

CONCRETE & FORMWORK FACTORS																					
POWERHOUSES																					
DESCRIPTION	LG-4			NIPAWIN			LA - 1			LG - 1			Grand-Mère			EASTMAIN			MUSKRAT FALLS- PH & Int		
	9 "FRANCIS" turbines - 2,650 MW			3 "KAPLAN" turbines - 255 MW			6 "FRANCIS" turbines - 890 MW			12 "KAPLAN" turbines - 1368 MW			3 "KAPLAN" turbines - 225 MW			3-Francis		3-Francis	4 "KAPLAN" turbines - 205 MW		
	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	EM - 1		EM - 1A	QTY	M-H	FACT
m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m3	m3		m-h / m3	
Concrete:																					
Place concrete ( phase I )	95 469	56 327	0,590	54 997	12 759	0,232	54 296	34 082	0,628	60 025	23 218	0,387	146 414	131 383	0,897				328 029	165 186	0,504
Place concrete ( phase II )	15 720	10 061	0,640	11 394	2 416	0,212	18 947	17 344	0,915				6 543	7 142	1,092				-	-	#DIV/0!
<b>Total</b>	<b>111 189</b>	<b>66 388</b>	<b>0,597</b>	<b>66 391</b>	<b>15 175</b>	<b>0,229</b>	<b>73 243</b>	<b>51 426</b>	<b>0,702</b>	<b>60 025</b>	<b>23 218</b>	<b>0,387</b>	<b>152 957</b>	<b>138 525</b>	<b>0,906</b>	<b>41 940</b>		<b>63 525</b>	<b>328 029</b>	<b>165 186</b>	<b>0,504</b>
Incidentals:	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2				m2		m-h / m2
Curing:	126 735	4 183	0,033	82 023	2 953	0,036	88 927	1 778	0,020	63 699	1 867	0,029	172 987	15 773	0,091				321 144	10 598	0,033
Green cut:	26 687	13 344	0,500	28 789	4 894	0,170	31 470	24 351	0,774	27 128	23 186	0,855	55 231	26 279	0,476				178 177	89 089	0,500
Fdn prep Hor: ( fine grade )	18 920	19 936	1,054				15 147	1 666	0,110				8 345	3 999	0,479				14 645	7 413	0,506
Fdn prep Vert:	20 550	3 206	0,156				8 226	1 514	0,184				6 909	4 499	0,651				-	-	#DIV/0!
Float finish:	33 951	10 015	0,295	10 841	7 100	0,655	33 132	5 964	0,180	5 893	3 764	0,639	27 276	18 711	0,686				37 899	18 480	0,488
P & Patch F1:				13 957	656	0,047													-	-	#DIV/0!
P & Patch F2:				25 990	10 058	0,387													-	-	#DIV/0!
P & Patch F3:	71 669	25 800	0,360				59 347	25 519	0,430	20 492	8 192	0,400	77 525	33 293	0,429				173 291	73 174	0,422
P & Patch F4:				3 210	1 467	0,457				10 739	5 536	0,516									
Bush Hammer:																					
Sandblast:													6 818	5 774	0,847						
<b>Total</b>		<b>76 484</b>			<b>27 128</b>			<b>60 792</b>			<b>42 545</b>			<b>108 328</b>						<b>198 754</b>	
Erect & Strip:	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2				m2		m-h / m2
Flat form:	44 497	180 879	4,065	24 443	67 952	2,780	34 694	122 774	3,539	9 712	32 341	3,330	49 911	189 298	3,793				200 258	495 737	2,475
Curved form:	3 045	9 054	2,973	267	1 178	4,412	1 929	5 456	2,828	4 740	13 828	2,917	6 753	34 404	5,095				-	-	#DIV/0!
Draft-tube form:	5 332	27 561	5,169	2 177	7 990	3,670	3 150	20 916	6,640	5 583	31 963	5,725	2 365	11 389	4,816				-	-	#DIV/0!
Block-out:	8 133	27 214	3,346	1 757	6 931	3,945	6 640	22 562	3,398	4 537	12 572	2,771	12 605	53 577	4,250				-	-	#DIV/0!
Bulkhead:				4 221	24 060	5,700	4 074	28 518	7,000	1 198	9 564	7,983	6 704	42 422	6,328				-	-	#DIV/0!
