

GANAPATI GROUP
Conglomerate of M/S Sauryajyoti Renewables Pvt Ltd and M/S Ganapati Products

Har Ghar Solar, Har Chad Solar





#### Preamble-Ganapati Group

#### Solutions for Sustainability in Energy and Environment

In an integrated global market, how can business be managed competitively and sustainably? How can energy costs be optimized to maximize profits, and at the same time minimize the impact of business operations on the environment?

Not only in business but also at institutional levels, every household cost of electricity, cost of fuel / heating challenge us continuously. The world multitude, especially the ones belonging to the developing nations, face these hardships which worsens with ever expanding urbanization.

Everywhere, enterprises face this challenge of delivering high quality products and services while ensuring margins and, as a corporate citizen, contributing to the efforts of protecting the air we breathe and the water we drink.

At Ganapati Group, we offer, energy efficient and eco-friendly technologies and in addition, we forge reliable business-to-business, household to us, and institution to us partnerships to respond to these critical challenges. We provide the competitive edge to your enterprise / need to make its mark with superior offerings and community goodwill.

#### **Renewable Energy Today**

Renewable energy is not just the production of electricity. It can include the provision of heat for industrial processes, various forms of liquid bio-fuels, and a range of hybrid technologies that work alongside the more traditional technologies using oil, coal, gas, or nuclear fuels.

Renewables bring different characteristics to more traditional energy sources. For example, while you cannot always control renewable energy output – the sun does not shine at night – renewables are not subject to fuel price volatility, with output costs virtually fixed.

These differences mean that our energy systems will need to transition as renewable energy input increases. The future of energy points to a growing portfolio of renewables working alongside the traditional sources. Enablers, such as energy storage and smart energy, will play an important role in this transition.





Ganapati Group is a world-class EPC and O&M contractor for utility-scale solar power and other renewable energy projects. Building on its extensive experience of medium – large scale solar projects, the company is well positioned to meet the challenges of the rapidly growing global solar market. With a strong in-house engineering capability, global scope and unmatched responsiveness, **Ganapati Products** designs and delivers high quality solar projects for its pan India spread clients.

#### **Our Focus:**

Assisting our customers into a world with more renewables, Ganapati Group offers a suite of services across this diverse and quickly evolving sector, at the core of which are :

#### Company Overview-Ganapati Group

]	A culture driven by safety and integrity	
]	Being technology neutral	
]	Local focus, with global reach	
]	Asset lifecycle aware engineering	
]	Strong innovation leadership	
]	Contracting flexibility	
]	Practical, project skilled staff	
]	Extensive energy experience	
]	Risk based management and processes	3

#### What can we do for you?

Ganapati Group will tailor an energy program using advanced technologies in alternative and renewable fuels to meet your budget and your sustainability goals. Our solutions and technologies are designed, developed and implemented locally, by people in your community with environmental responsibility in mind.





Mission & Vision-

**Ganapati Group** 

#### **Mission**

To help customers realize the full commercial potential of renewable energy sector and provide energy efficiency projects and innovative products.

#### **Vision**

Ganapati Group has entered the renewables industry to lead it with an ambitious growth strategy and a deep understanding of legal, commercial and legislative landscapes.

Our focus is to provide commercially viable models that enable our customers to generate long term revenue streams which has seen us regularly attain high IRR for our clients, investors and partners.

Our vision is to create a better, more sustainable world, where ideas and projects are realized with excellence. Excellence is the key to success. A world guided by excellence, even if only on a small scale at first, is an improved world.

The pursuit of excellence makes our future sustainable. In this future, growth and socio-economic development are guided by values that we believe in. This is because values must be present in order for growth to happen.

Excellence, Responsibility, Integrity and Respect, Transparency and Commitment. We implement these values on a daily basis. They compose our business culture. Our skills are the following: Critical and lateral thinking, teamwork, information management and communicative capacity, in-depth analysis and continuous research, innovation and adaptability. These skills guide us every day in our search for the result, in the service we provide to our client and to the market, but most of all to the project itself.



#### **Business Segments-Ganapati** Group

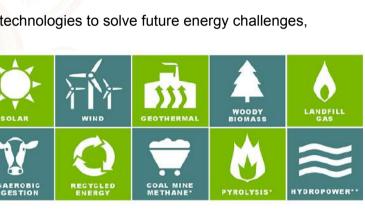
#### Start-to-end project engineering, design and construction Expertise in capturing, measuring and marketing greenhouse gas emissions Regulatory and environmental compliance assistance ☐ Continual operations and maintenance support Assistance in community relations efforts Innovative performance-based financing and fund syndication



While we are continuously seeking and researching new technologies to solve future energy challenges, Ganapati Group currently concentrates its efforts in:

- Energy Sector
  - Solar (Power, Thermal)
  - Biogas (Landfill and Wastewater Treatment)







**Solar Energy-**

Sauryajyoti

Renewables



Solar energy is the planet's most abundant renewable energy resource. The Earth receives more energy from the sun in one hour than the entire world consumes in a year.

But how do you capture and convert that energy to power your facility?

There are two types of solar energy technology:

#### A. Solar Electricity (Photovoltaic)

Photovoltaic energy converts photons of light into electricity through a photovoltaic cell. A PV cell is a semiconductor device that converts solar radiation into direct current electricity. Individual PV cells are the basic building blocks for modules, which in turn are used for solar arrays and complete PV systems.

#### **B. Solar Thermal**

Solar thermal energy uses solar collectors to gather the sun's energy and transform its radiation into heat for water, solar fluid or air. Solar thermal energy can be used in solar water heating systems, solar pool heaters and solar space heating or cooling systems.

#### **Benefits of Solar Energy:**

Commitment to renewable energy

□ Access to federal, state and local grants and incentives
 □ Energy security
 □ On-site fuel source
 □ Renewable energy certificates
 □ Energy price stability
 □ A reduced carbon footprint





#### Solar EPC-Sauryajyoti Renewables

#### **Total Solutions**

Sauryajyoti Renewables Pvt Ltd is expert across the full range of solar power applications, ranging from standalone solar parks to complex projects with integrated energy storage.

The decades of experience of our core group of experts in the thermal power sector, also makes us an ideal partner for hybrid applications, which combine the advantages of renewable energy sources with conventional power generation. Within the domain of electrical infrastructure, we have significant experience and engineering capability essential for the successful integration of solar power to the grid.

