



Gulf Specialized Co.

# COMPANY PROFILE

## CONSERVING NATURAL RESOURCES

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ENERGY | POWER | AUTOMATION



ISO-CERTIFICATIONS  
✓ 9001-14001-45001



# ENERGY & AUDITING



We design, supply and install energy solutions for various facilities with different kinds of renewable energy; Solar, Wind, Thermal energy through a professional engineering and technical team. In addition of Energy Efficiency, Energy Control and Management in addition Auditing Services.

# POWER & AUTOMATION



In Power Department We design, build and supply electrical systems and automation solutions to manage energy and water industry control and management products in ways that are safe, reliable, efficient and sustainable.

## ABOUT GS

In Gulf Specialized Co, we are committed to apply the highest standards of quality, and strive to provide the best products and solutions in the field of Power , Automation and Solar Energy. We design and build electrical panels and automation solutions to manage energy and process in ways that are safe, reliable, efficient and sustainable. Our manufacturing processes are using the latest and most advanced state of art production technologies.

All processes are subject to and according to ISO standards and requirements as well as rigorous in house Quality Controls. Over the last 10 years we built a global distribution network covering many countries across Europe, Africa and Asia. Our services have been completed for more than 100 companies for a well-diversified portfolio of clients.



## MISSION

Provide our **Customers** with competitive prices high quality engineering services to guarantee meeting business needs

## VISION

To be the **trusted** partner for energy and water solutions needs

## OUR VALUES

- We understand our **responsibility** of achieving the global environmental vision.
- GS staff are our real asset we are **focusing** to hire highly qualified people and train them to give the best they have.
- We appreciate our customers and work very hard to meet their **expectations** and to win their trust

## OUR GROUP



الموسى  
AL MOUSA



NWWC

الشركة الوطنية لأعمال المياه  
National Water Works Co.



الموسى للكابلات المتخصصة  
Al Mousa Specialized Cables



الإختيار التقني  
TECHNICAL SELECTION



Gulf Specialized Co.



Technical Development Solutions



سदन



شركة الموسى للمولدات الكهربائية  
Al Mousa Power Generators Company



شركة  
نفود العاذرية للمقاولات  
Nfoud Al Athereia Contracting Company



كون  
KOON





# CLIENTS



# CLIENTS



# GS IS AN EXPERIENCED EPC PROVIDER

## INSTALLATION / CONSTRUCTION

An expertly GS team formed to undertake all activities that are required to ensure that all installation and Construction in the profession way.

## OPERATION & MAINTENANCE

Specialized technicians under supervision of experienced and efficient engineers to operate and provide maintenance services in different energy majors.

## DESIGN/STUDY

Design and professional studies of energy solutions using simulations and new technology to get the best solutions.

## MATERIAL PROCUREMENT

GS Procurement implementing the procurement process in accordance with the approved specifications, and studying the best brands for the various components in the markets.

## TESTING & COMMISSIONING

Engineering team carried out on installations to ensure that they are safe and meet the design requirements.

# POWER & AUTOMATION SOLUTIONS

GS design, build and supply electrical systems and automation solutions to manage energy and water industry control and management products in ways that are safe, reliable, efficient and sustainable.





# GS POWER SERVICES

## GS POWER SOLUTIONS SUITS EVERYONE

### ELECTRIC POWER NETWORKS PROTECTION, DISTRIBUTION AND MANAGEMENT SYSTEM



### MOTOR CONTROL CENTERS



### POWER STATIONS MONITORING, CONTROL AND PROTECTION SYSTEMS



### INDUSTRIAL AUTOMATION AND COMMUNICATION SYSTEMS





# INDUSTRIAL AUTOMATION CAPABILITIES

GS is a leading industrial automation solutions provider, having a strong backbone through qualified engineers and technicians.



