

# COMPANY BROCHURE

**INZONN  
ENGINEERING  
SOLUTIONS**

The engineering partner for your solar journey!



# ABOUT US

EMPOWERING TOMORROW'S SOLAR SOLUTIONS TODAY

Inzonn, a dynamic organization based in India, radiates energy, passion, and unwavering confidence. With a team of highly skilled, motivated, and enthusiastic solar engineers and consultants, we unite experience, knowledge, and abundant resources to empower our clients worldwide. From visionary Developers and diligent EPCs to innovative O&Ms, reputable Suppliers, and forward-thinking Owners in the solar industry, we deliver complete engineering and technical consulting services with the fervent belief in a brighter, more sustainable future.

## VISION

We envision leading the way as a premier Solar Engineering and Consulting company, catalyzing the global shift to achieve Net Zero targets.

## MISSION

We are on a mission to accelerate the adoption of solar energy as a mainstream power source. As a leading Solar Engineering and Consulting company, we strive to deliver innovative, reliable, and sustainable solar engineering solutions. We aim to empower businesses, industries, and communities worldwide with solar energy, making significant strides towards a greener and more sustainable environment.

## CORE VALUES

-  Customer First
-  Endeavor for Excellence
-  Innovation
-  Accountability
-  Trust and Respect
-  Transparency
-  Continuous Improvement



# OUR SOLAR EXPERTS



## Nitish Kumar Sinha

Extensive experience in leading multi-MW ground and roof-mounted solar projects in Europe. Master's in Electrical Engineering with specialization in Solar Energy from TU Delft, Netherlands.



## Aashay Abhyankar

Skilled in PV system design and Techno-Commercial analysis. Master's in Sustainable Energy Technology, specialization in Solar and Economics from TU Delft, Netherlands.



## Sushant Pandey

Expertise in the design of residential and commercial solar projects in the United States. Researched developing clean energy solutions at IIT Mandi. Bachelor's degree in Electrical Engineering from Chandigarh University, India.





# SERVICES TAILORED TO YOUR NEEDS

**146+ MWp** and **1500+ hours** of Solar Engineering and Consulting Services already delivered to brighten up our satisfied Customers!



Expertise on  
Ground and  
Roof mounted  
solar solutions



Unique Techno-  
Commercial  
Approach for  
creating optimal  
solutions



Expert Team of  
experienced  
Engineers and  
Consultants at  
your service



Worldwide client base  
including Owners,  
Developers, EPCs,  
AMCs, and Suppliers

## SERVICES AT A GLANCE



Preliminary Designs



Permit Designs



Detailed Engineering



Supporting Services



## PRELIMINARY DESIGNS

With our preliminary design packages tailored for proposals, tender bids, or sales engineering, we cater to a wide range of clients in the USA, EMEA, and Asia, including EPCs, Developers, Owners, or other stakeholders. Depending on your requirements, the preliminary design package can include Yield estimation reports, optimized Module layouts, Single line diagrams supported with Cable calculations, Bill of Material (BOM), and more with an aim to provide rapid and precise solar system designs. To support our preliminary designs, we use industry leading software's like Helioscope, PVsyst, AutoCad, VirtoCad, Aurora, PVSol, etc.

## PERMIT DESIGNS

We craft client oriented custom permit designs that adhere to location-specific regulations, building codes, and utility requirements for swift approvals worldwide. For instance, these packages in the USA, include Title Sheets, Plot plans, Module layouts, String Plans, and more, meeting local AHJ (Authority Having Jurisdiction) standards. We prioritize precision and compliance in our design process for ready-to-approve permit designs.

# DETAILED ENGINEERING

Our experienced engineers employ advanced software and tools to create in-depth optimized solar designs that take into account site-specific limitations and compliance with relevant regulations. We take great pride in the comprehensiveness of our design package, ensuring it is construction-ready.

