1	Q.	On page 8 of the Report it is stated that the cost estimate for a new 60 MW
2		combustion turbine in-service in 2015 was \$120.8 million. When was this cost
3		estimate prepared? Please provide a copy of the cost estimate.

4 5

6 A. The \$120.8 million estimate as provided in Table 1 for a new 60 MW combustion 7 turbine in-service in 2015 was finalized in September of 2013 using the base

8 estimate as attached (see Attachment 1).

9

Table 1

Project Cost: (\$ x1,000)	<u>Total</u>
Material Supply	1,935.1
Labour	4,651.2
Consultant	1,739.8
Contract Work	82,266.6
Other Direct Costs	370.5
Interest and Escalation	11,672.1
Contingency	18,192.7
TOTAL	120,828.1

Project Title:		HRD 60 MW	(Nominal) C	SUMMARY T Addition					
Engineering Estimated by		All All & Consol	idated by				Project Typ		
Project Start		2013					Capital	•	
Date:	stimator pres	September 2 ents Project M		total estimate	by discipline s	stated in cas	h flow forma	nt.	Total
Estima		\$3,990,618	\$660,600	\$1,935,090	\$1,739,820	\$136,550	\$233,954	\$82,266,625	\$90,963,257
Total Ca	sh Flow:	\$3,990,618	\$660,600	\$1,935,090	\$1,739,820	\$136,550	\$233,954	\$82,266,625	\$90,963,257
Period	Cost Type	1110 Labour	1120 Overtime	1130 Material	1135 Consultant	1140 Equip. Rental	1145 Travel	1150 Contract Work	
2013	Jan	Labour	Overanio	Matorial	Conduction	Equip. Horita	navoi	CONTROL FROM	
(Year 1)	Feb								
	Mar								
	Apr May								
	Jun								
	Jul								
	Aug								
	Sep Oct								
	Nov								
	Dec								
	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2014	Jan Eab	133.3					7.8		
(Year 2)	Feb Mar	133.3 133.3			150.0		7.8 7.8	3,952.5	
	Apr	133.3			150.0	5.9	7.8	5,752.5	
	May	133.3			25.2	5.9	7.8	3,952.5	
	Jun	133.3				5.9	7.8		
	Jul	133.3 133.3				5.9 5.9	7.8 7.8	15,810.0	
	Aug Sep	133.3				5.9	7.8	7,905.0	
	Oct	133.3		322.5		5.9	7.8		
	Nov	133.3		322.5		5.9	7.8		
-	Dec Total	1,600.0	0.0	322.5 967.5	325.2	53.4	93.9	321.7 31,941.7	
	Cost Type	1110	1120	1130	1135	1140	1145	1150	
Period		Labour	Overtime	Material	Consultant		Travel	Contract Work	
2015	Jan	133.3		322.5	91.7	5.9	7.8	321.7	
(Year 3)	Feb Mar	133.3 133.3		322.5 322.6	91.7 91.7	5.9 5.9	7.8 7.8	321.7 321.7	
	Apr	181.8	60.1	322.0	126.6	5.9	10.6	321.7	
	May	181.8	60.1		126.6	5.9	10.6	23,715.0	
	Jun Jul	181.8 181.8	60.1 60.1		126.6 126.6	5.9 5.9	10.6 10.6		
	Aug	181.8	60.1		126.6	5.9	10.6	11,857.5	
	Sep	181.8	60.1		126.6	5.9	10.6	402.0	
	Oct Nov	299.9 299.9	100.1 100.1		126.6 126.6	9.9 9.9	17.7 17.7	402.0 402.0	
	Dec	299.9	100.1		126.6	9.9	17.7	12,259.5	
	Total	2,390.6	660.6	967.6	1,414.6	83.1	140.1	50,324.9	
2016 (Year 4)	Jan Feb								
(- 041 -1)	Mar								
	Apr								
	May Jun								
	Jul								
	Aug Sep								
	Oct								
	Nov								
	Dec Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2017	Jan			2.0		0			
(Year 5)	Feb								
	Mar Apr								
	May								
	Jun								
	Jul Aug								
	Sep								
	Oct Nov								
	Dec								
	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