The company also takes up project development as EPC i.e. Engineering, Procurement & Construction, where help the client identify the land, technology basically we do everything from concept to commissioning.

Having the team which can deliver gives a huge advantage to us and since we already have the expertise of setting up ground mounted system, the company is also involved in providing turnkey EPC solar energy solutions from concept to commissioning for solar PV and also operation and maintenance services throughout the lifetime of the project. Led by visionary leaders and industry veterans, Sauryajyoti Renewables provides end-to-end solutions including engineering, procurement and construction (EPC) services for our customers seeking to build photovoltaic solar power plants.

#### Services we render in Solar Projects

We provide the most efficient and total solutions for design, engineering, procurement, installation and commissioning services for Kilowatt to Megawatt Power Scale Solar Project.





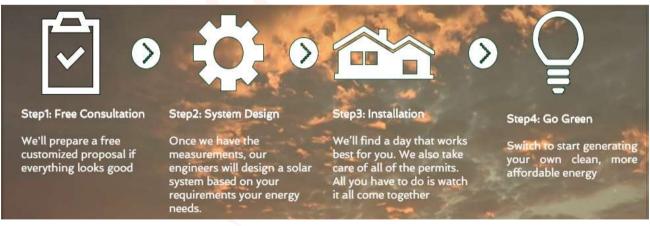
We are an independent EPC solutions provider, catering to Indian and international markets for all solar EPC solutions.

Our involvement ranges from concept, execution, commissioning, and acquisition of developed sites and maintenance of completed solar arrays throughout their lifetime.

We deliver reliable, durable, risk-free, and high yielding projects by using quality multi-system products. We are delivering large scale solar PV plants under various solar policies, like Jawaharlal Nehru National Solar Mission, IREDA scheme, state solar policies across states like West Bengal, Bihar, Jharkhand, Rajasthan, Madhya Pradesh, Chhattisgarh, Gujarat, Tamil Nadu, Odisha and states in North East India.

Sauryajyoti Renewables Pvt Ltd builds and commissions solar power plants on time and within budget. With our sophisticated real-time monitoring system, we ensure that the performance of our customer's solar power plants meets or exceeds the forecasted output.

#### Solar EPC-Sauryajyoti Renewables









- Site identification and assessment
- Energy yield studies & optimization
- Environmental permits
- Electricity grid interconnections
- Planning and building permits
- Project Development agreements
- Greenfield & Brownfield Development
- Project Pipeline Acquisition
- Financial feasibility
- Power Purchase Agreement Analysis
- LCOE optimization

# Techno- commercial Due diligence

Duediligence for renewable energy proje cts from Sauryajyoti Renewables helps you understand the techno-commercial feasibility of your project with a full risk review

#### **Engineering, Procurement & Construction**

Sauryajyoti Renewables is a leading Indian contractor providing complete turnkey solar power solutions for utility scale PV projects. We offer both full EPC scope including panel supply, as well as EPC for balance of system (BoS) according to client needs.

- Full turn-key EPC responsibility
- Optimized in-house engineering & design
- Procurement strategy based on approved tier-1 suppliers
- Energy storage integration and hybrid solutions
- Electrical substations and grid interconnections

#### **Operation & Maintenance**

We are experts in O&M for solar power plants, offering a full range of plant monitoring, preventive and corrective maintenance services backed up by appropriate contractual guarantees depending on customer requirements.

- Preventive maintenance programs
- Spare parts management
- Corrective maintenance
- 24/7 remote plant monitoring
- Plant availability guarantees
- Information management and reporting





#### Floating Solar-Sauryajyoti Renewables

- ✓ Our innovative floating solar system allows standard PV panels to be installed on large bodies of water such as drinking water reservoirs, guarry lakes, irrigation canals or remediation and tailing ponds.
- ✓ A simple and affordable alternative to ground-mount solar systems, floating solar farm is particularly suitable for energy and water-intensive industries who cannot afford to waste either land or water. Wineries, dairy farms, fish farms, mining companies, wastewater treatment plants, irrigation districts and water agencies are all examples of organizations who benefit from the synergy that our system creates between sun and water.
- ✓ The Floating Solar technology has been put to the test and has a 20+ year lifetime.
- ✓ Floating solar plant besides being affordable generates more energy than both Ground mounted and rooftop solar due to less ambient temperature in warm climate.







#### Solar Investment-Sauryajyoti Renewables

#### Rooftop is the Future of Solar

India has set a very ambitious target for rooftop solar and with NET Metering coming into effect, the parity has been reached by more than 6 states. Governments are pushing the policies ahead in other states as well and solar rooftop is poised to grow exponentially. With solar roof top there are multiple benefits available like no land requirement, government subsidies, tax benefits & zero running costs. Negligible transmission losses savings add on top of returns.

#### Why Sauryajyoti Renewables in Solar Project Investment?

Ganapati Group is a group consisting of multiple areas of business like online knowledge outsourcing, healthcare products, retail product marketing and training & Recruitment. The solar division was incorporated to provide solar energy as sustainable success and to secure the environmentally-friendly energy generation as a alternative to fossil energy sources. Sauryajyoti Renewables plays an important role in Solar Investment Consulting.

Affordable solar energy through photovoltaic systems, perfectly integrated into the public grid is our focus. The promoters are highly qualified professionals who have worked with some great organizations and are highly dedicated souls. Since all of them have exposure of international markets and have their roots firmly planted in the India soil, they AIM to provide a world class services and products at a cost which is very INDIAN. The company has a decent portfolio of both ground based installations and solar rooftop Installations.

The Problem of High initial investment can also be curtailed down by Bank liasioning for kWp scale CAPEX customers, CSR Funds for Rural Electrification & Government projects and through our chain of domestic and foreign investors for MWp scale BOOT/RESCO customers.





#### Biomass Energy-Sauryajyoti Renewables

#### **Biogas**

#### A. Landfill Gas Technology

Landfill gas systems harness gas emitted from waste sites, so that it can be converted into a power source or used as fuel replacement.

#### **B. Digester Gas Technology**

Specifically for wastewater treatment plants, digester gas technology uses bacteria to purify water and in the process, creates energy.

