

Rooftop 1 Analysis

rooftop_id: 1

area_m2: 100.0

orientation: South

obstructions: none

surface_type: Flat

suitability: 8

panel_type: monocrystalline

annual_energy_kwh: 10000

monthly_energy_kwh: [800.0, 900.0, 1000.0, 900.0, 900.0, 800.0, 700.0, 800.0, 800.0, 900.0, 800.0, 700.0]

system_size_kw: 5.27

total_cost_inr: 75395.15

annual_savings_inr: 78000.0

monthly_savings_inr: [6240.0, 7020.0, 7800.0, 7020.0, 7020.0, 6240.0, 5460.0, 6240.0, 6240.0, 7020.0, 6240.0, 5460.0]

payback_period_years: 4.0

Recommendations:

- Highly suitable (flat rooftop); use monocrystalline panels (24.70% efficiency).
- Secure permits from local discom (e.g., DTL in New Delhi).
- Comply with CEA standards (IS/IEC 61730).
- Clean panels 2-4 times yearly; use IoT monitoring.
- Leverage net metering under PM Surya Ghar Yojana.