Liquidated Damages (LDs) was capped at 15% of the contract price. In addition, LDs would begin if the successful Bidder failed to complete the Commissioning Static Checks by the date specified in Exhibit 9 – Schedule (originally, there was only one date for all three sites; however, this later changed to two dates during the evaluation process). For each calendar day the successful Bidder went beyond this date, LDs would be incurred as follows:

- First 30 days of delay: One Hundred and Fifty Thousand Dollars (\$150,000.00) per day beginning the first (1st) calendar day of the delay.
- For delays between Day 31 and 60: Two Hundred and Fifty Thousand Dollars (\$250,000.00) per day beginning the thirty first (31st) calendar day of the delay.
- For delays beyond Day 61: Five Hundred Thousand Dollars (\$500,000.00) per day beginning the sixty first (61st) calendar day of the delay.

Alstom took exception to both the LD cap and the daily retention arrangement. Alstom countered, proposing a daily retention amount of 0.05% per day per site, up to a maximum of 5% per site. In addition, Alstom proposed changing the limit of liability to 5% per site with an overall aggregate limit of 10% of the contract price. Using this calculation, the maximum LDs recoverable would total

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

5% of the contract price (10% is not achievable).

During the second Bid Clarification meeting held with Alstom on 15-May-2014, the following LD arrangement was discussed and later agreed to by Alstom.

- The LD cap would remain at 15% which is the same cap for CD0501 (there was no associated cost savings for reducing it).
- LDs are based on two different completion dates (one for SP and one for MF and CF). The Company proposed using \$100,000 per day for SP and \$150,000 per day for MF and CF (the latest date for completion). The maximum liquidated damages would not exceed \$150,000 per day if Alstom was late on all three sites. The following table illustrates the agreed to LD arrangement.

Agreed to LD Format - Alternative Construction Model - GIS Option	
Liquidated Damage (LD) Cap:	15% of Contract Value
Assumed Contract Value:	\$187,836,734
Max. LDs	\$28,175,510
Commissioning Static Checks complete at SP	1-Dec-2016
Commissioning Static Checks complete at MF & CF	1-Mar-2017
Damages if not complete at SP	\$100,000 per day
Damages if not complete at MF & CF	\$150,000 per day
How many days to reach cap?	128 days
	4.26 months

13.3 THIRD PARTY MARK-UPS


Company’s established mark-ups for reimbursable work as listed in Exhibit 2 – Compensation is as follows:

- Materials – 5%
- Rented Equipment – 5%
- Subcontractors – 5%
- Labour – 12%
- Affiliates – 5%

Neither Alstom nor Valard had any exception to the mark-ups provided.

13.4 TRADE LABOUR RATES (UNION RATES)

Initially, Alstom provided trade labour rates with its proposal; however, retracted these rates after Alstom was challenged by Company (via the clarification process) to re-evaluate its trade rates due to excessive mark-ups and cost adders. It was later determined that Alstom had included excessive mark-ups and costs adders because Alstom had not committed to any subcontractors (civil, electromechanical, etc.) during the RFP process, and thereby didn’t want to commit to any one

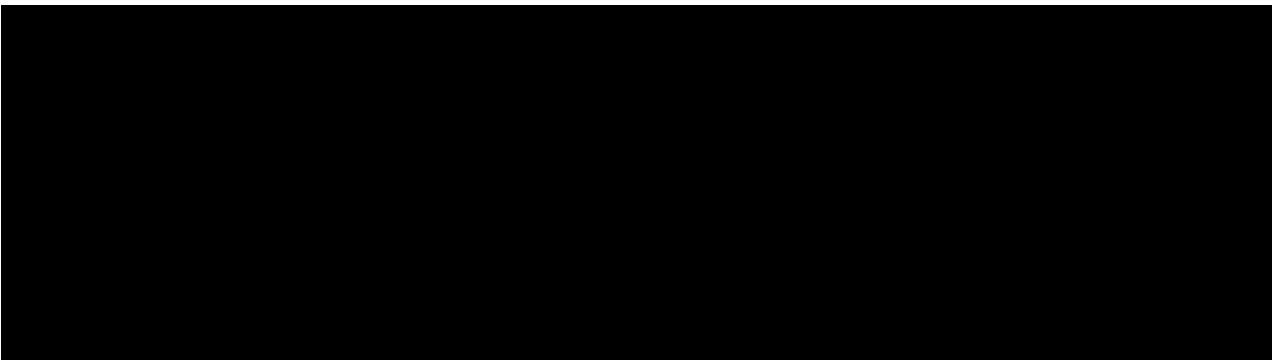
	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

subcontractor’s trade labour rates.

