

From: [Nik Argirov](#)
To: stevepellerin@lowerchurchillproject.ca
Cc: "[Krupski, Joseph \(NRCan/RNCan\)](#)"
Subject: Alstom and contractors reporting in general
Date: Tuesday, March 22, 2016 5:14:33 PM
Attachments: [.png](#)
[Pages from ILK-AS-SD-8000-PM-A06-0021-01_A1.pdf \(NA\).pdf](#)

Steve,

This is further to my earlier email below. As I was checking the cost report for CD0501, I found numerous discrepancies between the totals in the Contract Price Summary, Table 11-1 on p.44 and the figures in the tables in Appendix 2- Cost Report. I'm not sure now what the current total contract price including foreign funds figures is as two different figures are reported in different tables (see attached file with my comments inside). Please also confirm that the foreign funds are already spent as is indicated in the incurred to date cost figures in Appendix 2. BTW in the last table Cash Flow Forecast (in the attached) the contractor indicates that the cost out to date (foreign funds) is higher than the reported incurred to date cost in the previous Cost Forecast Report tables in Appendix 2. It is in general, very messy.

<<...>>

Speaking of cost reporting I now would like to expand further to all Contractors Monthly Reports and discuss the style of reporting and what is missing in the reports. I have been talking about this for a long time and have asked improvements to be made, however many of the reports are still deficient in this aspect. I'm referring to earned value management reporting. So to be more specific I went through most of the contractors reports and observed the following:

The best report is the Barnard's (CH009). They are reporting (and called it) earned progress as well as planned (baseline) and actual (!). Those are the three necessary components (PV, EV, AC) of earned value management/analysis. Earned value is what the real progress is to the moment of reporting (could be m3 of concrete or excavation or, etc.) and could be reported as % (typical for most of the reports). The actual is the actual cost (AC) spent to the moment.

Could be reported as % of the current total or as incurred to date cost like in a few of the reports. Most of the reports are missing the actual cost figures. Then the outer reported parameters are the deltas (Schedule and Cost Variances) as well as the SPI and CPI. $SPI = \text{earned/planned}$ and $CPI = \text{earned /actual}$. Anything less than 1 is not good. If it is less than 0.9 is becoming critical. The SPI is indicator for the schedule performance and the CPI for the cost. Anyhow, my point is that Barnard does it all and that is the way every other report should be structured.

Andritz- CH0030 is doing it well too. They report the earned progress (%) and the baseline (planned) progress (%) and schedule variance. In the S-curves (only) they also indicate the actual (cost in %). They don't present the SPI and CPI though. They should as (in their case) it is very easy to do.

Andritz –CD0032 though doesn't do this. They do not present actual cost or incurred cost to date in any fashion. Not for the overall project progress nor for the individual reported disciplines (Management, Engineering, Procurement, etc.). They should be asked to do it as indicated above.

Nexans is reporting partially OK. The reports are good but they need to include the actual cost as well. They report baseline as well as actual progress, however I believe they actually are reporting the earned progress but are calling it (wrongly) actual. They should be asked to start calling it earned and in addition should report the AC(actual cost as a % too) and the SPI and CPI values. They report overall actual cost to date (in \$), however I believe they are reporting not the total incurred to date cost but only what has been invoiced to date. So if one takes the figure in their latest (Feb'16) report of actual Cost to date (\$58,542,490.95) and presented as % of the current total (\$131,884,503) it appears that they have spent to date 44.39% (AC-actual cost). Their earned progress (called actual) is 67.02%. In this case the $CPI = 1.51$ which is very good but if you have the real AC (incurred to date cost) this will be perhaps a bit less. Still good though as Nexans is performing very well. So in the S-curves they can indicate earned value (reported at present as actual) as well as the actual cost (in %). Then the SPI and CPI are very easy to indicate.

