



• TURNKEY EPC & EQUIPMENT SUPPLY

Product & Project *Catalogue*

EDITION 2026 · JAIPUR, RAJASTHAN, INDIA

Official catalogue of PAA SOLAR's high-performance N-Type TOPCon modules, smart hybrid inverters, LiFePO4 battery vaults, containerized BESS, PM Surya Ghar franchise kits, and complete 21+ utility & enterprise project showcase.

500+

PM-SGY & ROOFTOP KITS

30yr

PERFORMANCE WARRANTY

27+

YEARS EPC EXPERIENCE

COMPANY PROFILE

India's Leading Solar EPC Developer

Headquartered in Jaipur, Rajasthan, PAA SOLAR (EKCHAKRA GROUP) brings over 27+ years of engineering leadership into clean energy infrastructure, providing end-to-end solar development for utility grids, enterprise commercial hubs, and domestic households.

30–40 Year Vision

Our projects are engineered with structural wind ratings up to 170 km/h, dual-glass TOPCon anti-degradation, and tier-1 electrical components designed for maximum lifetime yield.

DISCOM & Subsidy Direct

Empowered by official MNRE and ALMM compliance, our turnkey PM Surya Ghar Muft Bijli Yojana installations facilitate direct government subsidy transfer for rooftop customers.

TURNKEY EPC WORKFLOW

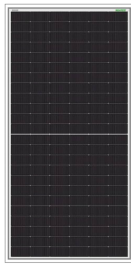
End-to-End Engineering Execution

STAGE	PROCESS & EXECUTION DETAILS	DELIVERABLES
01. Site Feasibility	3D Shadow analysis, tilt optimization, soil load bearing test, and DISCOM substation capacity mapping.	PVSyst Yield Report & Layout
02. Engineering & Approval	Complete SLD electrical design, DISCOM net-metering application, CEIG approval, and MNRE portal registration.	DISCOM Sanction Letter
03. Equipment Supply	Direct supply of ALMM-listed TOPCon solar modules, string inverters, LiFePO4 batteries, and hot-dip galvanized mounting structures.	OEM Warranty Certificates
04. Installation & Commissioning	Certified team execution, torque-checked framing, DC/AC cabling, earthing pits, and SCADA telemetry setup.	CEIG Certificate & Net-Meter
05. O&M & Monitoring	24/7 cloud SCADA monitoring, regular panel cleaning protocol, preventative thermal imaging, and guaranteed uptime.	Performance Uptime Guarantee

PRODUCT LINEUP 01

Solar Panels — TOPCon & DCR

High-efficiency N-Type TOPCon bifacial glass-glass modules and MNRE ALMM approved Domestic Content Requirement (DCR) solar panels engineered for India's extreme climates.



N-TYPE TOPCON · FLAGSHIP

N-Type TOPCon 650W Bifacial Module

Tunnel Oxide Passivated Contact (TOPCon) cell technology with 22.8%+ peak efficiency. Zero Potential Induced Degradation (PID) & Light Induced Degradation (LID) for high-temperature desert installations.

- 22.8%+ Efficiency
- 580W – 650W Power
- 10–15% Bifacial Gain
- 30-Year Guarantee

CELL TECHNOLOGY

Mono TOPCon N-Type

TEMP COEFFICIENT

-0.29% / °C

POWER OUTPUT

580W to 650W

JUNCTION BOX

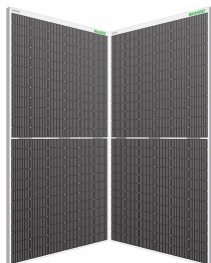
IP68 Split 3-Bypass

GLASS

2.0mm Dual Tempered AR

WARRANTY

30 Yrs (87.4% Output)



MNRE ALMM APPROVED · DCR

DCR Subsidy Solar Panel (540W–550W)

100% Domestic Content Requirement (DCR) compliant solar panels manufactured in India. Fully approved by MNRE and ALMM listed for PM Surya Ghar Muft Bijli Yojana rooftop projects.

- MNRE / ALMM Compliant
- 540W – 550W Range
- 21.3% Efficiency
- 25-Year Performance

CELL TYPE

Mono PERC / TOPCon DCR

WIND LOAD RATING

5400 Pa / 2400 Pa

POWER OUTPUT

540W – 550W

CERTIFICATIONS

BIS / IEC 61215 / ALMM

FRAME

Anodized Aluminum Alloy

WARRANTY

25 Yrs Linear Output

PRODUCT LINEUP 02

Smart Inverters & Battery Vaults

High-performance grid-tied string inverters, hybrid blackout protection inverters, and ultra-safe LiFePO4 battery energy storage vaults.



GRID-TIED & HYBRID

Smart String & Hybrid Inverters (3kW – 100kW+)

High-efficiency string inverters featuring 99.2% MPPT conversion efficiency, sub-10ms automatic grid outage backup transfer, and built-in WiFi/4G cloud SCADA telemetry.

