

Solar + Storage: 15 Years of Owner Savings from One 12 kWp System

12 kWp Solar with 30 kW / 65.8 kWh BESS & EMS · 10-Year Warranty · 15-Year Battery Lifetime

● ACTIVE SCENARIO · 1.5 HR/DAY LOAD-SHEDDING

15-YEAR OWNER SAVINGS

9,230,695

BDT total

INVESTMENT REQUIRED

3,000,000

BDT one-time

RETURN ON OUTLAY

3.08*

savings vs. cost

SYSTEM PAYBACK

~4.9

years · full cost

! Load-Shedding Sensitivity

15-year owner savings scale directly with daily load-shedding hours

0.25 hr / day

4,293,840

BDT · 15-yr savings

Owner payback ~10.5 yr

0.5 hr / day

5,305,352

BDT · 15-yr savings

Owner payback ~8.5 yr

1 hr / day

7,332,876

BDT · 15-yr savings

Owner payback ~6.1 yr

1.5 hr / day

CURRENT

9,230,695

BDT · 15-yr savings

Owner payback ~4.9 yr

1 SYSTEM OVERVIEW

System Cost (Investment) **3,000,000** BDT

Daily Generation Contribution to Owner **48.6** kWh

Diesel Generator Capacity **30** kW

2 ELECTRICITY COST ASSUMPTIONS (BPDB)

Avg. Cost of Electricity **12.33** BDT/kWh

3 SAVINGS FROM SBP (per kWh)

From Diesel Purchase **37.00** BDT/kWh

From Grid Electricity **12.33** BDT/kWh

4 LOAD-SHEDDING CONSIDERATION

Load-shedding per day **1.5** hr

Load-shedding per month **45** hr

Diesel cost to produce 1 unit of electricity **37.00** BDT/kWh

5 WHERE THE SAVINGS COME FROM – per kWh



All figures in BDT saved per kilowatt-hour. Grid savings apply to solar output self-consumed daily (48.6 kWh); diesel savings apply to generator capacity covered during load-shedding.

6 PROJECTED OWNER'S SAVINGS

PERIOD	DIESEL	GRID	TOTAL (BDT)
Per Day	1,665.00	44.39	1,709.39
Per Month	49,950	1,332	51,282
Per Year	599,400	15,980	615,380
In 5 Years	2,997,000	79,898	3,076,898
In 10 Years (Warranty)	5,994,000	159,797	6,153,797
In 15 Years (Battery Lifetime)	8,991,000	239,695	9,230,695

7 CONCLUSION

8,991,000 BDT / \$65,389
saved from avoided **diesel purchase** over 15 years

239,695 BDT / \$1,743
saved from reduced **grid electricity** purchase over 15 years

9,230,695
BDT / 15 YEARS

Overall, the Owner saves **BDT 9,230,695** including approx. **USD 67,133** over the 15-year battery lifetime from a single 12 kWp Solar + 30 kW / 65.8 kWh BESS system – recovering the full 3,000,000 BDT investment in roughly 4.9 years.