	Α	В	C GT-PUB-NLH-011, Attachment 1
2		Pa	age 2 of Basigo Mention Turbine Generation - Holyrood
3		Project Title:	HRD 60 MW (Nominal) CT Addition
4		Engineering Discipline:	All
5		Estimated by:	All & Consolidated by
6		Project Start Year:	2013
7		Date:	41546
8		Asset Manager:	
9			
10 11		High Level Description:	Supply, Install and Commission 50 MW (Minimal) Combustion Turbine
12			Plant with 120 MVAR of Synchronous Condensing & Balance Of Plant in Holyrood Plant Yard
13			Tioryrood Flant Tard
14		High Level Justification:	MW System Generation to offset projected LOLH violations. MVAR
15		g	support required to mitigate projected voltage issues. Replace HRP black-
16			start unit functionality.
17			
18		Scope of Work:	
19			
20			
22		Work Exclusions:	
23		WOIR EXCIUSIONS.	
24			
25			
26		Assumptions:	
27			
28			
29		Ocyclysinte	
30		Constraints:	
32			
33			
34		High Level Requirements:	
35			
36			
37			
38 39		High Level Risks:	
40			
41			
42		High Level Schedule:	
43		(i.e. material lead times, outages,)	
44			
45			
46		High Level Resource Assignment:	
47 48			
49			
50		Environmental Services:	Desktop study, Draft EA Document, EA Document, EA Process Interface,
51			Input to Construction Contract, Construction Monitoring, Post-
52			Construction Monitoring
53			
54			Review of Generation Alternatives
55		(i.e. Cost Benefit Analysis)	
56 57			
<i>ن</i>			

	Engineering Regular Labour								
Proj	ect Title:	HRD 60 MW (Nominal)							
Eng	ineering Discipline:	All							
Esti	mated by:	All & Consolidated by							
Proj	ect Start Year:	2013			Total Reg	ular Labour C	Costs(1110):	\$2,006,898	
Date	e:	September 29, 2013							
Note	e: All rate information c	omes from the Standard E	Estimating Rates.	R	ates Last Upo	dated: 2012-	12-14		
<u>#</u>	Item Description		Category # 0			# of People	Rate / Wk	Total \$	
1	PROGRAM MANAGE	R		•			\$ -		
2	Risk / Change Mar	nagement / Coaching	Engineer/Technologist		2.5	1	\$ 3,400.00	\$8,500	
3				•			(\$/wk)		
4	PROJECT MANAGER	ł		•			(\$/wk)		
5	Scope / Schedule	Budget Review	Engineer/Technologist	_	1	1	\$ 3,400.00	\$3,400	
6	Design Transmitta		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 Me		Engineer/Technologist	•	0.2	1	\$ 3,400.00	\$680	
10	Team Mtgs (1d/2w	Project Duration/#Project		_	13	1	\$ 3,400.00	\$44,200	
11	Biweekly Custome	r / Stakeholder Meetings	Engineer/Technologist		6	1	\$ 3,400.00	\$20,400	
12	Weekly Construction	on 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 Ou	ut	Engineer/Technologist	•	1	1	\$ 3,400.00	\$3,400	
16	Post Implementation	on Review	Engineer/Technologist	_	1	1	\$ 3,400.00	\$3,400	
17		3 years less above	Engineer/Technologist	•	125.3	1	\$ 3,400.00	\$426,020	
18	ENGINEERING			•	70	_	(\$/wk)		
19	Mechanical engine		Engineer/Technologist		78	1	\$ 3,400.00	\$265,200	
20	Electrical eng (See		Engineer/Technologist	_			\$ 3,400.00	\$188,760	
21	Civil engineering (\$ 3,400.00	\$76,000	
22	Telecontrol eng. (S	,	Engineer/Technologist	_			\$ 3,400.00	\$64,500	
23	P&C engineering (Engineer/Technologist	_			\$ 3,400.00	\$139,400	
24	P&C engineering (Engineer/Technologist				\$ 3,400.00	\$336,638	
25	P&C eng DCS (S	-	Engineer/Technologist				\$ 3,400.00	* 400.000	
26	T&D Engineering (See Estimate	Engineer/Technologist	V			\$ 3,400.00	\$129,600	
27	DRAFTING	- B ''I'-)	Drafters	·	15	1	(\$/wk)	400.000	
29	Drafting (Design/A	s-Builts)	Dianeis	į	13	'	\$ 2,400.00	\$36,000	
30	CHRYEVING			·			(\$/wk)		
	SURVEYING			*			(\$/wk)		
33	SURVEYING			·			(\$/wk)		
34	DHASE 1 ENGINEER	ING	Engineer/Technologist	·	4	6	(\$/wk)	¢01.600	
35 36	PHASE 1 ENGINEER	ING	Engineer/ reciniologist	V	-	3	\$ 3,400.00	\$81,600	
	ENVIRONMENTAL	1		\			(\$/wk) (\$/wk)		
	Environmental Special) liet	Ecologist/Safety Lead/Safety Specialist	·	12	1	\$ 2,900.00	\$34,800	
	Environmental Manage		Environmental Coordinator/Monitor	_	30	1	\$ 2,400.00	\$72,000	
40	Environmental Manag		Ecologist/Safety Lead/Safety Specialist	_	15	1	\$ 2,900.00	\$43,500	
41		omoni duning const.	Seed and a seed and a bank and a	•		•	(\$/wk)	ψ-τυ,υυυ	
42				•			(\$/wk)		
43				•			(\$/wk)		
44				•			(\$/wk)		
45				•			(\$/wk)		
40			l			l .	(ψ/ ₩/\)		

