

Undertaking 113

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Undertaking ...to provide any reports or any budget documents that would identify the installation cost of putting (adding) 50 or 60 megawatt combustion turbine

Mr. MacIsaac offered to include the contractor's cost and our own costs Mr. Dumaresque clarified to have it broken out between what you had estimated to be the contractor's cost as opposed to the owner's cost.

In October 2012, Hydro prepared two draft project budgets to install a new 60 MW CT plant (see Undertaking 113 Attachments 1, 2, 3, and 4). One project provided for a CT plant without a weather protective building and the second provided a CT plant with a weather protective building. In September 2013, Hydro prepared an updated budget for the CT with a weather protective building (see Undertaking 113 Attachments 5 and 6).

The budget prepared in 2013 is considerably more than that prepared in 2012. The reasons for the increase are as follows:

1. Higher local labour rates than what was planned for in 2012 to more closely align with the 2013 market.
2. More planning was provided which improved the class of estimate and its accuracy.

Engineering Regular Labour						
Project Title:		All				
Engineering Discipline:						
Estimated by:						
Project Start Year:						
Date:		Total Regular Labour Costs(1110): \$1,471,560				
Note: All rate information comes from the Std Estimating Rates.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	PROGRAM MANAGER					
2	- one month per year (12 weeks total)	Engineer/Technologist	12	1	\$ 3,200.00	\$38,400
3						
4	PROJECT MANAGER					
5	- full time for 3 years (156 weeks)	Engineer/Technologist	156	1	\$ 3,200.00	\$499,200
6	ENGINEERING					
7	Mechanical engineering	Engineer/Technologist	78	1	\$ 3,200.00	\$249,600
8	Electrical eng (See [REDACTED] Estimate)					\$51,840
9	Civil engineering (See [REDACTED] Estimate)					\$20,800
10	Telecontrol eng. (See [REDACTED] Estimate)					\$55,040
	P&C engineering (See [REDACTED] Estimate)					\$84,800
	P&C engineering (See [REDACTED] Estimate)					\$217,600
	P&C eng. - DCS (See [REDACTED] Estimate)					\$73,600
11	DRAFTING					
12	Drafting	Drafters	15	1	\$ 2,400.00	\$36,000
13	SURVEYING	Surveyors				\$2,880
14						
15						
16	Phase 1 engineering	Engineer/Technologist	4	4	\$ 3,200.00	\$51,200
17					(\$/wk)	
18	ENVIRONMENTAL ([REDACTED])				(\$/wk)	
19	Environmental Specialist	Ecologist/Safety Lead/Safety Specialist	12	1	\$ 2,800.00	\$33,600
20	Environmental Management during const.	Environmental Coordinator/Monitor	15	1	\$ 2,400.00	\$36,000
21	Environmental Management during const.	Ecologist/Safety Lead/Safety Specialist	7.5	1	\$ 2,800.00	\$21,000
22					(\$/wk)	
23					(\$/wk)	
24					(\$/wk)	
25					(\$/wk)	
26					(\$/wk)	
27					(\$/wk)	
29					(\$/wk)	
30					(\$/wk)	
31					(\$/wk)	
33					(\$/wk)	
34					(\$/wk)	
35					(\$/wk)	
36					(\$/wk)	
37					(\$/wk)	
38					(\$/wk)	
39					(\$/wk)	
40					(\$/wk)	
41					(\$/wk)	
42					(\$/wk)	
43					(\$/wk)	
44					(\$/wk)	
45					(\$/wk)	

Engineering Overtime Labour						
Project Title:		New Gas Turbine Plant for Holyrood (Option 1 - Non-Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		[REDACTED]				
Project Start Year:		2013		Total Overtime Labour Costs(1120): \$41,600		
Date:		September 27, 2012				
Note: All rate information comes from the Std Estimating Rates sheet.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)				(\$/wk)	\$3,200
2					(\$/wk)	
3	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	0			(\$/wk)	\$32,000
4					(\$/wk)	
5	P&C (DCS): (See [REDACTED] Estimate Template for Cost Breakdown)	0			(\$/wk)	\$6,400
6					(\$/wk)	
7					(\$/wk)	
8					(\$/wk)	
9					(\$/wk)	
10					(\$/wk)	
11					(\$/wk)	
12					(\$/wk)	
13					(\$/wk)	
14					(\$/wk)	
15					(\$/wk)	
16					(\$/wk)	
17					(\$/wk)	
18					(\$/wk)	
19					(\$/wk)	
20					(\$/wk)	
21					(\$/wk)	
22					(\$/wk)	
23					(\$/wk)	
24					(\$/wk)	
25					(\$/wk)	
26					(\$/wk)	
27					(\$/wk)	
29					(\$/wk)	
30					(\$/wk)	
31					(\$/wk)	
33					(\$/wk)	
34					(\$/wk)	
35					(\$/wk)	

Construction Regular Labour						
Project Title:		New Gas Turbine Plant for Holyrood (Option 1 - Non-Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		[REDACTED]				
Project Start Year:		2013		Total Regular Labour Costs(1110): \$1,585,400		
Date:		September 27, 2012				
Note: All rate information comes from the Std Estimating Rates.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	PLANT PERSONNEL				\$ -	
2	Electricians	Internal Labour – Trades	52	2	\$ 2,100.00	\$218,400
3	Mechanical maintenance	Internal Labour – Trades	52	2	\$ 2,100.00	\$218,400
4	P&C technicians	Internal Labour – Technologist	52	2	\$ 2,400.00	\$249,600
5	Labourers	Internal Labour – Trades	52	2	\$ 2,100.00	\$218,400
6	Supervisors	Internal Labour – Trades	52	3	\$ 2,100.00	\$327,600
7	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)	1			\$ -	\$71,000
10					\$ -	
11	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$106,200
12					\$ -	
13	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$105,600
14					\$ -	
15	P&C (DCS): (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$24,000
16					\$ -	
17	Electrical: (See [REDACTED] Estimate)				\$ -	\$46,200
18					\$ -	
19					\$ -	
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
28					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
32					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	
36					\$ -	
37					\$ -	
38					\$ -	
39					\$ -	
40					\$ -	
41					\$ -	
42					\$ -	
43					\$ -	

Construction Overtime Labour						
Project Title:		New Gas Turbine Plant for Holyrood (Option 1 - Non-Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		[REDACTED]				
Project Start Year:		2013		Total Overtime Labour Costs(1120): \$579,500		
Date:		September 27, 2012				
Note: All rate information comes from the Std Estimating Rates sheet.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	PLANT PERSONNEL				\$ -	
2	Electricians	Internal Labour – Trades	20	2	\$ 2,100.00	\$84,000
3	Mechanical maintenance	Internal Labour – Trades	20	2	\$ 2,100.00	\$84,000
4	P&C technicians	Internal Labour – Technologist	20	2	\$ 2,400.00	\$96,000
5	Labourers	Internal Labour – Trades	20	2	\$ 2,100.00	\$84,000
6	Supervisors	Internal Labour – Trades	20	3	\$ 2,100.00	\$126,000
7					\$ -	
8					\$ -	
9					\$ -	
10	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)	1			\$ -	\$15,200
11					\$ -	
12					\$ -	
13	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$11,700
14					\$ -	
15	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$48,000
16					\$ -	
17	P&C (DCS): (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$9,600
18					\$ -	
19	Electrical: (See [REDACTED] Estimate)				\$ -	\$21,000
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	

Materials					
Project Title:		New Gas Turbine Plant for Holyrood (Option 1 - Non-Enclosed Plant)			
Engineering Discipline:		All			
Estimated by:		██████████			
Project Start Year:		2013		Total Materials Cost (1130): \$1,271,890	
Date:		September 27, 2012			
#	Item Description	Unit Price	Units	Quantity	Total \$
1	Misc. materials for construction	\$200,000	ea	1	\$200,000
2					
3	Office furniture, fax machine, printers, etc. for construction trailers	\$10,000	ea	1	\$10,000
4					
5	Phones, blackberries, pagers, (including cell phone monthly fees)	\$10,000	ea	1	\$10,000
6					
7	PPE	\$8,000	ea	1	\$8,000
8					
9	Office supplies (paper, etc)	\$750	ea	1	\$750
10					
11	Drinking water	\$2,000	ea	1	\$2,000
12					
13	Telecontrol: (See ██████████ Estimate Template for Cost Breakdowns)				\$216,500
14					
15	P&C: (See ██████████ Estimate Template for Cost Breakdown)				\$72,175
16					
17	P&C: (See ██████████ Estimate Template for Cost Breakdown)				\$10,000
18					
19	P&C (DCS): (See ██████████ Estimate Template for Cost Breakdown)				\$30,000
20					
21	Civil: (See ██████████ Estimate Template for Cost Breakdown)				\$62,465
22					
23	Electrical: (See ██████████ Estimate Template for Cost Breakdown)				\$650,000
24					
25					
26					
27					
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29					
30					
31					
32					
33					
34					

