

Boundless Energy



Award Recommendation

CH0032 – Supply and Install Powerhouse
Hydro/Mechanical Equipment



SNC • LAVALIN EPCM consultant for Nalcor



Lower Churchill Project
RECOMMENDATION FOR AWARD
SUMMARY REPORT
CH0032: Supply/Install Powerhouse
Hydro/Mechanical Equipment

	NAME	TITLE	SIGNATURE	DATE
PREPARED BY:	Robert Anderson	Contract Administrator		25 Oct 2013
REVIEWED BY:	Bruce Drover	Package Leader		25 OCT 2013
REVIEWED BY:	Ed Over	Sr. Advisor –Commercial Strategies		25 Oct 2013
REVIEWED BY:	Frank Gillespie	Area Manager		25 Oct 2013
REVIEWED BY:	Ed. Bush	Project Cost Controls Manager		25 OCT 2013
REVIEWED BY:	Scott O'Brien	Project Manager – C1		25-OCT-2013
REVIEWED BY:	Jason Kean	Deputy Project General Manager		31-OCT-2013
APPROVED BY:	Pat Hussey	Supply Chain Manager		29 Oct 13
APPROVED BY:	Ron Power	General Project Manager		31 OCT - 2013



1 INTRODUCTION

1.1 PACKAGE NO.:

CH0032

1.2 PACKAGE TITLE:

SUPPLY/INSTALL POWERHOUSE HYDRO/MECHANICAL EQUIPMENT

1.3 PACKAGE SCOPE OF WORK BRIEF DESCRIPTION:

- Design, supply and installation of the spillway hydro-mechanical equipment;
- Supply and installation of mechanical and electrical auxiliaries, and architectural interior works for the spillway;
- Design, supply and installation of powerhouse intake hydro-mechanical equipment;
- Design, supply and installation of powerhouse draft tube hydro-mechanical equipment and handling equipment;
- Design, supply and installation of the trash cleaning system.

1.4 ESTIMATE:

CAD\$ 180 Million.

(D63 BUDGET) JPK.

1.5 CONTRACTING PARTIES:

Nalcor Energy and Andritz Hydro Canada Inc. (Contractor)

1.6 AGREEMENT TYPE:

Supply & Install

1.7 APPROVED BIDDERS LIST:

- ALSTOM Power & Transport Canada Inc.
- ANDRITZ Hydro Canada Inc.
- BLACK & MCDONALD/AFI/HATCH
- GANOTEC Inc./CANMEC Industriel Inc.
- KOREA Hydro & Nuclear Power Co. Inc./DAEWOO International Inc.
- HMI Construction/LAR/SUNNY CORNER



1.8 RFP KEY DATES AND VALIDITY:

- Issue RFP: 07 December 2012
- Proposal Closing Date: 19 February 2013
- Revised Proposal Closing Date 16 April 2013
- RFP validity 120 DAYS (Extended to Oct. 31, 2013)

1.9 RFP ADDENDUMS AND BIDDER CLARIFICATIONS

During the RFP period all Bidders received a total of Qty 14 separate RFP Addendums and SLI / Nalcor responses to 185 Bidder's Technical and Commercial Clarifications.

2 EVALUATION OF PROPOSALS

2.1 EVALUATION LEADS

Following the receipt, opening and distribution of Proposals the SLI / Nalcor Integrated Evaluation Team commenced a detailed analysis of the Proposals in accordance with the Package approved Bid Evaluation Plan. Proposals were received from 4 of the 6 Proponents. Black & McDonald/AFI/Hatch and HMI Construction/LAR/Sunny Corner declined to submit a proposal.

The Technical Evaluation including an analysis of the Technical Scope of Work, Schedule, Execution Plan, QA-QC, Environment, Health and Safety was led by Bruce Drover with support from project discipline representatives from both the local project office and Montreal.

The Commercial Evaluation including Risk Assessment and Newfoundland & Labrador Benefits was led by Ed Over with support from Aidan Meade, (McInnis Cooper, Lawyers / Avocats), Robert Anderson (Contract Administrator), Maria Moran (Industrial Benefits Lead), J.D. Tremblay (Risk Manager) and Andrew Sinnott (Assistant Treasurer).

To maintain security of information during the evaluation process, all members of the evaluation team signed a Confidentiality Agreement and the four Bidders were assigned code names as follows:

Alstom – Habs

Andritz – Sens

Ganotec/Canmec – Leafs

KHNP/Daewoo - Jets

2.2 BIDDER CLARIFICATION MEETINGS

The KOREA Hydro & Nuclear Power Co. Inc./DAEWOO International Inc. proposal was evaluated and determined to be technically unacceptable. Efforts to obtain further information via clarifications were unsuccessful.



ALSTOM Power & Transport Canada Inc. proposed two separate contracts; one for the supply of equipment and a separate contract for the installation with their proposed installer. The combined value of the contracts was significantly higher (over \$300M) than the other bids and was not evaluated further.

Off Site Technical and Commercial Clarification Meetings were arranged with two Bidders, Andritz Hydro Ltd. and Ganotec Inc./Canmec Ind. Inc. as these companies submitted the two lowest cost proposals that met the technical and commercial evaluation criteria. During these meetings Senior Representatives were invited to deliver Technical and Commercial Presentations to support their respective Proposals:

- ANDRITZ Hydro : 29 May 2013
- GANOTEC Inc./CANMEC Industriel Inc. 31 May 2013

2.3 PREFERRED BIDDER STATUS

Following the Bidder Clarification Meetings, the evaluation was focused on one Bidder, Andritz Hydro Ltd. The remaining three Bidders were notified that a “Preferred Bidder” had been selected however their Proposals would remain open for acceptance if negotiations with above failed to materialise into a formal contract award.

2.4 PERFORMANCE SECURITY

Performance Bond for 50% of the contract price.

The RFP requested a cost for a 10% Letter of Credit until a Final Completion Certificate was issued and a 5% Letter of Credit during the Warranty Period.

After financial evaluation it was determined that a Letter of Credit for 10% of the contract price, up to Final Completion would be required. This resulted in a cost saving of \$174,830.

2.5 EVALUATION REPORTS

A complete set of Evaluation Reports are attached, please refer to Appendices for details.

In summary:

	Andritz		Ganotec/ Canmec	
	Points	%	Points	%
Commercial (60% Weighting)	5.67	95%	1.82	30%
Technical (27.5% Weighting)	2.48	90%	2.61	95%
Schedule Execution Plan (10% Weighting)	0.93	93%	0.93	93%
NL Benefits (2.5% Weighting)	0.12	5%	0.17	7%
Overall Result		92%		55%
Risk Management		Pass		Pass
Health & Safety		Pass		Pass
Quality Assurance		Pass		Fail
Environmental		Pass		Pass



3 SUMMARY OF FINAL BIDDER PRICES

	ANDRITZ HYDRO	GANOTEC/ CANMEC
Total Base Proposal Price Converted to CAD\$	\$226,292,168.00	\$283,892,126.00
Estimate for Trades Labour Travel & Costs	\$5,081,252.00 (incl in proposal cost)	\$7,724,000.00 (not incl. in proposal cost)
Total Base Proposal Price Converted to CAD\$	\$226,292,168.00	\$291,616,126
Less credits offered through negotiation	-\$25,906,154	-\$44,690,803
Additional Cost re Technical & Commercial Clarifications	\$ 4,222,593	
Total Cost CAD\$	\$204,608,607	\$246,925,323

4 RECOMMENDATION FOR AWARD

In consideration of the Evaluation Reports detailed in Section 5.0 including the summary of final proposal prices detailed in Section 3 above, the Evaluation Team recommend awarding a Supply & Install Contract to:

ANDRITZ Hydro Canada Inc. for the following fixed contract prices:

- CAD\$ 122,378,792
- Euros 61,046,633

All prices detailed above exclude HST

The Evaluation Team is recommending award of an interim Limited Notice to Proceed (LNTP) Agreement for a maximum three months period to enable commencement of engineering deliverables required to maintain project schedule. The total value of the LNTP will not exceed CAD \$2,000,000.00 and Euros 2,000,000. The identified costs for work completed under the LNTP will be applied to specific milestone payments and not paid as a single lump sum line item.



5 APPENDICES:

- Commercial Evaluation Reports
- Technical Evaluation Reports
- QA Evaluation Reports
- Health & Safety Evaluation Reports
- Environmental Evaluation Reports
- Schedule & Execution Plan Evaluation Reports
- Newfoundland & Labrador Benefits Evaluation Reports
- Risk Management Evaluation Reports
- Overall Evaluation Scoring Matrix Report

CH0032 - S/I Powerhouse Hydro-mechanical equipment

Estimated Contract Value and Comparison to Budget

24-Oct-13

The Lump Sum final value for this award is indicated in Table 1-Contract Value and Comparison to Budget

1 EUR=1.3475 CAD

Table 1-Contract Value and Comparison to Budget

Description (all amount in CAD)		Amount
Contract Value (CAD section)	a1	\$ 122,378,792
Contract Value (EUR section)	a2	\$ 61,046,633
Total Contract Value (CAD)	a	\$ 204,639,130
Escalation (Note 1)	b	\$ -
Forecast Specific Growth Allowance (Note 2)	c	\$ 25,900,000
Forecast Non-specific Growth Allowance (Note 3)	d	\$ 19,584,000
Forecast Total Contract Value	e=a+b+c+d	\$ 250,123,130
Original Control Budget	f	\$ 101,525,168
Budget transfers and scope changes (Note 4)	g	\$ 73,633,628
DG3 Escalation allowance	h	\$ 2,716,907
Current Control Budget	i=f+g+h	\$ 177,875,703
Variance (Note 5)	j=e-i	\$ 72,247,427

Note 1: Escalation

- Contract value includes all escalation

N/A

Sub Total Escalation

\$ -

Note 2: Specific growth (i.e. Part of the scope not included in the contract value but to be awarded later)

For details refer to attached sheet

- Support during operation of the Spillway through diversion
- Provision for Second stage concrete
- Intake gate hoist elevation
- Bonus

\$ 400,000
\$ 20,000,000
\$ 500,000
\$ 5,000,000

Sub Total Specific

\$ 25,900,000

Note 3: Non-Specific growth (i.e. Additional scope that may or may not be added to the contract at a later stage)

For details refer to attached sheet

- Provision for Site coordination and interface
- Provision for Site conditions
- Provision for ECN's and Interference

\$ 7,344,000
\$ 2,010,000
\$ 10,230,000

Sub Total Non-Specific

\$ 19,584,000

Note 4: Budget revisions

- Transfer of CH0046 scope to CH0032 : 52,899,185 (MNCP 0001)
- Transfer of the Spillway electrical fro CH0031 : 3,163,963 (MNCP 0001)
- Spillway LLO gates optimization : 8,500,000 PCN# 0055
- Transfer of Spillway and Intake secondary concrete from CH0007: 9,831,272 (CH0007 addendas)
- Transfer a portion of the air transportation to SM0709: (760,792)

Note 5: Variance

- Growth : 45.5 M
- Fabrication: (27.4) M
- Air Travel : 5 M
- Installation: 49.4 M (Andritz has a higher rate for his Manpower : there is a 92 \$/Hr difference between our budget and his price representing 75% over-run for 550,000 Hrs)

Conclusion:

The Forecasted Total Contract VValue of \$ 250,123,130 inclusive of escalation, specified and un-specified growth, represents an over-run of \$ 72,247,427 compared to the Current Control Budget and should be retained as Authorised Fund Amount.

Note: Per discussions with Paul Harrington on 31-OCT-2013, the requisition for CH0032 to exclude Non-Specific Growth (\$19.5M); further provision of second stage concrete will likely fall within target value of CH0007.
JK-K
31-OCT-2013

CH0032 - S/I Powerhouse Hydro-mechanical equipment		
Basis of calculation		
		Revised 24 Oct. 2013
Note 1: <u>Escalation</u>		\$ -
1.1 included in contract price	N/A	
Note 2: <u>Specified Growth</u>		\$ 25,900,000
2.1 Support during operation of the Spillway through diversion (estimated 2000 Hrs)	\$ 400,000	
2.2 Second stage concrete (as per bid)	\$ 20,000,000	
2.3 Intake gate hoist elevation (estimated)	\$ 500,000	
2.4 Bonus (as per contract)	\$ 5,000,000	
Note 3: <u>Non-specified Growth</u>		\$ 19,584,000
3.1 Provision for site coordination and interface to prioritise day to day work execution in case of HSE, schedule and other constraints based on 6% of the CAD portion of the contract (Installation) of 122.4 M\$	\$ 7,344,000	
3.2 Provision for site conditions related to the owner's commitments towards the contractor such as camp availability, yards, construction power and others based on 1% of the contract value of 201 M\$	\$ 2,010,000	
3.3 Provision for ECN's during fabrication and interference on site during installation based on 5% of the contract value of 204.6 M\$	\$ 10,230,000	

Appendix 4 - Commercial Evaluation Report

Nalcor Energy-Lower Churchill Project

"AS BID and FINAL COST" DETAIL OPTION A&B - Spillway, Intake & Draft Tube

Package No./ Description: 505573-CH0032 SUPPLY/INSTALL POWERHOUSE HYDRO/MECHANICAL EQUIPMENT										
Item	Quantity	Description	Jets Total	SensTotal -Bid	SensTotal - Final	Leafs Total	Habs (Supply) Total	Habs (Install) Total	Habs Total	Notes
			(KHNP/Daewoo)	(Andritz)	(Andritz)	(Ganotec/Canmec)	(Alstom)	(Alstom)	(Alstom)	
AB-1	1	Mobilization	\$ 18,004,317.00	\$ 1,098,245.00	\$ 1,098,245.00	\$ 4,621,759.00	\$ 26,405.00	\$ 2,052,736.51	\$ 2,079,141.51	
AB-2	1	Management	\$ 21,124,564.00	\$ 10,164,447.00	\$ 10,164,447.00	\$ 27,717,128.00	\$ 26,514,202.00	\$ 21,355,771.44	\$ 47,869,973.44	
AB-3	1	Employee Training	\$ 224,076.00	\$ 97,912.00	\$ 97,912.00	\$ 221,920.00	\$ 21,330.00	\$ 593,617.12	\$ 614,947.12	
AB-4	1	Health & Safety Requirements	\$ 3,513,522.00	\$ 13,457.00	\$ 13,457.00	\$ 969,077.00	AB-2	\$ 5,439,061.98	\$ 5,439,061.98	
AB-5	1	Environmental Requirements	\$ 1,926,572.00	\$ 5,046.00	\$ 5,046.00	\$ -	AB-2	\$ 1,772,818.84	\$ 1,772,818.84	
AB-6	1	Quality Assurance/Quality Control	\$ 3,513,522.00	\$ 1,601,026.00	\$ 1,601,026.00	\$ 1,827,725.00	\$ 4,903,494.00	\$ 3,856,004.44	\$ 8,759,498.44	
AB-7	1	Letter of Credit (per Article 7 of Agreement)	\$ 414,000.00	\$ 906,154.00	\$ -	\$ -	\$ -	\$ -	\$ -	Jets - If require LC from Cdn bank then the cost is \$1,553,000
		Revised Letter of Credit			\$ 731,324.00					
AB-8	1	Parental Guarantee (per Article 7 of Agreement)	\$ -	\$ -	\$ -	\$ -	\$ 609,510.00	incl	\$ 609,510.00	
AB-9	1	Performance Bond (per Article 7 of Agreement)	\$ 2,070,000.00	\$ 3,825,976.00	\$ 3,825,976.00	\$ 2,059,430.00	\$ 2,437,274.00	\$ 2,085,000.00	\$ 4,522,274.00	
AB-10	1	Insurance (per Article 18 of Agreement)	\$ 4,959,470.00	\$ 2,592,720.00	\$ 2,592,720.00	\$ 101,452.00	\$ 1,980,440.00	\$ 2,186,381.03	\$ 4,166,821.03	Sens - Cost fo Insurance is for info only as this value has been distributed over various cost items in the bid.
AB-11	1	Warranty (per Article 17 of Agreement)	\$ 283,500.00	\$ -	\$ -	\$ 990,744.00	\$ 2,444,888.00	incl	\$ 2,444,888.00	
AB-12	1	Demobilization	\$ 292,794.00	\$ 408,404.00	\$ 408,404.00	\$ 1,522,013.00	\$ 26,405.00	\$ 116,248.73	\$ 142,653.73	
3.1	1	Phase A - Intake & Draft Tube Engineering	\$ 871,781.00	\$ 1,275,037.00	\$ 1,275,037.00	\$ 2,668,951.00	\$ 3,680,853.00	\$ -	\$ 3,680,853.00	
3.2	1	Phase B - Intake & Draft Tube Fabrication & Supply	\$ 39,045,573.00	\$ 42,023,212.00	\$ 42,023,212.00	\$ 60,704,258.00	\$ 85,870,032.00	\$ -	\$ 85,870,032.00	
		Add Hairpin Type Primary Anchors (Clarification #15)			\$ 435,515.00					
		Add Intake Gate Hoist Wire Rope (Clarification #31)			\$ 1,752,062.00					
		Add Intake Gate MCC NEMA Enclosures (Clarification #68)			\$ 75,624.00					
		Add Intake Gate Slot Covers (Clarification #152)			\$ 127,451.00					
3.3	1	Phase C - Intake & Draft Tube Installation	\$ 42,461,743.00	\$ 67,085,602.00	\$ 67,085,602.00	\$ 76,518,351.00	\$ -	\$ 66,422,266.86	\$ 66,422,266.86	
		Delete Cost of Second Stage Concrete (option to be put back prior to Feb 2014)			-\$ 14,000,000.00	-\$ 25,310,325.00				
3.4	1	Phase D - Intake & Draft Tube Commissioning	\$ 2,294,545.00	\$ 3,269,479.00	\$ 3,269,479.00	\$ 1,740,969.00	\$ 269,293.00	\$ 4,620.00	\$ 273,913.00	
4.1	1	Phase A - Spillway Hydro/Mechanical Engineering	\$ 897,170.00	\$ 2,230,017.00	\$ 2,230,017.00	\$ 4,219,755.00	\$ 3,027,945.00	\$ 759,000.00	\$ 3,786,945.00	
4.2	1	Phase B - Spillway Hydro/Mechanical Fabrication & Supply	\$ 34,840,954.00	\$ 40,729,516.00	\$ 40,729,516.00	\$ 50,087,082.00	\$ 56,380,049.00	\$ -	\$ 56,380,049.00	
		Add Hairpin Type Primary Anchors (Clarification #15)			\$ 186,649.00					
		Add Spillway Gate Hoist Wire Rope (Clarification #20)			\$ 838,343.00					
		Add Spillway Gate MCC NEMA Enclosures (Clarification #54)			\$ 75,624.00					
4.3	1	Phase C - Spillway Hydro/Mechanical Installation	\$ 28,646,001.00	\$ 49,285,150.00	\$ 49,285,150.00	\$ 44,569,121.00	\$ -	\$ 50,512,617.46	\$ 50,512,617.46	
		Delete Cost of Second Stage Concrete (option to be put back prior to Feb 2014)			-\$ 6,000,000.00	-\$ 10,847,282.00				
4.4	1	Phase D - Spillway Hydro/Mechanical Commissioning	\$ 2,492,034.00	\$ 2,273,408.00	\$ 2,273,408.00	\$ 3,352,391.00	\$ 317,536.00	\$ 264,359.31	\$ 581,895.31	
		Negotiated Global Discount (\$ to be allocated to items later)			-\$ 5,000,000.00	-\$ 8,533,196.00				
		Reimburseable Travel Costs (est)	\$ 4,745,659.00	\$ 5,081,252.00	\$ 5,081,252.00	\$ 7,724,000.00		\$ 8,256,993.53	\$ 8,256,993.53	Travel in cost - Sens; Travel not in cost - Leafs/Habs/Jets
		Total Cost	\$ 212,621,833.00	\$226,292,168.00	\$204,608,607.00	\$246,925,323.00	\$188,509,656.00	\$165,677,497.25	\$354,187,153.25	
5.0	2	Spillway Hydro/Mechanical Alternate Supply				\$ 7,399,178.00	\$ 6,957,275.00	\$ 157,131.35	\$ 7,114,406.35	

