# RenewSys Corporate Presentation





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- ✓ Products (PV Modules, PV Cells, Encapsulants, Backsheets)
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# About RenewSys



RENEWSYS CORPORATE PRESENTATION

RenewSys is the First Integrated
Manufacturer of Solar PV Modules
and Its Key Components Encapsulants (EVA, POE, & EPE),
Backsheets and Solar PV Cells





# About ENPEE Group





Established in 1961 \$515 MILLION 4000+ EMPLOYEES

www.enpee.com

RenewSys India Pvt. Ltd. is a part of the ENPEE Group. An international conglomerate established in 1961, with a rich heritage of manufacturing excellence in diverse industries.

#### Based in Nigeria:



Manufacturing Metal Packaging



Printing Cylinders and Inks, CPP Films



Soaps, Personal and Home Care, Beauty and Cosmetics



Flexible packaging



Cement/ Fibre Cement Sheets



Construction, Chemicals, Adhesives, Power Cables

#### Based in India:



Packaging Brand Management



Solar PV Modules & Components Manufacturing Facilities in Hyderabad, Bengaluru, & Navi Mumbai



# RenewSys Global Presence









# Manufacturing Facilities





Bengaluru:



**Hyderabad:** 



Patalganga:

CONSERV® 8 GW
EVA, POE, & EPE
Encapsulants

PRESERV<sup>®</sup> **4 GW**Backsheets

DESERV<sup>®</sup> **1.1 GW**TOPCon

PV Modules

RESERV<sup>®</sup> **130 MW**PV Cells

DESERV® 1.4 GW

**TOPCon** (750 MW) +

Mono PERC (650 MW)

PV Modules



### The Team









#### We are:

- Diverse set of dedicated professionals
- Knowledgeable with varying skill sets as engineering, finance, human resources
- Energetic and Dynamic
- Innovative and Progressive
- Human Resource strength of approximately 1500





### **ESG** Initiatives



#### **Environment:**

- Innovation e.g. Green Backsheet
- Recycling initiatives
- Reduced energy consumption
   approximately 4 lakh units in FY 23 24
- 5000+ trees and saplings planted over the last five years
- High on compliance for EPR responsibility (Plastic & E-waste)

#### Social:

- Sponsoring equipment for Vision
   Centers and providing cataract
   surgeries at zero cost
- PPE Kit donation during COVID-19
- Proud supporter of the India One
   Solar Thermal Power Plant
- Education for the underprivileged
- Supporting local NGOs
- Sponsoring Cancer patients
- Sponsoring Ph.D. Scholarship SERIS, Singapore
- New initiative towards research into Diabetes

#### Governance:

- Board Structure:
   Promoter (Related): 2
   Professional/s 1
   Independent Director/s -3
- Global leaders and visionaries
   who provide strategic direction
   and guidance to the organization
- The Company, under their leadership, has adopted crucial policies, including conflict minerals policy, biodiversity, diversity, & data privacy











India's Largest

PV Modules Testing Facility

- Rigorous and controlled quality
- Range of equipment including seven
   Environmental Chambers





# Product Excellence Centre (Bengaluru)







### India's 1st

NABL-accredited (Bengaluru) Solar PV
Laboratory specifically for Encapsulants,
Backsheets & their raw materials

- Facilitate New Product Development
- Continuous testing and Quality Control
- Superior Equipment Laboratory Extruder,
   Lab grade Laminator, and Universal Testing
   Machine, Environmental Chambers for Damp
   Heat Test, Thermal Cycling, etc.



## RenewSys - The 1st





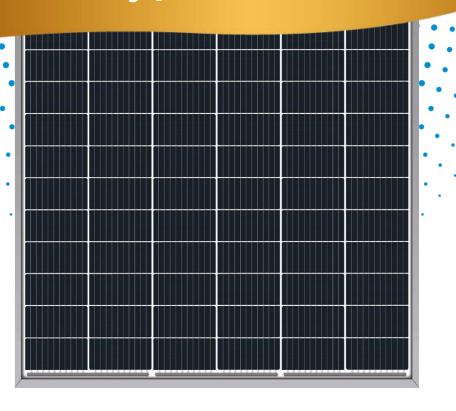
- And only integrated manufacturer
- In India to launch POE specifically made for N-type TOPCon cells
- In India to launch Glass-Backsheet Bifacial Solar PV Module.
- In India to receive UL approval for POE Encapsulant
- Indian manufacturer to have a dedicated NABL-accredited 'Product Excellence Centre,' offering free module wellness programme Dr. PV from Bengaluru Facility
- In India to launch 5 BB and 6 BB solar PV Cells, Made in India
- Indian company to receive a PV Backsheet patent
- In India to launch the fastest curing Encapsulant

### N-TYPE TOPCON MODULES





N-Type TOPCon



Efficiency: Up to 23.3 %

Temp Co-Eff.: -0.29 %/°C

Output Wp:

156 X

600-650







# RenewSys Hyderabad

The home to our World Class PV Modules and PV Cells - Made in India

At HyderabadElectronicManufacturingCluster

Total area

50 Acres

✓ World - class

Manufacturing facility

State-of-the-art

Technology

World - class

Racking System on tracks



# Production Capacity: DESERV and RESERV







# DESERV® 1.1 GW Solar PV Modules:

 Automated lines to manufacture TOPCon and Multi (including DCR), full-cell and cut-cell modules

### RESERV® 130 MW Solar PV Cells:

- Fully automated production lines
- PV Cells are made from undiffused silicon wafer (black wafer), as per MNRE requirements



# DESERV - Product Range





### Solar PV Modules

to suit application from small lighting systems to utility scale plants.

High Performance PV Modules
Multi and Mono Crystalline

- ✓ High Voltage, High Output PV Modules
  Prime and X-Prime Series
- Higher Output PV Modules
  - Extreme Series Bi-Facial Mono PERC Cut Cells
  - SGalactic Series Mono PERC Cut Cells
- ✓ Small PV Modules
- Specialised PV Modules
  - BIPV (Building Integrated Photovoltaic)



### Product Certifications

















- TUV Certified 61215, 61730,
  60068-2-68, 61701, 62716
- IEC TS 62804,61853
- UL Certified: 1703
- SON CAP Certified
- ALMM Listed

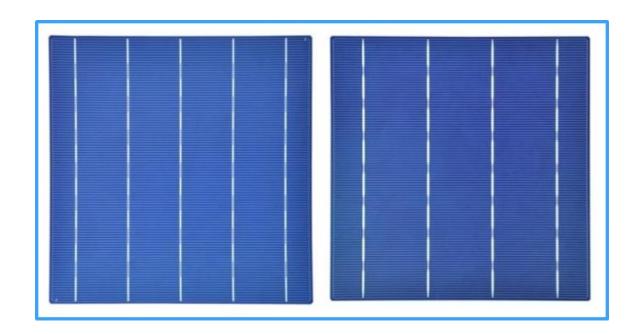
- Meets requirements for –
   SASO, RRECL, GEDA
- CAN/CSA: 61730
- DEWA Listed
- Independently audited by Solar Buyer
- BIS NO.: R-63000760

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# RESERV - Product Range





Solar PV Cells
made from poly-silicon
wafers and silver bus-bars

- ✓ Total cell capacity 130 MW
- ✓ First Indian company to launch 5 BB and 6 BB Cells
- Raw materials, including high purity solar grade undiffused silicon wafer (black wafer) as per MNRE requirements
- Statistical process control during production
- ✓ 100% Inline EL Inspection
- ✓ PID Testing at cell level

RENEWSYS CORPORATE PRESENTATION



# Packaging and Storage - Hyderabad



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### Our storage facilities

are designed for the secure and safe dispatch of our modules and components:

- Detailed inspection SAP system ensuring safe delivery
- Capable of 15,000 module dispatches per day
- Instore software for retrieval of goods from storage
- World-class Racking System with the facility to move on tracks





# RenewSys Patalganga

The home to our World Class Large Format PV Modules - Made in India

At Navi Mumbai

MIDC Industrial Area

Total area

8.5 Acres

State-of-the-art

Module Manufacturing Technology

Comprehensive

**Product Testing** Centre



# Production Capacity: DESERV







### DESERV® 1.4 GW

### Solar PV Modules:

- State-of-the-art manufacturing lines to make DESERV SGalactic & Extreme Large
   Format Solar PV Modules
- DESERV SGalactic (Monofacial) & Extreme (Bifacial) modules available in the configurations of 108X, 120X, 144X, & 156X



# DESERV - Product Range





# DESERV SGalactic Mono-facial DESERV Extreme Bi-facial

156, 144, 120, 108

- ✓ Smart: High module efficiency with half-cut Monocrystalline Multi Bus Bars PERC Solar Cells
- Modern: Processed on state-of-the-art technology production lines
- ✓ Dependable: Use of the highest quality raw material coupled with rigorous in-house testing
- ✓ Versatile: Suitable for Utility, Rooftop, and other general applications



### Munich RE and DNVGL



- Setting industry benchmarks for transparent, reliable business
- RenewSys modules now accepted by major Developers, EPC companies and Financiers, who otherwise only accept 'Tier 1'

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### Bankability

Transparency enhanced with audit by DNV GL - empowers customers with insights



#### Insurance

Both module factories are Munich RE\*-insured with valid insurance

Warranty partner



\*Terms & conditions apply





# RenewSys Bengaluru

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The home to our World Class Polymers - Made in India