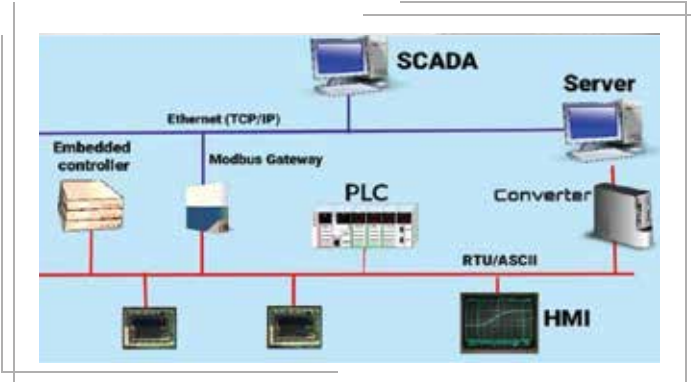
# INDUSTRIAL AUTOMATION

## GS INDUSTRIAL AUTOMATION SERVICES OFFERING INCLUDES

### DISTRIBUTED CONTROL SYSTEMS (DCS)



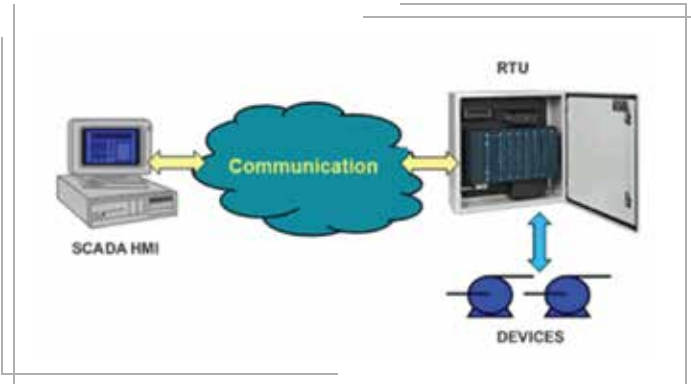
### SUPERVISORY CONTROLS & DATA ACQUISITION (SCADA)



### VISUALIZATION & HUMAN MACHINE INTERFACE (HMI)



### REMOTE TERMINAL UNITS (RTU)



# INDUSTRIAL AUTOMATION

## GS INDUSTRIAL AUTOMATION SERVICES OFFERING INCLUDES

### SAFETY SYSTEMS



### INDUSTRIAL IT & NETWORKS SOLUTIONS



### INTELLIGENT MOTOR CONTROLS



# PRODUCTS

## LOW VOLTAGE MAIN DISTRIBUTION BOARDS

LV main distribution switch board is an IEC low voltage power assembly up to 6300A. The system provides reliable power distribution for all commercial and industrial applications. Moreover, it is considered a reliable solution for applications where the supply of energy is vital for your business process. Providing Form of Separation to form 2, 3 and 4, the with drawable units can be exchanged without having to disconnect power and/or control cabling.



## MOTOR CONTROLLER

Motor Control Centers is an IEC low voltage assembly up to 2500 A. The system provides reliable power and control for all industrial motors applications. Moreover, it is considered a reliable solution for applications where the supply of energy is vital for your business process. Providing Form of Separation to form 2, 3 and 4, the withdrawable functional units can be exchanged without having to disconnect power and / or control cabling.





# PRODUCTS

## AUTOMATIC TRANSFER SWITCH

The integration of Automatic Transfer Switch systems is playing an important role when maximizing the uptime of an installation. The solutions we offer vary from synchronized switching between two power sources with ATS Controller up to controlling multiple generator feeds, switching numerous breakers based on PLC technology. WE provide different options of Automatic Transfer Switch Panels depend on plant requirements and customer needs. These options (or arrangements) vary depending on switching mechanisms (Motorized Breakers, Contactors or Automatic Transfer Switches) and loads criticality and shutdown time. Below schematics show ATS panels that can be manufactured.



## GEN-SET SYNCHRONIZED PANEL

Generator synchronization aims to match parameters such as voltage, frequency, phase angle, phase sequence and wave form of alternators (generators) with each other onto a common bus. A load share unit continuously monitor the load and during low demand periods one or more generators will be shut down to save on fuel consumption. As demand rises again the second generator and third generator will be restarted, synchronized and reconnected to the load .





# PRODUCTS

## POWER FACTOR CORRECTION SYSTEMS

Capacitor Banks improve the power factor by adding capacitive reactance in steps as per the power factor requirement. Power factor controller constantly monitors the load (and power factor) of the system on LV Panel and switch on/ off the capacitor steps to maintain the system power factor to the set value. It provides optimum power factor improvement to compensate for lagging Vars in the system, seen as a clean and reliable solution to providing quality power to the distribution network and to economize the electricity charge to customer/consumer.



## LIGHTING CONTROL PANELS:

Automatic lighting controls provide several major benefits to owners. It ensures that light is used only when it is needed and, in the quantity, needed, generating energy cost savings that increase profitability. The latest codes and standards require aggressive control of lighting. Thus, lighting must be capable of turning off or reducing power during times of night.