Third Party Consultants Labour						
Project Title:		New Gas Turbine Plant for Holyrood (Option 1 - Non-Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		[REDACTED]				
Project Start Year:		2013		Total Regular Labour Costs(1110): \$1,708,990		
Date:		September 27, 2012				
Note: All rate information comes from the Std Estimating Rates.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	Civil (See [REDACTED] Estimate)				\$ -	\$27,750
2					\$ -	
3	Electrical (See [REDACTED] Estimate)				\$ -	\$11,840
4					\$ -	
5	Mechanical				\$ -	\$250,000
6					\$ -	
7					\$ -	
8					\$ -	
9	On-site Reps	Consultants (min \$175/hr.)	52	3	\$ 7,000.00	\$1,092,000
10	On-site Rep expenses				\$ -	\$25,000
11					\$ -	
12	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)	1			\$ -	\$2,400
13					\$ -	
14					\$ -	
15	Environmental Studies				\$ -	\$300,000
16					\$ -	
17					\$ -	
18					\$ -	
19					\$ -	
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
28					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
32					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	
36					\$ -	
37					\$ -	
38					\$ -	
39					\$ -	
40					\$ -	
41					\$ -	
42					\$ -	
43					\$ -	

Third Party Equipment Rentals					
Project Title:		New Gas Turbine Plant for Holyrood (Option 1 - Non-Enclosed Plant)			
Engineering Discipline:		All			
Estimated by:		[REDACTED]			
Project Start Year:		2013		Total Equip Rental Costs(1140): \$101,400	
Date:		September 27, 2012			
Note: All rate information comes from the Std Estimating Rates sheet.					Rates Last Updated: 2011-11-15
#	Item Description	Category	# of Wks	Rate / Wk	Total \$
1	Rental of office trailers			\$ -	\$100,000
2				\$ -	
3	Electrical OSR Vehicle			\$ -	\$1,400
4				\$ -	
5				\$ -	
6				\$ -	
7				\$ -	
8				\$ -	
9				\$ -	
10				\$ -	
11				\$ -	
12				\$ -	
13				\$ -	
14				\$ -	
15				\$ -	
16				\$ -	
17				\$ -	
18				\$ -	
19				\$ -	
20				\$ -	
21				\$ -	
22				\$ -	
23				\$ -	
24				\$ -	
25				\$ -	
26				\$ -	
27				\$ -	
29				\$ -	
30				\$ -	
31				\$ -	
33				\$ -	
34				\$ -	
35				\$ -	

Engineering Travel						
Project Title:		New Gas Turbine Plant for Holyrood (Option 1 - Non-Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		[REDACTED]				
Project Start Year:		2013		Total Travel Costs(1145): \$171,942		
Date:		September 27, 2012				
Note: Air Fares may be typed directly into the Std Estimating Rates Sheet.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	Car for engineering project team	Commercial Car/Van/Pick Up Rental	156	1	\$ 500.00	\$78,000
2					\$ -	
3	Misc. (meals)				\$ -	\$10,000
4					\$ -	
5					\$ -	
6	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)	1			\$ -	\$6,600
7					\$ -	
8	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$10,770
9					\$ -	
10	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$34,120
11					\$ -	
12	P&C (DCS): (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$1,040
13					\$ -	
14	Civil: (See [REDACTED] Estimate)				\$ -	\$1,040
15					\$ -	
16	Electrical (See [REDACTED] Estimate)				\$ -	\$30,372
17					\$ -	
18					\$ -	
19					\$ -	
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	

Construction Travel						
Project Title:		New Gas Turbine Plant for Holyrood (Option 1 - Non-Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		██████████				
Project Start Year:		2013		Total Travel Costs(1145): \$16,260		
Date:		September 27, 2012				
Note: Air Fares may be typed directly into the Std Estimating Rates Sheet.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	Misc. meals				\$ -	\$5,000
2					\$ -	
3	Telecontrol: (See ██████ Estimate Template for Cost Breakdowns)	1			\$ -	\$2,900
4					\$ -	
5	P&C: (See ██████ Estimate Template for Cost Breakdowns)	1			\$ -	\$8,360
6					\$ -	
7					\$ -	
8					\$ -	
9					\$ -	
10					\$ -	
11					\$ -	
12					\$ -	
13					\$ -	
14					\$ -	
15					\$ -	
16					\$ -	
17					\$ -	
18					\$ -	
19					\$ -	
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	

Third Party Contracts					
Project Title:		New Gas Turbine Plant for Holyrood (Option 1 - Non-Enclosed Plant)			
Engineering Discipline:		All			
Estimated by:		[REDACTED]			
Project Start Year:		2013		Total Contract Cost (1150): \$56,878,275	
Date:		September 27, 2012			
#	Item Description	Unit Price	Units	Quantity	Total \$
1	Misc. mechanical ([REDACTED])	\$500,000	ea	1	\$500,000
2					
3					
4	FROM [REDACTED] PROPOSAL				
5	Supply and install 60 MW gas turbine plant (based on [REDACTED] proposal), not including black start diesel, or transformer	\$41,840,000	ea	1	\$41,840,000
	Water treatment plant	\$977,000	ea	1	\$977,000
	DI Water tank	\$1,726,000	ea	1	\$1,726,000
6	Cold-weather building - NOT INCLUDED IN THIS OPTION		ea	1	
	Upgrade from 300,000 to 700,000 gallon fuel tank	\$460,000	ea	1	\$460,000
	Misc. (From [REDACTED] - union fringes, etc.)	\$2,821,000	ea	1	\$2,821,000
7	Black start diesel	\$860,000	ea	1	\$860,000
8	Continuous emissions monitoring system	\$365,000	ea	1	\$365,000
9	Option: Capability to expand to 120 MW, with larger step-up transformer, updated control system and a full foundation (does not include the 2nd gas generator or power turbine)	\$4,341,000	ea	1	\$4,341,000
10	Step-up transformer, including delivery, assembly, commissioning	\$1,900,000	ea	1	\$1,900,000
11					
12	Interconnections for black start diesel - not included ([REDACTED] proposal [REDACTED])	\$300,000	ea	1	\$300,000
13					
14	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)				\$158,200
15					
16	P&C (DCS): (See [REDACTED] Estimate Template for Cost Breakdown)				\$100,000
17					
18	Civil: (See [REDACTED] Estimate Template for Cost Breakdown)				\$255,075
19					
20	Electrical (See [REDACTED] Estimate Template for Cost Breakdown)				\$165,000
21					
22					
23	Set up of construction trailers, including power, data, water & sewer	\$100,000	ea	1	\$100,000
24	Janitorial services for construction trailers	\$10,000	ea	1	\$10,000
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					

Internal Equipment Rentals					
Project Title:		New Gas Turbine Plant for Holyrood (Option 1 - Non-Enclosed Plant)			
Engineering Discipline:		All			
Estimated by:		[REDACTED]			
Project Start Year:		2013		Total Equip Rental Costs(1140): \$21,060	
Date:		September 27, 2012			
Note: All rate information comes from the Std Estimating Rates sheet.					Rates Last Updated: 2011-11-15
#	Item Description	Category	# of Wks	Rate / Wk	Total \$
1	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)	1		\$ -	\$7,700
2				\$ -	
3	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)			\$ -	\$9,800
4				\$ -	
5	Electrical: (See [REDACTED] Estimate)			\$ -	\$3,560
6				\$ -	
7				\$ -	
8				\$ -	
9				\$ -	
10				\$ -	
11				\$ -	
12				\$ -	
13				\$ -	
14				\$ -	
15				\$ -	
16				\$ -	
17				\$ -	
18				\$ -	
19				\$ -	
20				\$ -	
21				\$ -	
22				\$ -	
23				\$ -	
24				\$ -	
25				\$ -	
26				\$ -	
27				\$ -	
29				\$ -	
30				\$ -	
31				\$ -	
33				\$ -	
34				\$ -	
35				\$ -	

Standard Estimating Rates			
Rates Last Updated: 2011-11-15	Operating	Capital	
Labour	(\$/wk)	(\$/wk)	
Engineer/Technologist	\$3,200	\$3,200	
Surveyors	\$2,400	\$2,400	
Environmental Coordinator/Monitor	\$2,400	\$2,400	
Ecologist/Safety Lead/Safety Specialist	\$2,800	\$2,800	
Legal Counsel	\$3,900	\$3,900	
Drafters	\$2,400	\$2,400	
Owner Site Representative (OSR)	\$2,200	\$2,200	
Internal Labour – Technologist	\$2,400	\$2,400	
Internal Labour – Trades	\$2,100	\$2,100	
External Labour – Trades (Union)	\$3,320	\$3,320	
External Labour – Trades (Non Union)	\$2,280	\$2,280	
Consultants (min \$175/hr.)	\$7,000	\$7,000	
Miscellaneous			
Internal Equipment Rentals	(\$/wk)	(\$/wk)	
Cars/Vans/Pick Ups	\$350	\$350	
Snowmobiles/ATVs	\$250	\$250	
Line Body Trucks	\$1,000	\$1,000	
Aerial Devices	\$1,300	\$1,300	
Stake Body Boom Trucks	\$1,300	\$1,300	
Mobile Cranes	\$1,300	\$1,300	
Muskegs/Go Tracks	\$11,200	\$11,200	
Mobile Substation	\$850	\$850	
Portable Transformer (pallet)	\$850	\$850	
Helicopter (Casual or Contract) (\$1,285/hr)	\$51,400	\$51,400	
Miscellaneous			
Commercial Rental			
Other Equipment			
Travel	(\$)	(\$)	
Living Expenses	\$260	\$260	
Airport Taxi (Return)	\$80	\$80	
Commercial Car/Van/Pick Up Rental	\$500	\$500	
Hotel Accommodations (In province)	\$750	\$750	
Air Fare – In Province	By location	By location	
Air Fare – Out of Province	By location	By location	
Air Fare - Other			
Notes:			
• Labour rates for all categories the same for straight time and overtime, field or office. (no loading on overtime)			