Engineering Overtime Labour											
Project Title:	HRD 60 MW (Nominal) CT Ad										
Engineering Discipline:	All										
Estimated by:	All & Consolidated by										
Project Start Year:	2013			Total Over	time Labour	Costs(1120):	\$27,200				
Date:	September 29, 2013										
Note: All rate information of	comes from the Std Estimating F	Rates sheet.		Rat	es Last Upda	ted: 2012-12-	14				
# Item Description		Category		# of Wks	# of People	Rate / Wk	Total \$				
1			•			(\$/wk)					
2 P&C engineering	(See Estimate)	Engineer/Technologist	_	2	1	\$ 3,400.00	\$6,800				
3 P&C engineering	(See 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			_		1	(\$/wk)					

	Construction Regular Labour									
Proj	ect Title:	HRD 60 MW (Nominal)								
		All								
Esti	mated by:	All & Consolidated by								
Proj	ect Start Year:	2013			Total Reg	ular Labour C	Costs(1110):	\$1,983,720		
Date):	September 29, 2013								
Note	: All rate information c	omes from the Std Estima	ting Rates.		F	lates Last Up	dated: 2012-	12-14		
<u>#</u>	Item Description		Category		# of Wks	# of People	Rate / Wk	Total \$		
1				•			\$ -			
2	Mechanical engine	eering		•			\$ -			
3	Electrical eng (See	Estimate)		•			\$ -	\$360,000		
4	Civil engineering (See Estimate)		•			\$ -			
5	Telecontrol eng. (S	See Estimate)		•			\$ -	\$73,200		
6	P&C engineering (See Estimate)		•			\$ -	\$129,720		
7	P&C engineering (See Estimate)		•			\$ -	\$105,600		
8	P&C eng DCS (S			•			\$ -			
9	T&D Engineering (See Estimate					\$ -	\$36,000		
10				•			\$ -			
11				•			\$ -			
	PLANT PERSONNEL						\$ -			
	Electricians		Internal Labour - Trades		52	2	\$ 2,100.00	\$218,400		
	Mechanical maintenar	nce	Internal Labour – Trades		52	2	\$ 2,100.00	\$218,400		
	P&C technicians		Internal Labour – Technologist		52	2	\$ 2,400.00	\$249,600		
	Labourers		Internal Labour – Trades	_	52	2	\$ 2,100.00	\$218,400		
	Supervisors		Internal Labour – Technologist		52	3	\$ 2,400.00	\$374,400		
18				_			\$ -			
19				_			\$ -			
20				_			\$ -			
21				_			\$ -			
22				_			\$ -			
23				_			\$ -			
24				_			\$ -			
25				~			\$ -			
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29				_			\$ -			
30							\$ -			
31				_			\$ -			
32				Ť			\$ -			
33				_			\$ -			
34 35				—			\$ -			
				_			\$ -			
36 37				—			\$ - \$ -			
38				_						
39				_			\$ - \$ -			
40				_						
41				_			\$ - \$ -			
42				Ť			\$ -			
43							\$ -			
43						l	φ -			