- 99.2% Peak Efficiency
- Sub-10ms Transfer
- Dual / Quad MPPT
- IP66 Outdoor Rated

TOPOLOGY

Transformerless String

MPPT VOLTAGE

160V – 1000V DC

COMMUNICATION

WiFi / RS485 / Modbus

PROTECTIONS

AFCI / Anti-Islanding

NET-METERING

Zero-Export Smart Meter

WARRANTY

10 Years Standard


LITHIUM STORAGE VAULT

LiFePO4 Lithium Storage Banks (5kWh – 50kWh+)

Non-hazardous Lithium Iron Phosphate (LiFePO4) storage banks engineered for 10,000+ deep discharge cycles at 100% Depth of Discharge (DoD) with active BMS cell balancing.

- 10,000+ Deep Cycles
- 100% DoD Usable
- AI Active BMS
- 10-Year Warranty

CHEMISTRY

LiFePO4 (LFP)

VOLTAGE / MODULE

51.2V Rack / Wall Mount

SCALABILITY

Up to 16 Packs Parallel

SAFETY STANDARD

UN38.3 / IEC 62619

OPERATING TEMP

-10°C to +55°C

DESIGN LIFE

15+ Years Service

PRODUCT LINEUP 03

BESS & Turnkey PM SGY Kits

Megawatt-scale containerized Battery Energy Storage Systems (BESS) and complete ready-to-install PM Surya Ghar rooftop solar kits.



CONTAINERIZED MEGAWATT BESS

ESS 3532 Container & Li UPS 1250 Vault

Turnkey 3.53 MWh liquid-cooled containerized BESS unit for grid frequency regulation, peak shaving, and large industrial factory backup with sub-10ms islanding.

- 3.53 MWh LFP Capacity
- Liquid Cooling HVAC
- IP65 Containerized
- Sub-10ms Response

ENERGY CAPACITY

3,532 kWh (3.53 MWh)

MAX POWER OUTPUT

1,766 kW Continuous

FIRE SUPPRESSION

FK-5-1-12 Gas & Aerosol

CONTAINER SIZE

Standard 20ft / 40ft HC

GRID INTEGRATION

3-Phase 415V / 11kV

MONITORING

Cloud EMS & SCADA


PM SURYA GHAR · COMPLETE KITS

Complete Rooftop Solar Kits (3 kW to 10 kW)

Turnkey, box-packed rooftop solar kits containing ALMM DCR modules, hybrid inverters, hot-dip galvanized mounting structures, AC/DC distribution boxes, and complete earthing kit.

- 3kW / 5kW / 10kW Kits
- PM Surya Ghar Approved
- Fast 48-Hour Installation
- Franchise Partner Program

KIT INCLUSIONS

Modules + Inverter + Structure

WIRING & PROTECTION

UV Cables, SPD & MCB

GOVT SUBSIDY

Up to ₹78,000 Direct DBT

DEALER FRANCHISE

District Exclusive Rights

DELIVERY

Pan-India Freight Logistics

WARRANTY SUPPORT

Single Point PAA Service

PORTFOLIO SHOWCASE

Utility-Scale & Mega Solar Plants

High-irradiance ground-mounted solar power infrastructure engineered for multi-megawatt grid feeder synchronization.



2.5 MW DC / 2 MW AC Solar Plant PAHARI MANDIR, HARYANA

2.5 MWp **20,000 Tons**
CAPACITY CO2 OFFSET / YR

Ground-mounted solar power plant delivering clean renewable power to Haryana DISCOM grid infrastructure.

UTILITY SCALE · GROUND MOUNT



2.5 MW DC / 2 MW AC Solar Plant DIGAWAN, HARYANA

2.5 MWp **20,000 Tons**
CAPACITY CO2 OFFSET / YR

High-efficiency TOPCon ground solar installation with 33kV dedicated pooling substation connection.

UTILITY GROUND SOLAR



2.5 MW DC / 2 MW AC Solar Plant LOHARU, HARYANA

2.5 MWp **20,000 Tons**
CAPACITY CO2 OFFSET / YR

Large-scale grid-tied solar infrastructure generating high-yield clean energy for state transmission lines.

GRID-TIED GROUND SOLAR



2.5 MW Desert Solar Project HEMRA, BIKANER, RJ

2.5 MWp **20,000 Tons**
CAPACITY CO2 OFFSET / YR

Desert ground-mounted solar installation with automated SCADA telemetry and high temperature anti-PID modules.

DESERT SOLAR · SCADA



2.5 MW DC / 2 MW AC Ground Solar HANUMANGARH, RJ

2.5 MWp **20,000 Tons**
CAPACITY CO2 OFFSET / YR

Utility-scale ground solar plant at Karpoorisar featuring high-irradiance bifacial TOPCon technology.

BIFACIAL GROUND SOLAR



9.16 MW DC Mega Plant BTM BHIWANI, HARYANA

9.16 MWp **70,000 Tons**
CAPACITY CO2 OFFSET / YR

Flagship industrial ground-mounted mega solar power plant synchronised with state grid substation.

FLAGSHIP MEGA PROJECT

C&I PORTFOLIO

Industrial & Captive Solar Systems

Turnkey captive rooftop and ground-mounted solar installations for factories, breweries, distilleries, and logistics hubs.