## PRODUCTS

### ENCLOSED MOTOR STARTERS

It is an enclosed D.O.L motor starter and soft start starter, that is simple to use and install. The product is well designed to be wall-mounted or installed for local control. it has a modern design and high enclosure characteristics.



### SINGLE PHASE MOTOR STARTERS

This is a single-phase motor Starter that can be customized to operate motors with a variety of choices. It's simple, easy to use and install.



# OUR PROJECT RANGE

## COMMERCIAL BUILDINGS AND TOWERS



## HEALTHCARE & RESEARCH



## EDUCATIONAL



## WATER & WASTEWATER



## OIL/GAS & MINING



## RENEWABLE ENERGY



## QUALITY POLICY

We are fully committed to satisfy our clients by providing high quality products and services that meet their needs at a reasonable cost, integrating to the highest international specifications and requirements. We focus on exceeding the expectations of customers and beneficiaries of those products and services through:

- Sticking to customer requirements and specifications to provide a top quality integrable system.
- In a fast developing world, we keep pace with the latest technologies to achieve outstanding built systems.
- Looking after Investing in human resources, as it is believed to empower and make a creative mindset that positively reflects the Outcomes.
- Continuity of developing the company's systems in line with the strategic vision of GS Company.

**Recognizing** the importance of international quality systems, the company applies ISO 9001 Quality Management System rev. 2015 to cope with global management systems and GS is fully committed to implementing the quality management system, monitoring and improving its performance and periodically reviewing its objectives.

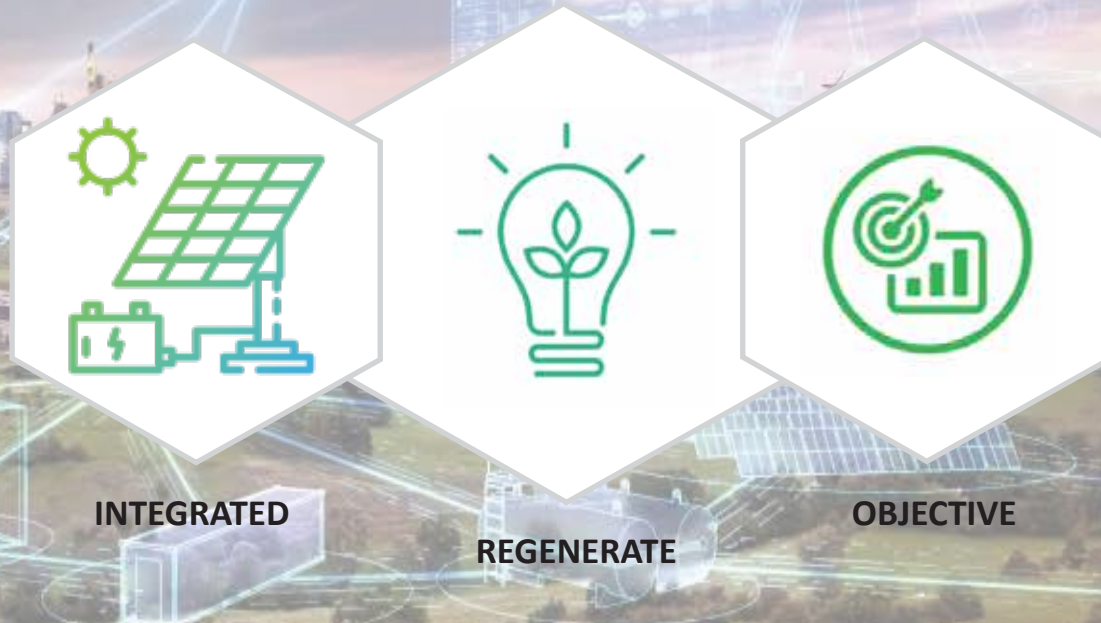




# ADVANCE ENERGY SOLUTIONS WITH GS

**At GS we believe that creating solutions that align with the needs of market is powerful force for deliver large scale energy. GS provides integrated services and solutions of energy.**

Renewable energy can easily provide substantial amounts of inexpensive, green electricity. Through new technology, renewable energy are becoming even more versatile. New power technologies are demonstrating the versatility of this powerful energy source.