Alstom counter-argued that the trade labour rates for work done on a reimbursable basis could be negotiated after contract award using the rates contained in the collective agreements and the agreed to mark-ups indicated in Exhibit 2 for third-party services (for work done on a cost-reimbursable basis). Alstom said it would ensure that its subcontractors apply such rates.

Since we will not have pre-negotiated trade labour rates, this has significant risks for any contemplated reimbursable work the following reasons:

1. It is assumed that subcontractors selected by Alstom will not have any exceptions to the rates contained in the collective agreements or to the mark-ups in Exhibit 2;
2. Its assumed that Alstom will be able to negotiate competitive trade labour rates after the Agreement has been awarded; and,
3. If Alstom’s subcontractors provide high labour rates, there will be no leverage or incentive by Alstom to reduce the rates.




13.5 ENGINEERING RATES (NON-UNION RATES)

Generally, Alstom’s Engineering rates are somewhat higher than Valards; however, Company would only use the engineering rates for two reasons:

1. As a check against any extra engineering scope completed by Alstom that resulted in a an approved change order; or,
2. If Company imposed a major redesign or added engineering scope and the work was completed on a reimbursable basis. Even then, a lump sum price would be the preferred commercial arrangement as it would be difficult verifying engineering hours (unless a Company Rep was assigned to oversee the work at the engineering office and signed timesheets).

13.6 CREDITWORTINESS AND PERFORMANCE SECURITY

A credit worthiness review was completed for all potential bidders during the Bidder Selection process. At that time Nalcor Treasury recommended both types of bonding (50% performance and 50% payment) and a 15% Letter of Credit (LOC) would be required from the successful bidder. After receipt of the bids and completion of the short list process, Nalcor Treasury was contacted again and asked to re-evaluate the financial status of the Bidders. In addition, given that both Valard and

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

Alstom were known to LCP, Nalcor Treasury was asked if there was any way to reduce the performance security requirements, thereby reducing the cost of the offers. As a result, Nalcor Treasury suggested the following:

- 50% Performance bond with rider and 5% LOC during the warranty period; and,
- 15% LOC (reducing to 5% during the warranty period)

Alstom’s and Valard’s price for each type of security was as follows:

Description	Alstom’s Price (CAD)	Valard’s Price (CAD)
50% Performance bond with rider and 5% LOC during warranty period	\$2,682,648	
15% LOC (reducing to 5% during warranty period)	\$1,872,596	

The original decision by Nalcor Treasury to request a performance bond was based on the assumption that the equipment being supplied was custom designed (similar to the CH0030 - Turbine and Generator package) and was the majority of the cost. Neither is true for CD0502. The equipment cost is approximately 20 - 25% of the overall cost. The equipment is not custom designed and is readily available from other suppliers such as Siemens or ABB.

Based on this, and the risks associated with this contract (and how it differs from CH0030 or CD0501), Nalcor Treasury agreed that liquidity was the more important consideration and that the 15% LOC would be the most appropriate performance security in this instance (and the performance bond was not required). As noted in the table above, this decision saved the Company an additional \$2.7M which was reflected in Alstom’s price submitted on 2-Jun-2014.


Nalcor Treasury’s Creditworthiness Report is included in Attachment 5.

13.7 ARTICLE EXCEPTIONS

Both Alstom and Valard had many exceptions to the Articles and both sets of exceptions were vetted by legal. Most of Valard’s exceptions were only negotiated to the extent of email correspondence. Remaining exceptions would require resolution through face to face discussions; however, none were considered “show stoppers” or would cause a significant commercial impact. As previously noted, since Alstom was commercially lower than Valard following the short list process, face to face discussions with Valard were not pursued.