Soffit:	14 583	53 914	3,697	4 987	17 305	3,470	8 608	26 592	3,089	2 452	7 286	2,971	8 931	43 700	4,893				-	-	#DIV/0!
Column:										715	965	1,350	1 024	3 072	3,000				-	-	#DIV/0!
Beam:				1 702	3 166	1,860	6 876	41 806	6,080										-	-	#DIV/0!
B.I.P.:	8 770	45 727	5,214							715	2 923	4,088	972	4 349	4,474				-	-	#DIV/0!
Transition form, soffit or scroll case:																			-	-	#DIV/0!
<b>Total</b>	<b>84 360</b>	<b>344 349</b>	<b>4,082</b>	<b>39 554</b>	<b>128 582</b>	<b>3,251</b>	<b>65 971</b>	<b>268 624</b>	<b>4,072</b>	<b>29 652</b>	<b>111 442</b>	<b>3,758</b>	<b>89 265</b>	<b>382 211</b>	<b>4,282</b>	<b>29 660</b>		<b>38 878</b>	<b>200 258</b>	<b>495 737</b>	<b>2,475</b>
Fab Form:	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2				m2		m-h / m2
Flat form:	8 737	16 338	1,870	9 242	9 981	1,080	13 884	27 914	2,011	2 465	3 911	1,587	15 935	24 543	1,540				55 194	199 600	3,616
Curved form:	827	1 960	2,370	241	424	1,759	190	348	1,832	432	520	1,204	2 447	7 088	2,897				-	-	#DIV/0!
Draft-tube form:	1 570	16 061	10,230	1 435	10 346	7,210	1 575	19 136	12,150	1 432	2 232	1,559	2 222	13 449	6,053				-	-	#DIV/0!
Block-out:							4 068	7 213	1,773				9 131	11 845	1,297				-	-	#DIV/0!
Transition form, soffit or scroll case:													5 624	12 100	2,151				-	-	#DIV/0!
<b>Total</b>	<b>11 134</b>	<b>34 359</b>	<b>3,086</b>	<b>10 918</b>	<b>20 751</b>	<b>1,901</b>	<b>19 717</b>	<b>54 611</b>	<b>2,770</b>	<b>4 329</b>	<b>6 663</b>	<b>1,539</b>	<b>29 735</b>	<b>56 925</b>	<b>1,914</b>				<b>55 194</b>	<b>199 600</b>	<b>3,616</b>
Miscellaneous:																					
Water stop ( m.l ):	6 863	3 329	0,485	7 171	4 590	0,640	6 156	5 048	0,820										63 312	31 657	0,500
Coating ( m2 ):	3 751	195	0,052																		#DIV/0!
<b>Total</b>		<b>3 524</b>			<b>4 590</b>			<b>5 048</b>												<b>31 657</b>	
<b>TOTAL M - H :</b>		<b>525 104</b>			<b>196 226</b>			<b>440 501</b>			<b>183 868</b>			<b>685 989</b>						<b>1 090 934</b>	
<b>TOTAL MH / M3 :</b>		<b>4,72</b>			<b>2,96</b>			<b>6,01</b>			<b>3,06</b>			<b>4,48</b>						<b>3,33</b>	
<b>FORM RATIO M2 / M3 :</b>		<b>0,76</b>			<b>0,60</b>			<b>0,90</b>			<b>0,49</b>			<b>0,58</b>			<b>0,71</b>			<b>0,61</b>	
<b>TOTAL FAB &amp; E/S FACTOR:</b>		<b>4,49</b>			<b>3,78</b>			<b>4,90</b>			<b>3,98</b>			<b>4,92</b>						<b>3,47</b>	
Rebar: ( qty - m/h - fact )	5 003 505	47 533	0,010	4 249 024	46 739	0,011	3 955 122	60 909	0,015	6 302 625	56 724	0,009	7 647 850	68 831	0,009				19 870 000	198 700	0,010
Indirects: ( total m-h )		480 000			170 000			244 192			181 000			425 000						754 288	
Global general factor mh / m3: ( without embedded & non-emb metals )		9,47			6,22			10,18			7,02			7,71						6,23	
<b>BID PRICE:</b>		<b>\$ 44 M</b>			<b>\$ 37 M</b>			<b>\$ 84 M</b>			<b>\$ 64 M</b>			<b>\$ 157 M</b>						<b>\$ 432 M</b>	
<b>AVERAGE \$ / M3 :</b>		<b>396 \$</b>			<b>527 \$</b>			<b>1 147 \$</b>			<b>1 066 \$</b>			<b>1 026 \$</b>			<b>1 107 \$</b>			<b>1 317 \$</b>	
<b>YEAR OF THE BID:</b>		<b>1974</b>			<b>1986</b>			<b>1990</b>			<b>1992</b>			<b>2004</b>			<b>2004</b>			<b>2008</b>	
																	<b>1 434 \$</b>			<b>1 225 \$</b>	

CONCRETE & FORMWORK FACTORS																				
SPILLWAY																				
DESCRIPTION	EASTMAIN			NIPAWIN			LG - 1									MUSKRAT FALLS- SPILLWAY				
	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT		
	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3		
<b>Concrete:</b>																				
Place concrete ( phase I )	24 600	9 594	0,390	124 155	23 589	0,190	116 441	27 946	0,240							62 631	19 497	0,311		
Place concrete ( phase II )	42	121	2,881	184	2 153	11,701	1 550	5 332	3,440							-	-	#DIV/0!		