# LET'S GO GREEN



“The Saudi and Middle East Green Initiatives are only a start. The Kingdom, the region and the world needs to go much further and faster in combatting climate change. Beginning this journey to a greener future has not been easy, but we are not avoiding tough choices. We reject the false choice between preserving the economy and protecting the environment.”

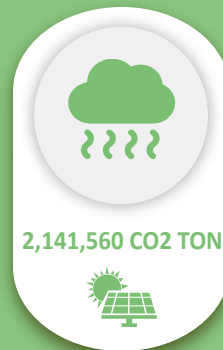
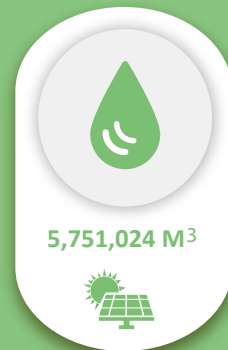
His Royal Highness

**Crown Prince Mohammed bin Salman bin Abdulaziz Al-Saud**

Sustainability has been at the heart of Vision 2030 since its inception. Saudi Arabia is now ushering in a new era as the Kingdom aims to reach Net Zero by 2060. This announcement is in line with wider Vision 2030 ambitions to accelerate the energy transition, achieve sustainability goals, and drive a new wave of investment. The Kingdom of Saudi Arabia has long played a central role in the international energy market, helping drive global economic growth and development.

Vision 2060 is a sustainable vision for the future of Saudi Arabia with sustainability at the heart of everything the Kingdom does. By creatively and responsibly addressing the energy and climate challenges of today, Vision 2030 inspires others around the world to share in building a sustainable tomorrow.

So we in GS believe in this vision and work hard to achieve it to support the growth of the Kingdom and we take the topic of ecological responsibility very seriously, we aim to offset CO2 emissions by end of 2060 by 2,141,560 ton.



# SOLAR ENERGY SOLUTIONS

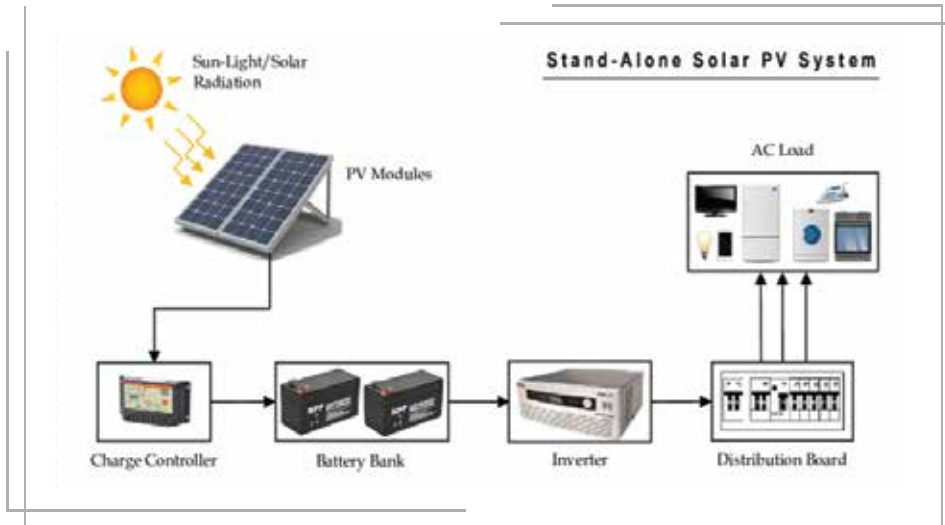
In energy department GS design, supply and install solar energy systems for various facilities with different kinds of solar systems, connected to the electricity grid or systems that are not connected to the electricity grid in addition of hybrid solar system, through a professional engineering and technical team. In addition of Energy Efficiency & Auditing service.