Appendix 4 - Commercial Evaluation Report

Nalcor Energy-Lower Churchill Project

"AS BID" DETAIL OPTION A - Intake & Draft Tube (not evaluated further)

Package No./ Description: 505573-CH0032 SUPPLY/INSTALL POWERHOUSE HYDRO/MECHANICAL EQUIPMENT									
Item	Quantity	Description	Jets Total	Sens Total	Leafs Total	Habs (Supply) Total	Habs (Install)Total	Habs Total	Notes
			(KHNP/Daewoo)	(Andritz)	(Ganotec/Canmec)	(Alstom)	(Alstom)	(Alstom)	
A-1	1	Mobilization	\$ -	\$ 885,223.00	\$ 3,128,886.26	\$ 13,351.00	\$ 1,817,024.04	\$ 1,830,375.04	
A-2	1	Management	\$ -	\$ 9,045,039.00	\$ 17,775,869.35	\$ 17,881,300.00	\$ 15,313,843.92	\$ 33,195,143.92	
A-3	1	Employee Training	\$ -	\$ 44,085.00	\$ 214,066.53	\$ 21,318.00	\$ 551,201.77	\$ 572,519.77	
A-4	1	Health & Safety Requirements	\$ -	\$ -	\$ 602,487.95	incl in A-2	\$ 5,011,745.38	\$ 5,011,745.38	
A-5	1	Environmental Requirements	\$ -	\$ -	\$ -	incl in A-2	incl A-4	\$ -	
A-6	1	Quality Assurance/Quality Control	\$ -	\$ 797,149.00	\$ 1,229,347.94	\$ 3,610,854.00	\$ 2,125,025.84	\$ 5,735,879.84	
A-7	1	Letter of Credit (per Article 7 of Agreement)	\$ -	\$ 453,077.00	\$ -	\$ -	not proposed	\$ -	
A-8	1	Parental Guarantee (per Article 7 of Agreement)	\$ -	\$ -	\$ -	\$ 365,824.00	included	\$ 365,824.00	
A-9	1	Performance Bond (per Article 7 of Agreement)	\$ -	\$ 1,912,988.00	\$ 1,128,953.56	\$ 1,462,807.00	\$ 1,271,850.00	\$ 2,734,657.00	
A-10	1	Insurance (per Article 18 of Agreement)	\$ -	\$ -	\$ 72,964.44	\$ 1,188,630.00	\$ 1,406,381.03	\$ 2,595,011.03	
A-11	1	Warranty (per Article 17 of Agreement)	\$ -	\$ -	\$ 582,163.13	\$ 1,335,129.00	included	\$ 1,335,129.00	
A-12	1	Demobilization	\$ -	\$ 205,960.00	\$ 1,077,529.24	\$ 13,351.00	\$ 116,248.73	\$ 129,599.73	
3.1	1	Phase A - Intake & Draft Tube Engineering	\$ -	\$ 1,275,037.00	\$ 2,072,521.80	\$ 3,758,950.00	\$ -	\$ 3,758,950.00	
3.2	1	Phase B - Intake & Draft Tube Fabrication & Supply	\$ -	\$ 42,023,212.00	\$ 51,435,624.47	\$ 87,515,640.00	\$ -	\$ 87,515,640.00	
3.3	1	Phase C - Intake & Draft Tube Installation	\$ -	\$ 67,085,602.00	\$ 78,077,510.57	\$ -	\$ 67,714,234.17	\$ 67,714,234.17	
3.4	1	Phase D - Intake & Draft Tube Commissioning	\$ -	\$ 3,269,479.00	\$ 1,523,445.55	\$ 269,293.00	\$ 4,620.00	\$ 273,913.00	
		Total Cost		\$ 126,996,851.00	\$ 158,921,370.79	\$ 117,436,447.00	\$ 95,332,174.88	\$ 212,768,621.88	

Appendix 4 - Commercial Evaluation Report

Nalcor Energy-Lower Churchill Project

"AS BID" DETAIL OPTION B - Spillway (not evaluated further)

Package No./ Description: 505573-CH0032 SUPPLY/INSTALL POWERHOUSE HYDRO/MECHANICAL EQUIPMENT									
Item	Quantity	Description	Jets Total	Sens Total	Leafs Total	Habs (Supply)Total	Habs (Install)Total	HabsTotal	Notes
			(KHNP/Daewoo)	(Andritz)	(Ganotec/Canmec)	(Alstom)	(Alstom)	(Alstom)	
A-1	1	Mobilization	\$ -	\$ 213,022.00	\$ 3,589,707.71	\$ 13,054.00	\$ 1,607,762.72	\$ 1,620,816.72	
A-2	1	Management	\$ -	\$ 7,473,249.00	\$ 15,804,380.86	\$ 14,545,360.00	\$ 10,591,682.53	\$ 25,137,042.53	
A-3	1	Employee Training	\$ -	\$ 53,827.00	\$ 236,329.81	\$ 22,346.00	\$ 579,303.47	\$ 601,649.47	
A-4	1	Health & Safety Requirements	\$ -	\$ 13,457.00	\$ 563,896.35	Incl in B-2	\$ 3,529,410.02	\$ 3,529,410.02	
A-5	1	Environmental Requirements	\$ -	\$ 5,046.00		Incl in B-2	incl in B-4	Incl in B-2	
A-6	1	Quality Assurance/Quality Control	\$ -	\$ 803,877.00	\$ 817,174.68	\$ 3,386,518.00	\$ 2,254,765.16	\$ 5,641,283.16	
A-7	1	Letter of Credit (per Article 7 of Agreement)	\$ -	\$ 453,077.00	\$ -	not proposed	not proposed	not proposed	
A-8	1	Parental Guarantee (per Article 7 of Agreement)	\$ -		\$ -	\$ 310,430.00	included	\$ 310,430.00	
A-9	1	Performance Bond (per Article 7 of Agreement)	\$ -	\$ 1,912,988.00	\$ 985,258.44	\$ 1,241,444.00	\$ 771,450.00	\$ 2,012,894.00	
A-10	1	Insurance (per Article 18 of Agreement)	\$ -		\$ 59,107.78	\$ 1,008,729.00	\$ 926,381.03	\$ 1,935,110.03	
A-11	1	Warranty (per Article 17 of Agreement)	\$ -		\$ 410,470.63	\$ 1,423,073.00	included	\$ 1,423,073.00	
A-12	1	Demobilization	\$ -	\$ 202,524.00	\$ 1,087,113.12	\$ 13,054.00	\$ 103,896.00	\$ 116,950.00	
4.1	1	Phase A - Spillway Hydro/Mechanical Engineering	\$ -	\$ 2,231,016.00	\$ 4,001,737.46	\$ 3,110,190.00	\$ 759,000.00	\$ 3,869,190.00	
4.2	1	Phase B - Spillway Hydro/Mechanical Fabrication & Supply	\$ -	\$ 40,729,516.00	\$ 50,415,081.74	\$ 62,619,437.00	\$ -	\$ 62,619,437.00	
4.3	1	Phase C - Spillway Hydro/Mechanical Installation	\$ -	\$ 49,285,150.00	\$ 52,978,229.07	\$ -	\$ 51,219,692.80	\$ 51,219,692.80	
4.4	1	Phase D - Spillway Hydro/Mechanical Commissioning	\$ -	\$ 2,273,407.00	\$ 3,377,121.37	\$ 317,536.00	\$ 266,686.37	\$ 584,222.37	
		Total Cost		\$ 105,650,156.00	\$ 134,325,609.02	\$ 88,011,171.00	\$ 72,610,030.10	\$ 160,621,201.10	
5.0	2	Spillway Hydro/Mechanical Alternate Supply	\$ -	\$ -	\$ -	\$ 6,957,275.00	\$ 157,131.35	\$ 7,114,406.35	

CH0032

Hydro Mechanical Bid Evaluation

T&C Scoring

		BIDDER Habs	BIDDER Sens	BIDDER Leafs	BIDDER Jets
Article 1	Interpretation	Not evaluated for commercial reasons- two contracts and cost	¼	½	
Article 2	Contractor's Status		-	-	
Article 3	Contractor Obligations		¼	-	
Article 4	Contractor's Design Obligations		-	-	
Article 5	Contractor's Personnel		¼	¼	
Article 6	Subcontracts		¼	-	
Article 7	Performance Security		¼	½	
Article 8	Policy on Ethics/Conflicts of Interest		-	-	
Article 9	Compliance with Laws		¼	-	
Article 10	Company's Obligations		-	¼	
Article 11	Role & Responsibilities of Engineer		¼	-	
Article 12	Compensation & Terms of Payment		¼	¼	
Article 13	Taxes		-	-	
Article 14	Audit and Records		-	-	
Article 15	Health, Safety & Environmental Protection		¼	-	
Article 16	Access and Quality		-	-	
Article 17	Warranty		½	½	
Article 18	Contractor Insurance		¼	¼	
Article 19	Workers Compensation		-	-	
Article 20	Project Insurance		¼	½	

		BIDDER Habs	BIDDER Sens	BIDDER Leafs	BIDDER Jets
Article 21	Indemnification		1/2	1/2	
Article 22	Site & Transport Route Conditions		-	-	
Article 23	Title and Risk		1/4	1/4	
Article 24	Completion and Delivery		1/4	1/4	
Article 25	Substantial & Final Completion		-	1/4	
Article 26	Changes in the Work		1/4	-	
Article 27	Public Communications		-	-	
Article 28	Confidentiality		1/4	-	
Article 29	Patents, Trademarks, Copyrights		1/4	-	
Article 30	Assignment		-	-	
Article 31	Force Majeure		1/4	1/4	
Article 32	Default and Termination		1/4	1/4	
Article 33	Bankruptcy, Insolvency, and Receivership		-	-	
Article 34	Suspension		1/4	1/4	
Article 35	Labour Relations		1/4	-	
Article 36	Liquidated Damages		1/4	1/4	
Article 37	Contractor's Representations, Warranties and Covenants		-	1/4	
Article 38	Entirety of Agreement, Non Waiver		-	1/4	
Article 39	Dispute Resolution		-	-	
Article 40	Notices		-	-	
Articles 41	Notices		-	-	
Article 42	Enurement, Time, Survival of Provisions		1/4	- (rounded scores)	
Articles 43	Counterparts		-	-	
			1/4		

1. I have assumed that the marking is out of "1" for each article.
2. I have deducted $\frac{1}{4}$ mark for each significant deviation from the wording proposed by the Company in the RFP form of Contract.

TK-2435 (14729497.1)



CONFIDENTIAL MEMO

Via Email

TO: ED OVER, SNC-LAVALIN; ROBERT ANDERSON, SNC-LAVALIN
FROM: ANDREW SINNOTT, ASSISTANT TREASURER
SUBJECT: CREDITWORTHINESS ASSESSMENT OF CH0032 BIDDERS
DATE: MAY 24, 2013
CC: SCOTT PELLEY, CORPORATE TREASURER; PAT HUSSEY, SUPPLY CHAIN COORDINATOR

Background:

- At the request of the Nalcor Energy – Lower Churchill Project (“LCP”), Treasury and Risk Management (“TRM”) conducted a financial analysis and credit worthiness verification of the following entities (the “Bidding Entities”):
 - Alstom Power and Transport Canada Inc. (“Alstom Canada”) and Vytrell Engineering Limited (“Vytrell”), a Consortium
 - Andritz Hydro Canada Inc. (“Andritz Canada”)
 - Ganotec Inc. and Canmech Industrial Inc., a partnership (“Ganotec-Canmech”)
 - Korea Hydro & Nuclear Power Co. and Daewoo International Corporation, a partnership (“KNHP-Daewoo”)
- The above-noted entities were all bidders on the recent RFP for CH0032 – Powerhouse and Spillway Hydromechanical Equipment
- Our analysis was required by and conducted in accordance with the *Guidelines for Credit Worthiness Verification* (LCP-PT-MD-0000-FI-PR-0003-01 Rev B.2)

Contract Details:

- For the purpose of our analysis, and to calculate turnover score, we used an approximate contract value of \$200M CAD¹

¹ Based on discussions with Ed Over on May 23, 2013. While actual bids are above \$200M, using actuals would not change outcome of conclusions regarding turnover.

- The package is broken down into two major deliverables: (a) supply and install of the Spillway equipment, and (b) the supply and install of the power house equipment.
- Bidders were asked to submit separate prices for the two components of the package
- The contract will be approximately 50% materials cost and 50% on-site work, and involves a significant steel component. The equipment will be built at the contractor's manufacturing facility, shipped to the site, and assembled and installed on-site. There will be ability for Nalcor to do inspections and testing throughout the process.²

Performance Security General:

- Where the financial assessment and rating is based on the parent company, a guarantee from the parent company will be required.
- The financial security recommended is for:
 - Standby letter of credit, equal to 10% of the contract price, to remain in effect until end of the warranty period.³ The letter of credit security must be issued from a Schedule 1 Canadian Bank⁴.
 - Bonding, by way of a performance bond, with Nalcor Rider, in the amount of 50% of the contract price. The bond shall be issued by a surety which has a minimum credit rating of A- by Standard & Poor's, or equivalent rating by another rating agency approved by Company
 - We can consider waiving the 50% payment bond for a 10% holdback or 10% retention bond, if this strategy is sufficient to mitigate the risk of exposure to subcontractors.
- The performance security recommendation would have to be revisited if, during the course of negotiating with the successful bidder, the commercial team is considering agreeing to significant up-front and/or milestone payments.

Results – General

- The results of the creditworthiness assessment are outlined in Appendix 1 of this memo.
- The reader is cautioned that the conclusions outlined in Appendix 1 are based on the effective date of the financial information used in the analysis, and our conclusions are subject to change based on any new information published after that date.

Alstom Power and Transport Canada Inc. (Consortium with Tyrell Engineering Limited)

- Alstom Power and Transport Canada Inc. ("Alstom Canada") is incorporated under the CBCA and headquartered in Quebec.
- Alstom Canada is 100% owned by Alstom SA (France), a leading global manufacturer of transport and energy infrastructure.

² As per discussion with Ed Over on May 16, 2013

³ The 10% amount equals the liquidated damages cap, as per discussion with Ed Over on May 23, 2013

⁴ Royal Bank of Canada, Canadian Imperial Bank of Commerce, Bank of Montreal, TD Bank or Bank of Nova Scotia

- Alstom SA is publicly traded in France with a market capitalization of €8.9 billion (\$11.8 billion CAD). For the year ended March 31, 2013, Alstom had global sales of €20.3 billion (\$27.0 billion CAD) and net income of €802 million (\$1.07 billion CAD)⁵.
- Alstom SA is rated by S&P as BBB (Negative), and Baa2 (Negative) by Moody's, which are investment grade ratings, albeit with negative outlooks.
- Based on the parent company turnover ratio and 3rd party information, Alstom was given a preliminary rating of MEDIUM. A rating of HIGH would have been given with a better public rating and/or outlook from Moody's and S&P.
- In terms of the financial statement and ratio analysis, Alstom Canada did not provide any financial information, and opted to include financial statements for the parent company for the years ended March 31, 2010, 2011 and 2012. March 31, 2013 financial statements were obtained from Credit Risk Monitor. The weighted credit score for the parent, Alstom SA, is 68%.
- We have not been provided with any financial information on Tyrell Engineering Limited and thus cannot assess the creditworthiness of that company. Also, the consortium submitted two separate bids, and would not submit a joint bid when requested to do so.
- Therefore, while we would rank Alstom as MEDIUM/HIGH (based on the parent guarantee), we are unable to do a complete assessment on the Consortium, thus a final ranking of LOW.
- **Consequently, the Alstom/Tyrell consortium is not considered creditworthy.**

Andritz Hydro Canada Inc.

- Andritz Hydro Canada Inc. ("Andritz Canada") is a Canadian corporation headquartered in Peterborough, Ontario.
- Andritz Canada is 100% owned by Andritz AG (Austria), a global company that develops production systems and industrial process solutions, including turnkey electromechanical equipment and services for hydro power plants.
- Andritz AG is publicly traded in Austria with a market capitalization of €4.5 billion (\$6.05 billion CAD). For the year ended December 31, 2012, Andritz AG had sales of €5.2 billion (\$6.9 billion CAD) and net income of €243 million (\$323 million CAD)⁶.
- We have been provided with audited financial statements for Andritz Canada for the year ended December 31, 2012. The turnover ratio is 1.4 based on revenues of \$284 million CAD. And with no public ratings available, the preliminary rating would be LOW.
- A review of financial ratios results in a ratio score of 84%, as Andritz Canada shows good profitability, cash flow and a strong balance sheet. Overall, the final rating would be MEDIUM/HIGH.
- **While the parent guarantee would be available if needed, security in form of a 10% letter of credit, 50% performance bond with Nalcor rider, and 10% holdback or retention bond would be sufficient to mitigate any risks. This would also avoid issues around enforceability of a guarantee from another jurisdiction.**

⁵ Based on Bank of Canada noon rate of 1.3293 CAD per Euro, as at May 22, 2013

⁶ Based on Bank of Canada noon rate of 1.3293 CAD per Euro, as at May 22, 2013

Ganotec Inc. and Canmech Industrial Inc., a partnership (“Ganotec-Canmech”)

- Ganotec Inc. is a Canadian company, owned by Peter Kiewit Infrastructure Co.
- Canmech Industrial Inc. is also a Canadian company, owned by Group Canmech Inc.
- Ganotec has a 75% share in the partnership, while Canmech has 25%. We have assigned the turnover and financial ratio scores based on this percentage.
- Audited financial statements for Peter Kiewit Infrastructure Co. have been received for the year-ended December 31, 2011; and internal September 30, 2012 have been reviewed. The turnover ratio is 9.7.
- Audited Financial statements for Group Canmech Inc. have been received for the year-ended December 31, 2011, and show a turnover ratio of 0.4. We will require December 31, 2012 year-end financial statements for Group Canmech Inc. prior to the award of any contract.
- The combined turnover score is 7.4, and based on lack of any 3rd party information the preliminary rating is MEDIUM.
- The financial ratio score is 100% for each entity, as both companies demonstrate strong cash flow and low debt levels. Overall, the final rating for the partnership is MEDIUM/HIGH.
- **We will require parent guarantees from Peter Kiewit Infrastructure Co. and Group Canmech Inc., as well as confirmation that Ganotec and Canmech are jointly and severally liable.**
- **Recommended security is a 10% letter of credit, 50% performance bond with Nalcor rider, and 10% holdback or retention bond.**

Korea Hydro & Nuclear Power Co. and Daewoo International Corporation, a partnership (“KHNP-Daewoo”)

- This partnership is between two South Korean companies. KHNP is a subsidiary of Korea Electric Power Corporation (“KEPCO”), a government owned corporation. Daewoo is a majority owned by POSCO, one of the world’s largest steel-making companies.
- KHNP is not publicly traded, but it is rated by S&P (A+ / Stable) and Moody’s (A1 / Stable). They are covered by Credit Risk Monitor with a FRISK score of 7 (probability of bankruptcy 0.38-0.54%), and a Z-Score of 2.31 (Neutral risk).
- KEPCO is publicly rated by S&P (A+ / Stable) and Moody’s (A1 / Stable).
- Daewoo is publicly traded in Korea with a market capitalization of 4.3 trillion Korean Won (\$4.0 billion CAD)⁷. Daewoo is not publicly rated but is covered by Credit Risk Monitor with a FRISK score of 7 (probability of bankruptcy 0.38-0.54%), and a Z-Score of 1.48 (Neutral risk).
- POSCO is publicly traded in Korea, with a market capitalization of 28 trillion Korean Won (\$26.0 billion CAD)⁵. The company is rated by S&P (BBB+ / Stable) and Moody’s (Baa1 / Negative).
- We have been provided with financial statements for both of the bidding entities and turnover and ratio scores are pro-rated based on the 50/50 share in the partnership between KHNP and Daewoo. We have not assessed the parent companies.
- KHNP has a turnover ratio of 31.2, and Daewoo’s ratio is 81.5 resulting in a combined turnover ratio is 56.4. Based on this score and the 3rd party information, the preliminary rating is HIGH.