Project Description
Asset Business Unit



Project Start Date
Project Completion Date

Business Unit		Cost Code			Cost Type											
Asset Business Unit	Year	Proj Num	Work Plan Type	Major Work Group	Future use	Activity	Description	Level of Detail	Labour 1110	Overtime 1120	Materials 1130	Consultants 1135	Equip. Rental 1140	Travel 1145	Contract 1150	Total
9999	99	99	5			Capital Projects		4								
9999	99	99	5	999		MWG Description		5								
9999	99	99	5	999	00	Proj. Num. Default 00		6								
9999	99	99	5	999	00	01	Project Activity Description	7								
9999	99	99	5	999	00	01	ENGINEERING	8	1,471,560.00	41,600.00				171,942.00		1,685,102.00
9999	99	99	5			Capital Projects		4								
9999	99	99	5	999		MWG Description		5								
9999	99	99	5	999	00	Proj. Num. Default 00		6								
9999	99	99	5	999	00	02	Project Activity Description	7								
9999	99	99	5	999	00	02	MATERIALS	8			1,271,890.00					1,271,890.00
9999	99	99	5			Capital Projects		4								
9999	99	99	5	999		MWG Description		5								
9999	99	99	5	999	00	Proj. Num. Default 00		6								
9999	99	99	5	999	00	03	Project Activity Description	7								
9999	99	99	5	999	00	03	THIRD PARTY	8				1,708,990.00	101,400.00		56,878,275.00	58,688,665.00
9999	99	99	5			Capital Projects		4								
9999	99	99	5	999		MWG Description		5								
9999	99	99	5	999	00	Proj. Num. Default 00		6								
9999	99	99	5	999	00	04	Project Activity Description	7								
9999	99	99	5	999	00	04	INTERNAL EQUIPMENT	8					21,060.00			21,060.00
9999	99	99	5			Capital Projects		4								
9999	99	99	5	999		MWG Description		5								
9999	99	99	5	999	00	Proj. Num. Default 00		6								
9999	99	99	5	999	00	05	Project Activity Description	7								
9999	99	99	5	999	00	05	CONSTRUCTION	8	1,585,400.00	579,500.00				16,260.00		2,181,160.00

Project Total: 63,847,877.00



PROJECT PROPOSAL SUMMARY

Capital Project

Bus. Unit _____

Project Title: New Gas Turbine Plant - Option 1 (Non-Enclosed Plant) **Date Prepared** Oct 25, 2012
Company: HYDRO **Project Type:** Default
Start Year: 2013 or Later **Category:** Generation - Gas Turbines
Start Date: 2013 Jan 1 **Definition:** Other **Classification:** Normal
Completion Date: 2015 Dec **Location:** Holyrood **Asset Retirement or Transfer?** No

Type of Work: More Material Less Labour **Prepared By:** _____

Base Date: 2012 Jan 1

5 Year Cash Sheet Should be Used

Project Cost: (\$ x1,000)	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>BEYOND</u>	<u>TOTAL</u>
Material Supply	0.0	1,271.9	0.0	0.0	0.0	0.0	1,271.9
Labour	700.0	1,100.0	1,878.1	0.0	0.0	0.0	3,678.1
Consultant	400.0	400.0	909.0	0.0	0.0	0.0	1,709.0
Contract Work	6,000.0	20,000.0	30,878.3	0.0	0.0	0.0	56,878.3
Other Direct Costs	5.0	50.0	255.7	0.0	0.0	0.0	310.7
O/H, AFUDC & Escln.	318.3	2,107.3	6,732.1	0.0	0.0	0.0	9,157.7
Contingency	0.0	0.0	12,769.6	0.0	0.0	0.0	12,769.6
TOTAL	7,423.3	24,929.2	53,422.7	0.0	0.0	0.0	85,775.2

Description:

Operating Experience:

Justification:

Future Plans:

"Initiating Bus.Unit" Mgr:	Project Estimator:	"Managing Dept." Mgr:	"Initiating Dept" Manager:	Vice-President:

Engineering Regular Labour						
Project Title:		Total Regular Labour Costs(1110): \$1,471,560				
Engineering Discipline: All						
Estimated by:						
Project Start Year:						
Date:						
Note: All rate information comes from the Std Estimating Rates.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	PROGRAM MANAGER					
2	- one month per year (12 weeks total)	Engineer/Technologist	12	1	\$ 3,200.00	\$38,400
3						
4	PROJECT MANAGER					
5	- full time for 3 years (156 weeks)	Engineer/Technologist	156	1	\$ 3,200.00	\$499,200
6	ENGINEERING					
7	Mechanical engineering	Engineer/Technologist	78	1	\$ 3,200.00	\$249,600
8	Electrical eng (See [REDACTED] Estimate)					\$51,840
9	Civil engineering (See [REDACTED] Estimate)					\$20,800
10	Telecontrol eng. (See [REDACTED] Estimate)					\$55,040
	P&C engineering (See [REDACTED] Estimate)					\$84,800
	P&C engineering (See [REDACTED] Estimate)					\$217,600
	P&C eng. - DCS (See [REDACTED] Estimate)					\$73,600
11	DRAFTING					
12	Drafting	Drafters	15	1	\$ 2,400.00	\$36,000
13	SURVEYING	Surveyors				\$2,880
14						
15						
16	Phase 1 engineering	Engineer/Technologist	4	4	\$ 3,200.00	\$51,200
17					(\$/wk)	
18	ENVIRONMENTAL ([REDACTED])				(\$/wk)	
19	Environmental Specialist	Ecologist/Safety Lead/Safety Specialist	12	1	\$ 2,800.00	\$33,600
20	Environmental Management during const.	Environmental Coordinator/Monitor	15	1	\$ 2,400.00	\$36,000
21	Environmental Management during const.	Ecologist/Safety Lead/Safety Specialist	7.5	1	\$ 2,800.00	\$21,000
22					(\$/wk)	
23					(\$/wk)	
24					(\$/wk)	
25					(\$/wk)	
26					(\$/wk)	
27					(\$/wk)	
29					(\$/wk)	
30					(\$/wk)	
31					(\$/wk)	
33					(\$/wk)	
34					(\$/wk)	
35					(\$/wk)	
36					(\$/wk)	
37					(\$/wk)	
38					(\$/wk)	
39					(\$/wk)	
40					(\$/wk)	
41					(\$/wk)	
42					(\$/wk)	
43					(\$/wk)	
44					(\$/wk)	
45					(\$/wk)	

Engineering Overtime Labour						
Project Title:		New Gas Turbine Plant for Holyrood (Option 2 - Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		[REDACTED]				
Project Start Year:		2013		Total Overtime Labour Costs(1120): \$41,600		
Date:		September 27, 2012				
Note: All rate information comes from the Std Estimating Rates sheet.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)				(\$/wk)	\$3,200
2					(\$/wk)	
3	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	0			(\$/wk)	\$32,000
4					(\$/wk)	
5	P&C (DCS): (See [REDACTED] Estimate Template for Cost Breakdown)	0			(\$/wk)	\$6,400
6					(\$/wk)	
7					(\$/wk)	
8					(\$/wk)	
9					(\$/wk)	
10					(\$/wk)	
11					(\$/wk)	
12					(\$/wk)	
13					(\$/wk)	
14					(\$/wk)	
15					(\$/wk)	
16					(\$/wk)	
17					(\$/wk)	
18					(\$/wk)	
19					(\$/wk)	
20					(\$/wk)	
21					(\$/wk)	
22					(\$/wk)	
23					(\$/wk)	
24					(\$/wk)	
25					(\$/wk)	
26					(\$/wk)	
27					(\$/wk)	
29					(\$/wk)	
30					(\$/wk)	
31					(\$/wk)	
33					(\$/wk)	
34					(\$/wk)	
35					(\$/wk)	

Construction Regular Labour						
Project Title:		New Gas Turbine Plant for Holyrood (Option 2 - Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		[REDACTED]				
Project Start Year:		2013		Total Regular Labour Costs(1110): \$1,585,400		
Date:		September 27, 2012				
Note: All rate information comes from the Std Estimating Rates.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	PLANT PERSONNEL				\$ -	
2	Electricians	Internal Labour – Trades	52	2	\$ 2,100.00	\$218,400
3	Mechanical maintenance	Internal Labour – Trades	52	2	\$ 2,100.00	\$218,400
4	P&C technicians	Internal Labour – Technologist	52	2	\$ 2,400.00	\$249,600
5	Labourers	Internal Labour – Trades	52	2	\$ 2,100.00	\$218,400
6	Supervisors	Internal Labour – Trades	52	3	\$ 2,100.00	\$327,600
7	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)	1			\$ -	\$71,000
10					\$ -	
11	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$106,200
12					\$ -	
13	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$105,600
14					\$ -	
15	P&C (DCS): (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$24,000
16					\$ -	
17	Electrical: (See [REDACTED] Estimate)				\$ -	\$46,200
18					\$ -	
19					\$ -	
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
28					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
32					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	
36					\$ -	
37					\$ -	
38					\$ -	
39					\$ -	
40					\$ -	
41					\$ -	
42					\$ -	
43					\$ -	