# IN GS WE PROVIDE SOLAR PV SOLUTIONS IN THERE DIFFERENT TYPES

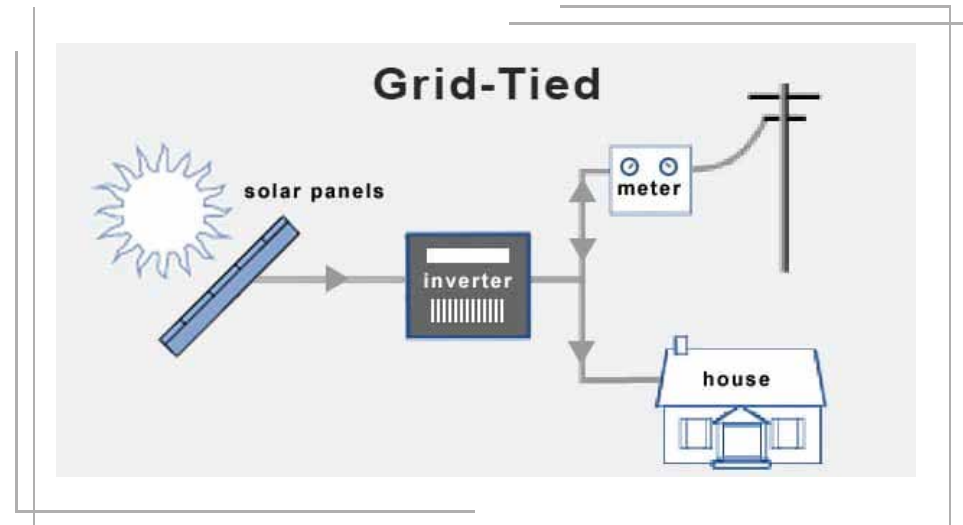
## ● STAND-ALONE SOLAR PV POWER SYSTEMS

Stand-alone systems rely on solar power only. These systems can consist of the PV modules and a load only or they can include batteries for energy storage. When using batteries charge regulators are included, which switch off the PV modules when batteries are fully charged and may switch off the load to prevent the batteries from being discharged below a certain limit.



## ● GRID CONNECTED SOLAR PV POWER SYSTEMS

Grid-connected Solar power systems are becoming increasingly popular for building integrated applications. As shown here, they are connected to the grid via inverters, which convert the DC power into AC electricity. These systems do not require batteries, since they are connected to the grid.

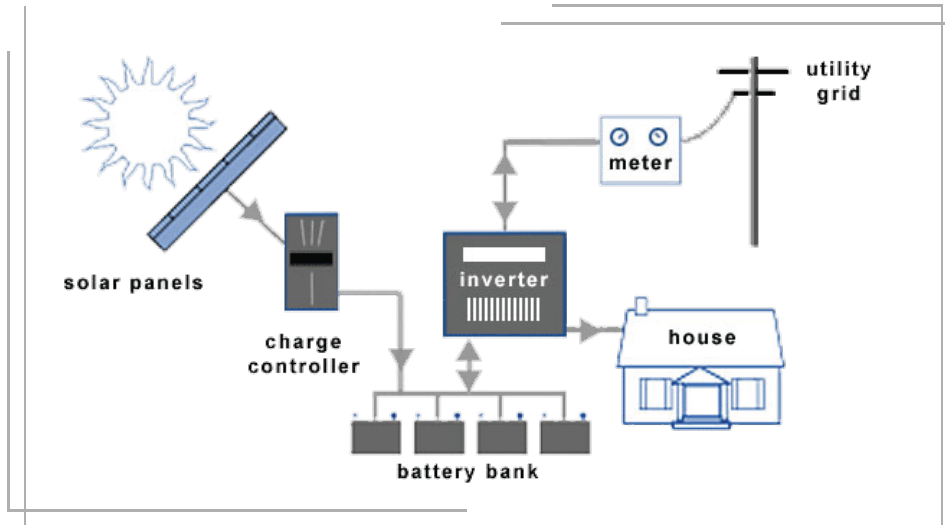


# IN GS WE PROVIDE SOLAR PV SOLUTIONS IN THERE DIFFERENT TYPES

## ● HYBRID SOLAR POWER PV SYSTEMS

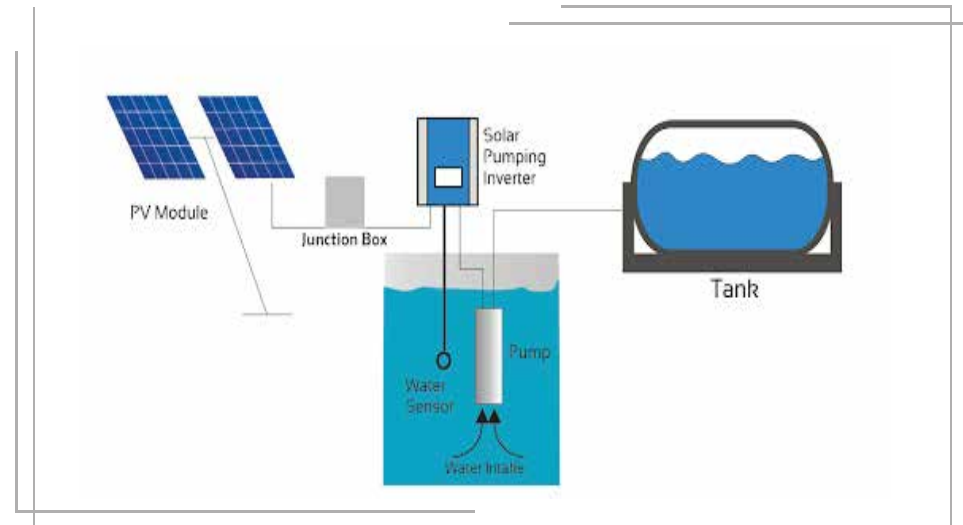
Hybrid systems consist of combination of PV modules and a backup system for electricity generation such as a diesel, gas or wind generator