#### **Biomass**

Wood Biomass Gasification Technology: The wood gasification process thermally converts waste material into a new energy source.

#### The Benefits of Wood Gasification

- Energy price stability
- Direct use as on-site energy
- Cleaner emissions
- Energy security

**Sauryajyoti Renewables** generate biogas from organic matter and make it usable for domestic, institutional purpose and it can also be used in Rural Electrification purposes. It is very cheap compared to conventional gas or electricity.





Small Wind Technology-Sauryajyoti Renewables Wind power is expanding across the country and is a clean, renewable energy source. Small wind technology uses turbines and their blades to "capture" the kinetic energy generated by the wind. The motion of the spinning or rotating blade is converted into electricity that powers a generator. Rotors typically have two or three blades and the number and size of the blades is what determines the amount of wind caught up in the "swept area" of a turbine. Typically, a tail is used to keep the turbine facing the correct direction to capture the wind. Small wind can be used to demonstrate your organization's commitment to renewable energy while serving as an on-site, back-up energy source.

#### The Benefits of Small Wind

- Demonstrates commitment to renewable energy
- Direct use as on-site energy
- A reduced carbon footprint

**Sauryajyoti Renewables** convert wind energy into electricity by using small windmills and can be used as Hybrid energy. Wind energy is one of the natural resources which is available in the large quantity any where in the world.



#### Hydro Technology-Sauryajyoti Renewables

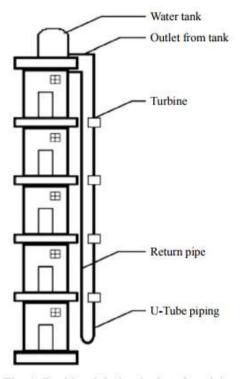
#### Pico & Micro Hydro Technology

Pico & Micro hydro is the hydro electricity generation methods with the maximum electric output of five kilowatts. The recent improvement and innovations in pico hydro technology have made it an easily available economic source of power even at remote places around the globe. This is a very versatile power source that could be used to generate AC electricity. Light bulb, radio, television and other similar electronic devices can be easily operated by using the pico hydro power.

The need of pico/Micro hydro electricity around the world is that it allows electricity generation simply and at no fuel cost. The growing high demand in electrical energy is forcing man to search for different available energy resources. The equipments used in pico/Micro hydro electricity generations specialised with its small and compact design, so that it could be installed in a small area very easily. The main benefit of pico hydro electric power generation is that it has a lower cost per kilowatt compared to that of solar or wind power. So pico hydro system is undoubtfully recommended in places with regular water flow.

The pico hydro system makes use of the energy of water, which is stored in the water reservoir. The water, which is stored in a water tank of residential buildings with at least 3m head can be used for generation of pico electricity generation. **Sauryajyoti Renewables** is focussing on pico/Micro Hydro generation for Domestic customers in the hilly areas.









Government of India has launched the scheme "Deendayal Upadhyaya Gram Jyoti Yojana" for rural electrification. The erstwhile Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) scheme for village electrification and providing electricity distribution infrastructure in the rural areas has been subsumed in the DDUGJY scheme. Rural Electrification Corporation is the Nodal Agency for implementation of DDUGJY.

Rural Electrification-Sauryajyoti Renewables



Under DDUGJY-RE, Ministry of Power has sanctioned 921 projects to electrify 1,21,225 un-electrified villages, intensive electrification of 5,92,979 partially electrified villages and provide free electricity connections to 397.45 lakh BPL rural households. As on 30th June 2015, works in 1,10,146 unelectrified villages and intensive electrification of 3,20,185 partially electrified villages have been completed and 220.63 lakh free electricity connections have been released to BPL households.

Sauryajyoti Renewables is focussing on rural electrification process by creating Micro-grid, Mini-Grid, provide solar Lanterns, Home lightning systems, Solar pumps for agriculture, Street lights, Maintaining rural plats etc.





#### Green Building-Sauryajyoti Renewables

**Green building** is the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a **building's** life-cycle from siting to design, construction, operation, maintenance, renovation and deconstruction.

With new technologies constantly being developed to complement current practices in creating greener structures, the benefits of green building can range from environmental to economic to social. By adopting greener practices, we can take maximum advantage of environmental and economic performance. Green construction methods when integrated while design and construction provide most significant benefits.

## Environmental benefits:

- Reduce wastage of water
- Conserve natural resources
- Improve air and water quality
- Protect biodiversity and ecosystems

#### **Economic benefits:**

- Reduce operating costs
- Improve occupant productivity
- Create market for green product and services

#### Social benefits:

- Improve quality of life
- Minimize strain on local infrastructure
- Improve occupant health and comfort

**Sauryajyoti Renewables** focuses on the rese<mark>arch, innovation, design, Report Preparation and Techno-Commercial Due Diligence with Green Buildings, It also helps in achieving Green Building Certification from LEED-India and GRIHA.</mark>



# Operation and Maintainence-Sauryajyoti Renewables

# Sauryajyoti Renewables has a total experience of Operation and Maintenance of cumulative 7MWp in DG projects and 3MWp in Ground Mounted Plant:

**Preventative Maintenance (PM)** includes the following activities:

Panel Cleaning

Water Drainage

**Vegetation Management** 

Retro-Commissioning (identifies and solves problems that have developed during the course of the PV system's life.)

Wildlife Prevention

Upkeep of Data Acquisition and Monitoring Systems (e.g., electronics, sensors)

Upkeep of Power Generation System (e.g., Inverter Servicing, BOS Inspection, Tracker Maintenance)

Site maintenance (e.g., security, road/fence repair, environmental compliance, snow removal, etc.).

#### **Corrective/Reactive Maintenance** typically includes:

**On-Site Monitoring** 

Non-Critical Reactive Repair (addresses production degradation issues Critical Reactive Repair (high priority, addresses production losses issues)

Warranty Enforcement

Condition-Based Maintenance (CBM) usually consists in Active Monitoring — Remote and On-Site Options Equipment Replacement (Planned and Unplanned) and Warranty Enforcement (Planned and Unplanned).