1.3 MW DC Industrial Solar

RENI, ALWAR, RJ

1.3 MWp **10,000 Tons**
CAPACITY CO2 OFFSET

Turnkey industrial solar installation supplying clean energy to regional distribution grid feeders.

INDUSTRIAL SOLAR



1.3 MW DC Distillery Solar

BERI, HARYANA

1.3 MWp **10,300 Tons**
CAPACITY CO2 OFFSET

Dual 500kW grid export & 500kW captive tin-shed industrial solar array for ADS Spirits Pvt Ltd.

CAPTIVE DISTILLERY



1.1 MW DC Commercial Solar

GOVINDGARH, ALWAR, RJ

1.1 MWp **8,000 Tons**
CAPACITY CO2 OFFSET

Commercial solar project empowering regional distribution feeders with stable clean power.

COMMERCIAL SOLAR



900 kW Industrial Tin Shed

SIRSA, HARYANA

900 kW **7,000 Tons**
CAPACITY CO2 OFFSET

High-capacity metal tin-shed industrial rooftop solar array with net-metering grid export.

TIN SHED ROOFTOP

500 kW Bazpur Solar Project

500 kW Ground Solar Project

BAZPUR, UTTARAKHAND

500 kW **4,000 Tons**
CAPACITY CO2 OFFSET

Ground-mounted solar project for Prem Ganga Infotech featuring high-voltage net-metering.

C&I GROUND SOLAR



500 kW Heavy Industry Solar

RUDRAPUR, UTTARAKHAND

500 kW **4,000 Tons**
CAPACITY CO2 OFFSET

Ground solar project for Maa Bhagwati Stones powering heavy stone processing equipment.

HEAVY INDUSTRY SOLAR

SPECIALIZED INSTALLATIONS

Manufacturing, Dairy, Agro & Hospitality

Complete portfolio of specialized solar installations across glass works, food processing, hospitality resorts, and oil mills.

500 kW Stone Crusher Ground Solar

UDAIPUR, RAJASTHAN

500 kW
CAPACITY

4,400 T
CO2 OFFSET

Heavy-duty ground solar plant powering New Ekling Nath Crusher operations.

HEAVY INDUSTRY

400 kW Industrial Glass Solar

DEHRADUN, UTTARAKHAND

400 kW
CAPACITY

3,200 T
CO2 OFFSET

Rooftop solar system powering Verma Toughened Glass Pvt Ltd plant.

GLASS MANUFACTURING

350 kW Captive Brewery Solar

KHATIMA, UTTARAKHAND

350 kW
CAPACITY

2,400 T
CO2 OFFSET

Tin-shed captive rooftop solar plant powering Sukas Breweries & Beverages.

CAPTIVE BREWERY

330 kW Dairy Industry Solar

JAIPUR, RAJASTHAN

330 kW
CAPACITY

2,400 T
CO2 OFFSET

Tin-shed industrial solar installation powering Dev Milk Foods Pvt Ltd processing plant.

FOOD & DAIRY INDUSTRY

180 kW Resort Hospitality Solar

NAINITAL, UTTARAKHAND

180 kW
CAPACITY

1,500 T
CO2 OFFSET

Rooftop solar installation powering luxury Trinantara Resort & Spa.

HOSPITALITY & RESORT

160 kW Industrial Oil Mill Solar

NOHAR, RAJASTHAN

160 kW
CAPACITY

1,200 T
CO2 OFFSET

Tin-shed rooftop solar installation powering V.G Oil Mill production lines.

OIL MILL INDUSTRY

110 kW Agro Industrial Solar

PALLU, RAJASTHAN

110 kW
CAPACITY

800 T
CO2 OFFSET

Tin-shed solar system for Vikas Agro Industries with net-metering grid export.

AGRO PROCESSING

100 kW Industrial Enterprise Solar

UDAIPUR, RAJASTHAN

100 kW
CAPACITY

800 T
CO2 OFFSET

Industrial tin-shed solar installation for Mahendra Singhvi Enterprise.

ENTERPRISE ROOFTOP

50 kW DC Glass Manufacturing Solar

FIROZABAD, UTTAR PRADESH

50 kW DC
CAPACITY

400 Tons
CO2 OFFSET

100% Captive
GRID STATUS

Rooftop solar installation powering Tirupati Glass manufacturing facility in Firozabad glass cluster.

GLASS MANUFACTURING

SUPPLY ECOSYSTEM

Tier-1 OEM Approved Partners

We partner directly with leading Tier-1 solar equipment manufacturers in India and worldwide to guarantee ALMM compliance, maximum module output, and zero-defect warranties.



GET IN TOUCH

Connect with PAA SOLAR

Reach out for utility PPA proposals, industrial EPC solar quotes, equipment procurement, or PM Surya Ghar dealer franchise opportunities.

Headquarters & Office

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Certifications & Approvals

- ✓ MNRE Approved Solar Developer
- ✓ PM Surya Ghar Portal Registered Vendor
- ✓ ALMM Listed Tier-1 Module Supply
- ✓ CEIG & DISCOM Net-Metering Authorized
- ✓ ISO 9001:2015 Quality Certified