			Construction Overtime Labour										
Pro	ject Title:	HRD 60 MW (Nominal) CT Add											
	ineering Discipline:	All											
1 1	imated by:	All & Consolidated by											
	ject Start Year:	2013			Total Over	time Labour	Costs(1120):	\$633,400					
Dat	•	September 29, 2013					` ,						
Not	e: All rate information o	comes from the Std Estimating Ra	ites sheet.		Rat	es Last Upda	ted: 2012-12-	14					
	Item Description		Category	ory #			Rate / Wk	Total \$					
1				•			\$ -						
2	Mechanical engine	eering		•			\$ -						
3	Electrical eng (See	Estimate)		•			\$ -	\$35,700					
4	Civil engineering (See Estimate)		•			\$ -						
5	Telecontrol eng. (8	See Estimate)		•			\$ -	\$15,200					
6	P&C engineering (See Estimate)		•			\$ -	\$11,700					
7	P&C engineering (See Estimate)		•			\$ -	\$48,000					
8	P&C eng DCS (See Estimate)		•			\$ -						
9	T&D Engineering	(See Estimate)		•			\$ -	\$30,800					
10				•			\$ -						
11	PLANT PERSONNEL			•			\$ -						
12	Electricians		Internal Labour – Trades	_	20	2	\$ 2,100.00	\$84,000					
13	Mechanical maintenar	ice	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	1			_			\$ -						

		Materials								
Pro	ject Title:	HRD 60 MW (Nominal) CT Addition								
Eng	gineering Discipline:	All								
Est	imated by:	All & Consolidated by								
Pro	ject Start Year:	2013	Total Ma	terials C	ost (1130):	\$1,935,090				
Dat	Date: September 29, 2013									
<u>#</u>	Item Description		Unit Price	<u>Units</u>	Quantity	Total \$				
1				m						
2	Mechanical engine	ering								
3	Electrical eng (See	Estimate)		lot		\$580,000				
4	Civil engineering (See Estimate)				\$51,900				
5	Telecontrol eng. (S			ea		\$222,800				
6	P&C engineering (See Estimate)				\$106,925				
7		See Estimate)		Lot		\$10,000				
8	P&C eng DCS (
9	T&D Engineering	See Estimate)				\$732,715				
10			#000 000							
	Misc. materials for cor	struction	\$200,000	ea	1	\$200,000				
12			¢10.000		4					
	Office furniture, fax ma	achine, printers, etc. for construction trailers	\$10,000	ea	1	\$10,000				
14	B		\$10,000		1	* 40.000				
		pagers, (including cell phone monthly fees)	\$10,000	ea	ı	\$10,000				
16	PPE		\$8,000	ea	1	#0.000				
			ψ0,000	ca	'	\$8,000				
18		oto)	\$750	ea	1	Ф7F0				
20	Office supplies (paper	eic)	φίσο	ca	'	\$750				
	Drinking water		\$2,000	ea	1	\$2,000				
22			ψ=,000			Ψ2,000				
23										
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										

Third Party Consultants Labour									
Project Title:	HRD 60 MW (Nominal) (-							
	All								
	All & Consolidated by								
Project Start Year:	2013			Total Reg	ular Labour (Costs(1110):	\$1,739,820		
	September 29, 2013			J		, ,	, , ,		
Note: All rate information co		ting Rates.		F	Rates Last Up	dated: 2012-	12-14		
# Item Description		Category		# of Wks	# of People	Rate / Wk	Total \$		
1			•			\$ -			
2 Mechanical engine	ering		•			\$ -	\$250,000		
3 Electrical eng (See	Estimate)		•			\$ -	\$30,120		
4 Civil engineering (S	See Estimate)		•			\$ -	\$25,200		
5 Telecontrol eng. (S	See Estimate)		•			\$ -			
6 P&C engineering (See Estimate)		•			\$ -			
7 P&C engineering (See Estimate)		•			\$ -			
8 P&C eng DCS (S	See Estimate)		•			\$ -			
9 T&D Engineering (See Estimate		•			\$ -	\$17,500		
10			•			\$ -			
11 Environmental Studies	i		•			\$ -	\$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:	AII								
Estimated by:	All & Consolidated by								
Project Start Year:	2013		Total E	quip Rental	Costs(1140):	\$105,600			
Date:	September 29, 2013								
Note: All rate information of	comes from the Std Estimating Rates sheet.			Rates Las	t Updated: 20	012-12-14			
# Item Description		Category		# of Wks	Rate / Wk	Total \$			
1			•		\$ -				
Mechanical engine	eering		•		\$ -				
	Estimate)		~		\$ -	\$4,200			
4 Civil engineering (~		\$ -				
	See Estimate)		~		\$ -				
	(See Estimate)		▼		\$ -				
7 P&C engineering	· · · · · · · · · · · · · · · · · · ·		▼		\$ -				
8 P&C eng DCS (~		\$ -				
9 T&D Engineering	(See Estimate)		~		\$ -				
10			~		\$ -				
11 Rental of office trailers			_		\$ -	\$100,000			
12 Electrical OSR Vehicle	e		_		\$ -	\$1,400			
13			▼		\$ -				
14			▼		\$ -				
15			▼		\$ -				
16			▼		\$ -				
17			▼		\$ - \$ -				
18			~		\$ -				
20			~		\$ -				
21			~		\$ -				
22			_		\$ -				
23			_		\$ -				
24			_		\$ -				
25			-		\$ -				
26			▼		\$ -				
27			▼		\$ -				
29			•		\$ -				
30			▼		\$ -				
31			▼		\$ -				
33			▼		\$ -				
34			▼		\$ -				
35			▼		\$ -				