<b>Total</b>	<b>24 642</b>	<b>9 715</b>	<b>0,394</b>	<b>124 339</b>	<b>25 742</b>	<b>0,207</b>	<b>117 991</b>	<b>33 278</b>	<b>0,282</b>	-	-	#DIV/0!	-	-	#DIV/0!	<b>152 957</b>	-	-		
<b>Incidentals:</b>	<b>m2</b>		<b>m-h / m2</b>	<b>m2</b>		<b>m-h / m2</b>	<b>m2</b>		<b>m-h / m2</b>	<b>m2</b>		<b>m-h / m2</b>	<b>m2</b>		<b>m-h / m2</b>	<b>m2</b>		<b>m-h / m2</b>		
Curing:	15 360	707	0,046	104 310	5 111	0,049	93 315	2 426	0,026							52 913	1 746	0,033		
Green cut:	4 911	1 670	0,340	27 628	4 697	0,170	36 716	20 194	0,550							22 680	11 340	0,500		
Fdn prep Hor:	2 083	1 479	0,710				9 622	4 811	0,500							5 129	2 565	0,500		
Fdn prep Vert:							2 145	515	0,240											
Float finish:	2 440	903	0,370	23 420	9 438	0,403	6 017	3 189	0,530							6 496	3 549	0,546		
P & Patch F1:				20 076	823	0,041	10 572	1 374	0,130											
P & Patch F2:	9 969	1 994	0,200	33 187	12 279	0,370														
P & Patch F3:							10 902	5 342	0,490							31 721	15 719	0,496		
P & Patch F4:							28 064	14 032	0,500											
Bush Hammer:							971	1 359	1,400											
Sandblast:							4 722	2 786	0,590											
<b>Total</b>		<b>6 753</b>			<b>32 348</b>			<b>56 028</b>								-	<b>34 919</b>			
<b>Erect &amp; Strip:</b>	<b>m2</b>		<b>m-h / m2</b>	<b>m2</b>		<b>m-h / m2</b>	<b>m2</b>		<b>m-h / m2</b>							<b>m2</b>		<b>m-h / m2</b>		
Flat form:	5 436	17 503	3,220	39 629	84 013	2,120	32 449	88 586	2,730							37 145	98 728	2,658		
Curved form:	571	2 142	3,751	1 999	4 318	2,160	3 651	6 754	1,850							-	-	#DIV/0!		
Draft-tube form:																-	-	#DIV/0!		
Block-out:	1 906	6 347	3,330	4 114	11 807	2,870	2 532	5 697	2,250							-	-	#DIV/0!		
Bulkhead:	233	1 048	4,498	4 814	26 333	5,470										-	-	#DIV/0!		
Soffit:				493	1 652	3,351	319	766	2,401							-	-	#DIV/0!		
Column:																-	-	#DIV/0!		
Beam:				2 325	10 649	4,580										-	-	#DIV/0!		
B.I.P.:	646	2 835	4,389				505	2 616	5,180							-	-	#DIV/0!		
Transition form, soffit or scroll case:							1 700	10 829	6,370							-	-	#DIV/0!		