## Module Layout

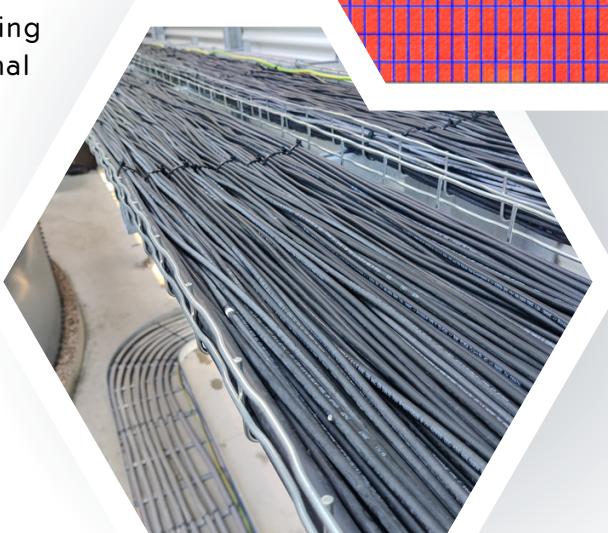
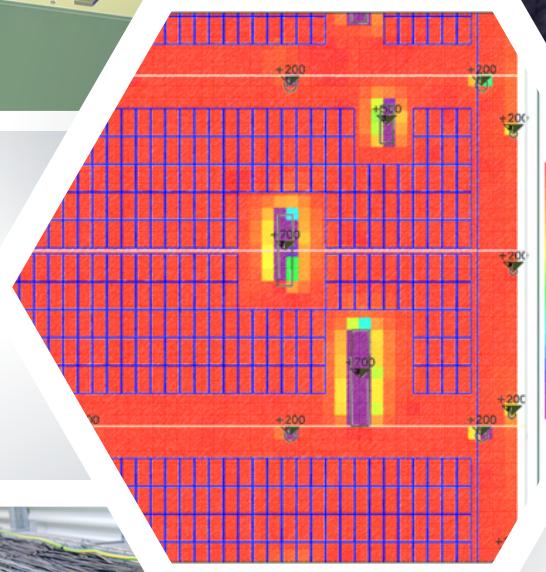
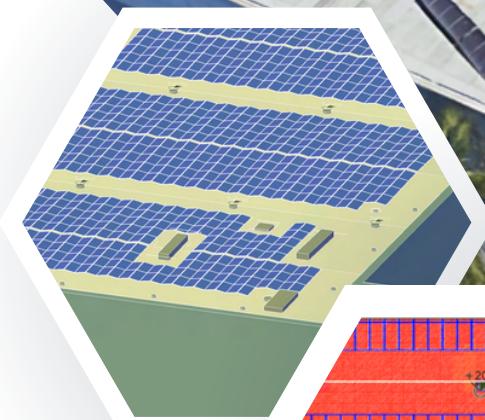
The module layout is at the heart of our design package, which is created using high-resolution images/contour data. We prioritize precision and detail along with a techno-commercial approach to define the optimal PV module layout, considering simulation studies, site-specific details, and stakeholder requirements.

## String Layout

We design the string layout to optimize inverter configuration, maximizing efficiency with optimal DC/AC ratio, minimizing losses, hence resulting in lower LCOE. Local factors like temperatures and irradiance are considered to determine string length and inverter configuration for optimal performance.

## Cable Layout

Our design prioritizes easy construction and maintenance, avoiding unnecessary complexity while minimizing DC and AC cable lengths. We ensure the thermal integrity of cable installations through careful design aligned with cable calculations.



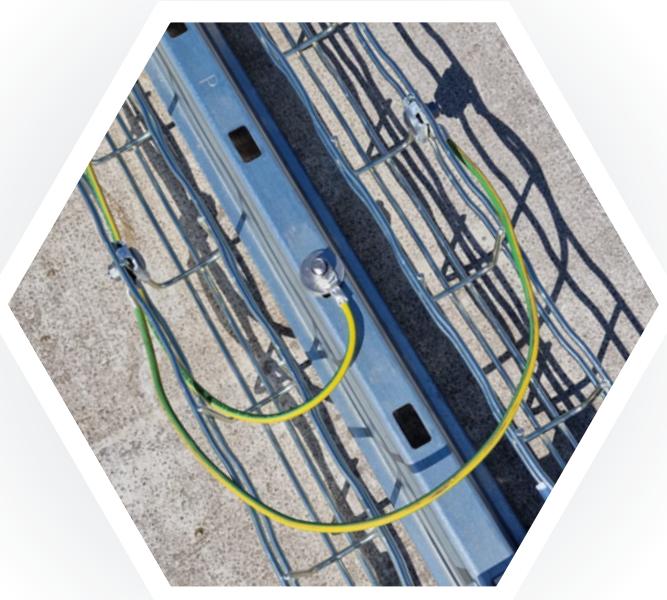


## Inverter Rack Layout

We design inverter mounting layouts following manufacturer guidelines for warranty compliance, ensuring sufficient thermal management and considering factors like cable bending radius, maintainability, and protection from external influences.