Construction Overtime Labour						
Project Title:		New Gas Turbine Plant for Holyrood (Option 2 - Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		██████████				
Project Start Year:		2013		Total Overtime Labour Costs(1120): \$579,500		
Date:		September 27, 2012				
Note: All rate information comes from the Std Estimating Rates sheet.					Rates Last Updated: 2011-11-15	
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	PLANT PERSONNEL				\$ -	
2	Electricians	Internal Labour – Trades	20	2	\$ 2,100.00	\$84,000
3	Mechanical maintenance	Internal Labour – Trades	20	2	\$ 2,100.00	\$84,000
4	P&C technicians	Internal Labour – Technologist	20	2	\$ 2,400.00	\$96,000
5	Labourers	Internal Labour – Trades	20	2	\$ 2,100.00	\$84,000
6	Supervisors	Internal Labour – Trades	20	3	\$ 2,100.00	\$126,000
7					\$ -	
8					\$ -	
9					\$ -	
10	Telecontrol: (See ██████ Estimate Template for Cost Breakdowns)	1			\$ -	\$15,200
11					\$ -	
12					\$ -	
13	P&C: (See ██████ Estimate Template for Cost Breakdown)	1			\$ -	\$11,700
14					\$ -	
15	P&C: (See ██████ Estimate Template for Cost Breakdown)	1			\$ -	\$48,000
16					\$ -	
17	P&C (DCS): (See ██████ Estimate Template for Cost Breakdown)	1			\$ -	\$9,600
18					\$ -	
19	Electrical: (See ██████ Estimate)				\$ -	\$21,000
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	

Materials					
Project Title:		New Gas Turbine Plant for Holyrood (Option 2 - Enclosed Plant)			
Engineering Discipline:		All			
Estimated by:		[REDACTED]			
Project Start Year:		2013		Total Materials Cost (1130): \$1,271,890	
Date:		September 27, 2012			
#	Item Description	Unit Price	Units	Quantity	Total \$
1	Misc. materials for construction	\$200,000	ea	1	\$200,000
2					
3	Office furniture, fax machine, printers, etc. for construction trailers	\$10,000	ea	1	\$10,000
4					
5	Phones, blackberries, pagers, (including cell phone monthly fees)	\$10,000	ea	1	\$10,000
6					
7	PPE	\$8,000	ea	1	\$8,000
8					
9	Office supplies (paper, etc)	\$750	ea	1	\$750
10					
11	Drinking water	\$2,000	ea	1	\$2,000
12					
13	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)				\$216,500
14					
15	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)				\$72,175
16					
17	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)				\$10,000
18					
19	P&C (DCS): (See [REDACTED] Estimate Template for Cost Breakdown)				\$30,000
20					
21	Civil: (See [REDACTED] Estimate Template for Cost Breakdown)				\$62,465
22					
23	Electrical: (See [REDACTED] Estimate Template for Cost Breakdown)				\$650,000
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					

Third Party Consultants Labour						
Project Title:		New Gas Turbine Plant for Holyrood (Option 2 - Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		[REDACTED]				
Project Start Year:		2013		Total Regular Labour Costs(1110): \$1,708,990		
Date:		September 27, 2012				
Note: All rate information comes from the Std Estimating Rates.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	Civil (See [REDACTED] Estimate)				\$ -	\$27,750
2					\$ -	
3	Electrical (See [REDACTED] Estimate)				\$ -	\$11,840
4					\$ -	
5	Mechanical				\$ -	\$250,000
6					\$ -	
7					\$ -	
8					\$ -	
9	On-site Reps	Consultants (min \$175/hr.)	52	3	\$ 7,000.00	\$1,092,000
10	On-site Rep expenses				\$ -	\$25,000
11					\$ -	
12	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)	1			\$ -	\$2,400
13					\$ -	
14					\$ -	
15	Environmental Studies				\$ -	\$300,000
16					\$ -	
17					\$ -	
18					\$ -	
19					\$ -	
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
28					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
32					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	
36					\$ -	
37					\$ -	
38					\$ -	
39					\$ -	
40					\$ -	
41					\$ -	
42					\$ -	
43					\$ -	

Third Party Equipment Rentals					
Project Title:		New Gas Turbine Plant for Holyrood (Option 2 - Enclosed Plant)			
Engineering Discipline:		All			
Estimated by:		[REDACTED]			
Project Start Year:		2013		Total Equip Rental Costs(1140): \$101,400	
Date:		September 27, 2012			
Note: All rate information comes from the Std Estimating Rates sheet.					Rates Last Updated: 2011-11-15
#	Item Description	Category	# of Wks	Rate / Wk	Total \$
1	Rental of office trailers			\$ -	\$100,000
2				\$ -	
3	Electrical OSR Vehicle			\$ -	\$1,400
4				\$ -	
5				\$ -	
6				\$ -	
7				\$ -	
8				\$ -	
9				\$ -	
10				\$ -	
11				\$ -	
12				\$ -	
13				\$ -	
14				\$ -	
15				\$ -	
16				\$ -	
17				\$ -	
18				\$ -	
19				\$ -	
20				\$ -	
21				\$ -	
22				\$ -	
23				\$ -	
24				\$ -	
25				\$ -	
26				\$ -	
27				\$ -	
29				\$ -	
30				\$ -	
31				\$ -	
33				\$ -	
34				\$ -	
35				\$ -	

Engineering Travel						
Project Title:		New Gas Turbine Plant for Holyrood (Option 2 - Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		[REDACTED]				
Project Start Year:		2013		Total Travel Costs(1145): \$171,942		
Date:		September 27, 2012				
Note: Air Fares may be typed directly into the Std Estimating Rates Sheet.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	Car for engineering project team	Commercial Car/Van/Pick Up Rental	156	1	\$ 500.00	\$78,000
2					\$ -	
3	Misc. (meals)				\$ -	\$10,000
4					\$ -	
5					\$ -	
6	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)	1			\$ -	\$6,600
7					\$ -	
8	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$10,770
9					\$ -	
10	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$34,120
11					\$ -	
12	P&C (DCS): (See [REDACTED] Estimate Template for Cost Breakdown)	1			\$ -	\$1,040
13					\$ -	
14	Civil: (See [REDACTED] Estimate)				\$ -	\$1,040
15					\$ -	
16	Electrical (See [REDACTED] Estimate)				\$ -	\$30,372
17					\$ -	
18					\$ -	
19					\$ -	
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	

Construction Travel						
Project Title:		New Gas Turbine Plant for Holyrood (Option 2 - Enclosed Plant)				
Engineering Discipline:		All				
Estimated by:		[REDACTED]				
Project Start Year:		2013		Total Travel Costs(1145): \$16,260		
Date:		September 27, 2012				
Note: Air Fares may be typed directly into the Std Estimating Rates Sheet.				Rates Last Updated: 2011-11-15		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	Misc. meals				\$ -	\$5,000
2					\$ -	
3	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)	1			\$ -	\$2,900
4					\$ -	
5	P&C: (See [REDACTED] Estimate Template for Cost Breakdowns)	1			\$ -	\$8,360
6					\$ -	
7					\$ -	
8					\$ -	
9					\$ -	
10					\$ -	
11					\$ -	
12					\$ -	
13					\$ -	
14					\$ -	
15					\$ -	
16					\$ -	
17					\$ -	
18					\$ -	
19					\$ -	
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	

Third Party Contracts					
Project Title:		New Gas Turbine Plant for Holyrood (Option 2 - Enclosed Plant)			
Engineering Discipline:		All			
Estimated by:		██████████			
Project Start Year:		2013		Total Contract Cost (1150): \$61,644,275	
Date:		September 27, 2012			
#	Item Description	Unit Price	Units	Quantity	Total \$
1	Misc. mechanical ██████████	\$500,000	ea	1	\$500,000
2					
3					
4	FROM ██████████ PROPOSAL				
5	Supply and install 60 MW gas turbine plant (based on ██████████ proposal), not including black start diesel, or transformer	\$41,840,000	ea	1	\$41,840,000
	Water treatment plant	\$977,000	ea	1	\$977,000
	DI Water tank	\$1,726,000	ea	1	\$1,726,000
6	Cold-weather building	\$4,766,000	ea	1	\$4,766,000
	Upgrade from 300,000 to 700,000 gallon fuel tank	\$460,000	ea	1	\$460,000
	Misc. (From ██████████ - union fringes, etc.)	\$2,821,000	ea	1	\$2,821,000
7	Black start diesel	\$860,000	ea	1	\$860,000
8	Continuous emissions monitoring system	\$365,000	ea	1	\$365,000
9	Option: Capability to expand to 120 MW, with larger step-up transformer, updated control system and a full foundation (does not include the 2nd gas generator or power turbine)	\$4,341,000	ea	1	\$4,341,000
10	Step-up transformer, including delivery, assembly, commissioning	\$1,900,000	ea	1	\$1,900,000
11					
12	Interconnections for black start diesel - not included ██████████ proposal (██████████)	\$300,000	ea	1	\$300,000
13					
14	Telecontrol: (See ██████████ Estimate Template for Cost Breakdowns)				\$158,200
15					
16	P&C (DCS): (See ██████████ Estimate Template for Cost Breakdown)				\$100,000
17					
18	Civil: (See ██████████ Estimate Template for Cost Breakdown)				\$255,075
19					
20	Electrical (See ██████████ Estimate Template for Cost Breakdown)				\$165,000
21					
22					
23	Set up of construction trailers, including power, data, water & sewer	\$100,000	ea	1	\$100,000
24	Janitorial services for construction trailers	\$10,000	ea	1	\$10,000
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					