In Hybrid systems the back-up generator can be used to recharge batteries only or to supply the load as well.



## ● PUMPING SOLAR POWER PV SYSTEMS

Pumping solar system consist of PV modules, solar pump and inverter. The power generated using solar PV (photovoltaic) system which is used for running the motor pump set. The pumping system draws water from the open well, bore well, stream, pond, canal etc

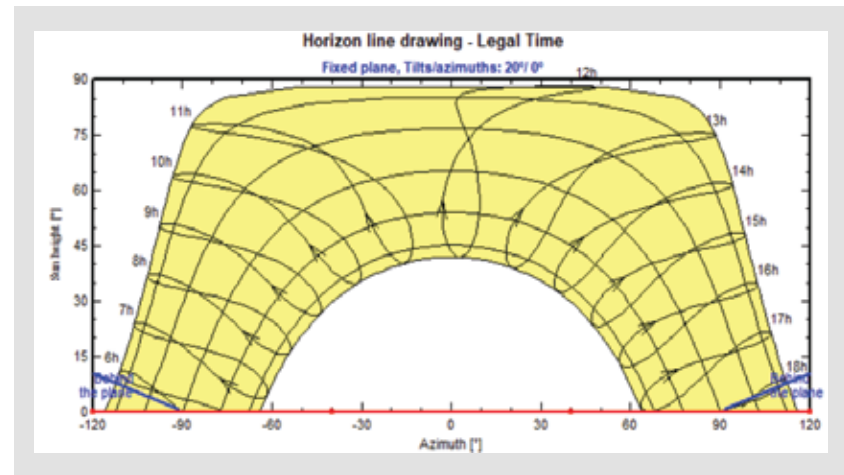
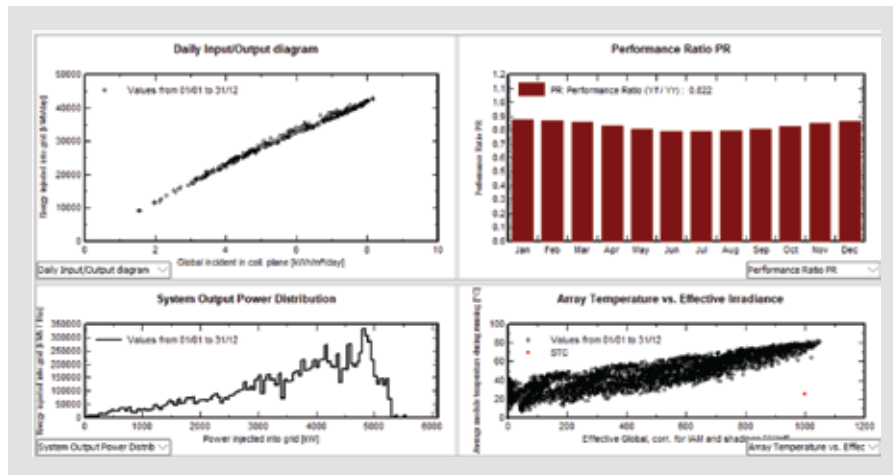
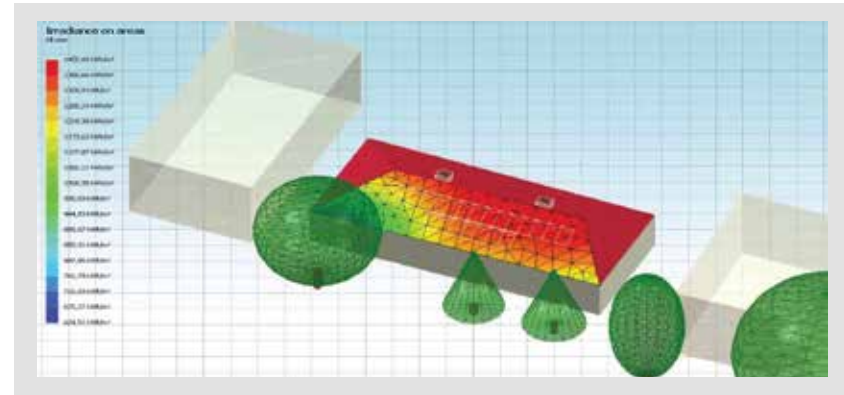