## Equipotential Plan

Safety is paramount in our design process, and we prioritize a reliable equipotential plan to protect equipment and personnel. Our plan ensures that all parts of the project are equipotential bonded with sufficient redundancy for added protection throughout the project's lifetime.



## Sensor Plan

Installed sensors help evaluate post-commissioning performance and ensure contract compliance. A sensor plan is tailored to stakeholder requirements, enabling reliable data collection for performance measurement.





## Cable Calculation

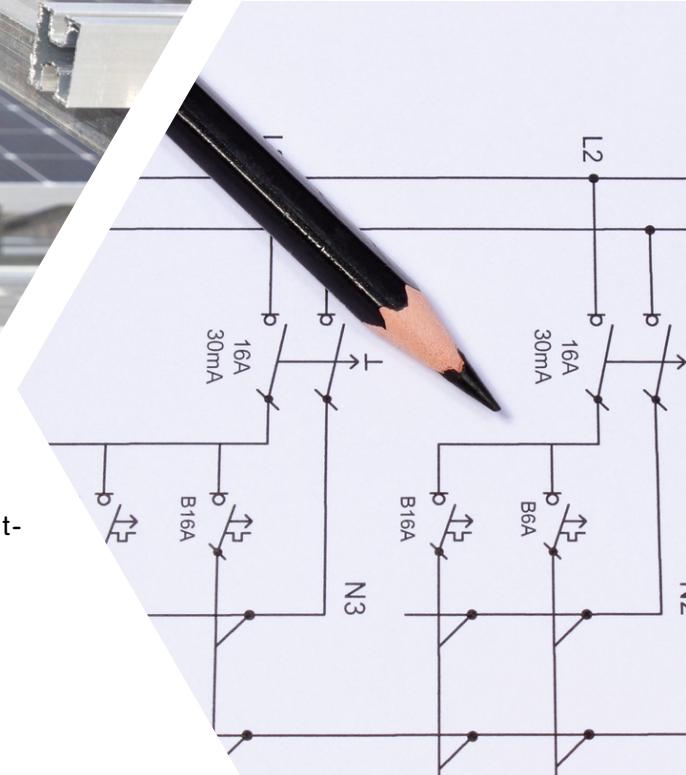
Comprehensive cable calculations (DC & AC) consider all project conditions to establish the worst-case scenario, determining the most suitable cable size. The techno-commercial analysis incorporates statutory norms like IEC 60364, safety factors, and project requirements for accurate cable sizing.

## Single Line Diagram

Our design package includes a comprehensive Single Line Diagram (SLD) encompassing all elements from DC to AC side, including cables, protection devices, earthing arrangements, inverter configuration, monitoring setup, energy meters, transformers, and medium voltage connections.

## Ballast/Structural Plan

For ballasted rooftop projects, we use software integration from the manufacturer to create a ballast plan that considers local factors like wind zone, terrain category, hazard reports, etc. The plan is tailored to the specific substructure, ensuring optimal ballasting for the PV system. For ground-mount system we also support you together with your supplier to create construction-ready structural plan.





## Yield Estimation and Performance Analysis

It is crucial to have a reliable yield estimation to determine the financial feasibility of the project and have an estimate of the performance of the plant. Through rigorous performance modeling, we assess the energy generation potential of your solar system, enabling accurate financial projections, Return on Investment (ROI) calculations, and performance estimates. Our team meticulously uses PVsyst or any other software as per requirement to generate yield reports for the project incorporating all site and design-specific data into the simulation.