For Alstom, most exceptions were previously negotiated for the recently awarded CD0501 – Converters and Cable Transition Compounds. In some instances; however, there were exceptions to the CD0501 package that were not specific to CD0502 (and vice versa) and these exceptions were removed which applied to:

- Performance Guarantees
- Definitions
- Substantial and Final Completion
- Warranty Period


	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

The table below provides a comprehensive list of the Articles that were changed and agreed to by both Alstom and Company.


Article	Brief Description of Change	Notes
Article 1 - Interpretation	<ul style="list-style-type: none"> Added definitions for "Affiliate Assignee", "Contract", "Cure Period", "HVac", "HVdc", "Letter of Credit", "Logistics and Transportation Strategy", and "Technical Data Schedules" Minor wording changes/template improvements 	Previously Negotiated for CD0501
Article 2 – Contractor's Status	Minor wording changes/template improvements	Previously Negotiated for CD0501
Article 3 – Contractor's Obligations	Minor wording changes	Previously Negotiated for CD0501
Article 4 – Contractor's Design Obligations	Added a clause such that Company has fifteen (15) business days to review drawings	Previously Negotiated for CD0501
Article 5 – Contractor's Personnel	Added wording such that Contractor's Key Personnel identified in Exhibit 2 – Compensation could not be removed or replaced without Contractor incurring liquidated damages	Previously Negotiated for CD0501
Article 6 - Subcontracts	<ul style="list-style-type: none"> Minor wording change to Articles 6.3 and 6.7 Template improvements 	Previously Negotiated for CD0501
Article 7 – Performance Security	Updated this Article to reflect type of Performance Security required (i.e., 15% Letter of Credit only)	New
Article 8 – Policy on Ethics / Conflict of Interest	No changes	N/A
Article 9 – Compliance with Laws	Moved indemnity wording in Article 9.2(a) to Article 21	Previously Negotiated for CD0501
Article 10 – Company's Obligations	<ul style="list-style-type: none"> Wording added to provide clarity on which Party is responsible for which permits Wording added to provide clarity of site access (both by Company and Contractor) 	Previously Negotiated for CD0501
Article 11 – Role and Responsibilities of Engineer	Minor wording changes/template improvements	Previously Negotiated for CD0501
Article 12 – Compensation and Terms of Payment	<ul style="list-style-type: none"> Added wording to provide further clarity of Payment Milestones and Payment Certificate process Article 12.24 is not applicable to CD0502 Template improvements 	New
Article 13 - Taxes	Minor wording changes	Previously Negotiated for CD0501
Article 14 – Audit and Records	<ul style="list-style-type: none"> Added wording to clarify what records and documents are audited in Exhibit 2 Added clause which allows Company to audit Contractor's subcontractors 	Previously Negotiated for CD0501
Article 15 – Health,	Added clause whereby Company must provide Contractor	Previously Negotiated for

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

Article	Brief Description of Change	Notes
Safety and Environmental Protection	disclosure of all known hazardous substances existing at the site	CD0501
Article 16 – Access and Quality	No change.	N/A
Article 17 - Warranty	<ul style="list-style-type: none"> Warranty period specific to contract Warranty period was changed from 36 months from Final Completion to 42 months from Completion of Static Checks Added clause re: exclusive warranty 	New
Article 18 – Contractor Insurance	<ul style="list-style-type: none"> Company requires court order to see Contractor’s insurance policies Minor wording changes/template improvements 	Previously Negotiated for CD0501
Article 19 – Workers Compensation	No change	Previously Negotiated for CD0501
Article 20 – Project Insurance	Reciprocal of Article 18, Contractor will require a court order to see Company’s insurance policies	Previously Negotiated for CD0501
Article 21 - Indemnification	<ul style="list-style-type: none"> Multiple changes throughout Relocated most indemnities to this Article Expanded no consequential losses Added cap on liability Template improvements 	Previously Negotiated for CD0501
Article 22 – Site and Transport Route Conditions	<ul style="list-style-type: none"> Added wording indicating Company would be responsible for upgrading the transport route from Cartwright to MF Worksite Added wording for unforeseen geological or geotechnical conditions 	Previously Negotiated for CD0501
Article 23 – Title and Risk	<ul style="list-style-type: none"> Added wording if Company has to take temporary or permanent possession of the Work Title transfer tied to payment 	Previously Negotiated for CD0501
Article 24 – Completion and Delivery	Wording change concerning timely performance	Previously Negotiated for CD0501
Article 25 - Substantial and Final Completion	Minor wording change	Previously Negotiated for CD0501
Article 26 – Changes in the Work	Minor wording change	Previously Negotiated for CD0501
Article 27 – Publicity Communications	No change	N/A
Article 28 - Confidentiality	No change	N/A
Article 29 – Patents, Trademarks, Copyrights	<ul style="list-style-type: none"> Multiple changes throughout Intellectual Property (IP) remains with Contractor, license to Company Notice of IP claims by third party 	Previously Negotiated for CD0501
Article 30 - Assignment	Reformatted, minor wording changes	Previously Negotiated for CD0501
Article 31 – Force	<ul style="list-style-type: none"> Added wording such that Contractor would be 	Previously Negotiated for