# ENGINEERING SOLUTIONS

Solar photovoltaic modules are where the electricity gets generated, but are only one of the many parts in a complete photovoltaic (PV) system. In order for the generated electricity to be useful in a home or business, a number of considerations must be in place.

GS specialized engineers design the solar PV systems after studying loads profile, areas, suitable mounting structures in addition shadow analysis using several softwares and other factors to give the ideal solution.

We also provide economical study for the project to show the feasibility of the systems.





# SOLAR PV SYSTEMS SUITS EVERY PLACE



# SOLAR LIGHTING

## ● SOLAR LIGHTING

A solar light does what a normal light does, only it draws power from the sun in order to function, while regular lights require electricity. Solar lights can have different components, but they draw their power from batteries that are charged using the power of the sun and have trapped the energy inside. The lamp operates on electricity from batteries, charged through the use of solar panel (solar photovoltaic panel).

These lights provide a convenient and cost effective way to light streets, gardens or any area at night without the need of AC electrical grids for pedestrians and drivers. They may have individual panels for each lamp of a system, or may have a large central solar panel and battery bank to power multiple lamps.



## ● ADVANTAGES

No pollution or noise produced

No dependency on erratic or expensive fuel chain supply (avoid also the risk of fuel theft)

Low regular maintenance requirements since solar panels and invertors have no moving parts

Highly reliable and durable

Reliable and long life span. Solar panels life can be at least 25 years

Low Operation costs since fuel is not needed and system run on sunlight

work effectively in two consecutive rainy days

# SOLAR LIGHTING

## ● SOLAR STREET LIGHT

Solar street lights are raised light sources which are powered by solar panels generally mounted on the lighting structure or integrated into the pole itself. The solar panels charge a rechargeable battery, which powers a fluorescent or LED lamp during the night. Most solar lights turn on and turn off automatically by sensing outdoor light using solar panel voltage. Solar street lights are designed to work throughout the night, Many can stay lit for more than one night if the sun is not in the sky for an extended period of time.



## ● SOLAR FLOOD LIGHT

Widely used in construction site lighting, plant lighting, sports centers, gas stations, parking lots, waiting rooms, railway stations, sea port other large-scale energy-efficient lighting.



## ● SOLAR GARDEN LIGHT

Outdoor solar lights are a great alternative to mains powered outdoor garden lights with many benefits. In order to maintain an elegant shape and decorative lights for the gardens, we in GS provide solar garden lights in several decorative shapes which are simpler and safer to install as will have the freedom to put lights in any place without the restraint of having to plug into a mains outlet.



# SOLAR LIGHTING

## ● ECOLIGHT

A solar Ecolight, commonly referred to as a sun tunnel, is a Ecolight alternative for channeling sunlight to a building's interior. With this technology, sunlight enters a metallic tube through a clear covering protruding from your roof. The natural light is then channeled along the length of the tube and into your building by a highly reflective polished sheet metal material that acts as a continuous mirror.

Most solar tubes don't actually produce any solar electricity, but some newer products have integrated photovoltaic technologies to provide artificial lighting when the sun isn't shining.

## ● ADVANTAGES

- Light Transfer Efficiency Light Transfer Efficiency (LTE) relates to the amount of light that travels through a TDD daily, seasonally and between multiple floors.
- Color Temperature Maintenance
- Saves costs on Electric Bills Significant Reduction in energy usage Color Temperature Maintenance
- Less expensive to purchase & install than a traditional skylight
- Quick Installation (as little as 2 hours!)
- Installation doesn't require any changes to the structure of your home (Unlike traditional skylights)
- No permit required for installation
- Health benefits
- Leak-proof design
- Home owners can control the way the light enters the room with various diffusers
- Add-ons available for dimming, extra light after dark, ventilation, etc.





