



BUSINESS PLAN · INDIA

Solar Installation and EPC Business

Rooftop and ground solar systems - EPC and O&M

ENERGY

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This document is confidential and prepared for planning purposes. All financial figures are illustrative model assumptions for an Indian MSME context and must be validated against live quotes, local rates and professional advice before any investment or borrowing decision.

1. Executive Summary

This plan sets out a **Solar Installation & EPC Business** in India — an engineering-procurement-construction firm that designs, supplies, installs & commissions rooftop & ground-mounted solar PV systems for residential, commercial, industrial & institutional customers, then services them under O&M/AMC contracts. It earns **margin on EPC projects plus recurring O&M income**, monetising India's solar boom driven by falling module costs, rising power tariffs, net-metering & the **PM Surya Ghar** rooftop-subsidy push — a project-, capex-execution-, subsidy/DISCOM-approval- & working-capital-driven business with a recurring O&M annuity.

India's rooftop & C&I solar market is growing fast: customers cut power bills & carbon while earning payback in 3–5 years, aided by PM Surya Ghar residential subsidy, net-metering & accelerated depreciation for businesses. A solar EPC firm is a **project-execution business**: design/engineering, procurement (modules/inverters/BOS), installation/commissioning, DISCOM & net-metering approvals, subsidy facilitation, then O&M. Success rests on execution quality, order-book/pipeline, procurement & cost, DISCOM/subsidy handling, working-capital management & the recurring O&M book. Revenue is **EPC margin (project) + O&M/AMC (recurring)**; it is order-book-, execution-, subsidy/approval- & WC-driven.

This is a project/EPC business — funded by promoter equity plus bank finance (working capital for projects — inventory + receivables/retention, plus modest equipment). This plan models a solar EPC firm requiring **₹1.5 crore** (₹55 lakh promoter + ₹95 lakh bank finance), targeting **₹9 crore** revenue in Year 1 and **₹22 crore** by Year 3. (*Solar EPC; EPC-margin + O&M, order-book/execution/subsidy/DISCOM/WC-driven — figures illustrative.*)

2. Business Description, Vision & Legal Structure

Concept: A solar installation & EPC business - design, supply, install & commission rooftop/ground solar PV + net-metering/subsidy facilitation + O&M, earning EPC margin + recurring O&M.

Vision: To power homes & businesses with reliable, affordable clean solar energy.

Mission: Deliver well-engineered, quality solar systems on time - real savings, smooth approvals & dependable O&M.

Legal structure options

- **Proprietorship / Partnership** — small EPC/installer start.
- **Private Limited / LLP** — recommended for scale, C&I/EPC tenders, empanelment & funding.

Regulatory anchor: a solar EPC firm operates within DISCOM net-metering approvals, PM Surya Ghar / state rooftop-subsidy schemes, MNRE/ALMM-approved modules, electrical/CEIG safety & contractor licences, GST & (for subsidy) empanelment as a registered vendor. Execution quality, order-book/pipeline, procurement/cost, DISCOM/subsidy handling, WC management & O&M determine success; it is order-book-, execution-, subsidy/approval- & WC-driven, with a recurring O&M annuity.

3. Promoter & Ownership

Led by a promoter with solar/EPC, electrical-engineering or renewable-energy expertise & execution capability. The team includes design/engineering, projects/installation, procurement, sales/BD, DISCOM/subsidy liaison & O&M. Execution quality, order-book, procurement/cost & O&M are the differentiators. Ownership & stakes are editable inputs.

4. Market Analysis — India

India's solar (especially rooftop & C&I) market is booming — falling module costs, rising tariffs, net-metering, PM Surya Ghar residential subsidy, accelerated depreciation & ESG/RE100 push give 3-5 year paybacks. Demand is savings-/subsidy-/sustainability-driven & policy-backed. The market rewards execution quality, order-book/pipeline, procurement/cost, DISCOM/subsidy handling, O&M & WC discipline; it is order-book-, policy-, execution- & WC-sensitive, met with execution, pipeline, cost & approvals.

