

GSS Construction Proposal for client in Guyana South America.

Comparison

In order to validate this proposal we have provided a comparison of using a diesel powered generator at various loads against that of our Solar Lighting solution.

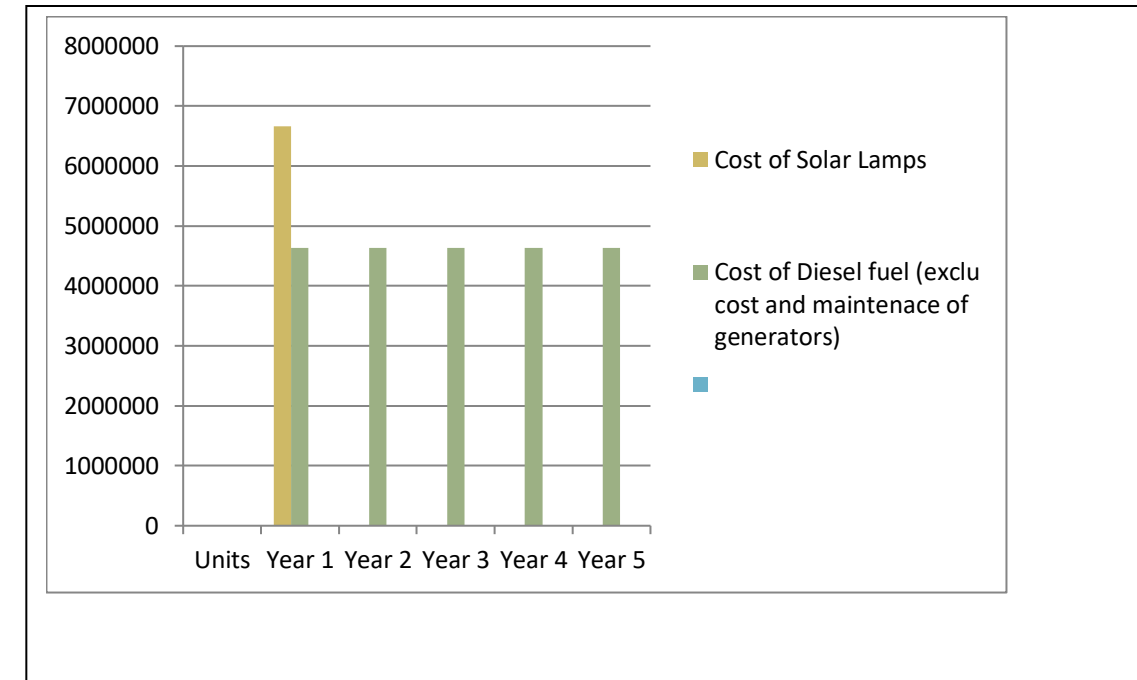
The table below outlines an approximation of the diesel generator fuel consumption per hour in litres. We've shown the usage at various load levels across a range of generators from 10kVA to 400kVA.


Approximate Diesel Fuel Consumption							
	¼ load (Ltr / hr)	½ Load (Ltr / hr)	¾ Load (Ltr/hr)	Full load (Ltr /hr)	Cost / 1 day	Cost 1 year	Cost 3 years
8kw/10kVA	0.8	1.3	1.8	2.4	\$59	\$15,432	\$46,296
10kW/ 12kVA	0.9	1.6	2.2	2.9	\$72	\$18,647	\$55,941
12Kw / 15kVA	1.1	1.9	2.7	3.6	\$89	\$23,148	\$69,445
20 kw / 25kVA	1.8	3.1	4.5	6.0	\$149	\$38,580	\$115,741
24kW / 30kVA	2.2	3.7	5.4	7.2	\$178	\$46,296	\$138,889
40kW / 50kVA	3.6	6.2	9.0	12.0	\$446	\$115,741	\$347,223
60kW / 75kVA	5.4	9.4	13.5	18.0	\$594	\$154,321	\$462,964
80kW / 100kVA	7.2	12.5	18.0	24.0	\$891	\$231,482	\$694,445
120kW / 150kVA	10.8	18.8	27.0	36.0	\$2,970	\$771,606	\$2,314,818

These figures are per generator, assuming using 6 generators to service approximately 50 lights over the 15 acre site. The annual cost in diesel for the 6 generators is - **\$4,629,636 (\$G)**. **1 Litre of Diesel is \$220 (G) and the US dollar**

Cost comparison (\$G)					
	Units	Year 1	Year 2	Year 3,4,5	Total
Cost of Solar Lamps (incl. Installation)	50	6,667,500	0	0	6,667,500
Cost of Diesel fuel (excl. purchase cost and maintenance of generators)	6	4,629,636	4,629,636	13,888,908	23,148,180

The table compares the one-off cost of the solar solution inclusive of installation against the annual diesel costs to power the generators over a 3 year period.





Cost comparison (\$G)					
	Units	Year 1	Year 2	Year 3	Total
Cost of Solar Lamps	50	4,095,000	0	0	4,095,000
Cost of Diesel fuel (excl. purchase cost and maintenance of generators)	6	4,629,636	4,629,636	4,629,636	13,888,908