<b>Total</b>	<b>8 792</b>	<b>29 875</b>	<b>3,398</b>	<b>53 374</b>	<b>138 772</b>	<b>2,600</b>	<b>41 156</b>	<b>115 248</b>	<b>2,800</b>							<b>37 145</b>	<b>98 728</b>	<b>2,658</b>		
<b>Fab Form:</b>	<b>m2</b>		<b>m-h / m2</b>	<b>m2</b>		<b>m-h / m2</b>	<b>m2</b>		<b>m-h / m2</b>							<b>m2</b>		<b>m-h / m2</b>		
Flat form:	686	1 462	2,131	5 053	4 558	0,902	5 932	12 576	2,120							6 893	15 289	2,218		
Curved form:	221	581	2,629	362	453	1,251	391	692	1,770											
Draft-tube form:																				
Block-out:																				
Transition form, soffit or scroll case:																				
<b>Total</b>	<b>907</b>	<b>2 043</b>	<b>2,252</b>	<b>5 415</b>	<b>5 011</b>	<b>0,925</b>	<b>6 323</b>	<b>13 268</b>	<b>2,098</b>							<b>6 893</b>	<b>15 289</b>	<b>2,218</b>		
<b>Miscellaneous:</b>																				
Water stop ( m.l ):	243	202	0,831	9 163	5 864	0,640	812	1 194	1,470							13 100	6 550	0,500		
Coating ( m2 ):							3 540	1 239	0,350											
<b>Total</b>		<b>202</b>			<b>5 864</b>			<b>2 433</b>									<b>6 550</b>			
<b>TOTAL M - H :</b>		<b>48 588</b>			<b>207 737</b>			<b>220 255</b>									<b>182 812</b>			
<b>TOTAL MH / M3 :</b>		<b>1,97</b>			<b>1,67</b>			<b>1,87</b>									<b>2,92</b>			
<b>FORM RATIO M2 / M3:</b>		<b>0,36</b>			<b>0,43</b>			<b>0,35</b>									<b>0,59</b>			
<b>TOTAL FAB &amp; E/S FACTOR:</b>		<b>3,63</b>			<b>2,69</b>			<b>3,12</b>									<b>3,07</b>			
Rebar: ( qty - m/h - fact )																		0,010		
Indirects: ( total m-h )																				
<b>BID PRICE:</b>																		<b>\$ 68,9 M</b>		
<b>AVERAGE \$ / M3 :</b>																		<b>1 100 \$</b>		
<b>YEAR OF THE BID:</b>		<b>1978</b>			<b>1986</b>			<b>1990</b>										<b>2013</b>		

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DESCRIPTION	LG-4			NIPAWIN			LA - 1			LG - 1			Keenleyside			Grand-Mère			MUSKRAT FALLS- PH & Int		
	9 "FRANCIS" turbines - 2,650 MW			3 "KAPLAN" turbines - 255 MW			6 "FRANCIS" turbines - 890 MW			12 " KAPLAN " turbines - 1368 MW			2 " KAPLAN " turbines - 170 MW			3 " KAPLAN " turbines - 225 MW			4 " KAPLAN " turbines - 205 MW		
	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT
Concrete:	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3
Place concrete ( phase I )	95 469	56 327	0,590	54 997	12 759	0,232	54 296	34 082	0,628	62 979	24 678	0,392	62 979	24 678	0,392	146 414	131 383	0,897	328 029	165 186	0,504
Place concrete ( phase II )	15 720	10 061	0,640	11 394	2 416	0,212	18 947	17 344	0,915	60 025	23 218	0,387	6 190	3 219	0,520	6 543	7 142	1,092	-	-	#DIV/0!
<b>Total</b>	<b>111 189</b>	<b>66 388</b>	<b>0,597</b>	<b>66 391</b>	<b>15 175</b>	<b>0,229</b>	<b>73 243</b>	<b>51 426</b>	<b>0,702</b>	<b>60 025</b>	<b>23 218</b>	<b>0,387</b>	<b>69 169</b>	<b>27 897</b>	<b>0,403</b>	<b>152 957</b>	<b>138 525</b>	<b>0,906</b>	<b>328 029</b>	<b>165 186</b>	<b>0,504</b>
Incidentals:	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2
Curing:	126 735	4 183	0,033	82 023	2 953	0,036	88 927	1 778	0,020	63 699	1 867	0,029	72 731	1 979	0,027	172 987	15 773	0,091	321 144	10 598	0,033
Green cut:	26 687	13 344	0,500	28 789	4 894	0,170	31 470	24 351	0,774	27 128	23 186	0,855	24 671	20 209	0,819	55 231	26 279	0,476	178 177	89 089	0,500
Fdn prep Hor: ( fine grade )	18 920	19 936	1,054				15 147	1 666	0,110				4 276	1 924	0,450	8 345	3 999	0,479	14 645	7 413	0,506
Fdn prep Vert:	20 550	3 206	0,156				8 226	1 514	0,184				265	339	1,279	6 909	4 499	0,651	-	-	#DIV/0!