Demand drivers

- **PM Surya Ghar** residential rooftop subsidy.
- **Falling module cost & rising tariffs** (payback).
- **Net-metering & C&I savings** + accelerated depreciation.
- **ESG/RE100 & sustainability.**
- **Government/institutional** solar targets.

Market sizing (illustrative framing)

Layer	Definition	Indicative scale
TAM	Rooftop/C&I solar EPC in India	Very large & fast-growing
SAM	Region/segment & capacity	Substantial
SOM (Yr 1-3)	MW installed / projects	Scaling

Target segments

- Residential rooftop (PM Surya Ghar).
- Commercial & industrial (C&I) rooftop.
- Institutional/government (schools/offices).
- Ground-mount / captive & O&M contracts.

5. Competition & Competitive Advantage

Landscape: other solar EPCs/installers, large national players, local electricians & module/OEM channel installers. The firm competes on execution quality, price/cost, DISCOM/subsidy handling, reliability, O&M & track record.

The business's edge

- **Execution quality & engineering.**
- **Procurement/cost & ALMM modules.**
- **DISCOM/net-metering/subsidy handling.**
- **O&M reliability (recurring, referral).**
- **Order-book, pipeline & track record.**

6. Products & Revenue Model

Stream	Model	Basis
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Residential rooftop EPC	EPC margin (per kW)	Core (subsidy-aided)
C&I rooftop EPC	EPC margin (larger)	Core/scale
Ground-mount / captive EPC	Project margin	Scale
O&M / AMC	Recurring annual fee	Recurring annuity
RESCO / OPEX (optional)	Per-unit / lease (balance-sheet)	Recurring (capex-heavy)

Core revenue is **EPC margin** on residential (subsidy-aided), C&I & ground-mount projects (per kW/MW), plus a recurring **O&M/AMC annuity**; a RESCO/OPEX model (firm owns the asset, sells power) is a capex-heavy recurring alternative. Economics = order-book × EPC margin + O&M; execution, order-book, procurement/cost, subsidy/DISCOM & WC drive it — the decisive solar-EPC levers.

7. Go-to-Market — Sales & Order-Book

- **Residential (PM Surya Ghar)** lead-gen & subsidy facilitation.
- **C&I/institutional BD** (savings/payback/ESG pitch).
- **Referrals & track record** (quality installs).
- **DISCOM empanelment & tenders.**
- **O&M attach & upsell** (recurring/referral).

Sales approach

Generate leads (residential subsidy + C&I savings pitch) → design & quote (payback/savings) → win & execute quality installs → handle DISCOM/net-metering/subsidy → attach O&M → build referrals, order-book & O&M book. Execution, order-book, subsidy/DISCOM handling & O&M build a project business with a recurring annuity.

8. Operations Plan (EPC + O&M)

- **Design & engineering:** site survey, system design, structure, electrical, DISCOM feasibility.
- **Procurement:** ALMM modules, inverters, BOS, structures — cost & quality critical.
- **Installation & commissioning:** project execution, safety (CEIG), quality, net-metering commissioning.
- **Approvals & subsidy:** DISCOM net-metering, PM Surya Ghar/state subsidy facilitation.
- **O&M:** monitoring, cleaning, maintenance, generation guarantee (recurring).

Project workflow

Stage	Activity	Metric
Design	Survey/quote	Conversion/margin
Procure	Modules/BOS	Cost/quality
Install	Execution/commission	On-time/quality
Approve	DISCOM/subsidy	Net-metering/subsidy
Service	O&M/AMC	Generation/recurring

9. Regulatory, Licences & Compliance (India)

- **DISCOM:** net-metering approval; feasibility; commissioning.
- **Subsidy:** PM Surya Ghar / state rooftop schemes; registered-vendor empanelment; ALMM modules.
- **Electrical/safety:** CEIG/electrical inspector; contractor licence; safety norms.
- **General:** GST; Udyam; warranties; O&M contracts.