⁷ Based on Bank of Canada noon rate of 1077.6 Korean Won per CAD, as at May 22, 2013

- KHNP has provided historical Audited financial statements for the last 3 years, and internal December 31, 2012 statements. The financial ratio score is 80%.
- Daewoo has provided historical Audited financial statements for the last 3 years. Financial statements for the year-ended December 31, 2012 are available on Credit Risk Monitor. The financial ratio score is 56%.
- The combined financial ratio score is 68%, which results in a final rating of MEDIUM/HIGH.
- **Recommended security is a 10% letter of credit, 50% performance bond with Nalcor rider, and 10% holdback or retention bond. We would not recommend any parent guarantees.**
- **Also, while the partnership agreement states each party is jointly and severally liable, this must be confirmed prior to the final award of any contract.**

Recommendations

- Alstom Canada
 - As outlined above, we are unable to do a complete assessment on the consortium, therefore have assessed a final rating of LOW, and would recommend excluding this bidder based on lack of creditworthiness.
- Andritz Canada
 - Based on the final rating of MEDIUM/HIGH, Andritz Canada is creditworthy
 - Financial security as outlined on page 2
 - The Commercial Questionnaire states that bonding is available via Chubb Insurance. The parent is rated A+ (Stable) by S&P, and all Chubb subsidiaries are rated AA (Stable) which would be acceptable to Nalcor.
- Ganotec-Canmech partnership
 - Based on the final rating of MEDIUM/HIGH, the partnership is creditworthy
 - The partnership agreement appears to indicate that the two partners are not joint and severally liable, which will be required prior to final award of any contract.
 - We require receipt of December 31, 2012 financial statements for Group Canmech Inc.
 - Guarantees from Peter Kiewit Infrastructure Inc. and Group Canmech Inc.
 - Financial security as outlined on page 2
 - The Commercial Questionnaire states that bonding is available via Travelers Insurance Company of Canada, rated AA- (Stable) by S&P, which is acceptable to Nalcor.
- KNHP-Daewoo JV
 - Based on the final rating of MEDIUM/HIGH, the joint venture is creditworthy
 - The liability of each partner must be joint and several, which is to be confirmed prior to final award of any contract.
 - Financial security as outlined on page 2
 - The Commercial Questionnaire states that bonding is available via four Korean companies all rated by S&P; Woori Bank (A- / Stable), Shinhan Bank (A / Stable), Korea Exchange Bank (A- / Stable) and Hana Bank (A / Stable). These would all be acceptable to Nalcor.

Appendix 1 – Summary of Credit Worthiness Assessment

Nalcor Energy - Lower Churchill Project Credit Worthiness Assessment Summary CH0032 - Supply and Install of Powerhouse and Spillway Hydromechanical Equipment May 24, 2013							
	Turnover Score ⁽¹⁾	3rd Party Credit Rating and Outlook ⁽²⁾	Preliminary Nalcor Rating ⁽³⁾	Post-Balance Sheet and Ratio Analysis ⁽⁴⁾		Final Nalcor Rating ⁽⁵⁾	Conclusion ⁽⁵⁾
				Ratio Score	Comments		
Alstom Power and Transport Canada and Tyrell Engineering Limited, a Consortium ⁽⁶⁾	124.59x	No ratings available for Alstom Canada; Parent (Alstom SA) has very high turnover, and is rated BBB/Negative (S&P) and Baa2/Negative (Moody's). No financial information or ratings for Tyrell Engineering.	MEDIUM	68%	No historical financial information was provided for the Canadian subsidiary, however, risks mitigated given guarantee from the parent company (Alstom SA), who show ratio score of 68%. The bid was submitted as a consortium, with Tyrell Engineering Limited. Tyrell were unwilling to provide financial information and the consortium were unwilling to provide one joint bid. Therefore we cannot assess any further, and while Alstom would rank a MEDIUM/HIGH on their own, we are assessing LOW, in the absence of complete information for all bidders.	LOW	Not Creditworthy
Andritz Hydro Canada Inc.	1.42x	No ratings available.	LOW	84%	Strong weighted credit score with financially strong parent company. Tests 3 and 4 indicate <u>no concern</u> .	MEDIUM/HIGH	Partially creditworthy - Letter of credit (10%), performance bond with Nalcor rider (50%) and holdback or retention bond (10%)
Ganotech-Canmech, partnership ⁽⁷⁾	7.36x	No rating available.	MEDIUM	100%	Weighted credit score of 100%, or HIGH. Tests 3 and 4 indicate <u>no concern</u> . Final rating is MEDIUM/HIGH. This is assuming Joint and Several liability and guarantees from Peter Kiewit Infrastructure Co. and Group Canmech Inc.	MEDIUM/HIGH	Partially creditworthy - Letter of credit (10%), performance bond with Nalcor rider (50%) and holdback or retention bond (10%). Parent guarantees from Peter Kiewit Infrastructure Co. and Group Canmech Inc.
KHNP-Daewoo, partnership ⁽⁸⁾	56.35x	Daewoo not rated, but publicly traded; KNHP is not publicly traded, however is rated, A+ Stable (S&P) and A1 Stable (Moody's)	HIGH	68%	Good weighted credit score, at the high end of MEDIUM/HIGH. Sovereign backing, Tests 3 and 4 indicate <u>no concern</u> . Overall, MEDIUM/HIGH rating	MEDIUM/HIGH	Partially creditworthy - Letter of credit (10%), performance bond with Nalcor rider (50%) and holdback or retention bond (10%)

(1) The minimum threshold for scoring above LOW on the turnover test is annual sales of at least 3.0x contract value. (See Test 1 - Guidelines for Credit Worthiness Verification)

(2) Reference to 3rd party ratings here means publically available credit rating reports from Standard and Poors, Moody's, Fitch, DBRS or Dunn & Bradstreet (See Test 2 -Guidelines for Credit Worthiness Verification), if available and/or applicable (i.e. if company is rated)

(3) Companies failing the turnover test receive a preliminary rating of LOW. For companies that pass the test, the preliminary rating is based on the magnitude of the turnover score and an assessment of any 3rd party credit information, if available. For a company that passes the turnover test, the lack of third party information for a Company, or 3rd party information that causes concern, results in a preliminary preliminary rating of MEDIUM

(4) As outlined in the Guidelines for Creditworthiness Verification, a post-balance sheet review (Test 3) and a ratio analysis (Test 4) are used to refine the preliminary rating. The ratio analysis results in a weighted average credit score for the company, which serves as a measure of financial capacity

(5) The final rating is determined after the Ratio Analysis and Post-Balance Sheet review. Ratings are as per Evaluation Matrix in Guidelines for Credit Worthiness Verification - Page 14

(6) Alstom Canada provided financial information Alstom SA, the global holding company in France. Alstom is a investment grade company with significant financial capacity. The turnover and ratio score presented here are for Alstom. We do not have any financial information on Tyrell.

(7) Financial analysis of Ganotech performed on Peter Kiewit Infrastructure Co., the parent company. Financial analysis of Canmech performed on Group Canmech Inc., the parent company. Turnover and Ratio scores represent a weighted average of the individual scores for each company; 75% for Ganotech and 25% for Canmech; Therefore, the weighted average presented represents the financial capacity of the group as a whole, assuming joint and several liability

(8) Turnover and Ratio scores represent a 50:50 weighted average of the individual scores for each company. Therefore, the weighted average presented represents the financial capacity of the group as a whole, assuming joint and several liability

Appendix 14

Technical Evaluation Matrix

Package # 505573-CH0032 Package Description: S/I Powerhouse Hydro/Mechanical Equipment

Contract Administrator: R Anderson
 Lead Technical : Bruce Drover
 Lead Commercial: E. Over
 Area Manager: Luc Turcotte

NOTE: Each subsection is rated on a scale 1 - 10 (rating) then multiplied by the weighted value (weighting) for the item (within the evaluation subsection) to get the item value.

Section 2 Technical

Lead Technical: Bruce Drover

Weighted value:

28%

Criteria:

- 1 Spillway Hydro- Mechancial Acceptability
- 2 Spillway Electrical Building Acceptability
- 3 Intake Hydro-Machancial Acceptability
- 4 Draft Tube Hydro-Mechancial Acceptability
- 5 Trash Cleaner Acceptability
- 6

item wgtg

25%
20%
25%
15%
15%
100%

x
x
x
x
x
x

Weighted value
Points value

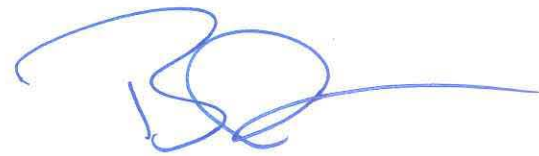
Habs		Sens		Leafs		Jets		Bidder 5		Comments:
Rating 0-10	item value	Rating 0-10	item value	Rating 0-10	item value	Rating 0-10	item value	Rating 0-10	item value	
	= 0.00		= 22.00		= 25.00		= 0.00		= 0.00	
	= 0.00		= 19.00		= 16.00		= 0.00		= 0.00	
	= 0.00		= 22.00		= 25.00		= 0.00		= 0.00	
	= 0.00		= 13.00		= 15.00		= 0.00		= 0.00	
	= 0.00		= 14.00		= 14.00		= 0.00		= 0.00	
	= 0.00		= 0.00		= 0.00		= 0.00		= 0.00	
0.00	0.00	0.00	90.00	0.00	95.00	0.00	0.00	0.00	0.00	
	X		X		X		X		X	
	28%		28%		28%		28%		28%	
	0.00		24.75		26.13		0.00		0.00	

Bruce Drover
 14-JUN-2013

Appendix 14A - Technical Backup to Weighted Evaluation Criteria						
RFP CH0032		RFP Name: S/I Powerhouse Hydro-Mechanical Equipment				
		Habs	Sens	Leafs	Jets	Bidder 5
Evaluation Plan Appendix 14a	Max Score	Score	Score	Score	Score	Score
A. Spillway Hydro-Mechanical						
1. Experience with design type & capacity	6.00	6	6	6	4	
2. Selection of material and components	8.00	7	5	8	6	
3. Proven design and reliability	8.00	7	8	8	6	
4. Maintainability	2.00	2	2	2	1	
5. Spare parts availability	1.00	1	1	1	0.5	
Score	25.00	23	22	25	17.5	0
6. Compliance with Specifications (Pass/Fail Multiplier)	(1 or 0)	1	1	1	0	
Total Evaluated Score (Score x Multiplier)		23	22	25	0	-
B. Spillway Electrical Building						
1. Experience with design type & capacity	5.00		5	4		
2. Selection of material and components	6.00		5	5		
3. Proven design and reliability	6.00		6	4		
4. Maintainability	2.00		2	2		
5. Spare parts availability	1.00		1	1		
Score	20.00	0	19	16	0	0
6. Compliance with Specifications (Pass/Fail Multiplier)	(1 or 0)	0	1	1	1	
Total Evaluated Score (Score x Multiplier)		0	19	16	0	-
C. Intake Hydro-Mechanical						
1. Experience with design type & capacity	6.00	5	6	6	4	
2. Selection of material and components	8.00	7	5	8	6	
3. Proven design and reliability	8.00	7	8	8	6	
4. Maintainability	2.00	2	2	2	1	
5. Spare parts availability	1.00	1	1	1	0.5	
Score	25.00	22	22	25	17.5	0
6. Compliance with Specifications (Pass/Fail Multiplier)	(1 or 0)	1	1	1	0	
Total Evaluated Score (Score x Multiplier)		22	22	25	0	-


14-06-2013

Appendix 14A - Technical Backup to Weighted Evaluation Criteria						
RFP CH0032	RFP Name: S/I Powerhouse Hydro-Mechanical Equipment					
		Habs	Sens	Leafs	Jets	Bidder 5
Evaluation Plan Appendix 14a	Max Score	Score	Score	Score	Score	Score
D. Draft Tube Hydro-Mechanical						
1. Experience with design type & capacity	4.00	4	4	4	3	
2. Selection of material and components	4.00	4	2	4	3	
3. Proven design and reliability	4.00	4	4	4	3	
4. Maintainability	2.00	2	2	2	2	
5. Spare parts availability	1.00	1	1	1	0.5	
Score	15.00	15	13	15	11.5	0
6. Compliance with Specifications (Pass/Fail Multiplier)	(1 or 0)	1	1	1	0	
Total Evaluated Score (Score x Multiplier)		15	13	15	0	-
E. Trash Cleaner						
1. Experience with design type & capacity	4.00	4	4	4	4	
2. Selection of material and components	3.00	3	3	3	3	
3. Proven design and reliability	3.00	2	2	2	2	
4. Maintainability	4.00	4	4	4	4	
5. Spare parts availability	1.00	1	1	1	1	
Score	15.00	14	14	14	14	0
6. Compliance with Specifications (Pass/Fail Multiplier)	(1 or 0)	1	1	1	1	
Total Evaluated Score (Score x Multiplier)		14	14	14	14	-
Score-Based Conclusion	100.00	N/C	90	95	N/C	???


 14-06-2013

Technical Bid Evaluation			Supply / Install Powerhouse and Spillway Hydro-Mechanical Equipment				Revision No.: 01			
			Package No.: CH0032		Project Title: LCP-MUSKRAT FALLS		Rev. Date.: 2013-06-13			
			Tag No.:		Client: NALCOR		Project No.: 505573			
Bidder:			HABS		SENS		LEAFS		Jets	
Item Number	Description	Specified Value or Reference	Proposed	Compliant	Proposed	Compliant	Proposed	Compliant	Proposed	Compliant
1	GENERAL TECHNICAL REQUIREMENTS									
	The bidder must acknowledge that there are no exceptions to the technical specifications (TS).	ACCEPT		K		K		K		N
	The bidder must acknowledge that there are no exceptions to the scope of works (SOW).	ACCEPT	4 of 8 S2 Stoplogs 8 of 16 S3 Stoplogs 5 of 10 S4 Stoplogs 4 of 8 DFT Stoplogs	N	5 of 10 S4 Stoplogs	N	5 of 10 S4 Stoplogs 4 of 8 DFT Stoplogs	N	4 of 8 DFT Stoplogs	N
	The technical requirements of the bid and subsequent execution of the SOW are summarized in the Supplier Document Requirements List (SDRL).	ACCEPT	Bidder agrees in principle with this requirement. In general, further discussion shall take place in order to negotiate a timetable that would be mutually beneficial to all parties involved.	N	Bidder acknowledges the content of Exhibit 4 and is prepared during contract execution to supply all the documentation as listed in this Exhibit. Bidder is not in a position within the RFP time frame to supply the complete and detailed MDL. The actual MDL – Master Document List will be generated based on the requirements of Exhibit 4 at the time of the project execution after Contract Award within the first few weeks. Bidder has demonstrated as part of the execution of the other packages, its understanding of SLI/Nalcor Energy requirements and has shown its adherence to	N	Marked up SDRL provided. No statement made about bidders acceptance of SDRL. Agreement with items not marked up to be clarified.	N	"We reviewed the Supplier Document Requirement in Exhibit 4. As a result of our review, We have no comments on the Supplier Document Requirements "	N
	The bidder shall make all necessary arrangements to undertake the SOW within the overall project milestone as illustrated in the Milestone Schedule (MS) – Exhibit 9.	ACCEPT								
2	GENERAL TECHNICAL QUESTIONNAIRE									
	The bidder shall provide the information listed below to the extent that it describes the systems being provided. Information not provided shall be provided after Award as listed in the SDRL.	ACCEPT								
3	SPILLWAY STOPLOGS									
3.1	SPILLWAY UPSTREAM STOPLOGS (TEMPORARY) - EMBEDDED PARTS									
3.1.1	Weight of embedded parts (without anchors)	129 000 kg ea.	33039 kg	Y	17,640_kg	Y	217 475 kg	Y	53,600 kg	Y
3.1.2	Loaded support bumper path profile/depth/moment of inertia	mm4	Missing Section Carbon steel, rectangular (125mm x 170mm) Stainless steel, rectangular (100mm x 200 mm) / 11300mm / 28017mm4 MISSING Carbon steel, rectangular (12.5mm x 170mm) Stainless steel, rectangular (100mm x 200 mm) / 6000mm / 17473mm4 MISSING Carbon steel, rectangular (12.5mm x 170mm) Stainless steel, rectangular (100mm x 200 mm) / 6000mm / 17473mm4 MISSING Carbon steel, rectangular (12.5mm x 170mm) Stainless steel, rectangular (100mm x 200 mm) / 6000mm / 17473mm4	K	1/150mm/2E+07mm ⁴	Y	WT / 233 mm/29.4X10 ⁶ mm4	Y	200/300mm/1.28x10 ⁶ mm4	K
3.1.3	Guide support bumper path profile/depth/moment of inertia	VTS	See 3.1.5	VTS	Rect./10_mm/31233mm ⁴	VTS	N/A / N/A mm/ N/A mm4	VTS	200/90mm/2.77x10 ⁶ 6mm4	VTS
3.1.4	Back guide/roller paths profile/depth/moment of inertia	VTS	Carbon steel: rectangular (12,5 mm x 150 mm) Stainless steel: rectangular (12,5 mm x 100 mm) / 40700 mm / 157878 mm4	VTS	T/150_mm/1.6E+07mm ⁴	VTS	L / 200 mm/ 15.6X10 ⁶ mm4	VTS	200/200mm/4.6x10 ⁶ 7 mm4	VTS
3.1.5	Side guides profile/depth/moment of inertia	VTS	Carbon steel: I-beam made of plates (19 mm x 150 mm, 150 mm x 19 mm, 16 mm x 150 mm) Stainless steel: rectangular (10.0 mm x 150 mm) / 40700 mm / 42150094 mm4	VTS	T/55_mm/1E+06mm ⁴	VTS	FB / 250 mm/115.6X10 ⁶ 6mm4	VTS	200/90mm/2.77x10 ⁶ 6mm4	VTS
3.1.6	Sill beam profile/depth/moment of inertia	mm4	Carbon steel: I-beam (12x5-1/4) Stainless steel: rectangular (10 mm x 95 mm) / 13200 mm / 113300000 mm4	Y	1/150_mm/1.9E+07mm ⁴	Y	S / 250 mm/ 51.4X10 ⁶ mm	Y	200/300mm/1.28x10 ⁶ 8mm4	Y
3.1.7	Lintel beam profile	N/A	Not applicable	N/A	there is no lintel beam	N/A	N/A	N/A	N/A	N/A
3.1.8	Loaded support bumper path anchors/vertical spacing	450 mm A-307	22 mm Ø / 600mm	K	25 mm Ø / 600 mm	K	32 mm □ / 300 mm	Y	22 mm □ / 600 mm	600
3.1.9	Guide support bumper path anchors/vertical spacing	600 mm A-307	See 3.1.11	Y	25 mm Ø / 600 mm	Y	N/A mm □ / N/A mm	Y	22 mm □ / 600 mm	600
3.1.10	Back roller/guide paths anchors/vertical spacing	600 mm A-307	22 mm Ø / 600mm	Y	25 mm Ø / 600 mm	Y	25 mm L / 600 mm	Y	22 mm □ / 600 mm	600
3.1.11	Side guides anchors/vertical spacing	600 mm A-307	22 mm Ø / 600mm	Y	25 mm Ø / 600 mm	Y	22 mm □ / 600 mm	Y	22 mm □ / 600 mm	600
3.1.12	Sill beam anchors/ horizontal spacing	450 mm A-307	22 mm Ø / 600mm	Y	25 mm Ø / 600 mm	Y	22 mm □ / 600 mm	Y	22 mm □ / 600 mm	600
3.1.13	Lintel beam anchors/ horizontal spacing	N/A	NA	N/A	20 mm Ø / 600 mm	N/A	mm □ / mm	N/A	N/A mm / N/A mm	N/A
3.1.14	Material specification of sealing faces	A-240 SS-304	ASTM A276 type 304	Y	A276-304 or 00Cr19Ni or equiv.	Y	A276, 304 L	Y	ASTM A276 Type 304	Y
3.1.15	Thickness of sealing faces	10 mm	Back roller faces: 12,5 mm, Other faces: 10 mm	Y	16mm	N	10 mm	Y	16mm	Y
3.1.16	Material specification of bumper tracks	300/350W	CSA G40.21-04 300 WT	Y	A529Gr50 or Q345 or equivalent	N	CSA G40.21 – 300W	Y	ASTM A240 Type 304	Y
3.1.17	Thickness of bumper tracks	12 mm	18mm	K	10+10 mm	Y	18 mm	K	16mm	Y
3.1.18	Hardness of bumper tracks	92-107 BHN	145 HB	Y	BHN170	Y	100 – 140 BHN	Y	187	Y
3.1.19	Material specification of backing members	VTS	Not applicable	VTS	A529Gr50 or Q345 or equivalent.	VTS	CSA G40.21 – 300&350W	VTS	ASTM A36	VTS
3.1.20	Second stage concrete volumes	570 m3	122 m ³	Y	209 95_m ³ /bay; or 1045 [AH-Q6] [high?]	Y	680-m ³ - Q5 clarification answer 132 m3 per temporary stoplog slot	Y	150m ³	Y
3.1a	SPILLWAY STOPLOGS (PERMANENT) - EMBEDDED PARTS									
3.1a.1	Weight of embedded parts (without anchors)	30 500 kg ea.	24,881 kg	Y	27,760_kg	Y	158 350 kg	Y	30,700 kg	Y