Telecom Sector & Power Sector-Sauryajyoti Renewables





Reliance Jio Tower at Uttar Pradesh



# Solar & Electrical Products -Ganapati Products

# **Eco-Friendly Systems, Diversified Services**

We have an assortment of services that caters to various Solar Energy needs. Our core services include the solutions providing for the cost effective Solar Powered Lighting, Solar Power backup Systems & Solar Hot Water Systems for Home/ Commercial/ Community Premises. These systems are cost effective, high on quality and at the same time eco-friendly. These solutions work as an excellent alternate medium of solar power to fight the frequent lighting fluctuation issues in many sites due to inadequate power supply.





#### **WIRES & CABLES**









#### LIGHTNING ARRESTOR (BOTH CONVENTIONAL & ESE TYPE)





#### SOLAR LANTERNS AND SOLAR HOME LIGHTING SYSTEM



SOLAR STREET LIGHTING SYSTEM

#### AJB - DCDB - ACDB - IIP - GIP

Array Junction Box

DC Distribution Box of capacity ranging from KWp to MWp AC Distribution Box of capacity ranging from KWp to MWp Phoenix make SPD, MCB, MCCB, Terminal Connectors







#### SPD, MCB, MCCB, CONNECTORS











#### MC4 CONNECTORS & SPARES



#### SOLAR PUMP CONTROLLER (VFD & ACCESSORIES)













EARTHING ELECTRODE, BFC,

PIT COVER, GI STRIP, BUS BAR











## SOLAR WATER HEATER













#### Healthcare Products-Ganapati Products

We are engaged in importing, supplying, distributing, wholesaling, trading and retailing a wide range of Health Care Equipments. Our aim is to help our clients to gain enormous health benefits and comfort in their personal lives.

Guided by our principles and policies to offer flawless range of products. We have been in our business for a considerable amount of time. This has led us to enjoy fruitful affects and huge appreciation of our customers. Skilled and committed professionals, world-class infrastructure, on-time delivery, easy payment options and customized solutions have enabled us to broaden our horizons and to gain the trust of our patrons. We bring about products that are designed keeping in mind the diverse requirements of the customers.

#### We are a name which is known for:

- Ø Wide range of quality healthcare products.
- Ø Timely delivery
- Ø Client oriented approach
- Ø Widely spread and satisfied client base.
- Ø Fair and transparent dealings
- Ø After sales support
- Ø Experienced team of experts
- Ø Reasonable price of products
- Ø Quality Assurance
- Ø Pan India presence



Design &

**Products** 

**Simulation-Ganapati** 



#### Designing and Simulation is always being a strength of Ganapati Products.

Initial design deliverable include the followings:

- 1 Panel Layout
- 2 Electrical SLD
- 3 3D isometric view and shading analysis using google sketches
- 4 Energy generation PVSYST report
- 5 BOM

The detailed engineering deliverables includes the followings:

- 1 All of the above with changes
- 2 String Layout
- 3 Cable Schedule
- 4 Earth pit and Lightning arrestor design and layout
- 5 SCB, Inv and BOS position layout
- 6 Structure drawing (For RCC, Sloping roof)

Our mega scale design consultancy projects:

- Nepal (25MW)
- Gujarat (25MW)
- Madhya Pradesh (20MW)
- Sri Lanka (10MW)
- Tamil Nadu (2.2MW+1.2MW)
- And multiple rooftop projects of capacity varying from 5kWp to 1MW





# **Project Report- Ganapati Products**

Preparation of **Detailed Project Report** is the first step towards any renewable energy Projects and loan liasioning form Banks or Funding Agencies. Our Core team is vastly experienced in the same. They deliver DPR in stipulated time mutually agreed by clients with relevant inputs from the client regarding the site.

#### It contains of:

Executive Project Summary
Site Survey Report (optional/to be provided by Clie
Location and infrastructure details
Irradiation Data
Selection of PV Technologies
Plant scheme and component description
Summarized Design of Power plant
Project Implementation and completion schedule
Financial Analysis of the plant
Single Line Diagram
Site photographs (to be provided by client)
PVSYST or SOLARGIS generation report (optional
Bill of Materials /BOQ (optional)

We also conduct site visit and generate site visit report.

We also provide **Newsletter preparation support** and research support with financial model development, Technical design support to clients like Shakti Sustainable Energy Solutions, DFID, AIREC, TERI and few EPC Partners.

#### MECHANICAL

- Site layout
- MMS design
- . BOM for Mechanical BOP
- As built drawings
- STAAD Analysis Report

#### DESIGN & SIMULATION REPORTS

- PVSyst Report
- Helioscope Report
- Homer Report
- Sketchup
- AutoCAD
- Solar GIS

#### ELECTRICAL

SERVICES PROVIDED

- SLD (Single Line Drawings)
   Selection of materials
- Cable Layouts
- BOM for Electrical BOP
- As Built Drawings • Earthing Layout

#### PROJECT COORDINATION

- Scope Matrix
- Gantt Chart
- Onsite coordination
- Selection of suppliers and EPC
- · Drawings required for approvals
- DPR / Feasibility Report

#### MECHANICAL DWGS:

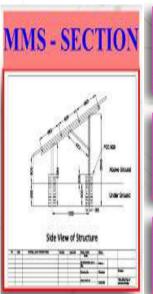
- PV plant layout
- MMS mounting details
- MMS mounting part dwgs
- Safety line
- Grating with perforated cable tray
- Inverter, ACDB, DCDB mounting details
- · Ladder design for roof access

#### CIVIL DWGS:

- Solar panel mounting structure grouting
- Inverter, DCDB, ACDB mounting structure grouting
- Earthing

- Single line diagram
- Detailed Single Line Diagram Stringing & DC cable routing
- AC cable routing
- Earthing & LA Layout
- Communication cable routing

# SCOPE OF WORK FOR ROOFTOP SOLAR PROJECTS





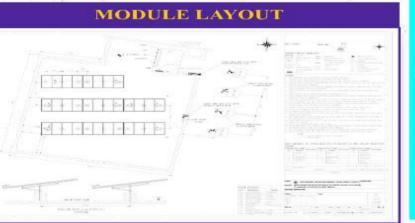


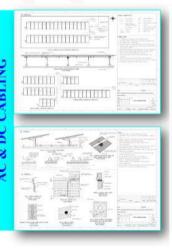


#### SOLAR GIS REPORT—1MWP















#### Innovative Solutions-Ganapati Products

# Battery solutions for transportation (Electric Vehicles)

Ganapati Products offers technologies for transportation applications. Our two lithium ion technologies offer very distinct capabilities enabling to design battery systems that are optimally geared for the application of the customer. Lithium Titanate Oxide - high power and Lithium Graphite/NMC - lots of energy. They are concentration in the sector of Electric Vehicles

# Battery storage to create stable micro grids

Ganapati Products offers its Lithium Ion Graphite/NMC solutions, Researches on Pinwheel storage, pumped storage, Flywheel storage etc which have very high energy density and allow efficient storage of energy for night time use while providing system stability.