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

Article	Brief Description of Change	Notes
Majeure	<p>compensated as soon as reasonably practical up to date of Force Majeure</p> <ul style="list-style-type: none"> Added wording so that Contractor is paid for work at other Worksites not affected by Force Majeure Added wording whereby Contractor can terminate Contract after 120 days if Company is affected by Force Majeure Added wording whereby Contractor is entitled to an extension of time to the milestone affected in order to recover from Force Majeure 	CD0501
Article 32 – Default and Termination	<ul style="list-style-type: none"> Right to immediate termination on certain defaults clarified Defaults where cure available is clarified 	Previously Negotiated for CD0501
Article 33 – Bankruptcy, Insolvency and Receivership	Minor change (one word deleted)	Previously Negotiated for CD0501
Article 34 - Suspension	<ul style="list-style-type: none"> Expanded on Suspension Expenses definition A suspension considers manufacturing impacts Wording added such that Contractor is allowed to adjust Milestones based on a suspension to the work Contractor can suspend the work if Company fails its obligations with respect to compensation, access, etc. 	Previously Negotiated for CD0501
Article 35 – Labour Relations	Minor wording change/template improvements	Previously Negotiated for CD0501
Article 36 – Liquidated Damages	No change	N/A
Article 37 – Contractor’s Representations, Warranties and Covenants	Minor wording change/template improvements	Previously Negotiated for CD0501
Article 38 – Entirety of Agreement, Non Waiver	Minor wording change/template improvements	Previously Negotiated for CD0501
Article 39 – Dispute Resolution	Added reference to new Exhibit 15 – Rules for Arbitration	Previously Negotiated for CD0501
Article 40 - Notices	No change	NA
Article 41 – Liens and Claims	Minor wording changes	Previously Negotiated for CD0501
Article 42 – Enurement, Time, Survival of Provisions	Minor wording change	Previously Negotiated for CD0501
Article 43 - Counterparts	No change	NA
Article 44 – Cost Reduction Proposals	New Article added such that Contractor can submit cost reduction proposals to Company for review and approval	Previously Negotiated for CD0501

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

13.8 PRICING SUMMARY

As indicated previously, PPB #6 requested Alstom and Valard to provide optional pricing for a number of items. The pricing for these items are indicated in the table below.

Option	Description	Alstom's Price (CAD)	Valard's Price (CAD)
1	Supply of 150mm of insulating gravel and 150mm granular fill at CF and MF	\$5,866,206	
2	Increase creepage distances for 230kV equipment	\$258,567	
3	Addition of fire suppression system in battery room of Control Building	Included in base offer	
4	Control Building Optimization	(\$528,262)	
5	Reduction of number of 735kV capacitive voltage transformers at CF	(\$118,642)	
6	Raised floor in the control building telecoms rooms	\$214,400	
7	Common fence at Soldier's Pond	\$197,321	
8	Potable Water Storage Tank at Churchill Falls	\$141,638	


Based on Company's evaluation, the following options were selected: 2, 3, 4, 5, and 8.

In addition to the above, Alstom identified additional cost adders based on the technical discussions which took place on 14-May-2014 during Bid Clarification Meeting #2.