Alstom Grid

CD0501 – the earned progress is also called actual and the actual cost by categories is not reported. They report the total overall incurred cost (as in the attached – Appendix 2, Cost Forecast Report) in \$ as well as in % = 22.1% to date (Jan 25'16). However, this is only for the

CAD portion. For the foreign funds, they report 100%. If that is so they should have the overall project actual cost (again in %) as well as the AC(%) for each of the reported categories. Then they can report the CPIs. It is interesting that they report the SPI for each category as well the overall project SPI. They should do the same for the CPIs.

CD0502 – almost the same as CD0501. Same comments. So in Table 2-2 Key Performance Indicators (KPI) Table (p.12 of 135) they can include the CPIs in the same way as they have the SPIs.

Alstom Power

CD0534 – They report only baseline and actual (earned) progress similar to the other Alstom contracts. They however are not reporting any actual cost (nor incurred to date cost). They report the SPIs like the other Alstom reports (in the KPI table) but do not report actual cost and therefore CPIs. They should improve their reporting (the same as above) including the ACs and CPIs.

Gilbert – CH008 – (North Spur Stabilization) - Their progress reporting requires a lot improvement. So far (last report Nov'15) they have not submitted progress curve and table nor Key Performance Indicator. So they should be asked to report progress to the standards of Earn Value Management as discussed above.

Valard

CT0319 LTA - They report plan and earned (they should call it earned) progress but not actual cost. No SPI nor CPI. They should report the overall SPI and CPI !

CT0327 – Here Valard needs a lot of improvement. They do not even report baseline (planned) progress! This should not be tolerated anymore. Valard has contracted work for more than a \$1B (both contracts) and it is really a shame for them not to be able to present a proper Earned Value reporting. Also they should report the overall project progress, not just the different segments progress. Valard should report PV (planned value-baseline), EV(earned value) and AC (actual cost – overall and for individual segments) so they can report the SPIs and CPIs (overall project as well as for the individual segments).

ABB - PH0014 - They are reporting (in earned value fashion) is pathetic. It just doesn't exist. They don't understand EV and I guess no one else that reviews their reports can understand (I for sure!) what they are reporting. Their contract is not so significant in price but this should not be an excuse for a sloppy reporting. Their SPIs and CPIs are as important as in any other contract.

Astaldi – CH007 - All the above is very much relevant to them as well (particularly if they start regular reporting, one day).

I hope this is clear enough but am willing to discuss it further and in more details if needed (perhaps during my upcoming visit).

Regards,

Nik

From: Nik Argirov [<mailto:nik@argirovglobal.com>]

Sent: Friday, March 18, 2016 4:37 PM

To: 'StevePellerin@lowerchurchillproject.ca'

Cc: 'Krupski, Joseph (NRCan/RNCan)'

Subject: Alstom

Steve,

I would like to bring to your attention my observations with respect to the three Alstom contracts – CD0501, CD0502, CD0534.

According to their monthly reports (the latest I have is from Jan'16) all three of them are delayed anywhere between 26 to 36 %. (CD0051-26.4; CD0502 27.01 and CD0534-35.4 %). In

these (Jan'16) reports, they are indicating that the delays are starting to impact on the overall schedule and the completion dates are slipping too. Moreover, the delta between baseline and earned is constantly increasing for the last five months (Sept'15 to Jan'16). The trend for the gap for CD0502 is upward (increasing) and for CD0501 and CD0534 is in decline but in a very slow rate. Main reasons given are Engineering, Procurement, Construction and winter weather but that is just about everything. So I want to better understand all risks associated with these delays and what mitigation measures Nalcor is taking. In addition, I would like to know the current status (mid March'16) of these contracts as the latest LCP report made available to me is also from Jan'16.