## Energy storage for home and business

Energy storage systems by Ganapati Products are far ahead of their time. They are easy to install and are compatible with the main inverter solutions on the market. Whether you decide to use Lithiumion Graphite/NMC technology or the unique Lithium Ion Titanate technology, your battery will last as long as your solar installation.



#### Battery packs designed for application

Ganapati Products brings in enriched expertise in battery R&D and manufacturing to find energy solutions for its customers whether they operate in:

- Medical
- Defense
- Instrumentation
- Charge stations
- Robotics
- Small mobility
- •Automated Guided Vehicle
- •Smart Cities PVcoupled Street Lighting





**Solar Bus Stop Solution** 



**Solar Tea Shade Solution** 

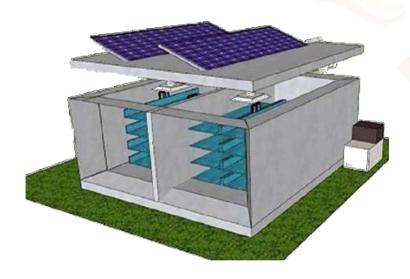


**Micro Solar Dome Solution** 



Solar E Rickshaw

Solution



Solar Cold Storage Solution (Usage- Solar Refrigeration for Vaccination, Solar Air Conditioner)



**Floating Solar Solution** 



**Solar Microgrid Solution** 





Energy Audit & Safety Audit Solution





# **Skill Development- Ganapati Products**

Ganapati Products was founded to provide industry-leading technical training in renewable energy to empower people, communities, and businesses worldwide. We have a team of highly qualified solar professionals with expertise in evaluation and curriculum development for the solar industry. We run from short term courses like 2 days' workshop on PV Systems, 15 days solar installation training to one-year Advance Diploma in Solar technology and Entrepreneurship Development. Our faculty includes industry experts & professional engineers. Most of our faculty own their own companies. They teach latest skills to make you succeed in your job or business. This means after you complete your course, the industry knows that you have been prepared by the best to become the best.

While other institutes may try to force you into their pre-packaged curriculum or delivery methods. We listen to you and work with you to understand your unique needs. We advise the training that's right for you. Selecting the right training provider is the first step to reaching or even exceeding your goals. Our ability to provide value focused training is very popular among the students. Our instructors fully understand your needs with a commitment to mentoring you to the right career goal.

Our content and modules are highly effective and relevant. We provide learning through presentations, demonstrations, examples & reference materials. Simulation & practical sessions help learners to gain valuable work experience. All our courses are aimed at transforming individuals into employable and skilled human resource; competent to serve private and public sectors at various levels; start their own enterprise or be trained in their chosen vocation. Most of our courses are short duration certification programs catering to candidates' academic, employment, & vocational requirements; designed to transform sincere individuals into extraordinary, valued human resource. The courses also promise to open doors to freelance and self-employment opportunities; and those aiming to lap up offshore job opportunities.

We also provide industry-Academia centres, Centre of Excellence, Research programmes





#### Manpower Consultancy-Ganapati Products

Ganapati Group is a world leader in innovative workforce solutions. Ganapati Group provides end to end Human Resource Management to organizations and helps them address their critical talent needs by providing comprehensive Workforce Management from Recruitment Process Outsourcing (RPO) to Staffing Solutions, Permanent Recruitment and Leadership Training and Development. Our endeavor is to help our clients and candidates win in the changing world of work.

Our comprehensive suite of innovative solutions cover an entire range of Human resource management right from market mapping and assessment to career management, outplacement and workforce management. Whether it is Recruitment Process Outsourcing (RPO), temporary staffing for projects or Payroll Outsourcing, our solutions are custom made to suite the organization's requirement. Our HR Processes and Services deliver the solutions that drive your business forward.

We also provide grooming and campussing support to major colleges and university in PAN India Basis.





### "Latest Technology of Renewable Energy- Green Buildings"

Organized By

Department of Electrical Engineering and Electronics & Communication Engineering JIS College of Engineering

**Date: 24th Jan 2018** 

Venue: Room No 304

Invited talk

Dr Debojyoti Sen
Executive Director -Business operations, Ganapati Products





















#### **Experts in project execution**

Successful implementation of utility-scale solar power projects demands highly effective project management and planning from commencement up to hand-over to the client. Ganapati Products is successful because the entire organization is highly focused on project execution.

#### **Engineering expertise**

Our experienced in-house engineering resources enable Ganapati Products to respond flexibly and responsively to project specific requirements. We are highly experienced not only in solar power plant design, but also in engineering solutions for grid interconnections including state-of-the-art electrical substations.

#### **Complex projects**

Ganapati Products is a market leader in large scale power generation projects. Our group has an unmatched capability to effectively handle innovative and technically challenging applications including energy storage integration and hybrid power generation.

#### Pan India reach

Together with its affiliated companies, Ganapati Products has experience or presence pan India. We are equally at home working in developed markets as we are in emerging economies and states.