Internal Equipment Rentals					
Project Title:		New Gas Turbine Plant for Holyrood (Option 2 - Enclosed Plant)			
Engineering Discipline:		All			
Estimated by:		[REDACTED]			
Project Start Year:		2013		Total Equip Rental Costs(1140): \$21,060	
Date:		September 27, 2012			
Note: All rate information comes from the Std Estimating Rates sheet.					Rates Last Updated: 2011-11-15
#	Item Description	Category	# of Wks	Rate / Wk	Total \$
1	Telecontrol: (See [REDACTED] Estimate Template for Cost Breakdowns)	1		\$ -	\$7,700
2				\$ -	
3	P&C: (See [REDACTED] Estimate Template for Cost Breakdown)			\$ -	\$9,800
4				\$ -	
5	Electrical: (See [REDACTED] Estimate)			\$ -	\$3,560
6				\$ -	
7				\$ -	
8				\$ -	
9				\$ -	
10				\$ -	
11				\$ -	
12				\$ -	
13				\$ -	
14				\$ -	
15				\$ -	
16				\$ -	
17				\$ -	
18				\$ -	
19				\$ -	
20				\$ -	
21				\$ -	
22				\$ -	
23				\$ -	
24				\$ -	
25				\$ -	
26				\$ -	
27				\$ -	
29				\$ -	
30				\$ -	
31				\$ -	
33				\$ -	
34				\$ -	
35				\$ -	

Standard Estimating Rates			
Rates Last Updated: 2011-11-15	Operating	Capital	
Labour	(\$/wk)	(\$/wk)	
Engineer/Technologist	\$3,200	\$3,200	
Surveyors	\$2,400	\$2,400	
Environmental Coordinator/Monitor	\$2,400	\$2,400	
Ecologist/Safety Lead/Safety Specialist	\$2,800	\$2,800	
Legal Counsel	\$3,900	\$3,900	
Drafters	\$2,400	\$2,400	
Owner Site Representative (OSR)	\$2,200	\$2,200	
Internal Labour – Technologist	\$2,400	\$2,400	
Internal Labour – Trades	\$2,100	\$2,100	
External Labour – Trades (Union)	\$3,320	\$3,320	
External Labour – Trades (Non Union)	\$2,280	\$2,280	
Consultants (min \$175/hr.)	\$7,000	\$7,000	
Miscellaneous			
Internal Equipment Rentals	(\$/wk)	(\$/wk)	
Cars/Vans/Pick Ups	\$350	\$350	
Snowmobiles/ATVs	\$250	\$250	
Line Body Trucks	\$1,000	\$1,000	
Aerial Devices	\$1,300	\$1,300	
Stake Body Boom Trucks	\$1,300	\$1,300	
Mobile Cranes	\$1,300	\$1,300	
Muskegs/Go Tracks	\$11,200	\$11,200	
Mobile Substation	\$850	\$850	
Portable Transformer (pallet)	\$850	\$850	
Helicopter (Casual or Contract) (\$1,285/hr)	\$51,400	\$51,400	
Miscellaneous			
Commercial Rental			
Other Equipment			
Travel	(\$)	(\$)	
Living Expenses	\$260	\$260	
Airport Taxi (Return)	\$80	\$80	
Commercial Car/Van/Pick Up Rental	\$500	\$500	
Hotel Accommodations (In province)	\$750	\$750	
Air Fare – In Province	By location	By location	
Air Fare – Out of Province	By location	By location	
Air Fare - Other			
Notes:			
• Labour rates for all categories the same for straight time and overtime, field or office. (no loading on overtime)			

Project Description
Asset Business Unit



Project Start Date
Project Completion Date

Business Unit		Cost Code			Cost Type											
Asset Business Unit	Year	Proj Num	Work Plan Type	Major Work Group	Future use	Activity	Description	Level of Detail	Labour 1110	Overtime 1120	Materials 1130	Consultants 1135	Equip. Rental 1140	Travel 1145	Contract 1150	Total
9999	99	99	5				Capital Projects	4								
9999	99	99	5	999			MWG Description	5								
9999	99	99	5	999	00		Proj. Num. Default 00	6								
9999	99	99	5	999	00	01	Project Activity Description	7								
9999	99	99	5	999	00	01	ENGINEERING	8	1,471,560.00	41,600.00				171,942.00		1,685,102.00
9999	99	99	5				Capital Projects	4								
9999	99	99	5	999			MWG Description	5								
9999	99	99	5	999	00		Proj. Num. Default 00	6								
9999	99	99	5	999	00	02	Project Activity Description	7								
9999	99	99	5	999	00	02	MATERIALS	8			1,271,890.00					1,271,890.00
9999	99	99	5				Capital Projects	4								
9999	99	99	5	999			MWG Description	5								
9999	99	99	5	999	00		Proj. Num. Default 00	6								
9999	99	99	5	999	00	03	Project Activity Description	7								
9999	99	99	5	999	00	03	THIRD PARTY	8				1,708,990.00	101,400.00		61,644,275.00	63,454,665.00
9999	99	99	5				Capital Projects	4								
9999	99	99	5	999			MWG Description	5								
9999	99	99	5	999	00		Proj. Num. Default 00	6								
9999	99	99	5	999	00	04	Project Activity Description	7								
9999	99	99	5	999	00	04	INTERNAL EQUIPMENT	8					21,060.00			21,060.00
9999	99	99	5				Capital Projects	4								
9999	99	99	5	999			MWG Description	5								
9999	99	99	5	999	00		Proj. Num. Default 00	6								
9999	99	99	5	999	00	05	Project Activity Description	7								
9999	99	99	5	999	00	05	CONSTRUCTION	8	1,585,400.00	579,500.00				16,260.00		2,181,160.00

Project Total: 68,613,877.00



PROJECT PROPOSAL SUMMARY

Capital Project

Bus. Unit _____

Project Title: New Gas Turbine Plant - Option 2 (Enclosed Plant) **Date Prepared** Oct 25, 2012
Company: HYDRO **Project Type:** Default
Start Year: 2013 or Later **Category:** Generation - Gas Turbines
Start Date: 2013 Jan 1 **Definition:** Other **Classification:** Normal
Completion Date: 2015 Dec **Location:** Holyrood **Asset Retirement or Transfer?** No

Type of Work: More Material Less Labour **Prepared By:** XXXXXXXXXX

Base Date: 2012 Jan 1

5 Year Cash Sheet Should be Used

Project Cost: (\$ x1,000)	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>BEYOND</u>	<u>TOTAL</u>
Material Supply	0.0	1,271.9	0.0	0.0	0.0	0.0	1,271.9
Labour	700.0	1,100.0	1,878.1	0.0	0.0	0.0	3,678.1
Consultant	400.0	400.0	909.0	0.0	0.0	0.0	1,709.0
Contract Work	6,000.0	20,000.0	35,644.3	0.0	0.0	0.0	61,644.3
Other Direct Costs	5.0	50.0	255.7	0.0	0.0	0.0	310.7
O/H, AFUDC & Escln.	318.3	2,107.3	7,252.2	0.0	0.0	0.0	9,677.8
Contingency	0.0	0.0	13,722.8	0.0	0.0	0.0	13,722.8
TOTAL	7,423.3	24,929.2	59,662.0	0.0	0.0	0.0	92,014.5

Description:

Operating Experience:

Justification:

Future Plans:

"Initiating Bus.Unit" Mgr:	Project Estimator:	"Managing Dept." Mgr:	"Initiating Dept" Manager:	Vice-President:

A	B	C
1		Undertaking 113, Attachment 5
2	Basis of Estimate Page 2 of 15	
3	Project Title:	HRD 60 MW (Nominal) CT Addition
4	Engineering Discipline:	All
5	Estimated by:	All & Consolidated by [REDACTED]
6	Project Start Year:	2013
7	Date:	41546
8	Asset Manager:	[REDACTED]
9		
10	High Level Description:	Supply, Install and Commission 50 MW (Minimal) Combustion Turbine Plant with 120 MVAR of Synchronous Condensing & Balance Of Plant in Holyrood Plant Yard
11		
12		
13		
14	High Level Justification:	MW System Generation to offset projected LOLH violations. MVAR support required to mitigate projected voltage issues. Replace HRP black-start unit functionality.
15		
16		
17		
18	Scope of Work:	
19		
20		
21		
22	Work Exclusions:	
23		
24		
25		
26	Assumptions:	
27		
28		
29		
30	Constraints:	
31		
32		
33		
34	High Level Requirements:	
35		
36		
37		
38	High Level Risks:	
39		
40		
41		
42	High Level Schedule:	
43	<i>(i.e. material lead times, outages,...)</i>	
44		
45		
46	High Level Resource Assignment:	
47		
48		
49		
50	Environmental Services:	Desktop study, Draft EA Document, EA Document, EA Process Interface, Input to Construction Contract, Construction Monitoring, Post-Construction Monitoring
51		
52		
53		
54	Financial Services:	Review of Generation Alternatives
55	<i>(i.e. Cost Benefit Analysis)</i>	
56		
57		

