

REPLACEMENT OF CONVENTIONAL LIGHTING WITH SOLAR
 (Street Lamps and External Lighting for Government Buildings)
 FINANCIAL CONSIDERATIONS

ESTIMATED COSTS			
Phases 1 and 3			
Phases 1	1	2	TOTAL
Installation of 28,000 Lights - Replacing Existing	21,000	7,000	28,000
Year			
Capital Costs			
Solar Panels, Controllers Light Source Poles	\$76,091,095.50	\$25,363,698.50	\$101,454,794.00
Installation Costs	\$140,000.00	\$46,666.67	\$186,666.67
Maintenance Costs			
Batteries			
Rental of Utility Poles	\$105,000.00	\$35,000.00	\$140,000.00
Phase 3			
Installation of 1,860 Lights _ Primary & Secondary Schools			
Capital Cost			
Solar Panels, Controllers light Source Poles	\$6,746,743.80		\$6,746,743.80
Installation Costs	\$140,000.00		\$140,000.00
GRAND TOTAL	\$83,222,839.30	\$25,445,365.17	\$108,668,204.47
Phase 2			
Installation of 25,000 Lights _ New	1	2	
Capital Cost			
Solar Panels, Controllers light Source Poles	\$76,091,095.50	\$14,493,542.00	\$90,584,637.50
Installation Costs	\$140,000.00	\$46,666.67	\$186,666.67
Maintenance Costs			
Batteries			
Rental of Utility Poles	\$105,000.00	\$20,000.00	\$125,000.00
GRAND TOTAL	\$76,336,095.50	\$14,560,208.67	\$90,896,304.17

Landed Cost of Batteries and Lights

	Lights	Batteries
Cost US\$	920.00	
Less Cost of Poles	(255.00)	
Net Cost	665.00	
BDS\$ Equivalent	1,330.00	150.00
Cost inclusive of Customs Duties 15%	1,529.50	172.50
Cost inclusive of Environmental Levy 3%	1,575.39	177.68
Landed Cost inclusive of VAT 15%	1,811.69	204.33

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PRESENT VALUE EVALUATION					
Year	Cash Outlay	Anuau Savings	Net Cash Flow	Discount Factor 5%	Present Value
0	(\$83,222,839)		(\$83,222,839)	1.00000	(\$83,222,839)
1	(\$116,341,669)	\$5,000,000	(\$111,341,669)	0.95238	(\$106,039,579)
2	(\$140,000)	\$5,000,000	\$4,860,000	0.90703	\$4,408,166
3	(\$265,000)	\$8,500,000	\$8,235,000	0.86384	\$7,113,722
4	(\$265,000)	\$8,500,000	\$8,235,000	0.82270	\$6,774,935
5	(\$265,000)	\$12,750,000	\$12,485,000	0.78353	\$9,782,372
6	(\$265,000)	\$13,260,000	\$12,995,000	0.74622	\$9,697,129
7	(\$265,000)	\$13,790,400	\$13,525,400	0.71068	\$9,612,231
8	(\$265,000)	\$14,342,016	\$14,077,016	0.67684	\$9,527,888
9	(\$265,000)	\$14,915,697	\$14,650,697	0.64461	\$9,443,986
10	(\$265,000)	\$15,512,325	\$15,247,325	0.61391	\$9,360,485
11	(\$265,000)	\$16,132,817	\$15,867,817	0.58468	\$9,277,596
12	(\$4,950,307)	\$16,778,130	\$11,827,823	0.55684	\$6,586,205
13	(\$6,817,440)	\$17,449,255	\$10,631,815	0.53032	\$5,638,264
14	(\$265,000)	\$18,147,226	\$17,882,226	0.50507	\$9,031,776
15	(\$265,000)	\$18,873,115	\$18,608,115	0.48102	\$8,950,875
16	(\$265,000)	\$19,628,039	\$19,363,039	0.45811	\$8,870,402
17	(\$265,000)	\$20,413,161	\$20,148,161	0.43630	\$8,790,643
18	(\$265,000)	\$21,229,687	\$20,964,687	0.41552	\$8,711,247
19	(\$265,000)	\$22,078,875	\$21,813,875	0.39573	\$8,632,405
20	(\$265,000)	\$22,962,030	\$22,697,030	0.37689	\$8,554,284
21	(\$265,000)	\$23,880,511	\$23,615,511	0.35894	\$8,476,551
22	(\$265,000)	\$24,835,731	\$24,570,731	0.34185	\$8,399,505
23	(\$265,000)	\$25,829,161	\$25,564,161	0.32557	\$8,322,924
24	(\$4,950,307)	\$26,862,327	\$21,912,020	0.31007	\$6,794,260
25	(\$6,817,440)	\$27,936,820	\$21,119,380	0.29530	\$6,236,553
TOTAL	(\$228,275,002)	\$434,607,322		Net Present Value	\$7,731,983
Net Savings Non Discounted Basis		\$206,332,320			

Notes:

Cost in Year 0 and 1 is the capital and installaion cost
 Outlay in Years 12, 13, 24 and 25 is the cost of replacing the batteries, which have a 10-15 year life span , plus rental of poles.
 Annual cost of rental of poles is \$265,000
 Assumes an annual inflation rate of 4% from year 5 for the evaluation of savings.