## Bill of Material

The BOM is crucial for precise cost estimation, procurement, and project planning, ensuring all required materials are detailed with quantity, description, manufacturer, etc., providing stakeholders with a comprehensive inventory for construction.

## BESS Design

In hybrid PV system design, the key is to determine the ideal battery capacity and connection topology for availability, efficiency, and reliability. We assess energy requirements, accounting for load fluctuations, C-rates and voltage limits, to calculate the required storage capacity. Our focus is on cost reduction, minimizing degradation, and meeting IEEE norms for residential, commercial, and industrial settings. In addition, we support you with evaluating BESS for utility scale projects.



# SUPPORTING SERVICES

We go beyond design and engineering to offer a holistic suite of supporting services that cover the entire lifecycle delivering end-to-end support to ensure the success and efficiency of your solar project from conception to operation. Through our supporting services, we assure that you have project engineering capacity remotely available.

## Procurement Support

Our team undergoes an in-depth techno-commercial analysis of the project to determine the selection of efficient and cost-effective equipment and their quantity estimation for the project. We provide valuable technical insights throughout the entire procurement cycle. Our goal is to optimize procurement strategies, mitigate risks, and achieve cost-effective solutions for our clients which also leads to the procurement process being hassle-free and efficient.

## Project Implementation and Commissioning Support

To ensure successful and seamless execution of solar energy projects we provide project implementation and commissioning support services. We assist clients in translating project designs into reality. We offer remote support in project management, coordinating with contractors, overseeing the construction and installation process, and verifying commissioning measurement results as per IEC norms. We provide valuable guidance throughout the implementation phase, addressing any technical challenges that may arise. Through ongoing remote interaction, we ensure the on-site implementation of the project design with utmost accuracy and precision. However, during construction due to several factors, there can be deviations from the design. Therefore, in the As-built documentation, we make sure to update the design package to reflect the actual installation.





## Asset Management Support

Construction of the project is an important milestone but not the end of the project lifecycle. It is followed by asset management which ensures that the performance of the PV system is optimal and the PV asset is maintained for longevity and smooth operation for the desired lifetime of the project. Our team is equipped to help our customers with asset management tasks such as Performance Ratio (PR) calculation for provisional acceptance, final acceptance, or period post-final acceptance. We can also assist you with assignments such as root cause analysis, troubleshooting, performance analysis, etc.



## Technical Consulting

Our team of experienced solar professionals brings in-depth knowledge and expertise in all aspects of solar energy. Our assessments provide you with crucial insights to help you make informed technical decisions at your organization.



At Inzonn, we understand that every challenge is unique, and we approach each engagement with a customized strategy. Our services are tailored to your specific goals, budget, and timeline. We are committed to delivering innovative and practical solutions that help you achieve long-term success in the dynamic and rapidly evolving solar industry.



# SERVICE DELIVERY



## Retainer

Our retainer model offers a flexible and cost-effective solution for clients seeking ongoing engineering support for their solar projects. With this model, you can have a dedicated remote team of experienced solar engineers at your disposal, providing the required deliverables, expertise, guidance, and technical assistance whenever you need it.



## Project Based

Access our dedicated remote experts for a specific project ensuring impeccable deliverables, consultations, regular updates, and timely results for the smooth completion of the project.

At Inzonn, our main focus is on providing outstanding services that go above and beyond our client's expectations. We believe in putting the customer at the center of everything we do and maintaining high standards of excellence.

Our goal is to ensure a smooth and efficient delivery of services that align with your unique requirements. Throughout the entire process, from the initial consultation to the final implementation, we offer expert guidance and support. Our service delivery options are carefully crafted to suit your needs and provide the best possible outcomes.



## Task Based

Stay ahead of any technical hurdles which you may encounter during a project with our agile engineering and consulting support, available at any project stage, unlocking seamless progress and expert problem-solving.



## Custom

Your unique needs deserve tailor-made solutions, meticulously crafted to deliver our services with unrivaled efficiency, catering specifically to your requirements.





# INZONN ENGINEERING SOLUTIONS

INZONN  
GET  
TOUCH!

**Thank you for your interest in  
our solar engineering  
services. We look forward to  
hearing from you!!**



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**Come and join us in creating  
a better tomorrow!**