Regards,

Nik





11.2 Cost Control

11.2.1 Contract Price Summary

Table 11-1 : Contract Price Summary

CONTRACT NUMBER: CD0501-001
Lower Churchill Converters & Transition Compounds Project

CONTRACT PRICE & CHANGE ORDERS
PERIOD: 25-Jan-2016

REF NUMBER	DESCRIPTION	UNIT	AWARDED in CAD\$	AWARDED in GBP	AWARDED in EUR	AWARDED in USD
			AMOUNT	AMOUNT	AMOUNT	AMOUNT
CD0501-001	Lower Churchill Converters & Transition Compounds Project	LS	354,115,630	8,829,537	658,218	448,466
CHO-CD0501001-0001	Hedging costs	LS	2,259,637	-	-	-
CHO-CD0501001-0003	Transformer manufacturing relocation	LS	(3,000,000)	-	-	-
CHO-CD0501001-0004	Creepage distance	LS	288,000	-	-	-
CHO-CD0501001-0005	Removal of 315 Kvac breakers	LS	(2,789,507)	-	-	-
CHO-CD0501001-0009	Battery autonomy & telecommunication load	LS	165,228			
CHO-CD0501001-0010	Additional Site Investigation	LS	72,633			
CHO-CD0501001-0013	Additional design and layouts	LS	133,601			
CHO-CD0501001-0015	Additional trailers at MF and SP sites	LS	531,955			
CHO-CD0501001-0016	Supply of wash cars in SP	LS	85,176			
CHO-CD0501001-0017	Advance on Settlement of Request CHR-0008	Est	5,000,000			
TOTAL			356,862,353	8,829,537	658,218	448,466

Appendix 2 (Cost Report) provides a breakdown status of cost control reporting.

Table 11-2 : CD0504-001 Contract Price

CONTRACT NUMBER: CD0504-001
Civil Works Agreement for HVdc Specialities - Soldiers Pond

CONTRACT PRICE & CHANGE ORDERS
PERIOD: 25-Jan-2016

REF NUMBER	DESCRIPTION	UNIT	AWARDED in CAD\$
			AMOUNT
CD0504-001	Civil Works Agreement for HVdc Specialities	LS	20,304,361
CHO-CD0504001-001	Site trailers installation	LS	67,632
CHO-CD0504001-002	Supply and install Superduct	LS	207,957
CHO-CD0504001-003	Supply and install RFI Screen	Reimbursable	300,000
CHO-CD0504001-005	Internet Hook Up & Security Trailer Modification	LS	7,663
TOTAL			20,887,613