Engineering Regular Labour						
Project Title:		HRD 60 MW (Nominal) CT Addition				
Engineering Discipline:		All				
Estimated by:		All & Consolidated by [REDACTED]				
Project Start Year:		2013		Total Regular Labour Costs(1110): \$2,006,898		
Date:		September 29, 2013				
Note: All rate information comes from the Standard Estimating Rates.				Rates Last Updated: 2012-12-14		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	PROGRAM MANAGER				\$ -	
2	Risk / Change Management / Coaching	Engineer/Technologist	2.5	1	\$ 3,400.00	\$8,500
3					(\$/wk)	
4	PROJECT MANAGER				(\$/wk)	
5	Scope / Schedule / Budget Review	Engineer/Technologist	1	1	\$ 3,400.00	\$3,400
6	Design Transmittal	Engineer/Technologist	1	1	\$ 3,400.00	\$3,400
7	Schedule	Engineer/Technologist	0.4	1	\$ 3,400.00	\$1,360
8	Risk Workshop	Engineer/Technologist	0.2	1	\$ 3,400.00	\$680
9	Project Kick-off Meeting	Engineer/Technologist	0.2	1	\$ 3,400.00	\$680
10	Team Mtgs (1d/2w Project Duration/#Project	Engineer/Technologist	13	1	\$ 3,400.00	\$44,200
11	Biweekly Customer / Stakeholder Meetings	Engineer/Technologist	6	1	\$ 3,400.00	\$20,400
12	Weekly Construction Meetings	Engineer/Technologist	2.4	1	\$ 3,400.00	\$8,160
13	Risk Management / Change Management	Engineer/Technologist	2.5	1	\$ 3,400.00	\$8,500
14	Site Safety Tour	Engineer/Technologist	2	1	\$ 3,400.00	\$6,800
15	Financial Close Out	Engineer/Technologist	1	1	\$ 3,400.00	\$3,400
16	Post Implementation Review	Engineer/Technologist	1	1	\$ 3,400.00	\$3,400
17	PM - Full Time For 3 years less above	Engineer/Technologist	125.3	1	\$ 3,400.00	\$426,020
18	ENGINEERING				(\$/wk)	
19	Mechanical engineering	Engineer/Technologist	78	1	\$ 3,400.00	\$265,200
20	Electrical eng (See [REDACTED] Estimate)	Engineer/Technologist			\$ 3,400.00	\$188,760
21	Civil engineering (See [REDACTED] Estimate)	Engineer/Technologist			\$ 3,400.00	\$76,000
22	Telecontrol eng. (See [REDACTED] Estimate)	Engineer/Technologist			\$ 3,400.00	\$64,500
23	P&C engineering (See [REDACTED] Estimate)	Engineer/Technologist			\$ 3,400.00	\$139,400
24	P&C engineering (See [REDACTED] Estimate)	Engineer/Technologist			\$ 3,400.00	\$336,638
25	P&C eng. - DCS (See [REDACTED] Estimate)	Engineer/Technologist			\$ 3,400.00	
26	T&D Engineering (See [REDACTED] Estimate)	Engineer/Technologist			\$ 3,400.00	\$129,600
27	DRAFTING				(\$/wk)	
29	Drafting (Design/As-Builts)	Drafters	15	1	\$ 2,400.00	\$36,000
30					(\$/wk)	
31	SURVEYING				(\$/wk)	
33	SURVEYING				(\$/wk)	
34					(\$/wk)	
35	PHASE 1 ENGINEERING	Engineer/Technologist	4	6	\$ 3,400.00	\$81,600
36					(\$/wk)	
37	ENVIRONMENTAL ([REDACTED])				(\$/wk)	
38	Environmental Specialist	Ecologist/Safety Lead/Safety Specialist	12	1	\$ 2,900.00	\$34,800
39	Environmental Management during const.	Environmental Coordinator/Monitor	30	1	\$ 2,400.00	\$72,000
40	Environmental Management during const.	Ecologist/Safety Lead/Safety Specialist	15	1	\$ 2,900.00	\$43,500
41					(\$/wk)	
42					(\$/wk)	
43					(\$/wk)	
44					(\$/wk)	
45					(\$/wk)	

Engineering Overtime Labour						
Project Title:		HRD 60 MW (Nominal) CT Addition				
Engineering Discipline:		All				
Estimated by:		All & Consolidated by [REDACTED]				
Project Start Year:		2013		Total Overtime Labour Costs(1120): \$27,200		
Date:		September 29, 2013				
Note: All rate information comes from the Std Estimating Rates sheet.				Rates Last Updated: 2012-12-14		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1					(\$/wk)	
2	P&C engineering (See [REDACTED] Estimate)	Engineer/Technologist	2	1	\$ 3,400.00	\$6,800
3	P&C engineering (See [REDACTED] Estimate)	Engineer/Technologist	6	1	\$ 3,400.00	\$20,400
4					(\$/wk)	
5					(\$/wk)	
6					(\$/wk)	
7					(\$/wk)	
8					(\$/wk)	
9					(\$/wk)	
10					(\$/wk)	
11					(\$/wk)	
12					(\$/wk)	
13					(\$/wk)	
14					(\$/wk)	
15					(\$/wk)	
16					(\$/wk)	
17					(\$/wk)	
18					(\$/wk)	
19					(\$/wk)	
20					(\$/wk)	
21					(\$/wk)	
22					(\$/wk)	
23					(\$/wk)	
24					(\$/wk)	
25					(\$/wk)	
26					(\$/wk)	
27					(\$/wk)	
29					(\$/wk)	
30					(\$/wk)	
31					(\$/wk)	
33					(\$/wk)	
34					(\$/wk)	
35					(\$/wk)	

Construction Regular Labour						
Project Title:		HRD 60 MW (Nominal) CT Addition				
Engineering Discipline:		All				
Estimated by:		All & Consolidated by [REDACTED]				
Project Start Year:		2013		Total Regular Labour Costs(1110): \$1,983,720		
Date:		September 29, 2013				
Note: All rate information comes from the Std Estimating Rates.				Rates Last Updated: 2012-12-14		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1					\$ -	
2	Mechanical engineering				\$ -	
3	Electrical eng (See [REDACTED] Estimate)				\$ -	\$360,000
4	Civil engineering (See [REDACTED] Estimate)				\$ -	
5	Telecontrol eng. (See [REDACTED] Estimate)				\$ -	\$73,200
6	P&C engineering (See [REDACTED] Estimate)				\$ -	\$129,720
7	P&C engineering (See [REDACTED] Estimate)				\$ -	\$105,600
8	P&C eng. - DCS (See [REDACTED] Estimate)				\$ -	
9	T&D Engineering (See [REDACTED] Estimate)				\$ -	\$36,000
10					\$ -	
11					\$ -	
12	PLANT PERSONNEL				\$ -	
13	Electricians	Internal Labour - Trades	52	2	\$ 2,100.00	\$218,400
14	Mechanical maintenance	Internal Labour - Trades	52	2	\$ 2,100.00	\$218,400
15	P&C technicians	Internal Labour - Technologist	52	2	\$ 2,400.00	\$249,600
16	Labourers	Internal Labour - Trades	52	2	\$ 2,100.00	\$218,400
17	Supervisors	Internal Labour - Technologist	52	3	\$ 2,400.00	\$374,400
18					\$ -	
19					\$ -	
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
28					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
32					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	
36					\$ -	
37					\$ -	
38					\$ -	
39					\$ -	
40					\$ -	
41					\$ -	
42					\$ -	
43					\$ -	

Construction Overtime Labour							
Project Title:		HRD 60 MW (Nominal) CT Addition				Total Overtime Labour Costs(1120):	\$633,400
Engineering Discipline:		All					
Estimated by:		All & Consolidated by [REDACTED]					
Project Start Year:		2013					
Date:		September 29, 2013					
Note: All rate information comes from the Std Estimating Rates sheet.					Rates Last Updated: 2012-12-14		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$	
1					\$ -		
2	Mechanical engineering				\$ -		
3	Electrical eng (See [REDACTED] Estimate)				\$ -	\$35,700	
4	Civil engineering (See [REDACTED] Estimate)				\$ -		
5	Telecontrol eng. (See [REDACTED] Estimate)				\$ -	\$15,200	
6	P&C engineering (See [REDACTED] Estimate)				\$ -	\$11,700	
7	P&C engineering (See [REDACTED] Estimate)				\$ -	\$48,000	
8	P&C eng. - DCS (See [REDACTED] Estimate)				\$ -		
9	T&D Engineering (See [REDACTED] Estimate)				\$ -	\$30,800	
10					\$ -		
11	PLANT PERSONNEL				\$ -		
12	Electricians	Internal Labour – Trades	20	2	\$ 2,100.00	\$84,000	
13	Mechanical maintenance	Internal Labour – Trades	20	2	\$ 2,100.00	\$84,000	
14	P&C technicians	Internal Labour – Technologist	20	2	\$ 2,400.00	\$96,000	
15	Labourers	Internal Labour – Trades	20	2	\$ 2,100.00	\$84,000	
16	Supervisors	Internal Labour – Technologist	20	3	\$ 2,400.00	\$144,000	
17					\$ -		
18					\$ -		
19					\$ -		
20					\$ -		
21					\$ -		
22					\$ -		
23					\$ -		
24					\$ -		
25					\$ -		
26					\$ -		
27					\$ -		
29					\$ -		
30					\$ -		
31					\$ -		
33					\$ -		
34					\$ -		
35					\$ -		