#### Ganapati Edge







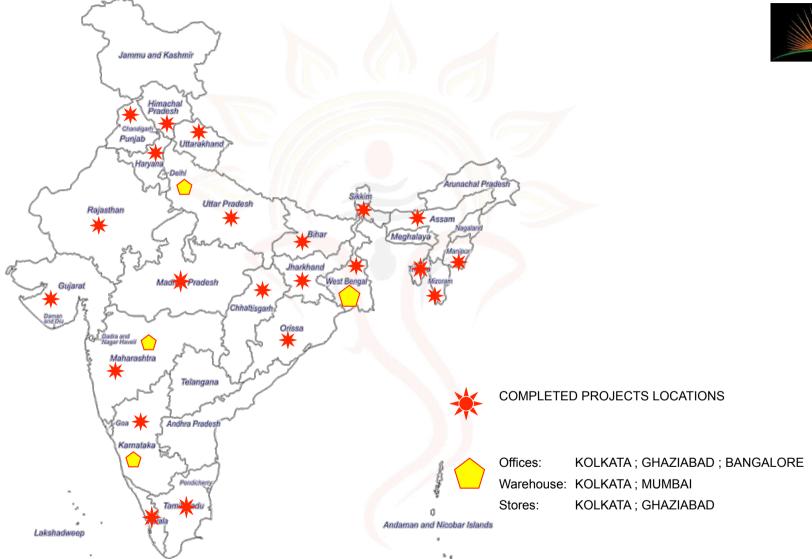
















# Projects at a Glance

#### **PROJECT STATUS:**

Rooftop: 29 MWp Cumulative

Ground Mounted: 401MWp

Rural Electrification: 3MWp

Solar Street Light: 1071 nos

Smart LED Light: 3000 nos

Solar Pump: 250 nos

Solar Water Heaters: Coming Up soon

Home Lighting System: 1801 nos

Liasioning Work: 155MWp in Solar & Wind

Operation & Maintenance: 10MWp Cumulative

Telecom Sector: Reliance Jio Tower Erection in Faizabad, Uttar Pradesh

Power Sector: Coming Up soon



## EAST INDIA ANNUAL SOLAR AWARDS 2022

PRESENTED AT

## Suryacan Kalkata Canference

04" August 2022, Hotel Novotel, Kolkata

DISTRIBUTED SOLAR EPC COMPANY OF YEAR

**SAURYAJYOTI RENEWABLES PVT LTD** 



INCF 2000



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Debojyoti Sen, Co-Founder, Ganapati Products MD & CEO, Sauryajyoti Renewables

Debojyoti is an electrical engineer with a master's degree in renewable energy from NIT Jaipur and is currently pursuing a Ph.D. at IIT Dhanbad. In addition to publishing 23 journal papers, Debojyoti is a renewable energy development researcher who is passionate about environmental & social concerns.



I was one of the executive engineers who worked on India's first floating solar project and Kolkata's rooftop solar policy



A LEADER WITH AMBITIOUS PLANS TO CREATE INNOVATIVE & SUSTAINABLE RENEWABLE PRODUCTS

ong-term prospective measures for sustainable development are required to provide answers to the environmental issues we confront today. This is where renewable energy resources come into play as a potentially effective and cost-effective alternative. As a result, renewable energy and sustainable development go hand in hand. In light of this, Debojyoti Sen founded the Ganapati Group to assist clients in realizing the complete economic value of the renewable energy industry and to deliver sustainability initiatives and revolutionary solutions.

Debojyoti is the Managing Director and Chief Executive Officer of Sauryajyoti Renewables as well. When it comes to solar power plant construction and commissioning, Sauryajyoti Renewables is a reliable partner. The company's advanced real-time monitoring system ensures that the production of its customers' solar power plants matches or surpasses projections.

In an exclusive interview with the CEO Insights magazine, Debojyoti described his professional and entrepreneurial career in the renewable energy industry so far.

#### What inspired you to establish Ganapati Products?

After graduating from NIT Jaipur in electrical engineering, I started my career with Wipro. Then, following the completion of my master's degree in the renewable energy sector, I joined the Energy and Resources Institute where I gained hands-on experience with solar projects. I was one of the executive engineers who worked on India's first floating solar project and Kolkata's rooftop solar policy. Furthermore, I worked for the West Bengal government as an executive engineer



for a year, I then decided to pursue a Ph.D. while at the same period, I was considering establishing my own company. As a result, I founded Ganapati Products intending to work as a trader in the healthcare and solar industries, eventually branching out into the EPC industry.

## Could you talk about the learnings and experiences that you acquired from IIT Dhanbad and how you apply them in your current role?

While completing my Ph.D. at IIT Dhanbad, I launched my own business. The most valuable lesson I learned at IIT Dhanbad was to never give up. Having to cope with a variety of situations and come up with fresh solutions as a consequence of the course's numerous challenges has helped me grow as a person. I received an opportunity to learn new skills and came to understand the value of researching to come up with fresh approaches to accomplishing goals.



## How would you define Ganapati Products as an organization and its position in the market?

Ganapati Products is a parent company with a wide range of products and services. Since we don't manufacture any of our Vedic products, we've been able to build a business on trading and OEM partnerships in the healthcare product industry. Because we are present on all of India's online eCommerce platforms, we can sell the original equipment from that specific partner in kiosks throughout the country. We also offer solar-powered products.

Ganapati Products has a market capitalization of 2 and if you are honest with yours percent in the acupressure segment of the healthcare around you, you will succeed.

for a year, I then decided to pursue a Ph.D. while at the same period, I was considering establishing my own company. As a result, I founded Ganapati Products years.

# You also serve as the Managing Director and Chief Executive Officer of Sauryajyoti Renewables. Could you tell us about the unique services that are provided by Sauryajyoti Renewables that make it stand out from the rest of the market?

In essence, Saurvaivoti Renewablesis a solar EPC beginning with the engineering side service analysis, completing the procurement assembly, and handing the project over to the appropriate customer as a turnkey project. We have completed and ongoing project experience of a total of 20 MWp cumulative Rooftop Solar plant, 400 MWp Ground mounted solar power plant, 3MWp Rural Electrification Projects, 106 Solar street lights, 250 Solar Pumps, 3013 Home Lighting Systems, 3000 smart LED Street Lights and Liaising work experience of 155MWp in solar and Wind. We are also currently working on O&M for various systems (both kWp & MWp level) cumulative nearly 33MWp on Pan India Basis. In the previous four years, we've worked with L&T, Amplus, Azure, and other well-known Indian companies, as well as across the country. Even we have worked in all the states of India except Jammu & Kashmir and worked with/for most of the Govt Organizations like WBREDA, WBSEDCL, HAREDA, BREDA, DRDO, NTPC, and many. As far as what makes Sauryajyoti Renewables unique from the competition, we have completed projects with short schedules for the toughest projects in the toughest terrains. We are committed to timelines with the least cost parameter. Furthermore, in the northeastern hilly sections of the country that are hard to access within the given time frame, we've done solar projects for our clients which even included government bodies.