Technical Bid Evaluation			Supply / Install Powerhouse and Spillway Hydro-Mechanical Equipment								Revision No.: 01	
			Package No.: CH0032				Project Title: LCP-MUSKRAT FALLS				Rev. Date.: 2013-06-13	
			Tag No.:				Client: NALCOR				Project No.: 505573	
Item Number	Description	Specified Value or Reference	Bidder: HABS		SENS		LEAFS		JETS		Proposed	Compliant
			Proposed	Compliant	Proposed	Compliant	Proposed	Compliant	Proposed	Compliant		
3.7.13	Load bearing guides loading – normal operating conditions	VTS	66MPa	Y	30 N/mm ²	Y	313 MPa (HERTZ CONTACT STRESS)	Y	11MPa	Y		
3.7.14	Load bearing guides loading – unusual operation conditions	VTS	75MPa	Y	20 N/mm ²	Y	N/A MPa (HERTZ CONTACT STRESS)	Y	15MPa	Y		
3.7.15	Material specification of bumpers	VTS	ASTM B584-C92300	Y	A276-304 or 00Cr19Ni or equiv.	Y	BRONZE	Y	ASTM B21	Y		
3.7.16	Bumper loading – normal operating conditions	VTS	136MPa	Y	2 N/mm ²	Y	2.6 MPa	Y	0.4MPa	Y		
3.7.17	Bumper loading – unusual operation conditions	VTS	Not applicable * contact pressures need not to be verified under exceptional conditions	Y	19 N/mm ²	Y	3.4 MPa	Y	0.6MPa	Y		
3.7.18	Description of spring-loaded rollers	VTS	Not applicable	Y	Rubber Spring	Y	N/A	Y	N/A	Y		
3.7.19	Material specification of Filling Valve	N/A	Not applicable	N/A	CS6 (cast steel) A387 or equiv.	N/A	N/A	N/A	N/A	N/A		
3.7.20	Material specification of Filling Valve seat	N/A	Not applicable	N/A	A387 or equiv.	N/A	N/A	N/A	N/A	N/A		
3.7.21	Hoist load required to lift Stoplog:											
3.7.21.1	At balanced pressure	11 000 kg	13000kg	Y	14,700 kg (To be optimized during detail design)	K	20 800 kg (MOBILE CRANE)	Y	27000kg	Y		
3.7.21.2	At 2.0 m differential pressure	22 000 kg	19500kg	N/A	33,100 kg	N/A	N/A	N/A	61000kg	N/A	Missing / High ? N/A because not specified to be removed under 2m WC pressure.	
3.8	SPILLWAY LIFT BEAM FOR TYPE S4 STOPLOGS											
3.8.1	Height of Lift Beam	500 mm	3154mm	Y	2.20_m	Y	2.2 m	Y	1.2m	Y		
3.8.2	Weight of Lift Beam	5 000 kg	2078kg	Y	2,500 kg	Y	3200 kg	Y	9300kg	Y	Heavy ?	
3.8.3	Latching mechanism description		Lifting Spec (from HNA)	Y	Hook, engaged mechanically	Y	COUNTER-WEIGHT MECHANISM TO ENGAGE HOOKS A NYLON ROPE TO DISENGAGE MANUALLY	Y	Balance Weight	Y		
4	SPILLWAY GATES											
4.1	SPILLWAY GATE											
4.1.1	Material specification	300W	CSA G40.21-04 350 WT	Y	A570-50 or CS50 or equiv.	N	CSA G40.21 – 300 / 350W	Y	CBA G40	K		
4.1.2	Thickness of skin plate	29-25 mm	25mm	Y	24/16/12 mm	Y	22 mm	Y	30mm	Y		
4.1.3	Minimum thickness of structural parts	10 mm	12.5mm	Y	10 mm	Y	10 mm	Y	12mm	K		
4.1.4	Height of Spillway Gate (seals compressed)	23 000 m	23000mm	Y	23,010 mm	Y	23 000 mm	Y	23000mm	Y		
4.1.5	Number of gate sections	5 - 6	7 (seven)	Y	6	Y	5	Y	5	Y		
4.1.6	Lintel seal Elevation	N/A	Not applicable	N/A	no lintel seal	N/A	N/A	N/A	N/A m	N/A		
4.1.7	Overall width of gate	11 500 mm	11952mm	Y	11,300 mm	Y	11 670 mm	Y	11550mm	Y		
4.1.8	Overall depth of gate (seal face to back of gate)	1 500 mm	1573mm	Y	1,650 mm	Y	1570 mm	Y	1496mm	Y		
4.1.9	Side seal distance between seal centres	10 800 mm	10750mm	Y	10,600 mm (limit)	K	10 720 mm	Y	10610mm	N		
4.1.10	Material specification of wheel and BHN	ASTM A504-C 321/363 BHN	ASTM A504 Classe C, 321 363 HB	Y	ASTM A-504 Class C_321 BHN	Y	ASTM A504, CLASS C, 321 TO 363 BHN	Y	ASTM A504,Class C and 363	Y		
4.1.11	Wheel path centre distance	11 000 mm	11120mm	Y	11,050 mm	Y	11 120 mm	Y	11100mm	Y		
4.1.12	Number of wheels each gate section	2 to 6	4 (7x4 total)	Y	4 (6x4 total)	Y	#1:4/ #2:4/ #3:4/ #4:2/ #5:0 (14 TOTAL)	Y	22	Y		
4.1.13	Wheel diameter	650 mm	750mm	Y	600 mm (flat face Wheel not acceptable)	N	813 mm	Y	762mm	Y		
4.1.14	Wheel shaft diameter	240 mm	280mm	Y	280 mm	Y	260 mm	K	260mm			
4.1.15	Wheel bearing make/model number	TIMKEN/SKF	_SKF 32056 X/_DF	Y	SKF for equiv 2311-15 CC 3033 (Cylindrical roller Bearing not acceptable)	N	SKF /32052	K	FAG / 23152-MB			
4.1.16	Wheel loading – normal operating conditions	125 000 kg	127650kg	N	245 000 kg (Wheel need to be equally shared)	N	195 275 kg	Y	160000kg	N		
4.1.17	Wheel loading – unusual operation conditions	130 000 kg	180278kg	Y	275,400 kg	Y	236 415 kg	Y	208000kg	Y		
4.1.18	Material specification of bumpers	VTS	ASTM A514 Gr. F	Y	ASTM A473 Type 420 or equiv.	Y	BRONZE	Y	ASTM B21	Y		
4.1.19	Bumper loading – normal operating conditions	VTS	277 MPa	Y	30kN	Y	N/A	Y	8MPa	Y		
4.1.20	Bumper loading – unusual operation conditions	VTS	Not applicable **contact pressures need not to be verified under exceptional conditions	Y	795kN	Y	N/A	Y	11MPa	Y		
4.1.21	Static weight of gate with seals	178 000 kg	172614kg	Y	169,800 kg	Y	153 000 kg	Y	227000kg	Y		
4.1.22	Maximum hoist load required to open gate	300 000 kg	275000kg	Y	245 000 kg (low, to be revised during detail design)	K	214 500 kg (low, to be revised during detail design)	K	320000kg	Y		
4.1.23	Maximum exceptional hoist load (with gate jammed)	VTS	605000kg	Y	670 000 kg (low, to be revised during detail design)	K	637 525 kg	Y	960000kg	Y		
4.1.24	Maximum load applied to hoist during emergency closure	VTS	396800kg	N	335 000 kg	K	153 000 kg	Y	240000kg	K		
4.1.25	Minimum residual closing force during emergency closure	VTS	157700kg	N	133 250 kg	K	110 900 kg	K	138000kg	Y		
4.1.26	Lift pin diameter	VTS	200mm	Y	160 mm	Y	300 mm	Y	260mm	Y		
4.1.27	Material and type of seals	Elastomer PTFE	Sides:SBR 60-70 Shore A/ Elastomeric bulb J seals with PTFEBottom (between sections):SBR 60-70 Shore A/ Elastomeric bulb J seals Bottom (sill):SBR 50 Shore A/ Elastomeric flat sel	Y	SBR+PTFE J-Type	Y	SINGLE STEM, SOLID BULB, PTFE COATED	Y	C.R and J	N		
4.1.28	Maximum hydrostatic load on gate	3 000 000 kg	271	Y	33,000kN	Y	230.5 kPa	Y	266kPa	Y		
4.1.29	Force required to start gate	270 000 kg	275000kg	Y	235,000 kg	Y	214 500 kg	Y	880000kg	N		
4.2	SPILLWAY GATE - EMBEDDED PARTS											
4.2.1	Weight of primary embedded anchors and template steel/gate	VTS	13471 kg	Y	60 000 kg (Welding pad type anchors not acceptable)	N	7000 kg	Y	3300 and 3,900kg	N		
4.2.2	Number of embedded anchors per lower lined side guide	VTS	1200	N	300	Y	4760 kg	Y	1049	Y		
4.2.3	Number of embedded anchors per upper side guide	VTS	1288	N	211	Y	N/A	Y	220	Y		
4.2.4	Number of embedded anchors per sill beam	VTS	102	Y	60	Y	1080 kg	Y	108	Y		
4.2.5	Number of embedded anchors per lintel beam	N/A	Not applicable	Y	80	N/A	N/A	Y	N/A	Y		
4.2.6	Weight of embedded parts (without anchors) per gate	71 500 kg	92773 kg	Y	50,000 kg	Y	83 900 kg	Y	78500kg	Y		
4.2.7	Loaded roller paths profile/depth/moment of inertia	mm4	Carbon steel: I-beam made of plates (57mm x 250mm, 300mm x 25mm, 31,5mm x 260mm) / 40500mm / 692835850mm4	Y	1/300mm/2.6E+08mm ⁴	Y	WT / 528 mm/ 2214X10 ⁶ mm4	Y	220880mm2 363 x 909mm4	K		
4.2.8	Guide roller paths profile/depth/moment of inertia	VTS	_See 4.2.10	Y	1/150mm/1.7E+07mm ⁴	Y	N/A / N/A mm/ N/A mm4	Y	200/90mm/2.77x10 ⁶ 6mm4	Y		
4.2.9	Back guide paths profile/depth/moment of inertia	VTS	Carbon steel: rectangular (25mm x 150mm) Stainless steel: rectangular (10mm x 200mm) / 46000mm / 611436mm4	Y	-	Y	L / 203 mm/18 X 10 ⁶ mm4	Y	200/300mm/1.2x10 ⁶ 8 mm4	Y		

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Technical Bid Evaluation table with columns: Item Number, Description, Specified Value or Reference, Bidder: (HABS, SENS, LEAFS, Jets), Proposed, Compliant, and Revision/Date/Project No. The table lists various mechanical equipment specifications and their evaluation results across multiple bid categories.

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Technical Bid Evaluation			Supply / Install Powerhouse and Spillway Hydro-Mechanical Equipment				Revision No.: 01			
			Package No.: CH0032		Project Title: LCP-MUSKRAT FALLS		Rev. Date.: 2013-06-13			
			Tag No.:		Client: NALCOR		Project No.: 505573			
Item Number	Description	Specified Value or Reference	Bidder: HABS		SENS		LEAFS		JETS	
			Proposed	Compliant	Proposed	Compliant	Proposed	Compliant	Proposed	Compliant
5.8.5	Number of gate sections	4 - 5	8 (eight)	Y	5	Y	5	Y		Y
5.8.6	Lintel seal Elevation	14.05 m	14,05m	Y	14.05_m	Y	14.05 m	Y	EL.(+)-14.05m	Y
5.8.7	Overall width of gate	7 500 mm	7952mm	Y	7.500_mm	Y	7683 mm	Y	7500mm	Y
5.8.8	Overall depth of gate (seal face to back of gate)	1 200 mm	1570mm	Y	1.850_mm. A gate depth of 1,600mm can be confirmed without any change to the offered price.	Y	1550 mm	Y	1085mm	K
5.8.9	Side seal distance between seal centres	6 800 mm	6750mm	Y	6.600_mm Will be increase to fit seals with SS path	K	6700 mm	Y	6700mm	Y
5.8.10	Material specification of wheel and BHN	ASTM A504-C 321/363 BHN	ASTM A504 Classe C, 321 363 HB	Y	ASTM A-504 Class C_321 BHN	Y	ASTM, A504, CLASS C, 321 TO 363 BHN	Y	ASTM A504,CLASSC and 363	Y
5.8.11	Wheel path centre distance	7 100 mm	7120mm	Y	7.400_mm	Y	7120 mm	Y	7200mm	Y
5.8.12	Number of wheels each gate section (TOTAL)	50 Total	4 (four)	Y	4	Y	#1:8/ #2:8/ #3:4/ #4:4/ #5:4 (24 TOTAL)	Y	30	Y
5.8.13	Wheel diameter	500 mm	750mm	Y	700 mm (Flat Roll Wheel) is not acceptable	N	813 mm	Y	800mm	Y
5.8.14	Wheel shaft diameter	200 mm	280mm	Y	300 mm	Y	260 mm	Y	200mm	Y
5.8.15	Wheel bearing make/model number	TIMKEN/SKF	SKF 32056 X/ DF	Y	SKF or equiv 723052 X/DF (Spherical bearing are not acceptable)	N	SKF/32052	Y	FAG / 23040-E1	Y
5.8.16	Wheel loading – normal operating conditions	100 000 kg	149205kg	Y	149 700 kg (Wheels to be equally spaced)	N	197 869 kg	Y	130000kg	N
5.8.17	Wheel loading – unusual operation conditions	105 000 kg	175235kg	Y	160000 kg	N	242 938 kg	Y	150000kg	N
5.8.18	Material specification of bumpers	VTS	ASTM A514 Gr. F	VTS	ASTM A473 Type 420 or equiv.	VTS	N/A	VTS	ASTM B21	VTS
5.8.19	Bumper loading – normal operating conditions	VTS	400MPa	VTS	30kN	VTS	N/A	VTS	10.6MPa	VTS
5.8.20	Bumper loading – unusual operation conditions	VTS	Not applicable **contact pressures need not to be verified under exceptional conditions	VTS	194kN	VTS	N/A	VTS	14.2MPa	VTS
5.8.21	Weight of each gate section with seats		**8 sections	VTS		VTS		VTS		VTS
5.8.21.1	Lower Section (Sill)	VTS	1 – 15312,13_kg 2 – 15554,13kg 3 – 15830,13kg 4 – 16151,13kg 5 – 16529,13kg 6 – 16943,13kg 7 – 17508,13kg 8 – 22933,09kg	VTS	26000kg	VTS	21 400 kg	VTS	44,300 kg	VTS
5.8.21.2	Intermediate Section 1	VTS		VTS	25000kg	VTS	19 300 kg	VTS	32,300 kg	VTS
5.8.21.3	Intermediate Section 2	VTS		VTS	25000kg	VTS	17 300 kg	VTS	32,400 kg	VTS
5.8.21.4	Intermediate Section 3	VTS		VTS	25000kg	VTS	21 600 kg	VTS	21,500 kg	VTS
5.8.21.5	Upper Section (Top)	VTS		VTS	24000kg	VTS	23 100 kg	VTS	21,500 kg	VTS
5.8.22	Combined static weight of gate	125 000 kg	136761kg	Y	125,500_kg (May be raised during detail design)	K	102 700 kg (Q13 - Gate weight : 108 000 kg - Sheave blocks weight : 108 kN)	Y	152,000kg	Y
5.8.23	Maximum hoist load required to open gate	290 000 kg	225000kg	Y	220,000_kg (May be raised during detail design)	K	181-700 kg (Q12 - 2024 kN = 206 500 kg)	Y	220,000kg	N
5.8.24	Maximum exceptional hoist load (with gate jammed)	VTS	405000kg	K	440,000_kg	K	579 400 kg	Y	630,000kg	Y
5.8.25	Maximum load applied to hoist during emergency closure	VTS	136761kg	Y	220,000_kg	K	102 700 kg	Y	50,000kg	N
5.8.26	Minimum residual closing force during emergency closure	VTS	18250kg	K	900 kg (Not enough and not compliant)	N	30 650 kg	K	25,000kg	Y
5.8.27	Lift pin diameter	VTS	200mm	Y	180 mm	Y	356 mm	Y	220mm	Y
5.8.28	Material and type of seals	Elastomer PTFE	Lintel: SBR 60-70 shore A/Elastomeric bulb J-stem bulb seals with PTFESides:SBR 60-70 shore A/Elastomeric bulb J-seals with PTFEBottom (between sections):SBR 60-70 shore A/Elastomeric bulb J-sealsBottom (between sections):SBR 50 shore A/Elastomeric flat seal	Y	SBR+PTFE/ J-Type__	Y	SINGLE/DOUBLE STEM, SOLID BULB, PTFE COATED	Y	500 kPa	N
5.8.29	Maximum hydrostatic load on gate	5 000 000 kg	518kPa	VTS	0.663_N/mm²	Y	502 kPa	Y	450kPa	N
5.8.30	Force required to start gate opening	260 000 kg	225000kg	K	220,000 kg (May be raised during detail design)	K	181 700 kg	K	63000kg	N
5.9 INTAKE GATE - EMBEDDED PARTS										
5.9.1	Weight of primary embedded anchors and template steel/gate	VTS	9855kg	Y	42,800_kg- Q3 Clarifications - The primary anchors for the Intake Gate: 9,500 kg, Intake Bulkeads: 5,400 kg, Intake Trashrack: 6,500 kg. All are per bay.	Y	5800 kg Q2 Clarifications - 15 500 kg per intake bay.	Y	2400kg	Y
5.9.2	Number of embedded anchors per lower lined side guide	VTS	196	N	33,600_kg	Y	413	Y	490	Y
5.9.3	Number of embedded anchors per upper side guide	VTS	196	Y	77	Y	256	Y	292	Y
5.9.4	Number of embedded anchors per sill beam	VTS	58	Y	24	Y	36	Y	40	Y
5.9.5	Number of embedded anchors per lintel beam	VTS	58	Y	24	Y	36	Y	21	Y
5.9.6	Weight of embedded parts (without anchors) per gate	85 000 kg	69033kg	Y	20,000_kg	N	63 620 kg	Y	72500kg	Y
5.9.7	Loaded roller paths profile/depth/moment of inertia	mm4	Carbon steel: I-beam made of plates(57mm x 250mm, 300mm x 25mm, 25mm x 260mm)Stainless steel: rectangular (35mm x 230mm)/ 29080mm / 607813465mm4	Y	1/300mm/3.1E+06mm4 (Seems not large enough to be tested during detail design)	K	WT/500 mm/1887X106 mm4	Y	300/540mm/3.28x1 0^8mm4	Y
5.9.8	Guide roller paths profile/depth/moment of inertia	VTS	See 5.9.10	VTS	T/150mm/1.7E+07mm4	VTS	N/A/N/A mm/ M/A mm4	VTS	200 /90mm/3.49x10^6m m4	VTS
5.9.9	Back guide paths profile/depth/moment of inertia	VTS	Carbon steel: rectangular (25mm x 150mm) Stainless steel: rectangular (10mm x 200mm) / 29080mm / 611436 mm4	VTS	--	VTS	L/203mm/18 X10^6 mm4	VTS	200 / 294mm/1.32x10^7m m4	VTS
5.9.10	Side guides profile/depth/moment of inertia	VTS	Carbon steel: I-beam made of plates (25mm x 150mm, 120mm x 22,4mm, 25mm x 150mm) Stainless steel: rectangular (10mm x 130mm) / 51580mm / 36397405mm4	VTS	1/120mm/4.5E+06mm4	VTS	WT/300 mm/136 X10^6 mm4	VTS	200 /90mm/3.49x10^6m m4	VTS
5.9.11	Sill beam profile/depth/moment of inertia	mm4	Carbon steel: I-beam (10 x 4-5/8) Stainless steel: rectangular (10mm x 148,8mm) / 9120mm / 51400000 mm4	VTS	1/150mm/1.7E+07mm4	VTS	S/2500 mm/62 X10^6 mm4	VTS	200/270mm/2.05x1 0^7mm4	VTS