10. Organisation & Manpower Plan

Role	Yr 1	Yr 2	Yr 3
Promoter / leadership	1	2	3
Design, engineering & projects	5	11	19
Installation crews & O&M	10	22	40
Sales/BD, DISCOM/subsidy liaison	4	8	13
Procurement, accounts & admin	3	5	8
Total	23	48	83

11. Implementation Timeline & Milestones

Phase	Timeline	Milestone
Setup	Month 0-2	Entity, team, empanelment/DISCOM, procurement tie-ups, first projects
Ramp	Month 2-7	Project execution, order-book, subsidy/net-metering, O&M
Traction	Month 7-12	Installed base & O&M; ₹9cr revenue
Expand	Year 2	C&I/ground-mount, more crews/geographies, ₹15cr
Scale	Year 3	₹22cr revenue; order-book & O&M annuity

12. Financial Plan (Illustrative)

All figures are illustrative model assumptions for an Indian context, shown so the promoter can replace them with live rates. They are not projections of guaranteed results. Solar EPC is project-based (EPC margin) with a recurring O&M annuity; working capital (inventory + receivables/retention) is the main need; subsidy/DISCOM timing affects cash.

12.1 Project cost & means of finance

Capital requirement	₹
Working capital (inventory + receivables/retention)	90,00,000
Tools, equipment, vehicles & O&M kit	30,00,000
Office, design/monitoring tech & setup	18,00,000
Empanelment, brand & pre-operative	12,00,000

Total project cost	1,50,00,000
Promoter contribution	55,00,000
Bank finance (WC + term, MSME)	95,00,000

12.2 Projected Profit & Loss (3 years)

Particulars	Year 1	Year 2	Year 3
Residential rooftop EPC	4,00,00,000	6,50,00,000	8,50,00,000
C&I / ground-mount EPC	4,50,00,000	7,50,00,000	11,00,00,000
O&M / AMC (recurring) & other	50,00,000	1,50,00,000	2,50,00,000
Total revenue	9,00,00,000	15,50,00,000	22,00,00,000
Materials (modules/inverters/BOS) & subcontract	6,55,00,000	11,10,00,000	15,50,00,000
Salaries & installation labour	1,10,00,000	1,90,00,000	2,70,00,000
Overheads, logistics & marketing	75,00,000	1,25,00,000	1,75,00,000
Interest & other	15,00,000	25,00,000	35,00,000
Total expenses	8,55,00,000	14,50,00,000	20,30,00,000
Net profit (before tax)	45,00,000	1,00,00,000	1,70,00,000
Net margin	5%	6.5%	7.7%

12.3 Unit economics & break-even

- **Order-book × EPC margin + O&M:** EPC margins are moderate (modules are ~55–65% of cost); procurement/cost, execution efficiency & project mix (C&I larger) drive it; O&M/AMC adds a recurring, higher-margin annuity that compounds with the installed base.
- **Subsidy/DISCOM & WC:** subsidy & net-metering timing affect cash; inventory + receivables/retention are the main WC; disciplined procurement, milestone billing & WC management protect margin & cash.
- **Break-even:** at an order-book/execution threshold covering overheads & interest; net margins moderate (EPC), improving with O&M annuity, C&I mix & procurement scale.

12.4 Projected Cash Flow — Year 1 (quarterly, illustrative)

Particulars (₹)	Q1	Q2	Q3	Q4
Opening balance	12,00,000	10,80,000	11,00,000	11,60,000
Project & O&M collections	1,70,00,000	2,20,00,000	2,55,00,000	2,80,00,000
Procurement, wages & operating	1,71,20,000	2,19,80,000	2,54,40,000	2,78,20,000
Closing balance	10,80,000	11,00,000	11,60,000	13,40,000

Solar EPC carries inventory + receivables/retention WC & subsidy/DISCOM-timing cash gaps. Milestone/advance billing, procurement discipline, subsidy/net-metering follow-through, O&M recurring cash, CC & the WC line manage cash; the key risks are project-execution/delays, module-price/procurement, subsidy/DISCOM-approval timing, receivable/retention &

competition — met with execution, procurement, approvals discipline & O&M.