APPENDIX 2- COST REPORT

Incurred Cost Forecast

Agreement No.: CD0501-001
 Period Ending: 25-Jan-2016

Description	Current Forecast				Incurred to Date				2018											
	CAD	GBP	EUR	USD	CAD	GBP	EUR	USD	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
	Item 1.01 - 1.16 (Indirects)	\$48 774 611				\$17 948 434				196 870	196 870	307 157	124 943	209 277	1 314 640	53 016	53 016	53 016	53 016	-
Item 2.01 - 2.08, 2.10-2.16 (Muskrat Falls)	\$141 510 037				\$27 102 129				-	-	-	-	-	-	-	-	-	-	-	-
Item 2.09 - MFG Breakers	\$2 789 507				\$0				-	-	-	-	-	-	-	-	-	-	-	-
Item 3.01 - 3.10 (Forteau Point)	\$10 723 746				\$891 029				-	-	-	-	-	-	-	-	-	-	-	-
Item 4.01 - 4.10 (Shoal Cove)	\$11 027 322				\$877 874				-	-	-	-	-	-	-	-	-	-	-	-
Item 5.01 - 5.08, 5.10 - 5.16 (Soldier's Pond)	\$139 572 405				\$28 256 051				-	-	-	-	-	-	-	-	-	-	-	-
Item 5.09 - SOP Breakers	\$2 780 814				\$695 204				-	-	-	-	-	-	-	-	-	-	-	-
Item 6.00 - 6.01 (Completions)	\$1 096 487				\$0				-	-	-	-	-	-	-	-	-	-	-	-
CHO-001 - Single currency	\$2 259 637				\$2 259 637				-	-	-	-	-	-	-	-	-	-	-	-
CHO-003 - transformer relocation	-\$3 000 000				\$0				-	(75 000)	-	-	-	-	-	-	-	-	-	-
CHO-004 - Creepage distance	\$288 000				\$0				-	7 200	-	-	-	-	-	-	-	-	-	-
CHO-005 - Remove MF Breakers	-\$2 789 507				\$0				-	-	-	-	-	-	-	-	-	-	-	-
CHO-013 - Alternative design and layouts	\$133 601				\$133 601				-	-	-	-	-	-	-	-	-	-	-	-
CHO-015 - Additional trailers at MF and SP sites	\$531 955				\$531 955				-	-	-	-	-	-	-	-	-	-	-	-
Item 1.01 - 1.16 (Indirects)		£167 844					£167 844													
Item 2.01 - 2.08, 2.10-2.16 (Muskrat Falls)		£4 482 026					£4 482 026													
Item 2.09 - MF Breakers		£0					£0													
Item 3.01 - 3.10 (Forteau Point)		£0					£0													
Item 4.01 - 4.10 (Shoal Cove)		£0					£0													
Item 5.01 - 5.08, 5.10 - 5.16 (Soldier's Pond)		£4 179 667					£4 179 667													
Item 5.09 - SOP Breakers		£0					£0													
Item 6.00 - 6.01 (Completions)		€ 0					€ 0													
Item 2.01 - 2.08, 2.10-2.16 (Muskrat Falls)			€ 329 109				€ 329 109													
Item 5.01 - 5.08, 5.10 - 5.16 (Soldier's Pond)			€ 329 109				€ 329 109													
Item 1.01 - 1.16 (Indirects)				\$0			\$0													
Item 2.01 - 2.08, 2.10-2.16 (Muskrat Falls)				\$298 978			\$298 978													
Item 3.01 - 3.10 (Forteau Point)				\$0			\$0													
Item 4.01 - 4.10 (Shoal Cove)				\$0			\$0													
Item 5.01 - 5.08, 5.10 - 5.16 (Soldier's Pond)				\$149 488			\$149 488													
Item 5.09 - SOP Breakers																				
Item 6.00 - 6.01 (Completions)	\$355 615	£8 829 537	€ 658 218	\$448 466	\$78 695 914	£8 829 537	€ 658 218	\$448 466	\$196 870	\$129 070	\$307 157	\$124 943	\$209 277	\$1 314 640	\$53 016	\$53 016	\$53 016	\$53 016	\$0	\$0

Note: Incurred To Date cannot be lower than the amount accrued. Incurred is payment milestone met + progress between payment milestones. Advance payment is not considered incurred.