Float finish:	33 951	10 015	0,295	10 841	7 100	0,655	33 132	5 964	0,180	5 893	3 764	0,639	11 951	4 727	0,396	27 276	18 711	0,686	37 899	18 480	0,488
P & Patch F1:				13 957	656	0,047													-	-	#DIV/0!
P & Patch F2:				25 990	10 058	0,387													-	-	#DIV/0!
P & Patch F3:	71 669	25 800	0,360				59 347	25 519	0,430	20 492	8 192	0,400	35 008	10 625	0,304	77 525	33 293	0,429	173 291	73 174	0,422
P & Patch F4:				3 210	1 467	0,457				10 739	5 536	0,516							-	-	#DIV/0!
Bush Hammer:																					
Sandblast:																6 818	5 774	0,847			
<b>Total</b>		<b>76 484</b>			<b>27 128</b>			<b>60 792</b>			<b>42 545</b>			<b>39 803</b>			<b>108 328</b>			<b>198 754</b>	
Erect & Strip:	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2
Flat form:	44 497	180 879	4,065	24 443	67 952	2,780	34 694	122 774	3,539	9 712	32 341	3,330	22 467	67 053	2,985	49 911	189 298	3,793	200 258	495 737	2,475
Curved form:	3 045	9 054	2,973	267	1 178	4,412	1 929	5 456	2,828	4 740	13 828	2,917	4 001	15 296	3,823	6 753	34 404	5,095	-	-	#DIV/0!
Draft-tube form:	5 332	27 561	5,169	2 177	7 990	3,670	3 150	20 916	6,640	5 583	31 963	5,725	1 390	4 883	3,513	2 365	11 389	4,816	-	-	#DIV/0!
Block-out:	8 133	27 214	3,346	1 757	6 931	3,945	6 640	22 562	3,398	4 537	12 572	2,771	7 589	20 836	2,746	12 605	53 577	4,250	-	-	#DIV/0!
Bulkhead:				4 221	24 060	5,700	4 074	28 518	7,000	1 198	9 564	7,983	4 806	22 512	4,684	6 704	42 422	6,328	-	-	#DIV/0!
Joint:	14 583	53 914	3,697	4 987	17 305	3,470	8 608	26 592	3,089	2 452	7 286	2,971	3 364	15 229	4,527	8 931	43 700	4,893	-	-	#DIV/0!
Column:										715	965	1,350				1 024	3 072	3,000	-	-	#DIV/0!
Beam:				1 702	3 166	1,860	6 876	41 806	6,080										-	-	#DIV/0!
B.I.P.:	8 770	45 727	5,214							715	2 923	4,088	1 264	4 915	3,888	972	4 349	4,474	-	-	#DIV/0!
Transition form, soffit or scroll case:										1 314	11 316	8,612							-	-	#DIV/0!
<b>Total</b>	<b>84 360</b>	<b>344 349</b>	<b>4,082</b>	<b>39 654</b>	<b>128 582</b>	<b>3,251</b>	<b>65 971</b>	<b>268 624</b>	<b>4,072</b>	<b>29 652</b>	<b>111 442</b>	<b>3,758</b>	<b>46 195</b>	<b>162 040</b>	<b>3,508</b>	<b>89 265</b>	<b>382 211</b>	<b>4,282</b>	<b>200 258</b>	<b>495 737</b>	<b>2,475</b>
Fab Form:	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2	m2		m-h / m2
Flat form:	8 737	16 338	1,870	9 242	9 981	1,080	13 884	27 914	2,011	2 465	3 911	1,587	4 087	5 793	1,417	15 935	24 543	1,540	55 194	199 600	3,616
Curved form:	827	1 960	2,370	241	424	1,759	190	348	1,832	432	520	1,204	353	780	2,210	2 447	7 088	2,897	-	-	#DIV/0!
Draft-tube form:	1 570	16 061	10,230	1 435	10 346	7,210	1 575	19 136	12,150	1 040	7 914	7,610	1 040	7 914	7,610	2 222	13 449	6,053	-	-	#DIV/0!