## What has been the success mantra that constantly helps you arrive at positive outcomes?

Never, ever quit; keep going as long as you can. There are going to be ups and downs in your life, but you simply have to stay focused on your objectives and proceed. At some point in time, things will change, and if you are honest with yourself and with others around you, you will succeed. [87]



















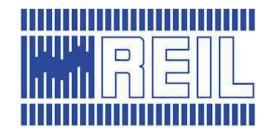
























































**The Core Team** 



# Debojyoti Sen, Chief Executing Officer (CEO) & Chief Marekting Officer (CMO)

He is the Chief Executive Officer of the company and look after the Technical execution, Training and Business Development of the company. Electrical Engineer, Mtech in Renewable energy From NIT Jaipur and Pursuing PhD from IIT (ISM)Dhanbad by education.

A total of 11 years, 2.5 year in academics and 8 years in the field of Renewable energy with a experience of nearly 400MW Solar System design, installation & Commissioning. A research professional in the renewable development sector with 23 Journal publications, interested in working on issues of concern to environment and society. Experience range from Solar Rooftop, ground mounted projects, Floating solar, Research, Policy framework formulation, Integration with grid, Cost Optimization, Rural electrification, Design & Simulation through Softwares, Financial analysis, Electric Charging stations etc.



### Aditi Dixit. Chief Financial Officer

She is the Chief Financial officer and Head-Planning & Strategy of the company and takes care of project planning & Strategy in the company. She is Electrical Engineer & MBA-Business Management by education and MSME solar trained candidate.

A total experience of 5 years in Product Sales and Digital Marketing. She takes care of all the accounting jobs, maintaining books, human relationship, employee management and financial projection for the company as well as projects and administrative responsibilities of the solar section of the company.



# Arijit Chattopadhyay, Chief Project & Procurement Officer (CPPO)

He is the Chief Project & Procurement Officer of the company and takes care of execution of all projects and marketing in the company. He is an Electrical Engineer by education.

A total experience of 5 years with 200MWp of Solar Installation and excution exposure. He takes care for the innovation department and the special purpose applications of Renewable Energy. He has also conducted 5 solar training programmes for the company. He also has knowledge of IOT Device and research based implementation with Jadavpur University. Moreover he also have experience on Electrical System Installation at IAC (Navy Warship).



# Debashis Sen, General Manager

He is the General Manager of the company and takes care of O&M and Logistics. He takes care of reporting of the day to day O&M activities and Logistical activities for the company. His expertise lies in Govt Documentation and executing projects in rural site conditions. He has an experince of 32 years in total in fire and safety.



**The Team Members** 



# Sampurna Dey, Admin



She is the Admin of the company. She is an Electrical Engineer by education and a MSME trained solar candidate. She takes care of the project coordination and tender follow ups for the company. She is also responsible for the admin work for the company.



# Biswajit Karmakar, Sr Project Manager (Electrical)

He is the Senior Project Manager of the company. He takes care of the site handling, management and execution of projects in site level. He is a diploma in Electrical and a MSME solar trained candidate. He has an experinec of 5 years in total.



# Sayandeep Chakraborty, Project Manager (Electrical)

He is the Project Mananger of the company. He takes care of the site handling, management and execution of projects in site level. He is a electrical Engineer, diploma in Electrical and a MSME solar trained candidate. He has an experinec of 5 years in total.



# Subhashis Patra, Site Manager (Mechanical)

He is the site Manager of the company. He takes care of the site handling, management and execution of projects in site level. He is a diploma in Mechanical and a MSME solar trained candidate. He has an experinec of 5 years in total.



# Prasenjit Bag, Procurement Engineer (Mechanical)

He is the Procurement Engineer of the company. He takes care of the disptach of the procurement tems and execution of projects in site level. He is a diploma in Mechanical and a MSME solar trained candidate. He has an experince of 5 years in total.



The Team Members





# Kuntal Srimany, O&M Engineer (Electronics)

He is the O&M Engineer of the company. He takes care of the O&M activities and documentation of projects and site survey in site level. He is Btech in Electronicsl and a MSME solar trained candidate. His expertise lies in Govt Documentation and executing projects in rural site conditions. He has an experince of 3 years in total.



# Tanmay Das, Site Supervisor (Civil)

He is the Site supervisor of the company. He takes care of the site execution of Rooftop DG projects in site level. He is a diploma in Civil and a MSME solar trained candidate.. He has an experince of 2 years in total



# Uday Paul, Site Supervisor (Civil)

He is the site supervisor of the company. He takes care of the site survey and execution of projects in site level. He is a diploma in Civil and a MSME solar trained candidate.. He has an experince of 2 years in total



# Koustav Paul, Design Engineer & Marketing Executive (Civil)

He is the Design Engineer & Marketing Executive of the company. He takes care of the vendor and client Management for the company. He takes care of keeping customer relationship and ground level sales. He is a diploma in Civil and a MSME solar trained candidate.. He has an experince of 2 years in total.





# The Consultants and Advisor



SAIKAT ROY CHOUDHURY
Managing Director, Galileo Solar India Pvt Ltd

Power Electronics has been his area of Key Interest for a long time. At a very early age his father had imbibed the feeling of association with Power Electronics and thankfully I chose this line as my profession continuing in his fathers foot steps. Have considerable experience in designing solar power plants and he like to design power plants which will work for the entire 15 years. Very conservative while designing power plants and low budget power plants are not really his forte but working power plants at the correct cost with the best Bill of Materials is something which h enjoy doing. Strong believer that India has stepped the wrong way as far as solar pv is concerned - the future is in roof tops not large sized solar power plants in the MW scale.

Am a strong believer that subsidy based solar regime should end and it should be replaced by

- 1. 100% accelerated depreciation
- 2. Companies being forced to enforce RPO obligations

This will ensure sustainable energy development in the future.

I believe that Solar PV has a potential of 1 GW per year in roof tops alone every year probably in 2 years times if the policies are right.