Materials					
Project Title:		HRD 60 MW (Nominal) CT Addition			
Engineering Discipline:		All			
Estimated by:		All & Consolidated by [REDACTED]			
Project Start Year:		2013		Total Materials Cost (1130): \$1,935,090	
Date:		September 29, 2013			
#	Item Description	Unit Price	Units	Quantity	Total \$
1			m		
2	Mechanical engineering				
3	Electrical eng (See [REDACTED] Estimate)		lot		\$580,000
4	Civil engineering (See [REDACTED] Estimate)				\$51,900
5	Telecontrol eng. (See [REDACTED] Estimate)		ea		\$222,800
6	P&C engineering (See [REDACTED] Estimate)				\$106,925
7	P&C engineering (See [REDACTED] Estimate)		Lot		\$10,000
8	P&C eng. - DCS (See [REDACTED] Estimate)				
9	T&D Engineering (See [REDACTED] Estimate)				\$732,715
10					
11	Misc. materials for construction	\$200,000	ea	1	\$200,000
12					
13	Office furniture, fax machine, printers, etc. for construction trailers	\$10,000	ea	1	\$10,000
14					
15	Phones, blackberries, pagers, (including cell phone monthly fees)	\$10,000	ea	1	\$10,000
16					
17	PPE	\$8,000	ea	1	\$8,000
18					
19	Office supplies (paper, etc)	\$750	ea	1	\$750
20					
21	Drinking water	\$2,000	ea	1	\$2,000
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					

Third Party Consultants Labour						
Project Title:		HRD 60 MW (Nominal) CT Addition				
Engineering Discipline:		All				
Estimated by:		All & Consolidated by [REDACTED]				
Project Start Year:		2013		Total Regular Labour Costs(1110): \$1,739,820		
Date:		September 29, 2013				
Note: All rate information comes from the Std Estimating Rates.				Rates Last Updated: 2012-12-14		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1					\$ -	
2	Mechanical engineering				\$ -	\$250,000
3	Electrical eng (See [REDACTED] Estimate)				\$ -	\$30,120
4	Civil engineering (See [REDACTED] Estimate)				\$ -	\$25,200
5	Telecontrol eng. (See [REDACTED] Estimate)				\$ -	
6	P&C engineering (See [REDACTED] Estimate)				\$ -	
7	P&C engineering (See [REDACTED] Estimate)				\$ -	
8	P&C eng. - DCS (See [REDACTED] Estimate)				\$ -	
9	T&D Engineering (See [REDACTED] Estimate)				\$ -	\$17,500
10					\$ -	
11	Environmental Studies				\$ -	\$300,000
12					\$ -	
13	On-site Reps	Consultants (min \$175/hr.)	52	3	\$ 7,000.00	\$1,092,000
14	On-site Rep expenses				\$ -	\$25,000
15					\$ -	
16					\$ -	
17					\$ -	
18					\$ -	
19					\$ -	
20					\$ -	
21					\$ -	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
28					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
32					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	
36					\$ -	
37					\$ -	
38					\$ -	
39					\$ -	
40					\$ -	
41					\$ -	
42					\$ -	
43					\$ -	

Third Party Equipment Rentals					
Project Title:		HRD 60 MW (Nominal) CT Addition			
Engineering Discipline:		All			
Estimated by:		All & Consolidated by [REDACTED]			
Project Start Year:		2013		Total Equip Rental Costs(1140): \$105,600	
Date:		September 29, 2013			
Note: All rate information comes from the Std Estimating Rates sheet.					Rates Last Updated: 2012-12-14
#	Item Description	Category	# of Wks	Rate / Wk	Total \$
1				\$ -	
2	Mechanical engineering			\$ -	
3	Electrical eng (See [REDACTED] Estimate)			\$ -	\$4,200
4	Civil engineering (See [REDACTED] Estimate)			\$ -	
5	Telecontrol eng. (See [REDACTED] Estimate)			\$ -	
6	P&C engineering (See [REDACTED] Estimate)			\$ -	
7	P&C engineering (See [REDACTED] Estimate)			\$ -	
8	P&C eng. - DCS (See [REDACTED] Estimate)			\$ -	
9	T&D Engineering (See [REDACTED] Estimate)			\$ -	
10				\$ -	
11	Rental of office trailers			\$ -	\$100,000
12	Electrical OSR Vehicle			\$ -	\$1,400
13				\$ -	
14				\$ -	
15				\$ -	
16				\$ -	
17				\$ -	
18				\$ -	
19				\$ -	
20				\$ -	
21				\$ -	
22				\$ -	
23				\$ -	
24				\$ -	
25				\$ -	
26				\$ -	
27				\$ -	
29				\$ -	
30				\$ -	
31				\$ -	
33				\$ -	
34				\$ -	
35				\$ -	

Engineering Travel						
Project Title:		HRD 60 MW (Nominal) CT Addition				
Engineering Discipline:		All				
Estimated by:		All & Consolidated by [REDACTED]				
Project Start Year:		2013				
Date:		September 29, 2013				
Note: Air Fares may be typed directly into the Std Estimating Rates Sheet.					Rates Last Updated: 2012-12-14	
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$
1	Project Manager Safety Tour (4 tours per year)	Living Expenses	2	1	\$ 260.00	\$520
2		Commercial Car/Van/Pick Up Rental	2	1	\$ 500.00	\$1,000
3					\$ -	
4					\$ -	
5	Project Manager Site Meetings (12 mtgs per year)	Living Expenses	6	1	\$ 260.00	\$1,560
6		Commercial Car/Van/Pick Up Rental	6	1	\$ 500.00	\$3,000
7					\$ -	
8	Mechanical engineering				\$ -	
9	Electrical eng (See [REDACTED] Estimate)				\$ -	\$30,372
10	Civil engineering (See [REDACTED] Estimate)				\$ -	\$4,712
11	Telecontrol eng. (See [REDACTED] Estimate)				\$ -	\$6,700
12	P&C engineering (See [REDACTED] Estimate)				\$ -	\$17,950
13	P&C engineering (See [REDACTED] Estimate)				\$ -	\$42,320
14	P&C eng. - DCS (See [REDACTED] Estimate)				\$ -	
15	T&D Engineering (See [REDACTED] Estimate)				\$ -	\$5,320
16					\$ -	
17	Environment (vehicle for construction monitoring)	Commercial Car/Van/Pick Up Rental	30	1	\$ 500.00	\$15,000
18					\$ -	
19	Car for engineering project team	Commercial Car/Van/Pick Up Rental	130	1	\$ 500.00	\$65,000
20					\$ -	
21	Misc. (meals)				\$ -	\$10,000
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
33					\$ -	
34					\$ -	
35					\$ -	

Construction Travel							
Project Title:		HRD 60 MW (Nominal) CT Addition				Total Travel Costs(1145):	\$30,500
Engineering Discipline:		All					
Estimated by:		All & Consolidated by [REDACTED]					
Project Start Year:		2013					
Date:		September 29, 2013					
Note: Air Fares may be typed directly into the Std Estimating Rates Sheet.					Rates Last Updated: 2012-12-14		
#	Item Description	Category	# of Wks	# of People	Rate / Wk	Total \$	
1					\$ -		
2	Mechanical engineering				\$ -		
3	Electrical eng (See [REDACTED] Estimate)				\$ -		
4	Civil engineering (See [REDACTED] Estimate)				\$ -		
5	Telecontrol eng. (See [REDACTED] Estimate)				\$ -	\$3,000	
6	P&C engineering (See [REDACTED] Estimate)				\$ -		
7	P&C engineering (See [REDACTED] Estimate)				\$ -	\$8,360	
8	P&C eng. - DCS (See [REDACTED] Estimate)				\$ -		
9	T&D Engineering (See [REDACTED] Estimate)				\$ -	\$14,140	
10					\$ -		
11	Misc. Meals				\$ -	\$5,000	
12					\$ -		
13					\$ -		
14					\$ -		
15					\$ -		
16					\$ -		
17					\$ -		
18					\$ -		
19					\$ -		
20					\$ -		
21					\$ -		
22					\$ -		
23					\$ -		
24					\$ -		
25					\$ -		
26					\$ -		
27					\$ -		
29					\$ -		
30					\$ -		
31					\$ -		
33					\$ -		
34					\$ -		
35					\$ -		

