Corporate Presentation FY 2020-21
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• Presence
• Products (PV Modules, PV Cells, Encapsulants, Backsheets)
• Facilities - (Hyderabad and Bengaluru)
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RenewSys is the First Integrated Manufacturer of Solar PV Modules and Its Key Components - Encapsulants (EVA and POE), Backsheets and Solar PV Cells
RenewSys India Pvt. Ltd. is a part of the ENPEE Group.

An international conglomerate with a rich heritage of nearly 60 YEARS of manufacturing excellence in diverse industries.
Our growth story is based on five key values identified for the team, by the team.
ENPEE Group Companies

- Based in Nigeria
  - Manufacturing Metal Packaging

- Based in Nigeria
  - Printing Cylinders and Inks, CPP Films

- Based in Nigeria
  - Soaps, Personal and Home Care, Beauty and Cosmetics

- Based in Nigeria
  - Flexible packaging

- Based in Nigeria
  - Cement/ Fibre Cement Sheets

- Based in India
  - Packaging Brand Management

- Based in Nigeria
  - Construction, Chemicals, Adhesives, Power Cables

- Solar PV Modules & Components
- Manufacturing Facilities in Hyderabad & Bengaluru, India

www.enpee.com
RenewSys Global Presence

- Manufacturing Facilities
- Offices
- Representatives
- Customer Presence
RenewSys PV Modules are harnessing the sun’s power across the globe in projects, ranging from small specialised applications to utility scale projects.
Manufacturing Facilities

Our **Hyderabad** facility manufactures:

**DESERV** 750 MW Solar PV Modules
**RESERV** 130 MW Solar PV Cells

Our **Bengaluru** facility manufactures:

**CONSERV** 1.65 GW EVA and POE Encapsulants
**PRESERV** 3 GW Backsheets
The Team

Team RenewSys:

- 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 1000
Careers

An environment that is conducive for ambition, growth and development:

- In-house training and development
- External training programmes
- Safe and healthy work environment
- Equal opportunity organisation
Community Initiatives

We are committed to giving back:

• India One Solar Thermal Power Plant supporter
• Eye care and Diabetes research
• Education for the underprivileged
• Sponsoring Cancer patients
• Sponsoring Ph.D. Scholarship SERIS, Singapore
• Vision Centres across India
• Special Needs Vision Clinic, Hyderabad
• Supporting with PPE kits during Covid-19
Product Excellence Centres

Reliable, Superior Product Quality:

- 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 of Solar PV Modules and its key components
- To launch India’s only Glass-Backsheet Bi-facial Solar PV Module - ‘DESERV Extreme’
- And only in India to receive UL approval and Commercialise the production of POE Encapsulant - CONSERV E 360
- And only Indian manufacturer to have a dedicated ‘Product Excellence Centre’
- And only in India with NABL Accredited PV Lab specifically for Encapsulants, Backsheets & their raw materials - Bengaluru Facility
- In India to have Intertek Certified Satellite® Lab - Hyderabad Facility
- In India to launch Dr. PV, a free module wellness programme
- In India to launch 5 BB and 6 BB solar PV Cells, Made in India
- Indian company to receive a PV Backsheet Patent
The Hyderabad Factory

- At FAB City, Outskirts of Hyderabad
- Total area - 50 Acres
- World-class manufacturing facility
- State-of-the-art European Technology
- World-class Racking System on tracks
The Hyderabad facility has made significant reduction in its overall carbon footprint by: **1,333 Tons**

- **Water Conservation** through recycling measures = 19,451 KL saved
- **Electricity Conservation** measures = 1,532,251 KWH / year saved
- 2800+ Trees and 1850+ Saplings
- **IMS Certified (QMS, EMS and OHSAS)** compliant storage facility
- **Avoided use of plastic water bottles** = 2880 kgs by replacing it with in-house RO water purification system since Dec 2019
Production Capacity: DESERV and RESERV

- **DESERV® 750 MW** Solar PV Modules:
  - Automated European lines to manufacture Multi and Mono, full cell and cut cell modules

- **RESERV® 130 MW** Solar PV Cells:
  - Fully automated European production lines
  - PV Cells are made from undiffused silicon wafer (black wafer), as per MNRE requirements
DESERV - Product Range

Solar PV Modules to suit applications from small lighting systems to utility scale plants.

- High Performance PV Modules (Multi and Mono)
- High Voltage, High Output PV Modules for special applications
- Higher Output PV Modules
  - Bi-facial Cells (Multi and Mono)
  - Half cut
- Small PV Modules
- Specialised PV Modules
  - BIPV (Building Integrated Photovoltaic)
  - Semi-rigid and Flexible (Multi and Mono)
Assured Performance

Rigorous and controlled manufacturing ensures that DESERV PV Modules set benchmarks for performance

- State-of-the-art manufacturing technology
- Three Stage Laminator
- Fully automated inspection process
  - 100% EL process - pre and post lamination
  - Automated Optical Inspection
- RTV Curing Chamber to assure quality
Product Certifications

Certification Details:

- TUV Certified 61215, 61730, 60068-2-68, 61701, 62716
- IEC TS 62804, 61853
- UL Certified: 1703
- SON CAP Certified
- Meets requirements for - SASO, RRECL, GEDA
- CAN/CSA: 61730
- MCS Certified
- DEWA Listed
- Independently audited by Solar Buyer
- BIS NO.: R-63000760
Munich RE & 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’

**Bankability**

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

**Insurance**

Product and performance insurance globally

Re-insurance offered by Munich RE*

Warranty partner

Large-scale PV projects bought during the Policy Period of 19 July, 2019-18 July, 2020 can obtain optional warranty back stop by Munich Re, with insurance capacity exclusively allocated for each project.

