

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 · 0.25 HR/DAY LOAD-SHEDDING

15-YEAR OWNER SAVINGS

4,235,020

BDT total

INVESTMENT REQUIRED

3,000,000

BDT one-time

RETURN ON OUTLAY

1.41*

savings vs. cost

SYSTEM PAYBACK

~10.6

years · full cost

! Load-Shedding Sensitivity

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

0.25 hr / day

CURRENT

4,235,020

BDT · 15-yr savings

Owner payback ~10.6 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

9,358,880

BDT · 15-yr savings

Owner payback ~4.8 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 **0.25** hr

Load-shedding per month **7.5** 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	277.50	506.76	784.26
Per Month	8,325	15,203	23,528
Per Year	99,900	182,435	282,335
In 5 Years	499,500	912,173	1,411,673
In 10 Years (Warranty)	999,000	1,824,347	2,823,347
In 15 Years (Battery Lifetime)	1,498,500	2,736,520	4,235,020

7 CONCLUSION

1,498,500 BDT / \$10,900
saved from avoided **diesel** purchase over 15 years

2,736,520 BDT / \$19,902
saved from reduced **grid electricity** purchase over 15 years

4,235,020
BDT / 15 YEARS

Overall, the Owner saves **BDT 4,235,020** including approx. **USD 30,800** 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 10.6 years.