Description	Price (CAD)
Protection and Control Compliance	\$374,555
Mehta Tech DFP and Qualitrol DFL	\$439,142
Differential Protection of Existing 735 kV busbar at CF	\$5,116
CT and CVT junction box heaters	\$201,416
Total Cost Adders	\$1,020,229

Based on all the options selected and technical cost adders, the final Conditioned Price for each Bidder is as follows:

Description	Alstom's Price (CAD)	Valard's Price (CAD)
Bidder's Latest Conditioned Price Offer	\$284,215,508	
Increase creepage distances for 230kV equipment	\$258,567	
Addition of fire suppression system in battery room of Control Building	Included in base offer	
Control Building Optimization	(\$528,262)	

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

Description	Alstom's Price (CAD)	Valard's Price (CAD)
Reduction of number of 735kV capacitive voltage transformers at CF	(\$118,642)	
Potable Water Storage Tank at Churchill Falls	\$141,638	
Cost Adders due to Technical Clarifications	\$1,020,229	
TOTAL CONDITIONED PRICE	\$284,989,038	

13.9 NORMALIZATION

During the bid evaluation process it was discovered that both Valard and Alstom had taken differing approaches to estimating the grounding requirements at each site. Since the actual amount of grounding couldn't be determined until after contract award (based on resistivity data from each site concluded by geotechnical investigation), both Bidders had to assume the grounding requirements based on preliminary geotechnical information supplied with the RFP. Valard had assumed a closer spaced grounding grid of 5m x 5m, which was considered more accurate of what the final grounding grid would resemble. Alstom had assumed a larger spaced grounding grid of 20m x 20m. In order to normalize Alstom's base offer, the technical team calculated the difference between a 20m x 20m grid and a 5m x 5m grid, to determine an overall grounding length differential. Since Alstom had provided an all-inclusive unit rate for the supply and installation of grounding at \$90.00/meter, this unit rate was used to calculate the cost adder required to normalize Alstom's bid as indicated in the table below.

Description	Alstom's Price (CAD)
TOTAL CONDITIONED PRICE	\$284,989,038
Additional Grounding – 63,046 meters @ \$90/meter	\$5,674,135
NORMALIZED PRICE	\$290,663,173


Although this normalization caused Alstom's price to increase, it is still [REDACTED] less than Valard's Conditioned Price.

13.10 ALTERNATIVE GAS INSULATED SWITCHGEAR (GIS) OPTION

As a separate alternative, 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 as follows:

Option	Price (CAD)
Gas Insulated Switchgear (GIS) at MF and CF	(\$6,790,000)

The GIS option is not economically viable at Soldier's Pond for the following reasons:

	Bid Evaluation and Award Recommendation	Rev.	Date
	CD0502 Construction of AC Substations	00	24-Jul-2014

- The model of circuit breaker required to meet the necessary TRV requirements in the GIS is from a different family as the rest of the switchgear, which increases the cost associated with the supply and the installation of the switchgear;
- The number of circuits is greater at Soldiers Pond than at Churchill Falls and Muskrat Falls and connections of certain circuits via cable and overhead strain bus is made more difficult and costly; and,
- The overall equipment cost is more than the expected savings in construction (civil works and installation).

Based on these reasons above, the GIS option at Soldier’s Pond will not be reviewed.

13.11 ALTERNATIVE 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, and retain a risk contingency and a portion of the mark-up associated with the civil works in the fixed contract price. 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. The contract price would be broken down as follows:

Description	Fixed Portion (CAD)	Variable Portion covering civil works (CAD)
Base Offer (dated 2-Jun-2014)	\$181,728,177	\$89,876,812
Alternative Offer with 315kV Gas-Insulated Switchgear (dated 17th June, 2014)	\$187,836,734	\$78,811,326

Therefore, total cost savings to LCP would be

Alstom’s Conditioned Price	\$284,989,038
Civil Works Model – Option 1 - Base Offer	\$271,604,989
Potential Savings	\$13,384,049

Alstom’s Conditioned Price	\$284,989,038
Civil Works Model – Option 2 – GIS Option	\$266,648,060
Potential Savings	\$18,340,978

Based on the savings indicated above, it is recommended to pursue the GIS option using the alternative civil works model.