BT



Bid Evaluation Plan Appendix 5



Table with columns: Item Number, Description, Specified Value or Reference, Bidder, HABS, SENS, LEAFS, Jets, Proposed, Compliant. Rows include technical specifications for hoist beams, cables, motors, gearboxes, and hydraulic systems.



Bid Evaluation Plan Appendix 5



Technical Bid Evaluation			Title: Supply / Install Powerhouse and Spillway Hydro-Mechanical Equipment				Revision No.: 01			
			Package No.: CH0032		Project Title: LCP-MUSKRAT FALLS		Rev. Date.: 2013-06-13			
			Tag No.:		Client: NALCOR		Project No.: 505573			
Item Number	Description	Specified Value or Reference	Bidder: HABS		SENS		LEAFS		Jets	
			Proposed	Compliant	Proposed	Compliant	Proposed	Compliant	Proposed	Compliant
7.1.35.7	Full load current	VTS	See main pump 7.1.33A	N/A	see main pump 7.1.33.	N/A	see main pump 7.1.33	N/A	See main pump 7.1.33.	N/A
7.1.35.8	Motor manufacturer	VTS	See main pump 7.1.33	N/A	see main pump 7.1.33.	N/A	see main pump 7.1.33	N/A	See main pump 7.1.33.	N/A
7.1.35.9	Motor Class	VTS	See main pump 7.1.33	N/A	see main pump 7.1.33.	N/A	see main pump 7.1.33	N/A	See main pump 7.1.33.	N/A
7.1.35.10	Gearbox manufacturer	VTS	Dinamic Oil	Y	Dinamic Oil	Y	Dinamic Oil	Y	Dinamic Oil	Y
7.1.35.11	Gearbox drive ratio	VTS	~112	VTS	~112	VTS	~112	VTS	112	VTS
7.1.36	Controls									
7.1.36.1	PLC (Programmable Logic Controller) (Make)	Schneider	Siemens	K	Siemens	K	Siemens	K	Siemens	K
7.1.36.2	PLC (Programmable Logic Controller) (Model)	Modicon Quantum	S7-314C	K	S7-314C	K	S7-314C	K	S7-314C	K
7.1.36.3	HMI (Human Machine Interface) display (Make)	Nematron	Siemens	K	Siemens	K	Siemens	K	Siemens	K
7.1.36.4	HMI (Human Machine Interface) display (Model)	VTS	OP-77A	K	OP-77A	K	OP-77A	K	OP-77A	K
7.1.36.5	Control cabinet manufacturer	VTS	Rittal	K	Rittal	K	Rittal	K	Rittal	K
7.1.36.6	Detail of the control and instrumentation redundancy	VTS	Second PLC as spare	K	Second PLC as spare	K	Second PLC as spare	K	Second PLC as spare	K
7.1.36.7	Detail of the manual control system	VTS	Joystick, Buttons	K	Joystick, Buttons	K	Joystick, Buttons	K	Joystick, Buttons	K
7.2	TRASH CLEANER HOIST									
7.2.1	Hoist rail height above road deck	VTS	~8,25m	VTS	~8.25_m	VTS	~8.25m	VTS	8.25m	VTS
7.2.2	Hoist rail length	VTS	~7,50 travel distance m	VTS	~7.50_m (travel distance)	VTS	~7.5m (travel distance)	VTS	7.50 m (travel distance)	VTS
7.2.3	Hoist width	VTS	~8,80m	VTS	~8.80_m	VTS	~8.80m	VTS	8.8m	VTS
7.2.4	Hoist rail centre distance	5 500 mm	~9,25m	VTS	~9.25_m	VTS	~9.25m	VTS	9.25m	VTS
7.2.5	Total weight of hoist (inc. trolley, ropes and sheave blocks)	VTS	~9000kg	VTS	~9000_kg	VTS	~9000 kg	VTS	9000kg	VTS
7.2.6	Hoist rated capacity	50 000 kg	40000kg	Y	~40000_kg	Y	40000 kg	Y	40000kg	Y
7.2.7	Rope drum(s)									

Table with columns for Bidder (HABS, SENS, LEAFS, Jets) and Proposed items. Includes metadata at the top: Title 'Supply / Install Powerhouse and Spillway Hydro-Mechanical Equipment', Package No. 'CH0032', Project Title 'LCP-MUSKRAT FALLS', Client 'NALCOR', and Revision No. '01'. The table lists various electrical components with their specifications and compliance status.

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Bid Evaluation Plan Appendix 5



Technical Bid Evaluation			Title: Supply / Install Powerhouse and Spillway Hydro-Mechanical Equipment				Revision No.: 01			
			Package No.: CH0032		Project Title: LCP-MUSKRAT FALLS		Rev. Date.: 2013-06-13			
			Tag No.:		Client: NALCOR		Project No.: 505573			
Item Number	Description	Specified Value or Reference	Bidder: HABS		SENS		LEAFS		Jets	
			Proposed	Compliant	Proposed	Compliant	Proposed	Compliant	Proposed	Compliant
10.1.5.3	Airflow (each)	L/s	800 L/s	Y	800 L/s	Y	800 L/s	Y	800L/s	Y
10.1.5.4	Static Pressure	Pa	434 Pa	Y	434 Pa	Y	434 Pa	Y	434Pa	Y
10.1.5.5	Motor (each)	HP	1.5 HP	Y	1 HP	Y	1 HP	Y	1HP	Y
10.1.5.6	Octave Band Center Sound Power	dB	69 dB	Y	68 dB	Y	see attached	Y	77dB	Y
10.1.6	Engine Exhaust System									
10.1.6.1	Manufacturer		Security Chimney International	Y	Nelson	Y	CAT	Y	SelkirkMetalbestos	Y
10.1.6.2	Model		CIX Secure Stack	Y	FRD6540	Y	see attached	Y	IPS	Y
10.1.6.3	Temperature Rating	oC	1000 continuous deg C	Y	460 °C	Y	see attached	Y	540 deg C	Y
10.1.6.4	Insulation Rating			VTS	Later	VTS	see attached	Y	Double wall with 100 mm insulation	Y
10.1.7	Louvers									
10.1.7.1	Manufacturer		Ventex	Y	Ruskin	Y	Construction Specialities	Y	Construction Specialities	Y
10.1.7.2	Model		Wind driven 5" deep # 2590	Y	EmE 420DD	Y	RS-4300	Y	RS-4300	Y
10.1.7.3	Material Finish		Kinar	Y	Duracron	Y	Kynar 500 / Hylar 5000	Y	Kynar500/Hylar5000	Y
10.1.7.4	Performance Requirments		TBD	VTS	Vary with the size of the louver	Y	see attached	Y	Maxmum Airflow(L/s) 1600, 20853	Y
10.1.7.5	Free Area		TBD	VTS	Vary with the size of the louver	Y	see attached	Y	2.84, 3.17	Y
10.1.7.6	Static Pressure Drop	Pa	TBD	VTS	Vary with the size of the louver	Y	see attached	Y	27.4, 34.5 Pa	Y
10.1.8	Electrical Room Inlet Air Filter									
10.1.8.1	Manufacturer		G&F/Hardy Filtration	Y	Camfil Farr	Y	CAMFIL FARR	Y	Camfil Farr	Y
10.1.8.2	Model				V-Bank Glide Pack	Y	V-Bank Glide Pack	Y	V-Bank Glide Pack	Y
10.1.8.3	Thickness	mm	51 mm	Y	51 mm	Y	51 mm	Y	51 mm	Y
10.1.8.4	Airflow	L/s	1600 L/s	Y	1600 L/s	Y	1600 L/s	Y	1600L/s	Y
10.1.8.5	Filter Face Velocity	m/s	1.44 m/s	Y	1.44 m/s	Y	1.44 m/s	Y	1.44m/s	Y
10.1.8.6	Static Pressure Drop (Initial)	Pa	32 Pa	Y	32 Pa	Y	32 Pa	Y	32Pa	Y
10.1.8.7	Static Pressure Drop (Final)	Pa	248 Pa	Y	248 Pa	Y	248 Pa	Y	248Pa	Y
10.1.8.8	Filter MERV Rating		8	Y	8	Y	MERV 8	Y	MERV 8	Y
10.1.9	Duct Mounted Electric Heater									
10.1.9.1	Manufacturer		Thermolec	Y	Thermolec	Y	THERMOLEC	Y	Thermolec	Y
10.1.9.2	Model		Thermo-V	Y	Slip in	Y	THERMO-V	Y	Thermo-V	Y
10.1.9.3	Coil Material		Nickel chrome alloy	Y	Nickel chrome Alloy	Y	Nickel Chrome Alloy	Y	Nickel Chrome Alloy	Y
10.1.9.4	Airflow	L/s	400 L/s	Y	400 L/s	Y	400 L/s	Y	400L/s	Y
10.1.9.5	Capacity / Output	kW	12 kW	Y	12 kW	Y	12 kW	Y	12kW	Y
10.1.9.6	Control Type		SCR	Y	SCR	Y	SCR	Y	SCR	Y
10.1.9.7	Control Signal		0-10Vac	Y	0-10v dc	Y	0-10 VDC	Y	0-10 VDC	Y
10.1.10	HVAC Control System									
10.1.10.1	PLC (Programmable Logic Controller) Manufacturer		Omron	VTS	Delta	VTS	ALLEN-BRADLEY	VTS	SIEMENS	VTS
10.1.10.2	PLC (Programmable Logic Controller) Model		RP Sigma	VTS	Delta	VTS	1756-L32BWA	VTS	89-800-SIPLUS	VTS
10.1.10.3	HMI (Human Machine Interface) display Manufacturer		Schneider	Y	Delta	Y	ALLEN-BRADLEY	Y	SIEMENS	Y
10.1.10.4	HMI (Human Machine Interface) display Model			Y	Delta	VTS	2711P-T7C4D8	Y	MP377 PRO 15	Y
10.1.10.5	Control Panel Manufacturer		HMI/PCP170BB33K04 N00	Y	ControlPro Distributors	Y	HAMMOND	Y	not answered	VTS
10.1.10.6	Instrumentation / Sensor Manufacturer		ACI	Y	Delta	Y	GREYSTONE/AUTOTRON/JOHNSON	Y	not answered	VTS
10.1.10.7	Damper Actuator Manufacturer		Johnson Controls	Y	Belimo	Y	TBD AMI	VTS	not answered	VTS
10.1.10.8	Damper Actuator Model		M9208	Y	Various models	Y	TBD AMI	VTS	not answered	VTS

Specification Compliance Summary

Bidder:	1	2	3	4	5				
Compliant	Y	564	565	543	544	584	583	513	0
Technically Acceptable with Negotiated and Approved Deviations	K	77	94	94	73	120	120	120	0
Non Compliant and Not Acceptable	N	52	51	54	53	12	13	82	0
Not applicable to evaluation	N/A	167	101	101	107	154	107	154	0
Vendor to Specify	VTS	235	436	436	410	226	410	226	0

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13-06-2013

Approvals	Signature	Date	Remarks	Remarks	Remarks	Remarks	Remarks
Lead Engineer		2013-06-13	Mechanical design: Minor review for compliance. Mechanical compnents manufactured in Brasil: Will need to be surveyed.	Mechanical design: Technical acceptable but need to review several items for compliance (Overall gate and bulkhead diemnsions, hoist ropes, gate wheels, primary anchors). Main mechanical structures, welding, painting and assembling are done in Chinese facilities: Will need to be surveyed permanently.	Mechanical design: Minor review for compliance (steel plat thickness, service hoist). All mechanical components are fully manufactured in Canadian well known facilities.	Mechanical design: Insufficient information to review design approach for compliance (Most of equipment is quite oversized). All mechanical components are manufactured in Korea.	
Mechanical Lead		13-06-2013					
Electrical Lead		13-06-2013					
Engineering Manager		13-06-2013					
Package Lead		13-06-2013	NA	Acceptable.	Acceptable	Insufficient information provided to obtain passing score	
C1 Manager							
Recommendation:			Not Acceptable	Tecnically Acceptable	Tecnically Acceptable	Not Acceptable	

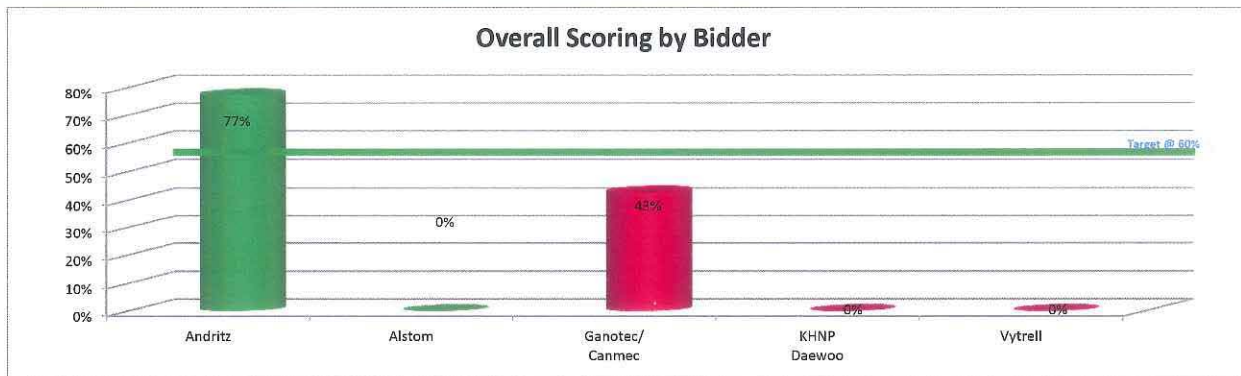
PMV/ME ENJ.