Cost Forecast Report

ONE COST REPORT FOR EACH CURRENCY

Agreement No.: CD0501-001
 Period Ending: 25-Jan-2016
 Currency: CAD

Item No.	Site	Description	Original Contract Price	Approved Changes	Current Contract Price (1)	PROGRESS				INVOICED	OUTSTANDING CHANGES		FORECAST			
						Incurred (%)		Incurred (Cost)		Invoiced to Date	Potential	Pending	Total Forecast		Monthly Forecast Variance (2-3)	Contract Forecast Variance (2-1)
						This Period	To Date	This Period	To Date				Current Month (2)	Previous Month (3)		
5,12	SOP	Supply & Installation of Fire Detection and Protection Equipment (includes incipient fire detection, IR, arc detectors, above ground piping where applicable, clean agent, etc)	\$ 1 745 751	\$ -	\$ 1 745 751			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1 745 751	\$ 1 745 751	\$ -	\$ -
5,13	SOP	Supply & Installation of Misc. Electrical Equipment (Generators, UPS, Auxiliary Stn Service)	\$ 19 694 434	\$ -	\$ 19 694 434	1,5%	18,9%	\$ 297 435	\$ 3 717 934	\$ 2 788 451	\$ -	\$ -	\$ 19 694 434	\$ 19 694 434	\$ -	\$ -
5,14	SOP	Testing and commissioning	\$ 1 141 904	\$ -	\$ 1 141 904			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1 141 904	\$ 1 141 904	\$ -	\$ -
5,15	SOP	Demobilisation, clean-up, removal of temporary structures, surface treatment, etc	\$ 748 394	\$ -	\$ 748 394			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 748 394	\$ 748 394	\$ -	\$ -
5,16	SOP	Mandatory Spare parts and tools	\$ 8 011 974	\$ -	\$ 8 011 974			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8 011 974	\$ 8 011 974	\$ -	\$ -
9,4	SOP	CHO-009 - Battery load requirement	\$ -	\$ 41 307	\$ 41 307	0,0%	25,0%	\$ -	\$ 10 327	\$ 10 327	\$ -	\$ -	\$ 41 307	\$ 41 307	\$ -	\$ -
9,5	SOP	CHO-016 - Supply of wash cars	\$ -	\$ 85 176	\$ 85 176	0,0%	30,6%	\$ 3 299	\$ 26 093	\$ 22 794	\$ -	\$ -	\$ 85 176	\$ 85 176	\$ -	\$ -
17,2	SOP	CHO-017 - Advance Settlement for CHR-008	\$ -	\$ 2 500 000	\$ 2 500 000	0,0%	12,0%	\$ 300 000	\$ 300 000	\$ 300 000	\$ -	\$ -	\$ 2 500 000	\$ -	\$ 2 500 000	\$ (2 500 000)
6,00	Overall	Dynamic Commissioning At Low Power	\$ 826 944	\$ -	\$ 826 944			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 826 944	\$ 826 944	\$ -	\$ -
6,01	Overall	Trial Operation At Low Power	\$ 269 543	\$ -	\$ 269 543			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 269 543	\$ 269 543	\$ -	\$ -
CHO-001	Overall	CHO-001 - Hedging costs		\$ 2 259 637	\$ 2 259 637	0,0%	100,0%	\$ -	\$ 2 259 637	\$ 2 259 637	\$ -	\$ -	\$ 2 259 637	\$ 2 259 637	\$ -	\$ -
CHO-003	Overall	CHO-003 - Transformer relocation		\$ (3 000 000)	\$ (3 000 000)	0,0%	0,0%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (3 000 000)	\$ (3 000 000)	\$ -	\$ -
CHO-004	Overall	CHO-004 - Creepage distance		\$ 288 000	\$ 288 000			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 288 000	\$ 288 000	\$ -	\$ -
CHO-005	MF	CHO-005 - Supply and supervision of installation and commissioning of 315 kV HVac breakers	\$ -	\$ (2 789 507)	\$ (2 789 507)			\$ -	\$ -	\$ -	\$ -	\$ -	\$ (2 789 507)	\$ (2 789 507)	\$ -	\$ -
CHO-007	Overall	CHO-007 - Revised low level background harmonics	\$ -	\$ -	\$ -			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (1 163 736)	\$ 1 163 736	\$ (1 163 736)
CHO-013	Overall	CHO-013 - Additionnal design and layouts	\$ -	\$ 133 601	\$ 133 601	0,0%	100,0%	\$ -	\$ 133 601	\$ 133 601	\$ -	\$ -	\$ 133 601	\$ 133 601	\$ -	\$ -
CHO-015	MF/SP	CHO-015 - Additionnal trailers at MF and SP sites	\$ -	\$ 531 955	\$ 531 955	100,0%	100,0%	\$ -	\$ 531 955	\$ 531 955	\$ -	\$ -	\$ 531 955	\$ 531 955	\$ -	\$ -
			\$ -	\$ -	\$ -			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
			\$ -	\$ -	\$ -			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Grand Total	\$ 354 115 630	\$ 1 582 987	\$ 355 798 617	1,4%	22,1%	\$ 5 042 921	\$ 78 695 914	\$ 60 070 858	\$ -	\$ -	\$ 355 698 617	\$ 350 698 617	\$ 5 000 000	\$ (5 000 000)