Block-out:							4 068	7 213	1,773	1 432	2 232	1,559	5 688	4 989	0,877	9 131	11 845	1,297	-	-	#DIV/0!
Transition form, soffit or scroll case:										968	2 033	2,100				5 624	12 100	2,151	-	-	#DIV/0!
<b>Total</b>	<b>11 134</b>	<b>34 359</b>	<b>3,086</b>	<b>10 918</b>	<b>20 751</b>	<b>1,901</b>	<b>19 717</b>	<b>54 611</b>	<b>2,770</b>	<b>4 329</b>	<b>6 663</b>	<b>1,539</b>	<b>11 168</b>	<b>19 476</b>	<b>1,744</b>	<b>29 735</b>	<b>56 925</b>	<b>1,914</b>	<b>55 194</b>	<b>199 600</b>	<b>3,616</b>
Miscellaneous:																					
Water stop ( m.l ):	6 863	3 329	0,485	7 171	4 590	0,640	6 156	5 048	0,820				605	303	0,501				63 312	31 657	0,500
Coating ( m2 ):	3 751	195	0,052																		#DIV/0!
<b>Total</b>		<b>3 524</b>			<b>4 590</b>			<b>5 048</b>						<b>303</b>						<b>31 657</b>	
<b>TOTAL M - H :</b>		<b>525 104</b>			<b>196 226</b>			<b>440 501</b>			<b>183 868</b>			<b>249 519</b>			<b>685 989</b>			<b>1 090 934</b>	
<b>TOTAL MH / M3 :</b>		<b>4,72</b>			<b>2,96</b>			<b>6,01</b>			<b>3,06</b>			<b>3,61</b>			<b>4,48</b>			<b>3,33</b>	
<b>FORM RATIO M2 / M3:</b>		<b>0,76</b>			<b>0,60</b>			<b>0,90</b>			<b>0,49</b>			<b>0,67</b>			<b>0,58</b>			<b>0,61</b>	
<b>TOTAL FAB &amp; E/S FACTOR:</b>		<b>4,49</b>			<b>3,78</b>			<b>4,90</b>			<b>3,98</b>			<b>3,93</b>			<b>4,92</b>			<b>3,47</b>	
Rebar: ( qty - m/h - fact )	5 003 505	47 533	0,010	4 249 024	46 739	0,011	3 955 122	60 909	0,015	6 302 625	56 724	0,009	5 118 506	46 067	0,009	7 647 850	68 831	0,009	19 870 000	198 700	0,010
Indirects: ( total m-h )		480 000			170 000			244 192			181 000			360 000			425 000			754 288	
Global general factor mh / m3: ( without embedded & non-emb metals )		<b>9,47</b>			<b>6,22</b>			<b>10,18</b>			<b>7,02</b>			<b>9,48</b>			<b>7,71</b>			<b>6,23</b>	
<b>BID PRICE:</b>		<b>\$ 44 M</b>			<b>\$ 37 M</b>			<b>\$ 84 M</b>			<b>\$ 64 M</b>			<b>\$ 196 M</b>			<b>\$ 157 M</b>			<b>\$ 432 M</b>	
<b>AVERAGE \$ / M3 :</b>		<b>396 \$</b>			<b>527 \$</b>			<b>1 147 \$</b>			<b>1 066 \$</b>			<b>2 834 \$</b>			<b>1 026 \$</b>			<b>1 317 \$</b>	
<b>YEAR OF THE BID:</b>		<b>1974</b>			<b>1986</b>			<b>1990</b>			<b>1992</b>			<b>2000</b>			<b>2004</b>			<b>2013</b>	

CONCRETE & FORMWORK FACTORS																							
POWERHOUSES																							
DESCRIPTION	LG-4			NIPAWIN			LA - 1			LG - 1			Grand-Mère			EASTMAIN			MUSKRAT FALLS- PH & Int				
	9 "FRANCIS" turbines - 2,650 MW			3 "KAPLAN" turbines - 255 MW			6 "FRANCIS" turbines - 890 MW			12 " KAPLAN " turbines - 1368 MW			3 " KAPLAN " turbines - 225 MW			3-Francis		3-Francis	4 " KAPLAN " turbines - 205 MW				
	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	QTY	M-H	FACT	EM - 1		EM - 1A	QTY	M-H	FACT		
m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m-h / m3	m3		m3	m3		m-h / m3			
Concrete:																							
Place concrete ( phase I )	95 469	56 327	0,590	54 997	12 759	0,232	54 296	34 082	0,628	18 947	17 344	0,915	60 025	23 218	0,387	146 414	131 383	0,897			328 029	165 186	0,504
Place concrete ( phase II )	15 720	10 061	0,640	11 394	2 416	0,212										6 543	7 142	1,092			-	-	#DIV/0!