# FEW COMPLETED PROJECT GLIMPSES TO SHOWCASE



**Tata Projects** 





**IOCL Projects** 

















**Defence Projects** 





**Ground Mounted Projects** 





Solar Park-Utility Scale Project





WBREDA School Projects





WBREDA Aloshree Projects





WBSEDCL Aloshree Projects







HAREDA Health Centre Projects















Home Lighting System under Saubhagya Scheme





Street Light installation























**Operation and Maintenance** 







# Completion **Certificates-Few**



#### TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/S GANA-PATI PRODUCTS has successfully installed 100kWp of Grid Connected Solar Routep Fower Plant at G.P. Trances Pvt. Ltd, 24 Cand South Rout & 700015-on 23/1/2/017.

The details of the solar rooftop power plant are:

Plant Address: 24 Canal South Read, Kolkets -700015 Capacity of the plant: 100kWp Date of commissioning: 23/12/2017

The bechnical details of the pipet are as follows

SL NO	PARTIC ULARIS	MAKE	SPECIFICATION	REMARKS
1	Module	HHIV Bolar	28.5Wg	
2	inverter	KACO New Energy	Powador 60.6TL3	
3	Structure	Schleter	Flat roof mounted	
4	AJB & ACDB	GP Trenics Pvt. Ltd.	IP 65	
5	Catles	Lapp, RR Kable, Polycab	4 Sqmm. Deuble insulated DC cable, 25 Sqmm. Flexible cable, 126 Sqmm. armoured cable.	

The above plant is noming accessfully and the performance of the above plant is satisfactory. Proper operation and multimostus is also carried for the above mentioned plant by the representatives of MIS GANAPATI PRODUCTS.

We therefore recommend that ME GANAPATI PRODUCTS can be entrusted similar jobs from anywhere in India and we believe that the quality work and limity accomplishment as in our case will be the exercise of MYS GANAPATI PRODUCTS for their entire future sedessions.

And atra



Authorised Signatory



N.R. Pharmaceuticals Pvt. Ltd. Pharmaceutical Distributors

### COMMISSIONING CERTIFICATE

Reference Purchase Order: PO / 19-20 / 002 dated 22-08-2019

### To whom it may concern:

- ionymyoti Renewables Pri Lid. has completed the Design, Procurement, Erection, esting & Commissioning of our Boof Top Solar Power Plant.
- 2. Total capacity of the plant is 22.5 KWp.
- 3. Mono Pero Solar Populs were poort.
- 4. The solar panels were installed on the tin-shed using aluminum strat channels.
- 6. They have installed the plumbing system for ease of cleaning of the modules.
- 7. The Solar plant has been tested spacesofully during commissioning.

Wal Milhe

RagA Office: Non-Premises &L, Friends Row, Jules 529s, Friends Row, Kolate - 700 875 | Mobile : 95/421/02/05/7 Get No.: 159AAG/CSG-57H622M5 | CL, NO. USE-52/04/05/97H7CSH5495 | E-mail: zephamicos/scaligipasid.com DL, No.: (3) WR/NO/JRIO/PROJECT & WRINGU/JRIO/PRESSOF (2) WRINGU/SSG/PRESSOE & WRINGU/JRIO/PRESSOE & WRINGU/JRIO/PRES



### TO WHOM IT MAY CONCERN

This is to certify that M/s Ganapati Products has successfully completed the below mentioned work

"Installation and commissioning of 1801 nos. of Solar Home Lighting Standalone systems each of copacity 300V/p at various remote beneficiary households under Saubhagya Scheme in the state of

We are satisfied with their werkmanship and quality for the above work.





### COMPLETION CERTIFICATE & TECHNICAL COMPETENCE

Dat = 26-03-2019

Reference Work Order, PO2119-006 dated 21-03-3019

This is to certify that M/s Sauryajycti Renewalties has completed the 995Kwp Roof top Project, installation & Commissioning Work for Solar Power Plant at Madhav Alfoys Pvt Ltd., Vill Akalgath, Amleh-Bhadson Read, Near Toll Plaza, Patists-147203.

It is hereby certified that all the components of the plant have been completed in all respects and total committed liabilities on the desired operation and testing have been fulfilled.

Mr. Sam Mathew



Ratiboni Engineering and Designs Pvf. Utf.



### COMMISSIONING CERTIFICATE

13.53 Wp (DC)/35.2 KVA (AC) CAPTIVE SOLAR PV POWER PLANT AT Annacurna Cold Storage

P.H. No. 7, At Patedi, Bhaisma D/C, Korbu-Champa Marg, Dist. Korba, Chattisgarh - 495674...

Date: 25% June 2019

### To Whomsoever It May Concern:

- 1. Purchase Order was placed to Solar Square Energy Private Limited for supply of material and service (POzef. no. SSEPL/SR/2019-20/01 dt. 30th May 2019) for 73.5 kWp (DC)/ 55.2 KVA Captive
- 2. The proceed has been installed at Annanuma Cold Storage with system spread across 1 RCC roofs
- B is certified that 73.5 kWp (2 inverters) Captive Rooftop Solar PV Power Plant was commissioned on 28° June 2019 and is performing well.

Yours Sincerely, For Solir Square Energy Private Limited.



Authorised Signatory



### Date: 19-12-2018

Ferience Work Order: PO No.: DAIZ/II/RDH/18-19/484 dated 26-11-2018

This is to certify that M/s Sauryajyoti flenewables have completed the work of installation, Exection8 commissioning of 245.44 KWp at Delhi Jal Boards tes as per approved guidelines along with the following jobs:

- Preparations of sivil foundations
   Structure fittings
- Panel mounts AC & DC Works Cabling work
- 6. Cable tray installations
- Earthing & LA Work PCU Switch ON
- 9. Data logger 10. Fisher Chemical
- 11. Including Loading & unloading of materials.

The plant is operational and running satisfactorily.

FOR TOP DAIZ SOLAR INC

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LET'S HARNESS THE SUN FOR BRIGHTER PUTURE





# **GANAPATI GROUP**

Conglomerate of M/S SAURYAJYOTI RENEWABLES PVT LTD and M/S GANAPATI PRODUCTS

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Contact No: 9717088074 / 8902550652

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support@ganapatiproducts.com

ganapatiproducts@gmail.com

**Contact Us** 

www.ganapatiproducts.com

Offices: KOLKATA; GHAZIABAD; BANGALORE

Warehouse: KOLKATA; MUMBAI

Stores: KOLKATA; GHAZIABAD