RFP #: CH0032		RFP Name: S/I Powerhouse Hydro/Mechanical Equipment														
	Weight	Max Score	Sens			Leafs			Sens			Leafs				
			Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments	Score	Weighted Score	Comments		
1i) - Bidder's quality policy statement and - list of current quality objectives.	0.7	5.0	4.5	0.18	policy statement and objectives issued	0.00	0.00		2.5	0.10	Ganotec-MUGA Fab Policy statement received. No objectives received.	0.00	0.00		0.00	
1ii) - Bidder's Master Documents List or the Table of Contents of your policy and procedures manual.	0.5	5.0	4.0	0.40	No procedures list provided	0.00	0.00		3.0	0.30	Canmec's QM TOC received Ganotec QM rec'd. Bidder clarified which manual applies. No apparent traceability between manual, QMS and certificate. See clarification question no. 92	0.00	0.00		0.00	
1iii) Bidder's current - Internal Audit Schedule. - External Audit Schedule	1.0	5.0	3.2	0.64	Audit schedules combined, previous years implementation suspect	0.00	0.00		3.0	0.60	Canmec Internal Audit schedule received. Ganotec's Audit schedule received.	0.00	0.00		0.00	
1iv) Bidder's third party ISO 9001:2008 registration, if available.	0.5	5.0	5.0	0.50	Very detailed scope definition specific to our scope of work.	0.00	0.00		2.0	0.20	Very confusing presentation of certificates across many companies. ISO 9001 certificate presented for Ganotec is a Integrated Management System between Ganotec and Muga Fab Inc., yet Execution Plan indicates that the QMS of Ganotec will serve as the foundation of their program.	0.00	0.00		0.00	
1v) Most Recent Management Review Minutes of Meeting.	1.0	5.0	3.0	0.60	Only Table of contents provided	0.00	0.00		2.5	0.50	Canmec Management Review minutes submitted. Ganotec submitted a Quality presentation when asked for Mgmt Review minutes.	0.00	0.00		0.00	
1vi) If ISO 9001:2008 registration is held, a copy of last third party surveillance report.	0.3	5.0	5.0	0.30		0.00	0.00		2.5	0.15	Audit report was conducted on a Project JV of three different organizations of which Ganotec was joint ventured with Muga Fab Inc.	0.00	0.00		0.00	
2) Briefly describe any processes employed to plan the activities related to the requested products / services. If available, provide typical examples of - Quality Plans and / or - Inspection and Test Plans.	0.4	5.0	5.0	0.40	Good submission of ITP's	0.00	0.00		3.0	0.24	Myriad of QP & ITP submissions submitted between Ganotec and Canmec	0.00	0.00		0.00	
3) Describe how this work relates to the total annual productive capacity of Bidder's company and that of Bidder's main suppliers.	0.5	5.0	3.5	0.35		0.00	0.00		2.0	0.20		0.00	0.00		0.00	
4) Briefly describe the processes used to control the design of the products / services to be supplied. Include references to the following processes: • Design Planning • Design Review • Design Verification • Design Validation • Design Changes	1.0	5.0	4.0	0.80		0.00	0.00		1.0	0.20		0.00	0.00		0.00	
5) Briefly describe the Bidder's Supplier / Sub-contractor selection process and any processes employed to monitor continued performance against contract requirements. In Bidder's response include a list of any services associated with the scope of work that would be sub-contracted out and where appropriate, the contract details for that Sub-Contractor.	1.0	5.0	4.5	0.90	List of subcontracted services provided in A16 as part of Commercial response. Supplier Assessment and Selection procedure included with response to questionnaire	0.00	0.00		2.0	0.40	List of subcontracted services provided in response to A16 question	0.00	0.00		0.00	
6) What techniques does the Bidder employ to verify that the product / service have been delivered appropriately and in accordance with the contract requirements? What verification records are generated?	0.4	5.0	4.0	0.32	Answer is acceptable and ITP's submitted are acceptable.	0.00	0.00		2.0	0.16		0.00	0.00		0.00	
7) Briefly describe the Bidder's records retention system and the normal records retained (or supplied to the client) as part of this product / service delivery. Bidder's response should make reference to records such as Material Test Reports, Non-destructive examination records, in process inspections and Factory Acceptance tests.	0.2	5.0	3.0	0.12		0.00	0.00		2.5	0.10		0.00	0.00		0.00	
8) What processes does the Bidder employ to ensure that inspection is performed and Measuring and Test Equipment is fully calibrated and functioning appropriately?	0.5	5.0	4.0	0.40		0.00	0.00		2.0	0.20		0.00	0.00		0.00	
9) When products / services do not meet requirements, what processes are employed to ensure timely resolution of the problem? If so, what records of the problem and solution are generated?	0.2	5.0	4.0	0.16	NCR procedure submitted	0.00	0.00		2.5	0.10		0.00	0.00		0.00	
10) Does the Bidder employ any continuous improvement processes or other methods to monitor evaluate and improve the quality of products / services provided? If so, briefly describe them. Include in your response details on the following: • Processes to monitor and measure effects of continuous improvement changes. • Processes for the evaluation and implementation of innovative and cost reduction ideas.	0.5	5.0	4.0	0.40		0.00	0.00		2.5	0.25		0.00	0.00		0.00	
11) Does the Bidder employ any processes to monitor internal / external activities to ensure conformance to procedures? If so, briefly describe them.	0.5	5.0	3.5	0.35		0.00	0.00		2.5	0.25		0.00	0.00		0.00	
12) Briefly describe the Bidder's Training Policy and any controls used to ensure personnel are competent to perform their defined functions and responsibilities.	0.5	5.0	3.5	0.35		0.00	0.00		2.0	0.20		0.00	0.00		0.00	
13) Briefly describe any servicing and / or product support required / recommended as part of the delivery of this equipment / service.	0.5	5.0	3.0	0.30		0.00	0.00		0.0	0.00		0.00	0.00		0.00	
14) Briefly describe any processes employed to monitor Customer Satisfaction and how these processes will be applied to the proposed scope of work.	0.2	5.0	4.0	0.16		0.00	0.00		2.0	0.08		0.00	0.00		0.00	
15) The Bidder shall confirm that it has reviewed and can comply with any Quality Assurance requirements outlined in the contract agreement and that the responses to this questionnaire are true and accurate.	0.1	5.0	5.0	0.10	QM Sign off	0.00	0.00		2.0	0.04	President sign off. Requested to have QM sign off but request was denied.	0.00	0.00		0.00	
Total Weighted Score With Design	10.0			7.73		0.00	0.00		4.27			0.00	0.00		0.00	
Preliminary evaluation scores based on requested objective documentary evidence submissions only as depicted by the colour blue.			77%			0%			43%			0%			0%	
Desk Top Study Score-Based Recommendation									Canmec-Design & Manufacturing Ganotec - Construction Exec & PM							

**Proponent must achieve a minimum Total Weighted Score of 60 percent to be considered acceptable.

Comments: (Overall impression of the Bidder and how the evaluation relates to the recommendation)
 Sens: Andritz Hydro's Quality submission was acceptable with responses provided by their Quality Manager who was able to provide appropriate details to applicable questions. The response to the questionnaire was supplemented with supporting QA procedures.
 Bidder 2:
 Leafs: The collaboration of players and required interface management represents a risk to the project. There is no sound evidence of coherent implementation of Quality Assurance. This is concerning regarding design control and associated interface between all parties.
 Bidder 4:
 Bidder 5:

Evaluation Rating	
Recommended	Green
Clarification / Pre Award Audit (Desk Top and/or Site) Recommended	Yellow
Not Recommended	Red
Scoring Guide:	
0 - Question not answered or no relevant information provided in response	
1 - Response does not meet key criteria	
2 - Response only meets a few of the key criteria	
3 - Response meets a majority of the key criteria	
4 - Response meets all key criteria	
5 - Response meets and exceeds key criteria	
Quality Representative: P. REID	
Date: 12 JUN 13	



Health and Safety Scoring Guide:												
0 - Question not answered or no relevant information provided in response 1 - Response does not meet key Criteria 2 - Response only meets a few of the key criteria 3 - Response meets a majority of the key criteria 4 - Response meets all key criteria 5 - Response meets and exceeds key criteria						Package Name: Supply and Install Powerhouse and spillway Mechanical Package No.: CH0032 Project: Lower Churchill Project						
Question Weight (%)	Ganotec		Alstom		Andritz		Vytrel		KHNP / Daewood		Bidder	
	Answer	Score	Answer	Score	Answer	Score	Answer	Score	Answer	Score	Answer	Score
Health and Safety												
2.0 HEALTH AND SAFETY MANAGEMENT PERFORMANCE - Please provide the following safety statistics, referencing the attached incident definitions and frequency calculation.												
10	4	8	3	6	1	2		0		0		0
3.0 WORKER'S COMPENSATION - Indicate the jurisdiction where you are registered. List your overall Worker's Compensation industry rating for the current year and past three (3) years. Attach a WCB clearance letter and experience rating statements for the past three years.												
3	4	2.4	4	2.4	4	2.4		0		0		0
4.1 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a certificate of recognition or is your health and safety management system certified by an outside agency? (DHSAS 18001, CSA Z-1000 etc.) If yes, provide a copy of the certificate.												
2	5	2	4	1.6	3	1.2		0		0		0
4.2 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your health and safety program have a policy statement that clearly outlines the Company's commitment to health and safety?												
3	4	2.4	4	2.4	4	2.4		0		0		0
4.3 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Has your company received an occupational health and safety stop work order, charges or equivalent from any regulator in the last three (3) years? If yes, provide details.												
3	3	1.8	4	2.4	1	0.6		0		0		0
4.4 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Please list the highest ranking safety professional in your organization; (attach résumé). Do you plan to have a safety representative(s) for this Work full time or part time (Y or N)? If "Yes", provide a résumé(s).												
3	3	1.8	3	1.8	4	2.4		0		0		0
4.5 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your health and safety management system address the following key elements? Management leadership and commitment; hazard/risk identification, evaluation and control; risk assessments on all critical and non-routine jobs/job functions; a permit to work system; ongoing inspection. If yes to any of these, reference appropriate Health and Safety manual section(s).												
8	4	6.4	4	6.4	4	6.4		0		0		0
4.6 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your health and safety management system include work practices and procedures, such as: Lockout and tagout; traffic control; excavation and trenching; confined space entry; hoisting and rigging; working near power lines; handling and transporting hazardous substances; unloading large/long materials (such as piles); vehicle recovery. If yes to any of these, reference appropriate Health and Safety manual section(s).												
8	4	6.4	4	6.4	4	6.4		0		0		0

Question Weight (%)	Ganotec		Alstom		Andritz		Vytrell		KHNP / Daewood		Bidder	
	Answer	Score	Answer	Score	Answer	Score	Answer	Score	Answer	Score	Answer	Score
Health and Safety												
4.7 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have written programs for the following? Duty to refuse work; fall protection; noise management; workplace violence; working alone; personal protective equipment (PPE); WHMIS (Workplace Hazardous Materials Information System); respiratory protection. If yes to any of these, reference appropriate Health and Safety manual section(s). In regards to respiratory protection, have your employees been: trained? fit tested? medically approved?	8	4	6.4	4	6.4	4	6.4	0	0	0	0	0
4.8 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you conduct medical exams for the following? Pre-employment; replacement job capacity; pulmonary; respiratory. If yes to any of these, reference appropriate Health and Safety manual section(s).	2	0	0	3	1.2	4	1.6	0	0	0	0	0
4.9 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a drug and alcohol program? If "Yes", does it include the following? Pre-employment testing; testing for cause; post incident testing; formalized arrangements with a collection and testing agency (if "Yes", provide testing agency information); does your drug and alcohol policy follow the guidelines as laid out in The Canadian Model for Providing A Safe Workplace – Alcohol and Drug Guidelines and Work Rule Version 2 – Effective October 1, 2010? If yes to any of these, reference appropriate Health and Safety manual section(s).	3	3	1.8	3	1.8	4	2.4	0	0	0	0	0
4.10 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Equipment (Tools, Supplies, Machinery and Sanitary Facilities): Do you have a written list of equipment requiring pre-use inspections? Do you have a documented list of equipment requiring scheduled servicing in accordance with manufacturer's recommendations, legislated requirements, and industry standards? Is frequency of equipment inspections and maintenance identified? Are corrections of deficiencies documented? Do you have follow-up mechanism for corrective actions? If yes to any of these, reference appropriate Health and Safety manual section(s).	4	4	3.2	4	3.2	4	3.2	0	0	0	0	0
4.11 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Orientation Program: Do you have a health and safety orientation program? Does the program include new, transferred and temporary workers? Does the program provide instruction on the following: employer health and safety responsibilities; employee health and safety responsibilities; obligation to refuse imminent danger work; progressive discipline policies and procedures; safe work practices and/or procedures; emergency response procedures; first-aid procedures; incident/near miss reporting; does your orientation program include a quiz? If yes to any of these, reference appropriate Health and Safety manual section(s).	5	4	4	4	4	4	4	0	0	0	0	0
4.12 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Incident Investigation: Do you have a written procedure for incident reporting and investigation? Do you utilize a root cause determination process such as "Tap-Root"? If yes to any of these, reference appropriate Health and Safety manual section(s).	5	4	4	4	4	4	4	0	0	0	0	0
4.13 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have an emergency response plan related to activities and specific locations? If yes reference appropriate Health and Safety manual section(s).	4	4	3.2	4	3.2	4	3.2	0	0	0	0	0

	Question Weight (%)	Ganotec		Alstom		Andritz		Vytrell		KHNP / Daewood		Bidder	
		Answer	Score	Answer	Score	Answer	Score	Answer	Score	Answer	Score	Answer	Score
Health and Safety													
4.14 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a policy pertaining to prohibited items on (e.g. knives, firearms)? Are all employees made aware of the prohibited items policy and is it enforced? If yes to any of these, reference appropriate Health and Safety manual section(s).	1	3	0.6	4	0.8	4	0.8		0		0		0
4.15 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you make reference to following legislative requirements where work is being performed?; violence policies and procedures; harassment policies and procedures. If yes to any of these, reference appropriate Health and Safety manual section(s).	1	4	0.8	4	0.8	4	0.8		0		0		0
4.16 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Do you have a policy or specific rules with respect to the use of personnel protective equipment (PPE)? Do you have a formal process in place for determining PPE requirements? If yes to any of these, reference appropriate Health and Safety manual section(s).	3	4	2.4	4	2.4	4	2.4		0		0		0
4.17 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Contractor Management: Do you pre-qualify subcontractors? Do you include subcontractors in: orientations, health and safety meetings, inspections, audits. If yes to any of these, reference appropriate Health and Safety manual section(s).	5	4	4	4	4	4	4		0		0		0
4.18 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Communications: Do you inform employees and subcontractors on Health and Safety alerts, programs, practices, procedures, rules, revisions and related information? Do you have a joint Health and Safety committee? Do you hold scheduled safety meetings, such as weekly general safety meetings for all crew and weekly departmental meetings for each department at all worksites? Are Health and Safety meeting minutes and attendance recorded? If yes to any of these, reference appropriate Health and Safety manual section(s).	5	4	4	4	4	4	4		0		0		0
4.19 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your Health and Safety program outline the requirements for supervisors and employees to conduct regular Health and Safety inspections of equipment and work conditions at all worksite(s)? If yes reference appropriate Health and Safety manual section(s).	3	4	2.4	4	2.4	4	2.4		0		0		0
4.20 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Does your Health and Safety program require the prompt reporting of hazardous conditions at all worksite(s)? If yes reference appropriate Health and Safety manual section(s).	5	4	4	4	4	4	4		0		0		0
4.21 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Health and Safety Training: Have your employees received the required Health and Safety training and retraining? Do you have a specific Health and Safety training program for supervisors? If yes to any of these, reference appropriate Health and Safety manual section(s).	3	4	2.4	4	2.4	4	2.4		0		0		0
4.22 HEALTH AND SAFETY SUPPLEMENTARY QUESTIONS - Training Records: Do you have Health and Safety training records for your employees? How do you verify competency of the training (job monitoring? written test? competency check? oral test? other?). Are all training records available upon request? If yes to any of these, reference appropriate Health and Safety manual section(s).	3	3	1.8	4	2.4	4	2.4		0		0		0
Score	100		76.20		76.40		71.80		0.00		0.00		0.00
Percentage			76.20%		76.40%		71.80%		0.00%		0.00%		0.00%
PASS/FAIL			PASS		PASS		PASS						

Minimum Pass Score is 70%


	Question Weight (%)	Ganotec		Alstom		Andritz		Vytrel		KHNP / Daewood		Bidder	
		Answer	Score	Answer	Score	Answer	Score	Answer	Score	Answer	Score	Answer	Score

Health and Safety

Evaluated By	Sean Lee 
Reviewed By	
Review Date	25-Apr-13

Health and Safety Scoring Guide:											
0 - Question not answered or no relevant information provided in response 1 - Response does not meet key Criteria 2 - Response only meets a few of the key criteria 3 - Response meets a majority of the key criteria 4 - Response meets all key criteria 5 - Response meets and exceeds key criteria				Package Name: Supply and Install Powerhouse and spillway Mechanical Package No.: CH0032 Project : Lower Churchill Project							
Question Weight (%)	Ganotec		Alstom		Andritz		Vytrell		KHNP / Daewood		
	Answer	Score	Answer	Score	Answer	Score	Answer	Score	Answer	Score	
Health and Safety											
PASS/FAIL	PASS		PASS		PASS		Could Not Complete		Could Not Complete		
	No further clarification required. H&S Management System provided meets the requirements of the evaluation criteria to obtain a pass mark.		H& Management System provided meets the requirements for a passing rate.		H& Management System provided meets the requirements for a passing rate.		Only provided a table of contents and did not provide a copy of the H&S Management System		Could not evaluate, the documents provided were not robust enough to provide adequate evaluation.		
	OHSAS 18001 Registered and certificate provided.		Over the last 3 years Alstrom has had 20 Lost Time Injuries. What actions has been taken to ensure this trend does not continue. Have the trends determined that these incidents occurred on site during installation or during manufacturing.		Over the last 2 years Andritz has had 16 Lost Time Injuries and 22 medical aids. What actions has been taken to ensure this trend does not continue. Have the trends determined that these incidents occurred on site during installation or during manufacturing.						
					In a period of just over a year Andritz had 2 stop work orders and a fine, what actions have been taken to ensure that this does not happen on the LCP? What improvements have been made to your H&S Management System?						

Minimum Pass Score is 70%

Evaluated By	Sean Lee 
Reviewed By	
Review Date	25-Apr-13

RFP - Environmental Evaluation											
RFP #: CH0032			RFP Name: S/I Powerhouse Hydro/Mechanical Equipment								
Evaluation Plan Appendix 10	Weight	Max Score	Alstom Vytrel		KHNP Daewoo		Ganotec/Canmec		Andritz		Scoring Instructions (Pass Mark 70%)
			Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	
MANAGEMENT INVOLVEMENT, LEADERSHIP AND ADMINISTRATION											
1.1 Environmental Management System (ISO or Not)?	3.0	5.0	5.0	3.00	5.0	3.00	5.0	3.00	5.0	3.00	If ISO Score 5, If not ISO Score 3, If No System score 0
1.1a Adequacy of TOC (if provided)	3.0	5.0	4.0	2.40	0.0	0.00	5.0	3.00	5.0	3.00	Rank adequacy 1 - 5; If not provided Score 0
1.1b Adequacy of Environmental Policy (if provided)	3.0	5.0	4.0	2.40	0.0	0.00	5.0	3.00	5.0	3.00	Rank adequacy 1 - 5; If not provided Score 0
1.3 Are environmental targets developed and reviewed on a regular basis?	3.0	5.0	5.0	3.00	5.0	3.00	5.0	3.00	5.0	3.00	Yes = 5; No = 0
1.3a Adequacy of Environmental targets	3.0	5.0	3.0	1.80	3.0	1.80	4.0	2.40	4.0	2.40	Rank adequacy 1 - 5; If not provided Score 0
1.4 Has a formal system, including the use of audits and inspections, been developed to define responsibilities for verifying that environmental performance objectives are met?	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	Yes = 5; No = 0
1.4a Adequacy of audit and inspection information	1.5	5.0	4.0	1.20	3.0	0.90	4.0	1.20	4.0	1.20	Rank adequacy 1 - 5; If not provided Score 0
2. ENVIRONMENTAL HAZARD IDENTIFICATION AND RISK MANAGEMENT											
2.1 Does the Bidder conduct formal risk assessments when planning and implementing operations and activities?	2.0	5.0	5.0	2.00	5.0	2.00	5.0	2.00	5.0	2.00	Yes = 5; No = 0
2.2 If "Yes", does that risk assessment include environmental risks?	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	Yes = 5; No = 0
2.2a adequacy of risk management system	1.5	5.0	5.0	1.50	3.0	0.90	5.0	1.50	4.0	1.20	Rank adequacy 1 - 5; If not provided Score 0
2.3 Has a formal hazard observation program been implemented at the Bidder's worksites?	0.5	5.0	5.0	0.50	5.0	0.50	5.0	0.50	4.0	0.40	Yes = 5; No = 0
2.3a Adequacy of hazard observation program	0.5	5.0	3.0	0.30	3.0	0.30	4.0	0.40	4.0	0.40	Rank adequacy 1 - 5; If not provided Score 0
3. ORGANIZATIONAL RULES AND WORK PROCEDURES											
3.1 Does the Bidder have documented environmental protection plans for all jobs/work activities?	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	Yes = 5; No = 0
3.1a adequacy of EPP	2.5	5.0	4.0	2.00	5.0	2.50	5.0	2.50	4.0	2.00	Rank adequacy 1 - 5; If not provided Score 0
3.2 Does the Bidder have environmental contingency plans?	1.5	5.0	5.0	1.50	3.0	0.90	5.0	1.50	5.0	1.50	Yes = 5; No = 0
3.2a adequacy of contingency plans/Does the plan outline responsibilities, available resources and actions to be taken in the event of an environmental incident?	1.5	5.0	4.0	2.00	5.0	2.50	4.0	2.00	4.0	2.00	Rank adequacy 1 - 5; If not provided Score 0
4. EMPLOYEE KNOWLEDGE, TRAINING AND AWARENESS											
4.1 Does the Bidder have an environmental awareness program?	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	Yes = 5; No = 0
4.1a Adequacy of Program?	2.0	5.0	5.0	2.00	5.0	2.00	5.0	2.00	5.0	2.00	Rank adequacy 1 - 5; If not provided Score 0
4.2 Does the Bidder provide environmental awareness training to supervisory staff?	2.0	5.0	5.0	2.00	5.0	2.00	5.0	2.00	5.0	2.00	Yes = 5; No = 0
4.3 What is frequency of environmental awareness training?	2.0	5.0	1.0	0.40	3.0	1.20	3.0	1.20	1.0	0.40	Score 1-5. If monthly score 5; if bimonthly score 4; if quarterly score 3; if biannually score 2; if annually score 1
4.3a Adequacy of content environmental awareness training	2.0	5.0	4.0	1.60	2.0	0.80	3.0	1.20	3.0	1.20	Rank adequacy 1 - 5; If not provided Score 0
5. PERSONAL COMMUNICATIONS AND ENVIRONMENTAL MEETINGS											
5.1 Are personal communications conducted to impart environmental awareness with other workers and thereby reducing the likelihood of non-compliances or environmental incidents?	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	Yes = 5; No = 0
5.2 Is there a system for sharing best practices and procedures, incidents and other information across the Bidder's organization?	1.0	5.0	5.0	1.00	5.0	1.00	5.0	1.00	5.0	1.00	Yes = 5; No = 0
5.3 Is there an environment committee in place?	1.0	5.0	5.0	1.00	5.0	1.00	5.0	1.00	5.0	1.00	Yes = 5; No = 0