			Engineering Travel						
Proj	ect Title:	HRD 60 MW (Nominal) CT Add	ition						
Eng	ineering Discipline:	All							
Esti	mated by:	All & Consolidated by	_						
Proj	ect Start Year:	2013	_			Total Travel	Cost	s(1145):	\$203,454
Date	e:	September 29, 2013							
Note	e: Air Fares may be type:	ped directly into the Std Estimating	g Rates Sheet.	Rat	es Last Upda	ated:	2012-12-	14	
<u>#</u>	Item Description		<u>Category</u>		# of Wks	# of People	Rate / Wk		Total \$
1	Project Manager Safe	ty Tour (4 tours per year)	Living Expenses	4	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 engine	eering		•			\$	-	
9	Electrical eng (Se	e Estimate)		•			\$	-	\$30,372
10	Civil engineering ((See Estimate)		•			\$	-	\$4,712
11	Telecontrol eng. (See Estimate)		•			\$	-	\$6,700
12	P&C engineering	(See Estimate)		•			\$	-	\$17,950
13	P&C engineering	(See Estimate)		•			\$	-	\$42,320
14	P&C eng DCS (See Estimate)		•			\$	-	
15	T&D Engineering			•			\$	-	\$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 pr	roject 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 Trave	el				
Project Title:	HRD 60 MW (Nominal) CT Add	ition					
Engineering Discipline:	All						
Estimated by:	All & Consolidated by						
Project Start Year:	2013				Total Travel	Costs(1145):	\$30,500
Date:	September 29, 2013						
Note: Air Fares may be typ	ped directly into the Std Estimatin		Rat	es Last Upda	ted: 2012-12	-14	
# Item Description		Category		# of Wks	# of People	Rate / Wk	Total \$
1			•			\$ -	
Mechanical engine	eering		•			\$ -	
3 Electrical eng (See	Estimate)		•			\$ -	
4 Civil engineering (·		•			\$ -	
	See Estimate)		•			\$ -	\$3,000
6 P&C engineering ((See Estimate)		▼			\$ -	
7 P&C engineering ((See Estimate)		•			\$ -	\$8,360
8 P&C eng DCS (•			\$ -	
9 T&D Engineering	(See 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				
	All				
Estimated by:	All & Consolidated by				
Project Start Year:	2013	Total	Contrac	t Cost (1150):	\$82,266,625
Date:	September 29, 2013				
# Item Description		Unit Price	<u>Units</u>	Quantity	Total \$
1			m		
2 Mechanical engine	eering				
3 Electrical eng (See	Estimate)		m3		\$215,000
4 Civil engineering (See Estimate)				\$681,625
5 Telecontrol eng. (S	See Estimate)		ea		\$175,000
6 P&C engineering (See Estimate)				
7 P&C engineering (See Estimate)		Lot		
8 P&C eng DCS (See Estimate)				
9 T&D Engineering ((See Estimate)				\$1,345,000
10					
11 Misc. mechanical ()	\$500,000	ea	1	\$500,000
12					
13					
	SAL (Quote is in USD, Rate of 1.02 used for \$Can)				
Supply and install 60 M 15 including:	MW gas turbine plant (based on	\$79,050,000	ea	1	\$79,050,000
16	, Full Unit Erection, Liquid Fuel Water Injected with standard 50 foot				
17 Exhaust Stack, includi	ng the Larger Electric Generator - , a cold weather package				
18 for temperatures below	v 20 deg F, Water wash cart and basic SCADA System (local and remote)				
19 Interface.					
20 Options included are:					
21 Wet Compression Sys	tem; Inlet Fogging System; Larger 3 Winding Xfmr. (13.8/230/4.16 kV);				
22 Black Start Diesel; Ex	pansion 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 over	rhead crane)				
26					
27					
28					
29 Interconnections for bl	ack start diesel - not included	\$300,000	ea	1	\$300,000
30					
31					
32					
33					
34					