*Terms & conditions apply
Champion Products

**DESERV EXTREME** INDIA’S MOST Efficient Solar PV Module

A 390 Wp Solar PV Module
giving an output as high as 500 Wp @30% Albedo

- Bi - Facial
- Cut Mono PERC Cells
- Transparent Fluoro Backsheet
RESERV - Product Range

RESERV range of PV Cells made from virgin poly-silicon wafers and silver bus-bars

• Total cell capacity - 130 MW
• First Indian company to launch 5 BB and 6 BB Cells
• We manufacture 4 BB Cells and 5 BB Cells
• Raw materials, including high purity solar grade silicon wafers and contact pastes with high metal content used
• Statistical process control during production
• PV Cells are made from undiffused silicon wafer (black wafer), as per MNRE requirements
Assured Performance

A meticulous process ensures that the highest quality of PV Cells are manufactured:

• **Automated Cell Sorting** is conducted with the help of our latest European technology
• **PID Testing** at cell level
• **Statistical Process Control** to check cell measurements
• **High conversion efficiency** due to elimination of cracks
Our storage facilities are designed for the secure and safe dispatch of our modules and components:

- Detailed inspection SAP system ensuring safe delivery
- Over 3,680 modules dispatched per day
- Customised packaging 14.835 tons in last 6 months
- Instore software for retrieval of goods from storage
- World-class Racking System with the facility to move on tracks
Intertek Lab

India’s 1st Intertek Certified Satellite®
Lab - Hyderabad Facility

Know more...
Customers Testimonials
The Bengaluru Factory

- **Located** on Bommasandra Jigani - Link Road, Bengaluru
- **Total area** of facility = 6 Acres, of which 10% area is a green belt
- **World-class** manufacturing facility
- **Latest** and state-of-the-art European technology
The Bengaluru facility is designed to reduce its overall carbon footprint by: **1640+ MT** per year

- ISO certified - 9001 : 2015
- Building Integrated System
- **CNG** used instead of electrical heating
- 145+ Trees planted
- Safety Calendar
Production Capacity: CONSERV and PRESERV

- **CONSERV®** EVA and POE Encapsulants: 1.65 GW
- **PRESERV®** Backsheets and Bus Bar Insulation Sheet: 3 GW
- Fully automated European lines
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’ and ‘Ultra - 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 only UL Certified POE
- Delivered advantages of TPO as well
- Resilient in harsh and extreme climatic conditions
- Unique formulation for virtually Zero PID
The CONSERV product range is designed to ensure better module performance:

- Superior bonding to Backsheets and Glass
- PID Resistance
- High Luminous Transmittance
- Compatible with Glass-to-Glass and Glass-to-Backsheet PV Modules

Assured Performance
Champion Products

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

2018 Finalist

POE - CONSERVE 360
Product Certifications

Certification Details:
- UL: UL 746A & UL746B
- IEC 61215
- RoHS
- DHT TUV Declaration
PRESERV - Product Range

PRESERV Backsheets protect the module from moisture and dust, and are crucial for ensuring performance.

**PRESERV Backsheets:**

- PVF Backsheets (Fluoro)
- PVDF Backsheets (Fluoro)
- Metallic-based Backsheets
- PET-based Backsheets
PRESERV - Product Range

PRESERV range of Bus - Bar Insulation Sheet ensures prevention of inter- connect breaking

PRESERV Bus Bar Insulation Sheets:

• PVF Backsheets (Fluoro)
• PVDF Backsheets (Fluoro)
• Metallic-based Backsheets
• PET-based Backsheets
Assured Performance

- Laminated with high dielectric properties
- High moisture barrier
- High partial discharge = 1500V DC: available
- High mechanical properties and Peel Bond retention post - DHT and HAST exposure
Product Certifications

Certification Details:

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

India’s 1st NABL accredited Solar PV Laboratory specifically for Encapsulants, Backsheets & their raw materials

Who should avail of this facility:

- Solar PV Module Manufacturers
- Solar Project Financiers, Project Developers, EPC, & System Integrators
- Encapsulant & Backsheet Manufacturers

Know more...
Customers Testimonials

[Customer Testimonial 1]

[Customer Testimonial 2]

[Customer Testimonial 3]
Haryana

Location: National Dairy Research Institute
Capacity: 1 MW
Tamil Nadu

Location: Tuticorin, Tamil Nadu
Capacity: 45 MW
West Bengal

Location: Canal Top, West Bengal
Capacity: 10 MW
Location: 39615 Zehrental (OT Drösedeh), Altmark
Capacity: 750 KW
South Africa's largest ground mounted private sector project
Location: Port Elizabeth, Eastern Cape, South Africa
Project: Nelson Mandela University
Funded by: Standard Bank of South Africa
Capacity: 1.1 MW
Location: Bachmann AG, 6153 Ufhusen
Capacity: 931 KW
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