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## Solar Engineering Design

Our solar engineering design services allow solar power plants to maximize their efficiency and effectiveness by determining the optimal placement and orientation of solar panels, the appropriate sizing of the system, and the selection of the most suitable components and technologies. Furthermore, our solar design services define how to integrate photovoltaic energy systems with existing infrastructure considering aspects such as grid connectivity and energy storage solutions.



THE Applus+ SOLUTION

Nowadays, the parties involved in the development and construction of utility-scale solar plants are increasingly aware of the key elements that need to be monitored from a <u>quality assurance</u> perspective across the different phases of solar farm projects.

Applus+ through Enertis, its <u>solar services</u> and <u>energy storage solutions</u> specialist, assists its clients, especially Engineering, Procurement, and Construction (EPC) firms, to ensure that their solar power plant design meets the highest quality standards. This is a key element to guarantee their long-term performance and to support them throughout all the stages of their solar power plants, from the solar design engineering phase to its development, construction, and management.

Enertis Applus+ team of solar engineering design services has worked on projects in more than 65 countries, offering wide global expertise in the solar industry as well as deep knowledge of solar photovoltaic technology. They are committed to their client's success while providing a high-quality service.

## Our solar design services include:

 Basic engineering for permitting purposes, whose purpose is to ensure that solar projects meet the technical requirements to receive the necessary permits.



- **Detailed engineering** services for EPC companies, that aim to provide the construction designs and to review and approve the selected equipment and designs submitted by various suppliers and contractors.
- Owner's engineering services are provided during the design, planning, construction, and commissioning phases, in order to ensure the solar energy projects' quality throughout their lifetime
- The supervision of the solar power plant construction works execution by the EPC company
- **Feasibility studies** that aim to maximize the use of the available capacity at the POI via hybridization of technologies, such as solar power and wind energy, or other possible configurations with the use of BESS technologies.
- Qualified technical back-office services that provide valuable support to site solar engineers.

<u>Enertis Applus+</u> solar design engineering services and processes are accredited by ISO 9001, the world's most popular standard for quality management, which certifies its high-standard services and solutions.

Our solar power designers' international experience in energy storage projects worldwide – enables us to provide specific technical support also on this rapidly expanding technology.

## Target customers

Applus+ provides independent and specialized solar engineering services to solar project owners and EPC firms across all phases of a solar project life-cycle, namely:

- Pre-planning phase
- Planning and development phase
- Implementation and construction phase
- Operation and asset management phase

## Key customer benefits

With its tailored solar design engineering services, Applus+ clients benefit from specialized and independent advice across all phases of solar power plants, from the design to the operation stages.

When they rely on Applus+ solar design engineering services, solar plant owners make sure that their projects meet the highest quality standards, a key element to mitigate risks – some of which may lead to major issues - and ensure a high-quality project performance throughout the plant's lifetime.