	Inter	nal Equipment Rentals	
Project Title:	HRD 60 MW (Nominal) CT Addition		
Engineering Discipline	: All		
Estimated by:	All & Consolidated by		
Project Start Year:	2013	Total I	Equip Rental Costs(1140): \$30,950
Date:	September 29, 2013		
Note: All rate information	n comes from the Std Estimating Rates she	et.	Rates Last Updated: 2012-12-14
# Item Description		Category	# of Wks Rate / Wk Total \$
 Vehicle for Safety T 	our	▼	\$ -
2 Vehicle for Travel for	or Meetings	▼	\$ -
3		▼	\$ -
4 Mechanical engi	ineering	▼	\$ -
5 Electrical eng (S	See Estimate)	▼	\$ - \$7,850
6 Civil engineering	g (See Estimate)	▼	\$ -
7 Telecontrol eng.	(See Estimate)	▼	\$ - \$7,700
8 P&C engineering	g (See	▼	\$ - \$10,500
9 P&C engineering	g (See Estimate)	▼	\$ -
10 P&C eng DCS	S (See Estimate)	▼	\$ -
11 T&D Engineerin	g (See 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		▼	\$ -

St	andard Estimating Rate	es	
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)	
	(4, 111)	(4, 1113)	
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	φοι,του	ψο 1, 100	
THE CONGINE OF CO.			
Commercial Rental			
Other Equipment			
Ctrior Equipment			
Travel	(\$)	(\$)	
	(Ψ)	(Ψ)	
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	by location	Dy location	
All Fale Office			
Notes:			
 Labour rates for all categories the same for straight 	aight time and avertime f	iold or office. (no leading an	ovortimo)

GT-PUB-NLH-011, Attachment 1

Page 15 of 15, 100 MW Combustion Turbine Generation - Holyrood

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sset Bus							9999									
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roject Sta	art D	ate														
roject Co			Date													
TOJECT OU	mpi		Date		1											
3usines	s Un	it		Cos	st Code)			Cost Type							
Asset			Work	Malau				=								
Business		Proj	Plan	Major Work	Future			Level of Detail	Labour		Materials	Consultants	Equip. Rental	Travel		
	V					A - 4114	Description	et e		Oversime 1100			1140		O	Tatal
Unit	Year	Num	Туре	Group	use	Activity	Description	_ 0	1110	Overtime 1120	1130	1135	1140	1145	Contract 1150	Total
0000	99	0.0	9 5				Capital Projects	4								
9999 9999	99	99	5	999			MWG Description	5								
	99	99	5	999	00		Proj. Num. Default 00	6								
9999 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.
9999	99	99	5	999	00	UI	ENGINEERING	8	2,006,897.50	27,200.00				203,454.00		2,237,551.
0000	00	00	_				Operited Desirents									
9999	99	99	5	000			Capital Projects	4								
9999	99	99	5	999	00		MWG Description	5								
9999	99	99	5	999	00	00	Proj. Num. Default 00	6								
9999	99	99	5	999	00	02	Project Activity Description	7								4 005 000
9999	99	99	5	999	00	02	MATERIALS	8			1,935,090.00	+				1,935,090.0
9999	99	99	5				Capital Projects	4								
9999	99	99	5	999			MWG Description	5								
9999	99	99	5	999	00	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	84,112,045.0
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			30,950.0
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.
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															Project Total:	90,963,256.5
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