<b>Total</b>	<b>111 189</b>	<b>66 388</b>	<b>0,597</b>	<b>66 391</b>	<b>15 175</b>	<b>0,229</b>	<b>73 243</b>	<b>51 426</b>	<b>0,702</b>	<b>60 025</b>	<b>23 218</b>	<b>0,387</b>	<b>152 957</b>	<b>138 525</b>	<b>0,906</b>	<b>41 940</b>		<b>63 525</b>	<b>328 029</b>	<b>165 186</b>	<b>0,504</b>		
Incidentals:																							
Curing:	126 735	4 183	0,033	82 023	2 953	0,036	88 927	1 778	0,020	63 699	1 867	0,029	172 987	15 773	0,091				321 144	10 598	0,033		
Green cut:	26 687	13 344	0,500	28 789	4 894	0,170	31 470	24 351	0,774	27 128	23 186	0,855	55 231	26 279	0,476				178 177	89 089	0,500		
Fdn prep Hor: ( fine grade )	18 920	19 936	1,054				15 147	1 666	0,110				8 345	3 999	0,479				14 645	7 413	0,506		
Fdn prep Vert:	20 550	3 206	0,156				8 226	1 514	0,184				6 909	4 499	0,651				-	-	#DIV/0!		
Float finish:	33 951	10 015	0,295	10 841	7 100	0,655	33 132	5 964	0,180	5 893	3 764	0,639	27 276	18 711	0,686				37 899	18 480	0,488		
P & Patch F1:				13 957	656	0,047													-	-	#DIV/0!		
P & Patch F2:				25 990	10 058	0,387													-	-	#DIV/0!		
P & Patch F3:	71 669	25 800	0,360				59 347	25 519	0,430	20 492	8 192	0,400	77 525	33 293	0,429				173 291	73 174	0,422		
P & Patch F4:				3 210	1 467	0,457				10 739	5 536	0,516											
Bush Hammer:																							
Sandblast:																							
<b>Total</b>		<b>76 484</b>			<b>27 128</b>			<b>60 792</b>			<b>42 545</b>			<b>108 328</b>						<b>198 754</b>			
Erect & Strip:																							
Flat form:	44 497	180 879	4,065	24 443	67 952	2,780	34 694	122 774	3,539	9 712	32 341	3,330	49 911	189 298	3,793				200 258	695 737	3,474		
Curved form:	3 045	9 054	2,973	267	1 178	4,412	1 929	5 456	2,828	4 740	13 828	2,917	6 753	34 404	5,095				-	-	#DIV/0!		
Draft-tube form:	5 332	27 561	5,169	2 177	7 990	3,670	3 150	20 916	6,640	5 583	31 963	5,725	2 365	11 389	4,816				-	-	#DIV/0!		
Block-out:	8 133	27 214	3,346	1 757	6 931	3,945	6 640	22 562	3,398	4 537	12 572	2,771	12 605	53 577	4,250				-	-	#DIV/0!		
Pulkhead:				4 221	24 060	5,700	4 074	28 518	7,000	1 198	9 564	7,983	6 704	42 422	6,328				-	-	#DIV/0!		
Soffit:	14 583	53 914	3,697	4 987	17 305	3,470	8 608	26 592	3,089	2 452	7 286	2,971	8 931	43 700	4,893				-	-	#DIV/0!		
Column:										715	965	1,350	1 024	3 072	3,000				-	-	#DIV/0!		
Beam:				1 702	3 166	1,860	6 876	41 806	6,080										-	-	#DIV/0!		
B.I.P:	8 770	45 727	5,214							715	2 923	4,088	972	4 349	4,474				-	-	#DIV/0!		
Transition form, soffit or scroll case:																			-	-	#DIV/0!		