✓ Loc

Located on Bommasandra Jigani

Link Road, Bengaluru

**/** 

Total area

6 Acres plot

V

World - class

Manufacturing

facility

Latest and state-of-the-art

European Technology

RENEWSYS CORPORATE PRESENTATION



# Production Capacity: CONSERV and PRESERV







CONSERV® 8 GW EVA, POE, & EPE Encapsulants

Fully automated production lines

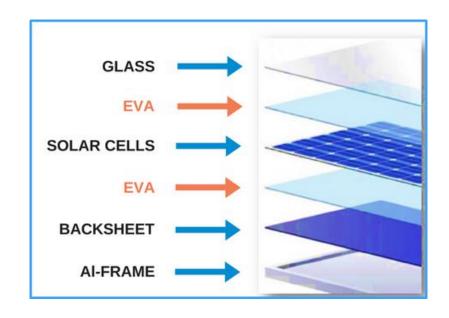
PRESERV® 4 GW

Backsheets & Bus Bar Insulation Sheets



# CONSERV - EVA Encapsulant





**CONSERV** range of

Ethylene Vinyl Acetate (EVA)
Encapsulants protect PV cells
and the integrity of the module

**CONSERV EVA Encapsulant:** 

Encompasses a range of products in 'Fast Cure', 'Ultra-fast Cure', and

'Giga-Fast Cure' versions:

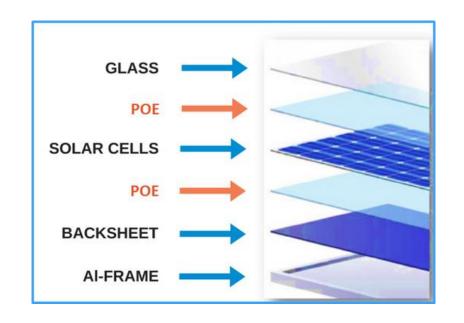
- Potential Induced Degradation (PID) Resistant
- Ultra Violet (UV) Transparent





# CONSERV - POE Encapsulant





### **CONSERV** range of

Polyolefin Elastomer (POE)
Encapsulants protect PV cells
and the integrity of the module

#### **CONSERV POE Encapsulant:**

Ideal for use in Glass-to-Glass PV modules, it is well suited to protect Glass-to-Backsheet PV modules also.

- India's first UL-Certified POE
- Delivered advantages of TPO as well
- Unique formulation for virtually Zero PID
- Resilient in harsh and extreme climatic conditions





### Product Certifications







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### **CONSERV®**

- UL: UL 746A & UL746B
- IEC 61215
- RoHS
- DHT TUV Declaration

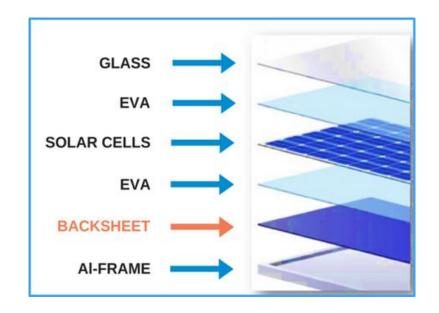
### **PRESERV®**

- UL: UL 764A & UL 764B
- CTI (Comparative Tracking Index)
- RoHS
- Partial Discharge
- Flame Spread Index



# PRESERV - Product Range





**PRESERV** Backsheets

protect the module from moisture and dust, and are crucial for ensuring performance PRESERV Backsheets and
Bus Bar Insulation Sheets:

- ✓ Tedlar® Backsheets
- PVDF Backsheets (Fluoro)
- Metallic-based Backsheets
- ✓ PET-based Backsheets

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# Supply To Date



**PV Modules** 

**PV Cells** 

Encapsulants

& Backsheets

3.5+ GW

600+ MW

24+ GW

RENEWSYS CORPORATE PRESENTATION

Inception-To date





# RenewSys PV Module Installations

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### Maharashtra





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Capacity: 15 MW

**Location: Nagpur** 



# Rajasthan





32

Capacity: 56 MW

Location: Barmer, Rajasthan, India



# Tamil Nadu





33

Capacity: 45 MW

Location: Tuticorin, Tamil Nadu



# West Bengal





34

Capacity: 10 MW

Location: Canal Top, West Bengal



# Germany







35

Location: 39615 Zehrental (OT Drösede), Altmark



### South Africa





South Africa's largest ground mounted private sector project Project: Nelson Mandela University

Capacity: 1.1 MW

Location: Port Elizabeth, Eastern Cape

Funded by: Standard Bank of South Africa



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### South Africa







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South Africa's largest Floating Solar Power Plant

Capacity: 233 KW

Location: Western Cape, South Africa



### Switzerland







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Capacity: 931 KW

Location: Bachmann AG, 6153 Ufhusen



# UAE





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Capacity: 210 KW

Location: Amity University, Dubai



### Contact Us



#### Factory Contacts:

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# RenewSys = Peace Of Mind

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Thank you!