

Tunisia grid-connected inverters are supplied in large quantities





Overview

Tunisia's power sector is well developed, and nearly the entire population enjoys access to the national electricity grid. Tunisia has a current power production.

While projects are often subject to delays, excellent commercial opportunities exist for the sale of power generation equipment to STEG-operated and IPP.

Does Tunisia have a power grid?

Tunisia's national grid is connected to those of Algeria and Libya which together helped supply about 12% of Tunisia's power consumption in the first half of 2023. Moreover, in August 2023, Tunisia's sub-sea connection project with Italy, called ELMED, was approved for \$337 million funding from the European Commission.

Does a network-related fault affect photovoltaic system integration in Tunisia?

Network-related faults like outage of photovoltaic farm event, three-phase short-circuit at a conventional bus, and voltage dip at the largest photovoltaic station have been considered. It is hoped that the results of the presented study would benefit Tunisian's utility's policies on integration of PV systems.

What percentage of Tunisia's electricity is renewable?

In 2022, only 3% of Tunisia's electricity is generated from renewables, including hydroelectric, solar, and wind energy. While STEG continues to resist private investment in the sector, Parliament's 2015 energy law encourages IPPs in renewable energy technologies.

How many spvgs can a Tunisian grid support?

Conferring to the bifurcation diagram, the maximum capacity of SPVGs that can be supported and accepted by the Tunisian grid is 2185 MW. Abrupt disconnection of PV farms results in a frequency deviation of 48.825 Hz, and voltage drop 6% of the nominal voltage.

Why is energy demand increasing in Tunisia?



Owing to the increasing population density in new cities, and developing industrial areas, the Tunisian national power grid has been facing huge expansion with growing additional energy demand. Since the government has planned for industrial development expansion during years to come, there will be sustained growth in energy demand.

How much energy does Tunisia generate a year?

Electricity generation has been raised to 18,988 GWh in 2018 from 12,091 GWh in 2005, resulting in an average annual growth rate of 4% (Tractebel, 2019). To reach the renewable energy development strategy targets in Tunisia, a national program known as the Tunisian Solar Plan (TSP) has been established.



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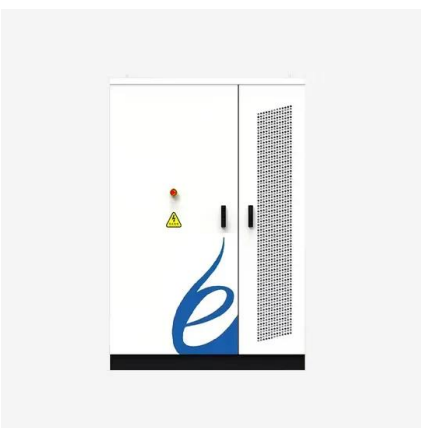
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Grid tied systems Tunisia

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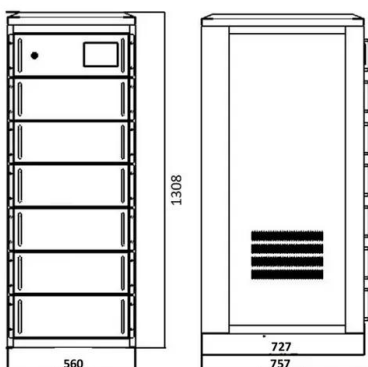
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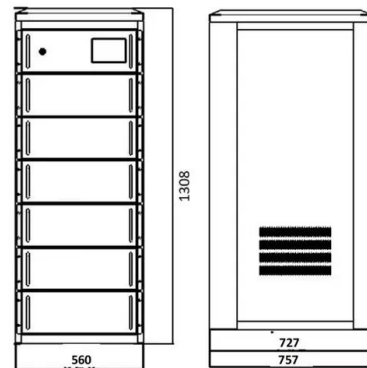
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A grid-connected PV system's grid connection must be implemented by DC-AC converters (inverters), which do this task by transforming the DC from the PV array into a sinusoidal ...

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[Projects of photovoltaic plants in Tunisia. \[31\]](#)

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Beyond these four business models, one can mention the existence, for many years, of photovoltaic systems that are not connected to the grid in Tunisia. These installations are ...

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