<b>Total</b>	<b>84 360</b>	<b>344 349</b>	<b>4,082</b>	<b>39 554</b>	<b>128 582</b>	<b>3,251</b>	<b>65 971</b>	<b>268 624</b>	<b>4,072</b>	<b>29 652</b>	<b>111 442</b>	<b>3,758</b>	<b>89 265</b>	<b>382 211</b>	<b>4,282</b>	<b>29 660</b>		<b>38 878</b>	<b>200 258</b>	<b>695 737</b>	<b>3,474</b>		
Fab Form:																							
Flat form:	8 737	16 338	1,870	9 242	9 981	1,080	13 884	27 914	2,011	2 465	3 911	1,587	15 935	24 543	1,540				55 194	199 600	3,616		
Curved form:	827	1 960	2,370	241	424	1,759	190	348	1,832	432	520	1,204	2 447	7 088	2,897				-	-	#DIV/0!		
Draft-tube form:	1 570	16 061	10,230	1 435	10 346	7,210	1 575	19 136	12,150	1 432	2 232	1,559	2 222	13 449	6,053				-	-	#DIV/0!		
Block-out:							4 068	7 213	1,773				9 131	11 845	1,297				-	-	#DIV/0!		
Transition form, soffit or scroll case:													5 624	12 100	2,151				-	-	#DIV/0!		
<b>Total</b>	<b>11 134</b>	<b>34 359</b>	<b>3,086</b>	<b>10 918</b>	<b>20 751</b>	<b>1,901</b>	<b>19 717</b>	<b>54 611</b>	<b>2,770</b>	<b>4 329</b>	<b>6 663</b>	<b>1,539</b>	<b>29 735</b>	<b>56 925</b>	<b>1,914</b>				<b>55 194</b>	<b>199 600</b>	<b>3,616</b>		
Miscellaneous:																							
Water stop ( m.l ):	6 863	3 329	0,485	7 171	4 590	0,640	6 156	5 048	0,820										63 312	31 657	0,500		
Coating ( m2 ):	3 751	195	0,052																		#DIV/0!		
<b>Total</b>		<b>3 524</b>			<b>4 590</b>			<b>5 048</b>												<b>31 657</b>			
<b>TOTAL M - H :</b>	<b>525 104</b>			<b>196 226</b>			<b>440 501</b>			<b>183 868</b>			<b>685 989</b>						<b>1 290 934</b>				
<b>TOTAL MH / M3 :</b>	<b>4,72</b>			<b>2,96</b>			<b>6,01</b>			<b>3,06</b>			<b>4,48</b>						<b>3,94</b>				
<b>FORM RATIO M2 / M3:</b>	<b>0,76</b>			<b>0,60</b>			<b>0,90</b>			<b>0,49</b>			<b>0,58</b>			<b>0,71</b>		<b>0,61</b>	<b>0,61</b>				
<b>TOTAL FAB &amp; E/S FACTOR:</b>	<b>4,49</b>			<b>3,78</b>			<b>4,90</b>			<b>3,98</b>			<b>4,92</b>						<b>4,47</b>				
Rebar: ( qty - m/h - fact )	5 003 505	47 533	0,010	4 249 024	46 739	0,011	3 955 122	60 909	0,015	6 302 625	56 724	0,009	7 647 850	68 831	0,009				19 870 000	198 700	0,010		
Indirects: ( total m-h )		480 000			170 000			244 192			181 000			425 000						754 288			
Global general factor mh / m3: ( without embedded & non-emb metals )	<b>9,47</b>			<b>6,22</b>			<b>10,18</b>			<b>7,02</b>			<b>7,71</b>						<b>6,84</b>				
<b>BID PRICE:</b>	<b>\$ 44 M</b>			<b>\$ 37 M</b>			<b>\$ 84 M</b>			<b>\$ 64 M</b>			<b>\$ 157 M</b>						<b>\$ 432 M</b>				
<b>AVERAGE \$ / M3 :</b>	<b>396 \$</b>			<b>527 \$</b>			<b>1 147 \$</b>			<b>1 066 \$</b>			<b>1 026 \$</b>			<b>1 107 \$</b>		<b>1 143 \$</b>	<b>1 317 \$</b>				
<b>YEAR OF THE BID:</b>	<b>1974</b>			<b>1986</b>			<b>1990</b>			<b>1992</b>			<b>2004</b>			<b>2004</b>		<b>2008</b>	<b>2013</b>				
																				<b>1 434 \$</b>	<b>1 225 \$</b>		