RFP - Environmental Evaluation											
RFP #: CH0032		RFP Name: S/I Powerhouse Hydro/Mechanical Equipment									
	Weight	Max Score	Alstom Vytrell		KHNP Daewoo		Ganotec/Canmec		Andritz		Scoring Instructions
Bid Evaluation Plan Appendix 10			Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	(Pass Mark 70%)
Are regular (minimum monthly) environmental meetings held at all facilities to maintain effective communication of environmental information throughout the organization and with Bidder's contractors?	2.0	5.0	5.0	2.00	5.0	2.00	5.0	2.00	5.0	2.00	Yes = 5; No = 0
5.4a Adequacy of content and frequency of environmental meetings?	1.5	5.0	3.0	0.90	5.0	1.50	5.0	1.50	5.0	1.50	Rank adequacy 1 - 5; if not provided Score 0
5.5 Are minutes and records of attendance of these meetings maintained?	0.5	5.0	5.0	0.50	5.0	0.50	5.0	0.50	5.0	0.50	Yes = 5; No = 0
5.5a Adequacy of meeting minutes	0.5	5.0	4.0	0.40	4.0	0.40	3.0	0.30	3.0	0.30	Rank adequacy 1 - 5; if not provided Score 0
5.6 Does the Bidder respond in writing to environmental concerns raised at environmental meetings?	1.0	5.0	4.0	0.80	4.0	0.80	4.0	0.80	3.0	0.60	Yes = 5; No = 0
6. ENVIRONMENTAL MONITORING AND REPORTING											
6.1 Has the Bidder developed specific procedures for environmental monitoring and reporting on incidents that occur at its worksites?	1.0	5.0	5.0	2.00	5.0	2.00	5.0	2.00	5.0	2.00	Yes = 5; No = 0
6.1a Adequacy of monitoring and incident procedure	1.5	5.0	4.0	1.20	3.0	0.90	5.0	1.50	4.0	1.20	Rank adequacy 1 - 5; if not provided Score 0
6.2 Does the Bidder use an EMS system to establish standards, reporting and follow up and corrective action?	1.5	5.0	0.0	0.00	5.0	1.50	5.0	1.50	5.0	1.50	Yes = 5; No = 0
6.2a Adequacy of this process	1.0	5.0	0.0	0.00	3.0	0.60	4.0	0.80	3.0	0.60	Rank adequacy 1 - 5; if not provided Score 0
6.3 Does the Bidder have dedicated environmental personnel?	1.0	5.0	0.0	0.00	4.0	1.60	5.0	2.00	5.0	2.00	Yes = 5; No = 0
6.3a Adequacy of personnel and responsibilities	0.5	5.0	3.0	0.30	3.0	0.30	5.0	0.50	5.0	0.50	Rank adequacy 1 - 5; if not provided Score 0
Are supervisors formally trained in accident/investigations?	1.0	5.0	5.0	1.00	5.0	1.00	5.0	1.00	4.0	0.80	Yes = 5; No = 0
6.4a Adequacy of training program and frequency	0.5	5.0	4.0	0.40	4.0	0.40	4.0	0.40	4.0	0.40	Rank adequacy 1 - 5; if not provided Score 0
7. ENVIRONMENTAL INCIDENT ANALYSIS											
7.1 Does the Bidder have in place a formal system for the collection, analysis, trending and evaluation of environmental incident data and statistical analysis?	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	Yes = 5; No = 0
7.2 Does the Bidder develop monthly environmental incident analysis reports, which are reviewed during management review meetings?	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	Yes = 5; No = 0
7.3 Does senior management review and comment on serious and significant environmental incidents?	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	Yes = 5; No = 0
7.4 Are all incident reports followed through from recommendations to completion and closure?	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	Yes = 5; No = 0
8. LEADERSHIP TRAINING											
8.1 Does Bidder's management receive formal environmental management training which provides a thorough understanding of the philosophies and principles behind environmental management?	2.0	5.0	5.0	2.00	5.0	2.00	5.0	2.00	5.0	2.00	Yes = 5; No = 0
8.1a Adequacy of environmental management training	2.0	5.0	4.0	1.60	2.0	0.80	5.0	2.00	4.0	1.60	Rank adequacy 1 - 5; if not provided Score 0
8.2 Does the Bidder's management receive an orientation to the Bidder's Environmental Management System that includes an introduction to individual accountabilities and responsibilities?	2.0	5.0	5.0	2.00	5.0	2.00	5.0	2.00	5.0	2.00	Yes = 5; No = 0
8.2a Adequacy of orientation	2.0	5.0	3.0	1.20	3.0	1.20	4.0	1.60	5.0	2.00	Rank adequacy 1 - 5; if not provided Score 0
9. ENVIRONMENTAL AUDITS, INSPECTIONS AND PREVENTATIVE MAINTENANCE											
9.1 Is there a documented process for performing environmental audits?	2.5	5.0	5.0	2.50	5.0	2.50	5.0	2.50	5.0	2.50	Yes = 5; No = 0
9.2 Has a formal process been developed to ensure routine environmental monitoring?	2.0	5.0	5.0	2.00	5.0	2.00	5.0	2.00	5.0	2.00	Yes = 5; No = 0
9.3 Does the Bidder have planned preventative measures in place to prevent environmental incidents?	2.0	5.0	5.0	2.00	5.0	2.00	5.0	2.00	5.0	2.00	Yes = 5; No = 0
10. CRITICAL OPERATION AND TASK ANALYSIS											

RFP - Environmental Evaluation											
RFP #: CH0032		RFP Name: S/I Powerhouse Hydro/Mechanical Equipment									
	Weight	Max Score	Alstom Vytrel		KHNP Daewoo		Ganotec/Canmec		Andritz		Scoring Instructions
Bid Evaluation Plan Appendix 10			Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	(Pass Mark 70%)
Has a systematic approach been developed to identify and inventory tasks based on mandatory rules, regulations and applicable codes, guidelines and standards?	2.0	5.0	5.0	2.00	5.0	2.00	5.0	2.00	5.0	2.00	Yes = 5; No = 0
10.2 Is there a formal process to assess the environmental requirements associated with the tasks and to mitigate the risk to ensure compliance with the requirements?	2.0	5.0	4.0	1.60	4.0	1.60	5.0	2.00	5.0	2.00	Yes = 5; No = 0
11. SYSTEM REVIEW AND EVALUATION											
11.1 Do the Bidder's senior management conduct regular reviews of the Environmental Management System, at least annually or at more frequent intervals, as the organization may deem necessary?	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	Yes = 5; No = 0
11.1a Adequacy of reviews	1.5	5.0	4.0	1.20	5.0	1.50	5.0	1.50	4.0	1.20	Rank adequacy 1 - 5; if not provided Score 0
11.2 Do these reviews include environmental management policies and procedures and other inputs such as the results and recommendations from environmental audits, monitoring and surveys and analysis of incident investigations?	1.0	5.0	5.0	1.00	5.0	1.00	5.0	1.00	5.0	1.00	Yes = 5; No = 0
12. STATISTICS											
12.1 Number and type of directives from clients or regulators	1.0	5.0	5.0	1.00	5.0	1.00	5.0	1.00	3.0	0.60	For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.2 Oil spill incidents;	1.5	5.0	5.0	1.50	5.0	1.50	0.0	0.00	3.0	0.90	For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.3 Waste management incidents;	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.4 Hazardous materials incidents;	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.5 Water degradation incidents;	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.6 Air degradation incidents; and	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.7 Soil degradation incidents.	1.5	5.0	5.0	1.50	5.0	1.50	5.0	1.50	5.0	1.50	For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
12.8 Total Environmental Incidents	1.0	5.0	5.0	1.00	5.0	1.00	5.0	1.00	5.0	1.00	For 3 yr period: >= 5 score 0; 4 score 1; 3 score 2; 2 score 3; 1 score 4; 0 score 5
Total Weighed Scores	100.0			86.20		84.40		94.30		91.90	

Comments:

Provided by e-mail to Contract procurement representative.

Environmental Manager: David Haley
 Date: 05-May-13

[Handwritten Signature]
 17 June 2013

Appendix 15

Schedule and Execution Plan Evaluation Matrix
 Package # 505573-CH0032 (Component C1)
 Hydro - Mechanical

Contract Administrator: R. Anderson
 Lead Technical: Bruce Drover
 Lead Commercial: Ed Over
 Lead Planner: Tony Scott
 Senior Planner - C1: Marvin Zylber
 Area Managers: Luc Turcotte
 Construction: Laird Paton

Date: 10-Jun-13

NOTE: Each subsection is rated on a scale 1 - 10 (rating) then multiplied by the weighted value (weighting) for the item (within the evaluation subsection) to get the item value.

Section 3 Schedule & Execution Plan

Weighted value:		10%		Habs		Sens		Leafs		Jets		Bidder 5		Comments:
Criteria:	Item wgtg	Rating 0-10	Item value	Rating 0-10	Item value	Rating 0-10	Item value	Rating 0-10	Item value	Rating 0-10	Item value	Rating 0-10	Item value	
1	Work Schedule Milestones	30%	x	10	3.00	10	3.00	10	3.00	10	3.00	0	0.00	All reflected in their HFP's that they met the milestones
2	Site Staff Schedule	10%	x	6	0.60	9	0.90	9	0.90	6	0.60	0	0.00	Senators and Leafs optimized staffing plans and matched MFL to schedule
3	Payment Schedule (against deliverables)	10%	x	6	0.60	9	0.90	9	0.90	6	0.60	0	0.00	Issue for Commercial. Some bidders did not define clearly match their payment schedule (to deliverables)
4	SLHL Compliant with Schedule	10%	x	6	0.60	9	0.90	9	0.90	7	0.70	0	0.00	Senators and Leafs were compliant with schedule
5	Schedule Quality	20%	x	5	1.00	10	2.00	10	2.00	5	1.00	0	0.00	Senators had a better quality schedule in terms of presentation and logic. Habs & Jets schedule was hard-to-follow
6	Execution Plan / Strategy	20%	x	4	0.80	8	1.60	8	1.60	5	1.00	0	0.00	Leafs will manufacture locally. Senators need to ship parts worldwide. Logistics risk. Issue for Commercial per cost/benefit
			x		0.00		0.00		0.00		0.00	0	0.00	Leafs have VERY good manufacturing approach, but concerns with site construction - SCHEDULE / FLOAT 30 4/18
			x		0.00		0.00		0.00		0.00	0	0.00	
		100%		##	37.00	6.60	55.00	9.30	55.00	9.30	39.00	6.90	0.00	0.00
						X	X	X	X	X	X	X	X	
						10%	10%	10%	10%	10%	10%	10%	10%	
						Points value	0.66	0.93	0.93	0.69	0.69	0.00	0.00	

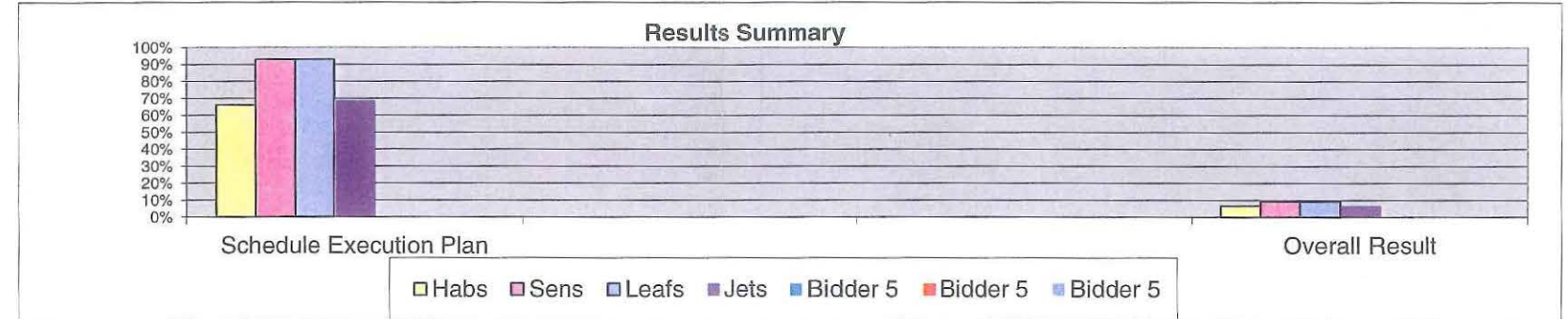
SUMMARY OF RESULT

Points value of Section 3 Schedule & Execution Plan
 OVERALL RATING OF PROPOSALS

	Habs	Sens	Leafs	Jets	Bidder 5				
66%	0.66	93%	0.93	93%	0.93	69%	0.69	0%	0.00
7%	0.66	9%	0.93	9%	0.93	7%	0.69	0%	0.00

Overall Comments:
 No bidder 5. Only met Senators and Leafs in pre-bid meetings to-date
 Senators team already contractors on CH0030 turbine project. Thus LCP is familiar with their team and quality of work.

	Habs	Sens	Leafs	Jets	Bidder 5
Schedule Execution Plan	66%	93%	93%	69%	0%
Overall Result	7%	9%	9%	7%	0%



Signature
 miz

Provincial Benefits (including INNU Content) - Labour RFP Evaluations
(for use on Civil, Supply & Install, and Services RFPs)

RFP #: Ch0032 Title:

Section	Description / Expectation	Weighting Assigned	Sens		incomplete questionnaire		jets		Leafs		Score Given	Weighted Score	Comments	Score Given	Weighted Score	Comments	Bidder 6		Bidder 7		
			Score Given	Weighted Score	Score Given	Weighted Score	Score Given	Weighted Score	Score Given	Weighted Score							Score Given	Weighted Score			
2.1	Contracting and Procurement (7.5%)																				
2.1 a)	Describe Bidder's experience with implementing local benefits strategies and agreements, including Aboriginal agreements	2.5		0			0	0	no canadian experience	5	2.5		projects listed		0		0	0		0	0
2.1 b)	Describe Bidder's procurement policies and procedures that will ensure reasonable advance notice to NL supply community of all procurement opportunities	2.5		0			2	1	ystem for international pr	5	2.5		direct contacts		0		0	0		0	0
2.1 c)	Describe Bidder's familiarity with NL contractor/supply capabilities. If Bidder is not currently familiar with these capabilities, describe proposed steps to ensure familiarity	2.5		0			5	2.5	orking with M&M and Cal	5	2.5				0		0	0		0	0
2.2	Employment (5%)																				
2.2 a)	Describe Bidder's familiarity with Newfoundland & Labrador workforce	2.5		0			5	2.5	orking with M&M and Cal	5	2.5		long harbour		0		0	0		0	0
2.2 b)	Describe Bidder's human resource policies that will optimize Newfoundland and Labrador employment benefits	1.5		0			5	1.5	local partners	5	1.5				0		0	0		0	0
2.2 c)	Describe Bidder's human resource policies that will optimize Innu employment benefits for work in Labrador	1.0		0				0		5	1		work with innu nation		0		0	0		0	0
2.3	Gender Equity and Diversity (5%)																				
2.3 a)	Does Bidder have gender equity and diversity plans? If so, describe Bidder's policies, including harassment and discrimination policies that support gender equity and diversity	1.5		0				0	none indicated	5	1.5		provided		0		0	0		0	0
2.3 b)	Does Bidder's human resource policies enable the voluntary identification of members of under represented groups? If so, describe these policies	1.5		0				0			0				0		0	0		0	0
2.3 c)	Is the Bidder a woman-owned business?	1.0						0													
2.3 d)	List any intended subcontractors / suppliers that are woman-owned business	1.0						0													
2.4	NL Benefits Reporting (5%)																				
2.4 a)	Indicate Bidder's previous experience at capturing employment and expenditure data as they relate to local benefits monitoring	2.5		0				0	none	5	2.5		vale		0		0	0		0	0
2.4 b)	Indicate who, within Bidders organization, will be responsible for benefits monitoring and reporting	2.5		0			5	2.5	admin manager	5	2.5		hr		0		0	0		0	0
	Scoring Grid																				
	5	Response meets and exceeds all key criteria																			
	4	Response meets all key criteria																			
	3	Response meets a majority of all key criteria																			
	2	Response meets only a few of the key criteria																			
	1	Response meets none of the key criteria																			
3.0	Provincial and Innu Content																				
3.0 a)	Is Bidder a registered Innu Company with IBDC?	Yes = 5 No = 0	5.0	0				0			0				0		0	0		0	0
3.0 b)	Use of registered Innu subcontractors?	Yes = 5 No = 0	2.5	0				0			0				0		0	0		0	0
3.0 c)	Is Bidder an NL Company	Yes = 5 No = 0	5	0				0			0				0		0	0		0	0
3.0 d)	Use of NL Subcontractors	Yes = 5 No = 0	2.5	5	2.5	listed	5	2.5	listed		0				0		0	0		0	0
3.0 e)	Bidder has experience working with aboriginal IBAs	Yes = 5 No = 0	2.5	0				0		5	2.5				0		0	0		0	0
4.0 a)	NL BENEFITS CONTENT - PERSON HOUR ESTIMATE by Residency (25.0)	25	5	25				0		4	20				0		0	0		0	0
	Score = 5 If NL percentage of total hours is > 80%																				
	Score = 4 If NL percentage of total hours is 60 to 80 %																				
	Score = 3 If NL percentage of total hours is 40 to 60 %																				
	Score = 2 If NL percentage of total hours is 20 to 40 %																				
	Score = 1 If NL percentage of total hours is < 20%																				
4.0 b)	NL BENEFITS CONTENT - PERSON HOUR ESTIMATE by Location of Work (10.0)	10	5	10				0		4	8				0		0	0		0	0
	Score = 5 If NL percentage of total hours is > 80%																				
	Score = 4 If NL percentage of total hours is 60 to 80 %																				
	Score = 3 If NL percentage of total hours is 40 to 60 %																				
	Score = 2 If NL percentage of total hours is 20 to 40 %																				
	Score = 1 If NL percentage of total hours is < 20%																				
5.0	NL BENEFITS CONTENT - EXPENDITURE ESTIMATE (25%)	25	2	10				0		4	20				0		0	0		0	0
	Score = 5 If NL percentage of total expenditures is > 80%																				
	Score = 4 If NL percentage of total expenditures is 60 to 80 %																				
	Score = 3 If NL percentage of total expenditures is 40 to 60 %																				
	Score = 2 If NL percentage of total expenditures is 20 to 40 %																				
	Score = 1 If NL percentage of total expenditures is < 20%																				

Scored By: Maria Moran Total 100 47.5 12.5 69.5 0 0 0 0
 Date: _____ Sectional Weighting 2.5% 1.1875 0.3125 1.7375 0 0 0 0
 Ranking

Maria Moran

BID EVALUATION PLAN
COMMENT SHEETS

Package Number: CH0032
Package Name: Supply and Install Powerhouse Hydro-Mechanical Equipment

Bidder Name: Andritz **Percentage** 71.50%

Comments: Bidder has performed multiple Hydro projects throughout Canada in northern remote loations. Bidder has appropriate expertise and experience for this type of work and demonstrates good understanding of remote cold weather locations. However, the production facilities are dissiminated across the world with the major ones in China. On-site quality monitoring of manufacturing will be required. Detailed logistics plan will need to be implemented and monitored closely.
Bidder emphasizes on quality of MF accomodations as mitigation measure for labour attraction and retention.