# SOLAR WATER HEATER

## ● SOLAR WATER HEATER

Solar water heating (SWH) is heating water by sunlight, using a solar thermal collector. A variety of configurations is available at varying cost to provide solutions in different climates. SWH are widely used for residential and some industrial applications. A sun facing collector heats a working fluid that passes into a storage system for later use. They use water only, or both water and a working fluid. They are heated directly or via light concentrating mirrors. They operate independently or as hybrids with electric or gas heaters. In large scale installations, mirrors may concentrate sunlight into a smaller collector.

## ● ADVANTAGES



You are using the free energy



Light weight for Easy handling



Solar thermal panels take up less space than solar PV panels



Save for Environment



Low Maintenance



Efficient



# EV CHARGER

We in GS provides two options for EV charger; on grid charger and charger combined with solar PV system.

## ● EV CHARGER (GRID-TIED)

A total electric vehicle charging solution from compact, high quality AC wall boxes, reliable DC fast charging stations with robust connectivity, to innovative on-demand electric bus charging systems, we deploy infrastructure that meet the needs of the next generation of smarter mobility.

## ● SOLAR CHARGING STATIONS FOR ELECTRIC VEHICLES (EV'S)

The combination of solar energy and electric vehicle (EV) charging is the key in drastically reducing our dependence on fossil fuels. Electricity comes from a variety of sources and it's crucial that electric vehicles will be powered by renewables. In GS We offer Solar charging stations. Because they are not tied to the electric grid, the solar EV charging stations are easier and quicker to install than traditional grid-tied solar EV charging stations.



## UNINTERRUPTIBLE POWER SUPPLY (UPS)

A UPS is typically used to protect hardware such as computers, data centers, telecommunication equipment or other electrical equipment where an unexpected power disruption could cause injuries, fatalities, serious business disruption or data loss. UPS units range in size from units designed to protect a single computer without a video monitor (around 200 volt-ampere rating) to large units powering entire data centers or buildings.

GS provides two options for UPS:

1. UPS charges from electrical Grid.
2. UPS integrated with PV solar system, to backup the loads.



# ENERGY EFFICIENCY & AUDITING

“Energy costs are getting higher, and the cheapest energy is the energy you don’t use”

Paul Pettipas

## ● ENERGY EFFICIENCY & AUDITING

Energy Auditing is a tool for identifying energy efficiency potential and measures. An energy audit is an important tool or method for finding such potentials for energy efficiency measures and for assessing their financial viability, which can be carried out at different levels. A simple level just includes a brief site inspection as well as assessing the broad energy input and output of a system this identifies low cost energy saving opportunities. Medium level audits include an in depth analysis of energy costs, energy usage and system characteristics along with on site energy demand measurements to identify energy efficiency measures which are more capital intensive and need to be aligned with the financial budget plan of the site. The most sophisticated level, which is referred to as an investment grade audit, includes an additional continuous monitoring of system data and process characteristics.





# ENERGY EFFICIENCY & AUDITING

## ● IN GS WE PROVIDE ENERGY EFFICIENCY & AUDITING SERVICES

- Collecting and analyzing continuous data.
- Identify optimizations in equipment schedules, set points and flow rates to improve energy efficiency.
- Calculate return on investment. Units of energy saved can be metered and calculated just like units of energy delivered.
- Execute energy optimization solutions.
- Breakdown energy usage and significant energy use by equipment/process.
- Benchmark energy performance against similar premises/processes.
- Provide an overview of supply and metering strategy.
- Analyze the building envelope, services and controls.
- Review of the energy management procedures, including maintenance.
- Identify energy and cost saving opportunities together with pay back periods of the investment needed to implement the energy saving measures.
- Prioritize no or low-cost opportunities to large capital investment opportunities and create action plans.
- Control solar and energy systems.



## OUR CUSTOMERS RANGE

### GS ENERGY SOLUTIONS SUITS EVERYONE

#### FAMILIES AND HOUSEHOLDS

We have helped families save their power bills with solar power solutions.



#### FACTORIES AND INDUSTRIAL UTILITY

We design and install solar solutions for Industrial facilities and factories.



#### COMMERCIAL

We provide commercial energy efficiency services, energy auditing and solar systems for a wide range of businesses and organizations.



#### AGRICULTURAL

We provide solar energy solutions for the agricultural sectors .





**THANK YOU**



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