12.5 Key Performance Indicators to Monitor

- **Order-book:** pipeline; kW/MW installed; conversion; project mix.
- **Execution:** on-time/quality; cost/kW; generation performance.
- **Recurring:** O&M book; AMC attach; renewal.
- **Finance:** EPC margin; WC/receivable days; subsidy-timing; net margin.

13. Funding Requirement & Bankability

Total ask: **₹95 lakh bank finance** against ₹55 lakh promoter contribution — mostly **working capital** (inventory + receivables/retention) plus tools/equipment, MSME-eligible. Bankability rests on order-book/pipeline, execution track record, procurement tie-ups, subsidy/DISCOM handling & the growing O&M annuity; the solar tailwind (PM Surya Ghar, net-metering, ESG) supports demand. Year-1 profit ~₹45 lakh growing to ₹1.7 crore supports servicing; order-book, execution, WC & O&M are key. Execution, order-book, procurement/cost, subsidy/DISCOM & O&M underpin the model.

13.1 Funding utilisation

Use of funds	₹	% of total
Working capital (inventory + receivables/retention)	90,00,000	60%
Tools, equipment, vehicles & O&M kit	30,00,000	20%
Office, design/monitoring tech & setup	18,00,000	12%
Empanelment, brand & pre-operative	12,00,000	8%
Total	1,50,00,000	100%

14. Risk Analysis & Mitigation

Risk	Mitigation
Project execution / delays	Engineering, crews, project management, quality, milestones
Module-price / procurement	Tie-ups, ALMM sourcing, timing, cost pass-through
Subsidy / DISCOM-approval timing	Empanelment, liaison, follow-through, WC buffer
Receivable / retention / WC	Milestone/advance billing, credit discipline, CC/WC line
Competition / margin pressure	Execution quality, O&M annuity, C&I focus, procurement scale

15. SWOT Analysis

Strengths Strong solar tailwind (PM Surya Ghar/net-metering/ESG); EPC margin + O&M annuity; 3-5yr payback demand; scalable.	Weaknesses Project/execution-dependent; WC-intensive; subsidy/DISCOM-timing; module-price & competition/margin pressure.
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Opportunities Rooftop/C&I growth; PM Surya Ghar; O&M book; RESCO/OPEX; storage/hybrid; institutional/tenders.	Threats Module-price/policy shifts; DISCOM/net-metering changes; competition/price war; execution/quality reputation.
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16. Recommended AiSevak Tools for This Business

This solar EPC firm would use AiSevak's Energy vertical tools in delivery:

- **EPC ops:** solar-design/quoting & procurement/cost, project-execution & DISCOM-net-metering/subsidy, O&M/generation-monitoring tools.
- **Business ops:** order-book/CRM & milestone-billing/WC, empanelment & GST tools (with Finance & Legal verticals).
- **Practice:** Business Plan, EPC-margin/O&M and Break-even tools to model the business.

17. Key Assumptions & Notes

- Solar EPC: design/supply/install/commission rooftop & ground solar + net-metering/subsidy facilitation + O&M; EPC margin (project) + recurring O&M annuity.
- Order-book × EPC margin + O&M decisive; execution quality, procurement/cost, subsidy/DISCOM handling & WC management are the levers; O&M compounds with installed base.
- Promoter equity + bank WC/term (MSME); DISCOM net-metering, PM Surya Ghar/state subsidy, ALMM modules, CEIG/electrical safety.
- Order-book, execution, procurement, subsidy/DISCOM timing & O&M drive economics; figures illustrative, exclude GST.

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