Bidder Name: Ganotec-Canmec **Percentage** 67.80%

Comments: Bidder has performed multiple Hydro projects of similar nature throughout Canada in northern remote loations. Canmec has manufactured similar equipment for multiple Canadian owners, and is familiar with Canadian standards. However, as the scope of CH0032 is very large and as Canmec will be the only manufacturer of the main components, dedicating 100% of its production capacity to CH0032, its ability to meet production requirements should be investigated and monitored closely.
Bidder emphasizes on quality of MF accomodations as mitigation measure for labour attraction and retention.

Bidder Name: KHNP-Deawoo **Percentage** 50.10%

Comments: Bidder is not a manufacturer but a Project manager only. Bidder does not demonstrate having prior experience with this type of work in Canada and would have to start building relationships with local partners from "scratch" upon contract award. Responses indicate poor knowledge of local labour availability conditions. Bidder does not demonstrate having experience in remote cold weather location. There is no mention of sheltering work areas with heated enclosures but rather having heated "warm-up" facilities and workbreaks for workers to warm-up. Many supporting documents are provided in Korean and those provided in English are substandard, suggesting potential communication challenges during contract execution. Saint-John's seems to be considered as the proper location for setting up project offices, suggesting poor knowledge of local geography having a direct impact on logistical assumption and plans.

Bidder Name: Alstom-Not **Percentage** #VALUE!
evaluated

Comments:

Scored By: Jean-Daniel Tremblay-Interface Manager & Risk Coordinator

Date: JUNE 13, 2013

BID EVALUATION
DISCIPLINE SCORE SHEETS

RFP - Risk Management Questionnaire Evaluation

Package Number: CH0032	Package Name: Supply and Install Powerhouse Hydro-Mechanical Equipment
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<p>Scoring Guide:</p> <p>0 - Question not answered or no relevant information provided in response</p> <p>1 - Response does not meet key Criteria</p> <p>2 - Response only meets a few of the key criteria</p> <p>3 - Response meets a majority of the key criteria</p> <p>4 - Response meets all key criteria</p> <p>5 - Response meets and exceeds key criteria</p>

Item	Risk Management	Question Weight (%)	Andritz			Ganotec-Canmec			KHNP-Deawoo			Alstom-Not evaluated		
			Answer	Score	Comments	Answer	Score	Comments	Answer	Score	Comments	Answer	Score	Comments
1	Risk Management system in place.	5	3	3	Bidder states Corporate Risk Management document titles without providing samples. Risk management system not aimed at proactively managing Project Risks with LCP Team but rather managing bidder's own risks.	3	3	Informal Risk management conducted by Partnership estimators at bidding phase. Risks, mitigating measures and associated costs transferred to Project management team upon Contract award. Risks under the control of client noted and identified for Client action.	2	2	No risk management system currently in place but to be implemented for this Contract.		0	
2	Risk Management Plan sample	5	1	1	No sample provided. Stated as being proprietary and confidential.	3	3	No sample provided. Major Risks identified with associated mitigation measures.	2.5	2.5	Sample of intended Risk Management plan provided. Management plan somewhat generic and incomplete.		0	
3	Top 5 Risks - Identification	5	4	4	1-Delay of approval process of design-Intense communication with client 2-Shortage of Raw Material on the world market-Timely placement of POs 3-Shortage of components of special sub-suppliers (like gear boxes, etc.)-Timely placement of POs 4-Bad work planning of manufacturer-Site supervision 5-Weather conditions influencing transport-Local transporter experience	4	4	1-Delay with Contract award without extension of milestone dates 2-Delay with drawings approval by LCP team 3-Readiness of camp accommodations 4-Delay in spillway availability 5-Delay in Powerhouse availability for all these risks mitigation measure stated to be proactive communication of technical info and drawings for approval.	2	2	1-Weather conditions 2-Permissions and licenses 3-HSE Policy 4-Local Labor 5-Inspection and testing As mitigation measure, Bidder states the they will set up new Risk Management plan for the Project. Stated Risks seem to relate mostly to limited knowledge of local conditions and acquisition of visas (Permissions and licenses)		0	

BID EVALUATION
DISCIPLINE SCORE SHEETS

RFP - Risk Management Questionnaire Evaluation

Package Number: CH0032	Package Name: Supply and Install Powerhouse Hydro-Mechanical Equipment
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	Question Weight (%)	Andritz			Ganotec-Canmec			KHNP-Deawoo			Alstom-Not evaluated			
		Answer	Score	Comments	Answer	Score	Comments	Answer	Score	Comments	Answer	Score	Comments	
4	Magnitude of Scope	10	4	8	Bidder states having all required financial, human and manufacturing resources to execute contract according to schedule and budget	4	8	All scope of work has been considered and an execution plan developed accordingly	4	8	Stated as not affecting their capacity to deliver the work.		0	
5	Loss Control Plan	3	2	1.2	Bidder does not provide details of plan in the event of disruption or loss of major production facility	2	1.2	No formal Loss Control plan but contingency plan needed to mitigate identified will be developed upon award.	3	1.8	Nationwide Emergency action Plan in place for disaster and loss.		0	
6	Involvement of Subs in Risk Management	3	4	2.4	Subs stated as being part of overall execution plan	4	2.4	Major Supplier, Canmec part of the Joint Venture	1	0.6	Subs currently not involved but will be in new Risk management to be implemented for CH0032.		0	
7	Historical Records-Successful delivery	2	2	0.8	Four project international names stated but with no details substantiating similarity with scope of CH0032	4	1.6	Multiple other Canadian hydro projects stated as similar in nature but of smaller scope.	2	0.8	KHNP states they are not a manufacturer. Provides list of Hydro-mechanical Projects performed by its major subs.		0	
8	Report and root cause of unsuccessful deliveries	2	4	1.6	"Lessons Learned" stated as being part of company wide corporate process	4	1.6	No significant delays to report. However, the following are identified as having potential impact on Project delivery: delay in award of contract delay in issuing construction drawings Limited availability of qualified labor Provision of first class accommodations	1	0.4	Stated as N/A		0	

BID EVALUATION
DISCIPLINE SCORE SHEETS

RFP - Risk Management Questionnaire Evaluation

Package Number: CH0032	Package Name: Supply and Install Powerhouse Hydro-Mechanical Equipment
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Question Weight (%)	Andritz			Ganotec-Canmec			KHNP-Deawoo			Alstom-Not evaluated				
	Answer	Score	Comments	Answer	Score	Comments	Answer	Score	Comments	Answer	Score	Comments		
9	Discussion on Schedule Critical Path	10	4	8	Local manufacturing of primary embedded anchors. Preliminary design of hoists allowing for early PO Manufacturing of major components at reliable known locations	3.5	7	Critical fabrication performed by Canmec. Milestone dates imposed on all supplier and fabricators with close follow up and monitoring.	1	2	Critical path stated as being the "preparation of local skilled labor". KHNP to open office in St Jones (sic) to manage the delivery of labor and equipment".		0	
10	Production Workload forecast	10	3.5	7	Main manufacturing facility for Gates Trashrack and stop logs in Tianbao China, guides in Portugal, Spain Italy and Slovakia. Production capacity stated as far exceeding CH0032 needs, but no details provided.	4	8	Canmec's production workload is 90% CH0032 for Q3 and Q4 of 2013 and 100% for 2014.	3.5	7	Currently not much work to supply hydro-mechanicals in Korea. Keumjeon and Kumsung identified as major subs for this project which have sufficient capacity.		0	
11	Mobilization strategy	5	3	3	Bidder states there is sufficient time for mobilization. Team experienced with cold weather. Installation team involved in design.	3	3	Bidder relates to successful completion of five large tanks in Deception Bay, Quebec. Refers to Appendix A9 control schedule indicating 40 day mobilization period starting Sept 7, 2014 as well as mobilization dates for 100T and 220T cranes. No specific comments on strategy.	2	2	Bidder response as follow: "Foreign: Selection of engineering company, start of design and manufacturing Local: open local office, manager dispatched upon contract award"		0	
12	Mitigation of lower productivity due to adverse weather	5	4	4	Scaffolding towers enclosure along gate slots. Insulated cladding and roofing on towers and heated. Certain float considered in project schedule to account for extreme weather conditions. Heated enclosures for most of the work. High wind is major condition for which work could not proceed.	4	4	Trailers located close to work areas to avoid down time. Heated enclosures for performing work in winter conditions.	2	2	Overtime and added personnel identified as measure to catch-up schedule.		0	

BID EVALUATION
DISCIPLINE SCORE SHEETS

RFP - Risk Management Questionnaire Evaluation

Package Number: CH0032	Package Name: Supply and Install Powerhouse Hydro-Mechanical Equipment
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Question Weight (%)	Andritz			Ganotec-Canmec			KHNP-Deawoo			Alstom-Not evaluated		
	Answer	Score	Comments	Answer	Score	Comments	Answer	Score	Comments	Answer	Score	Comments
13	4	4	One shift time table considered in project schedule. Additional shifts introduced if required. Additional manpower not contemplated as workspace is confined.	4	4	Bidder states extensive experience in all northern areas of Canada.	2	2	Suspension of work in severe weather. Overtime and work on off days to catch-up schedule.		0	
14	3.5	3.5	Most of equipment manufactured in medium scaled privately owned companies in Europe and China where risks of strikes are considered limited.	2	2	Bidder states that CLRA-NL Building Trades agreement will be used. Silent on main manufacturers strike history	4	4	No strikes to report at Keumjeon and Kumsung facilities.		0	
15	5	2	Provided in Appendices A5 and A6	5	2	Provided in Appendices A5	5	2	Provided in Appendices A5		0	
16	5	2	Provided in Appendices A7	5	2	Provided in Appendices A7	5	2	Provided in Appendices A7		0	
17	3	3	Generic listing provided. Limited details regarding critical skills required. However, bidder states available resources from various Canadian and European business units having a generally low turnover.	3	3	Specialized skilled in-house personnel to provide training to Train to less experienced workers for alignment of embedded parts.	2	2	Limited generic response .		0	
18	5	5	Bidders demonstrates good understanding and experience with remote site conditions and provides reasonable retention strategy. Emphasis on Camp conditions.	3	3	Refers to CLRA-NL Trades agreement with emphasis on good camp accommodations	2	2	Bidder does not demonstrate adequate understanding of local labor condition as provided response can be summarized as follow: "use of skilled workers until end of Contract. Provide temporary house to skilled worker. Replace skilled worker instantly if one leaves the project"		0	


BID EVALUATION
DISCIPLINE SCORE SHEETS

RFP - Risk Management Questionnaire Evaluation

Package Number: CH0032	Package Name: Supply and Install Powerhouse Hydro-Mechanical Equipment
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	Question Weight (%)	Andritz			Ganotec-Canmec			KHNP-Deawoo			Alstom-Not evaluated		
		Answer	Score	Comments	Answer	Score	Comments	Answer	Score	Comments	Answer	Score	Comments
19	10	3.5	7	All logistical aspect under the direct responsibility of the bidder. Testing in accordance with technical specification.	2	4	Refers to Appendix A9 control schedule, no other details provided	2	4	Will do their best to solve problems if any.		0	
20	1	5	1	Provided	5	1	Provided	5	1	Provided		0	
Score - transfer to Technical Summary		100	71.50		67.80			50.10			0.00		
		Total Percentage	71.50%		67.80%			50.10%			0.00%		

Scored By: Jean-Daniel Tremblay - Interface & Risk Coordinator 

Date: June 13, 2013

Appendix 3

Overall Evaluation Scoring Matrix

Contract Administrator: R Anderson
 Lead Technical: Bruce Drover
 Lead Commercial: Ed Over
 Area Manager: Luc Turcotte

Package # 505573-CH0032: S/I Powerhouse Hydro/Mechanical Equipment

NOTE: Each subsection is rated on a scale 1 - 10 (rating) then multiplied by the weighted value (weighting) for the item (within the evaluation subsection) to get the item value.

Section 1 Commercial

Lead: Ed Over

Weighted value: **60%**

Criteria:

Criteria	item wgtg	x	Alstom		Andritz		Ganotec/Canmec		KHNP/Daewoo	
			Rating 0-10	item value	Rating 0-10	item value	Rating 0-10	item value	Rating 0-10	item value
1 Total Evaluated Cost comprising :	65%		0	0.00	10	6.50	0	0.00	0	0.00
Proposal Price - A & B		x		0.00		0.00		0.00		0.00
Terms of Payment		x		0.00		0.00		0.00		0.00
Net Present Value		x		0.00		0.00		0.00		0.00
Milestone Payment Schedule		x		0.00		0.00		0.00		0.00
Delivery Schedule		x		0.00		0.00		0.00		0.00
Currency Exchange Costs		x		0.00		0.00		0.00		0.00
Estimated Inspection & Expediting Costs		x		0.00		0.00		0.00		0.00
		x		0.00		0.00		0.00		0.00
2 Terms & Conditions comprising:	35%		0	0.00	8.43	2.95	8.66	3.03	0	0.00
Limitation of Liability		x		0.00		0.00		0.00		0.00
Liquidated Damages		x		0.00		0.00		0.00		0.00
Title Transfer		x		0.00		0.00		0.00		0.00
Insurance		x		0.00		0.00		0.00		0.00
Performance Security		x		0.00		0.00		0.00		0.00
Ownership of I.P		x		0.00		0.00		0.00		0.00
Default		x		0.00		0.00		0.00		0.00
Exceptions		x		0.00		0.00		0.00		0.00
Overall compliance		x		0.00		0.00		0.00		0.00
	100%		0.00	0.00	18.43	9.45	8.66	3.03	0.00	0.00
Weighted value				X		X		X		X
Points value				60%		60%		60%		60%
				0.00		5.67		1.82		0.00

Comments:

Section 2 Technical

Lead: Bruce Drover

Weighted value: **27.5%**

Criteria:

Criteria	item wgtg	x	Alstom		Andritz		Ganotec/Canmec		KHNP/Daewoo	
			Rating 0-10	item value	Rating 0-10	item value	Rating 0-10	item value	Rating 0-10	item value
1 Spillway Hydro- Mechancial Acceptability	25%		9.2	2.30	8.8	2.20	10.0	2.50	7.0	1.75
2 Spillway Electrical Building Acceptability	20%	x	0.0	0.00	9.5	1.90	8.0	1.60	0.0	0.00
3 Intake Hydro-Machancial Acceptability	25%	x	8.8	2.20	8.8	2.20	10.0	2.50	7.0	1.75
4 Draft Tube Hydro-Mechancial Acceptability	15%	x	10.0	1.50	8.7	1.31	10.0	1.50	7.7	1.16
5 Trash Cleaner Acceptability	15%	x	9.3	1.40	9.3	1.40	9.3	1.40	9.3	1.40
	100%		n/c	7.40	45.10	9.00	47.30	9.50	n/c	6.05
Weighted value				X		X		X		X
Points value				27.5%		27.5%		27.5%		27.5%
				n/c		2.48		2.61		n/c

Comments:

Alstom & KHNP-Daewoo were considered incomplete as they scored '0' in this category

Section 3 Schedule & Execution Plan

Lead: **Bruce Drover**

Weighted value:

10%

Criteria:

item wtgt

1	Work Schedule Milestones	30%	x
2	Site Staff Schedule	10%	x
3	Payment Schedule (against deliverables)	10%	x
4	SDRL Compliant with Schedule	10%	x
5	Schedule Quality	20%	x
6	Execution Plan / Strategy	20%	x

100%

Weighted value

Points value

Alstom		Andritz		Ganotec/Canmec		KHNP/Daewoo	
Rating 0-10	item value	Rating 0-10	item value	Rating 0-10	item value	Rating 0-10	item value
10	= 3.00	10	= 3.00	10	= 3.00	10	= 3.00
6	= 0.60	9	= 0.90	9	= 0.90	6	= 0.60
6	= 0.60	9	= 0.90	9	= 0.90	6	= 0.60
6	= 0.60	9	= 0.90	9	= 0.90	7	= 0.70
5	= 1.00	10	= 2.00	10	= 2.00	5	= 1.00
4	= 0.80	8	= 1.60	8	= 1.60	5	= 1.00
37.00	6.60	55.00	9.30	55.00	9.30	39.00	6.90
	X		X		X		X
	10%		10%		10%		10%
	0.66		0.93		0.93		0.69

Comments:

All reflected in their proposal that they met the milestones
 Andritz & Ganotec optimized staffing plans & matched MFL to Schedule
 Issue for Commercial. Some Bidders did not clearly match payment schedules to deliverables.
 Andritz & Ganotec were compliant with schedule
 Andritz had a better quality schedule in terms of presentation & logic. Alstom & Daewoo schedules were hard to follow
 Ganotec will mfr locally. Andritz need to ship parts worldwide. Logistics risk. Issue for Commercial re cost/benefit
 Ganotec have VERY good mfr'g approach, but concerns with site construction - schedule/float

Section 4 NL Benefits

Lead: **Maria Moran**

Weighted value:

2.5%

Criteria:

item wtgt

1	Refer to Bid Eval Plan Appendix 8	100%	x
			x
			x
			x
			x
			x
			x
			x

100%

Weighted value

Points value

Alstom		Andritz		Ganotec/Canmec		KHNP/Daewoo	
Rating 0-10	item value	Rating 0-10	item value	Rating 0-10	item value	Rating 0-10	item value
	= 0.00	4.75	= 4.75	6.95	= 6.95	1.25	= 1.25
	= 0.00		= 0.00		= 0.00		= 0.00
	= 0.00		= 0.00		= 0.00		= 0.00
	= 0.00		= 0.00		= 0.00		= 0.00
	= 0.00		= 0.00		= 0.00		= 0.00
	= 0.00		= 0.00		= 0.00		= 0.00
	= 0.00		= 0.00		= 0.00		= 0.00
0.00	0.00	4.75	4.75	6.95	6.95	1.25	1.25
	X		X		X		X
	2.5%		2.5%		2.5%		2.5%
	0.00		0.12		0.17		0.03

Comments:

Andritz was missing some information and will have to submit missing information
 Alstom was not evaluated

SUMMARY OF PROPOSAL RESULTS

Overall Comments:

Points value of Section 1 Commercial
 Points value of Section 2 Technical
 Points value of Section 3 Schedule & Execution Plan
 Points value of Section 4 NL Benefits

Alstom		Andritz		Ganotec/Canmec		KHNP/Daewoo	
0%	0.00	95%	5.67	30%	1.82	0%	0.00
n/c	n/c	90%	2.48	95%	2.61	n/c	n/c
66%	0.66	93%	0.93	93%	0.93	69%	0.69
0%	0.00	5%	0.12	7%	0.17	1%	0.03
7%	0.7	92%	9.2	55%	5.5	7%	0.7

OVERALL RATING OF PROPOSALS

	Alstom	Andritz	Ganotec/Canmec	KHNP/Daewoo
1 Commercial	0%	95%	30%	0%
2 Technical	n/c	90%	95%	N/C
3 Schedule Execution Plan	66%	93%	93%	69%
4 NL Benefits	0%	5%	7%	1%
Overall Result	7%	92%	55%	7%
5 Risk Management	F	P	P	F
7 Health & Safety	F	P	P	F
8 Quality Assurance	F	P	F	F
9 Environmental	P	P	P	P