Cost Forecast Report

ONE COST REPORT FOR EACH CURRENCY

Agreement No.: CD0501-001
 Period Ending: 25-Jan-2016
 Currency: GBP

Item No.	Site	Description	Original Contract Price	Approved Changes	Current Contract Price (1)	PROGRESS				INVOICED	OUTSTANDING CHANGES		FORECAST			
						Incurred (%)		Incurred (Cost)		Invoiced to Date	Potential	Pending	Total Forecast		Monthly Forecast Variance (2 - 3)	Contract Forecast Variance (2-1)
						This Period	To Date	This Period	To Date				Current Month (2)	Previous Month (3)		
4,06	SC	Supply & Installation of Fire Detection and Protection Equipment (includes incipient fire detection, IR, arc detectors, above ground piping where applicable, clean agent, etc)		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
4,07	SC	Supply and installation of HVdc equipment		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
4,08	SC	Testing and commissioning		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
4,09	SC	Demobilisation, clean-up, removal of temporary structures, surface treatment, etc		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
4,10	SC	Mandatory Spare parts and tools		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,01	SOP	Site Management		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,02	SOP	Mobilization of staff and equipment		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,03	SOP	Temporary Site Facilities		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,04	SOP	General Civil Works		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,05	SOP	Valve Halls		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,06	SOP	Control Building		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,07	SOP	Supply & Installation of Converter Transformers	£ 3 602 290	£ -	£ 3 602 290		100,0%		£ 3 602 290	£ 3 602 290	£ -	£ -	£ 3 602 290	£ 3 602 290	£ -	£ -
5,08	SOP	Supply & Installation of HVac Filters		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,09	SOP	Supply and supervision of installation and commissioning of 230 kV HVac breakers		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,10	SOP	Supply & Installation of HVdc Equipment		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,11	SOP	Supply & Installation of Valve Cooling equipment		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,12	SOP	Supply & Installation of Fire Detection and Protection Equipment (includes incipient fire detection, IR, arc detectors, above ground piping where applicable, clean agent, etc)		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,13	SOP	Supply & Installation of Misc. Electrical Equipment (Generators, UPS, Auxiliary Stn Service)		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,14	SOP	Testing and commissioning		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,15	SOP	Demobilisation, clean-up, removal of temporary structures, surface treatment, etc		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
5,16	SOP	Mandatory Spare parts and tools	£ 577 377	£ -	£ 577 377		100,0%		£ 577 377	£ 577 377	£ -	£ -	£ 577 377	£ 577 377	£ -	£ -
6,00	Overall	Dynamic Commissioning At Low Power		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
6,01	Overall	Trial Operation At Low Power		£ -	£ -				£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
		Grand Total	£ 8 829 537	£ -	£ 8 829 537	0,0%	100,0%	£ -	£ 8 829 537	£ 8 829 537	£ -	£ -	£ 8 829 537	£ 8 829 537	£ -	£ -