Third Party Contracts					
Project Title:		HRD 60 MW (Nominal) CT Addition			
Engineering Discipline:		All			
Estimated by:		All & Consolidated by [REDACTED]			
Project Start Year:		2013		Total Contract Cost (1150): \$82,266,625	
Date:		September 29, 2013			
#	Item Description	Unit Price	Units	Quantity	Total \$
1			m		
2	Mechanical engineering				
3	Electrical eng (See [REDACTED] Estimate)		m3		\$215,000
4	Civil engineering (See [REDACTED] Estimate)				\$681,625
5	Telecontrol eng. (See [REDACTED] Estimate)		ea		\$175,000
6	P&C engineering (See [REDACTED] Estimate)				
7	P&C engineering (See [REDACTED] Estimate)		Lot		
8	P&C eng. - DCS (See [REDACTED] Estimate)				
9	T&D Engineering (See [REDACTED] Estimate)				\$1,345,000
10					
11	Misc. mechanical ([REDACTED])	\$500,000	ea	1	\$500,000
12					
13					
14	FROM [REDACTED] PROPOSAL (Quote is in USD, Rate of 1.02 used for \$Can)				
15	Supply and install 60 MW gas turbine plant (based on [REDACTED]) including:	\$79,050,000	ea	1	\$79,050,000
16	[REDACTED], Full Unit Erection, Liquid Fuel Water Injected with standard 50 foot				
17	Exhaust Stack, including the Larger Electric Generator [REDACTED], a cold weather package				
18	for temperatures below 20 deg F, Water wash cart and basic SCADA System (local and remote)				
19	Interface.				
20	Options included are:				
21	Wet Compression System; Inlet Fogging System; Larger 3 Winding Xfmr. (13.8/230/4.16 kV);				
22	Black Start Diesel; Expansion for capability to 120 MW (Full foundation/Updated control system);				
23	Continuous Emissions Monitoring System; Demineralized Water Production Plant including				
24	1,000,000 gallon tank; Two (2) 700,000 gallon Oil Tanks; and Fully Enclosed Cold Weather				
25	Building including overhead crane)				
26					
27					
28					
29	Interconnections for black start diesel - not included [REDACTED]	\$300,000	ea	1	\$300,000
30					
31					
32					
33					
34					

Internal Equipment Rentals					
Project Title:		HRD 60 MW (Nominal) CT Addition			
Engineering Discipline:		All			
Estimated by:		All & Consolidated by [REDACTED]			
Project Start Year:		2013		Total Equip Rental Costs(1140): \$30,950	
Date:		September 29, 2013			
Note: All rate information comes from the Std Estimating Rates sheet.				Rates Last Updated: 2012-12-14	
#	Item Description	Category	# of Wks	Rate / Wk	Total \$
1	Vehicle for Safety Tour			\$ -	
2	Vehicle for Travel for Meetings			\$ -	
3				\$ -	
4	Mechanical engineering			\$ -	
5	Electrical eng (See [REDACTED] Estimate)			\$ -	\$7,850
6	Civil engineering (See [REDACTED] Estimate)			\$ -	
7	Telecontrol eng. (See [REDACTED] Estimate)			\$ -	\$7,700
8	P&C engineering (See [REDACTED])			\$ -	\$10,500
9	P&C engineering (See [REDACTED] Estimate)			\$ -	
10	P&C eng. - DCS (See [REDACTED] Estimate)			\$ -	
11	T&D Engineering (See [REDACTED] Estimate)			\$ -	\$4,900
12				\$ -	
13				\$ -	
14				\$ -	
15				\$ -	
16				\$ -	
17				\$ -	
18				\$ -	
19				\$ -	
20				\$ -	
21				\$ -	
22				\$ -	
23				\$ -	
24				\$ -	
25				\$ -	
26				\$ -	
27				\$ -	
29				\$ -	
30				\$ -	
31				\$ -	
33				\$ -	
34				\$ -	
35				\$ -	

Standard Estimating Rates			
Rates Last Updated: 2012-12-14	Operating	Capital	
Labour	(\$/wk)	(\$/wk)	
Engineer/Technologist	\$3,400	\$3,400	
Surveyors	\$2,400	\$2,400	
Environmental Coordinator/Monitor	\$2,400	\$2,400	
Ecologist/Safety Lead/Safety Specialist	\$2,900	\$2,900	
Legal Counsel	\$4,400	\$4,400	
Drafters	\$2,400	\$2,400	
Owner Site Representative (OSR)	\$2,200	\$2,200	
Internal Labour – Technologist	\$2,400	\$2,400	
Internal Labour – Trades	\$2,100	\$2,100	
External Labour – Trades (Union)	\$3,320	\$3,320	
External Labour – Trades (Non Union)	\$2,280	\$2,280	
Consultants (min \$175/hr.)	\$7,000	\$7,000	
Miscellaneous			
Internal Equipment Rentals	(\$/wk)	(\$/wk)	
Cars/Vans/Pick Ups	\$350	\$350	
Snowmobiles/ATVs	\$250	\$250	
Line Body Trucks	\$1,000	\$1,000	
Aerial Devices	\$1,300	\$1,300	
Stake Body Boom Trucks	\$1,300	\$1,300	
Mobile Cranes	\$1,300	\$1,300	
Muskegs/Go Tracks	\$11,200	\$11,200	
Mobile Substation	\$850	\$850	
Portable Transformer (pallet)	\$850	\$850	
Helicopter (Casual or Contract) (\$1,285/hr)	\$51,400	\$51,400	
Miscellaneous			
Commercial Rental			
Other Equipment			
Travel	(\$)	(\$)	
Living Expenses	\$260	\$260	
Airport Taxi (Return)	\$80	\$80	
Commercial Car/Van/Pick Up Rental	\$500	\$500	
Hotel Accommodations (In province)	\$750	\$750	
Air Fare – In Province	By location	By location	
Air Fare – Out of Province	By location	By location	
Air Fare - Other			
Notes:			
• Labour rates for all categories the same for straight time and overtime, field or office. (no loading on overtime)			

Business Unit		Cost Code					Cost Type									
Asset Business Unit	Year	Proj Num	Work Plan Type	Major Work Group	Future use	Activity	Description	Level of Detail	Labour 1110	Overtime 1120	Materials 1130	Consultants 1135	Equip. Rental 1140	Travel 1145	Contract 1150	Total
Project Description																
Asset Business Unit 9999																
Project Start Date																
Project Completion Date																
9999	99	99	5				Capital Projects	4								
9999	99	99	5	999			MWG Description	5								
9999	99	99	5	999	00		Proj. Num. Default 00	6								
9999	99	99	5	999	00	01	Project Activity Description	7								
9999	99	99	5	999	00	01	ENGINEERING	8	2,006,897.50	27,200.00				203,454.00		2,237,551.50
9999	99	99	5				Capital Projects	4								
9999	99	99	5	999			MWG Description	5								
9999	99	99	5	999	00		Proj. Num. Default 00	6								
9999	99	99	5	999	00	02	Project Activity Description	7								
9999	99	99	5	999	00	02	MATERIALS	8			1,935,090.00					1,935,090.00
9999	99	99	5				Capital Projects	4								
9999	99	99	5	999			MWG Description	5								
9999	99	99	5	999	00		Proj. Num. Default 00	6								
9999	99	99	5	999	00	03	Project Activity Description	7								
9999	99	99	5	999	00	03	THIRD PARTY	8				1,739,820.00	105,600.00		82,266,625.00	84,112,045.00
9999	99	99	5				Capital Projects	4								
9999	99	99	5	999			MWG Description	5								
9999	99	99	5	999	00		Proj. Num. Default 00	6								
9999	99	99	5	999	00	04	Project Activity Description	7								
9999	99	99	5	999	00	04	INTERNAL EQUIPMENT	8					30,950.00			30,950.00
9999	99	99	5				Capital Projects	4								
9999	99	99	5	999			MWG Description	5								
9999	99	99	5	999	00		Proj. Num. Default 00	6								
9999	99	99	5	999	00	05	Project Activity Description	7								
9999	99	99	5	999	00	05	CONSTRUCTION	8	1,983,720.00	633,400.00				30,500.00		2,647,620.00
															Project Total:	90,963,256.50



PROJECT PROPOSAL SUMMARY

Capital Project

Bus. Unit

1325

Project Title: HRD 60 MW (Nominal) CT Addition Project **Date Prepared** 2013, September 29
Company: HYDRO **Project Type:** Report > 500K
Start Year: 2014 or Later **Category:** Generation - Gas Turbines
Start Date: 2014 Jan 7 **Definition:** Other **Classification:** Mandatory
Completion Date: 2015 Dec **Location:** HRD **Asset Retirement or Transfer?** Yes

Type of Work: Combustion Turbine Plant Constr **Prepared By:** XXXXXXXXXX
Base Date: 2013 Jan 1

2 Year Cash Sheet Should be Used

Project Cost: (\$ x1,000)	<u>2014</u>	<u>2015</u>	<u>BEYOND</u>	<u>TOTAL</u>
Material Supply	967.5	967.6	0.0	1,935.1
Labour	1,600.0	3,051.2	0.0	4,651.2
Consultant	325.2	1,414.6	0.0	1,739.8
Contract Work	31,941.7	50,324.9	0.0	82,266.6
Other Direct Costs	147.3	223.2	0.0	370.5
Interest and Escalation	2,308.9	9,363.2	0.0	11,672.1
Contingency	0.0	18,192.7	0.0	18,192.7
TOTAL	37,290.6	83,537.4	0.0	120,828.1

Description:

See attached report.

Operating Experience:

See attached report.

Justification:

See attached report.

Future Plans:

See attached report.

"Initiating Bus.Unit" Mgr:	Project Estimator:	"Managing Dept." Mgr:	"Initiating Dept" Manager:	Vice-President:
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