Cost Forecast Report

ONE COST REPORT FOR EACH CURRENCY

Agreement No.: CD0501-001
 Period Ending: 25-Jan-2016
 Currency: EUR

Item No.	Site	Description	Original Contract Price	Approved Changes	Current Contract Price (1)	PROGRESS				INVOICED	OUTSTANDING CHANGES			FORECAST			
						Incurred (%)		Incurred (Cost)			Invoiced to Date	Potential	Pending	Total Forecast		Monthly Forecast Variance (2-3)	Contract Forecast Variance (2-1)
						This Period	To Date	This Period	To Date					Current Month (2)	Previous Month (3)		
4,06	SC	Supply & Installation of Fire Detection and Protection Equipment (includes incipient fire detection, IR, arc detectors, above ground piping where applicable, clean agent, etc)		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
4,07	SC	Supply and installation of HVdc equipment		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
4,08	SC	Testing and commissioning		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
4,09	SC	Demobilisation, clean-up, removal of temporary structures, surface treatment, etc		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
4,10	SC	Mandatory Spare parts and tools		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,01	SOP	Site Management		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,02	SOP	Mobilization of staff and equipment		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,03	SOP	Temporary Site Facilities		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,04	SOP	General Civil Works		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,05	SOP	Valve Halls		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,06	SOP	Control Building		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,07	SOP	Supply & Installation of Converter Transformers	282 093 €	- €	282 093 €		100,0%	- €	282 093 €	282 093 €	- €	- €	- €	282 093 €	282 093 €	- €	- €
5,08	SOP	Supply & Installation of HVac Filters		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,09	SOP	Supply and supervision of installation and commissioning of 230 kV HVac breakers		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,10	SOP	Supply & Installation of HVdc Equipment		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,11	SOP	Supply & Installation of Valve Cooling equipment		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,12	SOP	Supply & Installation of Fire Detection and Protection Equipment (includes incipient fire detection, IR, arc detectors, above ground piping where applicable, clean agent, etc)		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,13	SOP	Supply & Installation of Misc. Electrical Equipment (Generators, UPS, Auxiliary Stn Service)		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,14	SOP	Testing and commissioning		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,15	SOP	Demobilisation, clean-up, removal of temporary structures, surface treatment, etc		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
5,16	SOP	Mandatory Spare parts and tools	47 016 €	- €	47 016 €		100,0%	- €	47 016 €	47 016 €	- €	- €	- €	47 016 €	47 016 €	- €	- €
6,00	Overall	Dynamic Commissioning At Low Power		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
6,01	Overall	Trial Operation At Low Power		- €	- €					- €	- €	- €	- €	- €	- €	- €	- €
		Grand Total	658 218 €	- €	658 218 €	0,0%	100,0%	- €	658 218 €	658 218 €	- €	- €	- €	658 218 €	658 218 €	- €	- €

Cash Flow Forecast

Agreement No.: CD0501-001
 Period Ending: 25-Jan-2016

Description	Current Forecast				Cash Out To Date				2016												
	CAD	GBP	EUR	USD	CAD	GBP	EUR	USD	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
	Item 2.09 - MF Breakers	\$2 789 507				\$0															
All Other Items	\$356 150 978				\$55 677 950				4 081 724	3 336 721	4 926 102	3 592 992	6 671 218	26 800 185	15 559 205	24 528 817	29 015 636	21 374 375	9 164 932	28 122 968	
CHO-001 - single currency	\$2 259 637				\$2 033 673																
CHO-003 - transformer relocation	-\$3 000 000				\$0																(2 700 000)
CHO-004 - creepage distance	\$288 000				\$0											259 200					
CHO-005 - Remove MF Breakers	-\$2 789 507				\$0																
Item 2.09 - MF Breakers																					
All Other Items		£10 478 662				€9 595 708															
Item 2.09 - MF Breakers																					
All Other Items			€ 1 544 374				€ 1 478 552														
Item 2.09 - MF Breakers																					
All Other Items				\$663 133			€518 286														
	355 698 615	10 478 662	1 544 374	663 133	57 711 623	9 595 708	618 286		4 081 724	3 336 721	4 926 102	3 592 992	6 671 218	26 800 185	15 559 205	24 788 017	29 015 636	18 674 375	9 164 932	28 122 968	

Note: The amount shown in each month is "cash out" from LCP. Example: if invoice for April is planned to be issued on May 5 then "cash out" will be June. Advance payment and reimbursement should be included.