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Solar Expert

Misyonumuz suyu, hayvanları, enerji enerjisini, doğayı ve çevremizi korumaktır. Faaliyetlerimiz dünya çapında alınır.

Birlikte bir fark yaratabiliriz!

Solar expert bir ExpertGrup iştirakidir. Bunca yıllık bilgi ve birikimlerimizi Mühendis ve Teknik Ekibimizle siz değerli müşterilerinizin %100 memnuniyeti için bu yola çıktık ve sektörde sürekli kendini yenileyen dinamizimle ve teknik kadromuzla günümüzde gelişen teknolojileri yakından takip ederek gerek yurtiçi ve gerekse yurtdışında hizmet vermekteyiz.

Kalite Sahibi olmaya ne dersiniz?

Vizyonumuz ve Misyonumuz gelişen dünya üzerinde sunduğumuz çözümlerle müşterilerinizin tamamen kendi ihtiyaçlarına gerekli olan enerjilerini üretip hem doğa dostu hemde bitmeyen enerjilerini sağlamalarıdır.



Neden biz?

2014 yılından beri EPC hizmetlerimizden ve proje geliştirme , mühendislik tecrübelerimizden elde etmiş olduğumuz bilgi birikimlerimizi siz değerli müşterilerimiz için en doğru marka ve ürünlerle gerek ülke içinde gerekse yurtdışındaki tedarik zincirlerimizle birleştirerek müşterilerimize en profesyonel ve uygun maliyetli çözümler sunuyoruz. Güneş enerjisi santrallerinde kullanılan ürünlerimizin ekonomik ömürleri 25 yılı aşmaktadır. Solar expert sizler için en doğru ürünleri en iyi çözümlerle sunarak sizlerin değerli yatırımlarına değer katmaktadır. Bu vizyonla müşterilerimizden en üst seviyede memnuniyet sağlamaktayız.



Daha Yaşanabilir Bir Dünya İçin, **Enerjini Boşa Harcama.**



Geri Dönüşüm

Yenilenebilir Enerji, sürekli devam eden doğal süreçlerdeki var olan enerji akışından elde edilen enerjidir!



Eko Sistem

Yenilenebilir Enerji, sayesinde Eko sistemi koruyarak, canlıların habitat'ına müdahale etmeyen bir nesil yetiştiriyoruz!



Su Hayattır!

Yenilenebilir Enerji, sayesinde Suyu koruyarak, gelecek 10 senenin susuzluk tehlikesi ile mücadele ediyoruz!



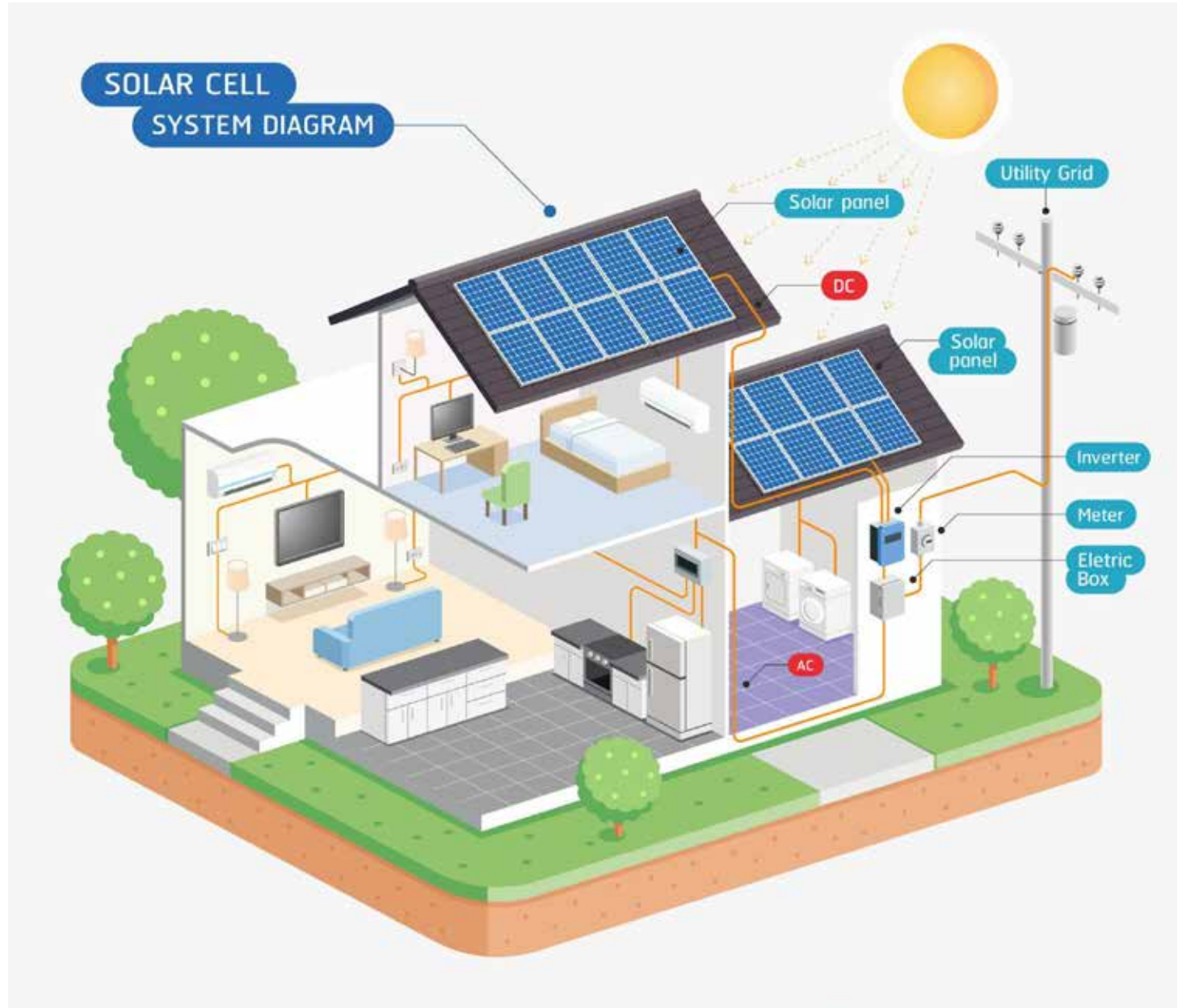
Hayvanları Koruyalım

Yenilenebilir Enerji, sayesinde, doğa dostumuz hayvanları koruyor, çocuklarımıza parlak bir gelecek sunuyoruz!

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3 Compatible with whole industry supply chain	4 Strong power expandability potential

www.jasolar.com Harvest the Sunshine



PERC 6BB 166MM HALF-CUT PV MODULE

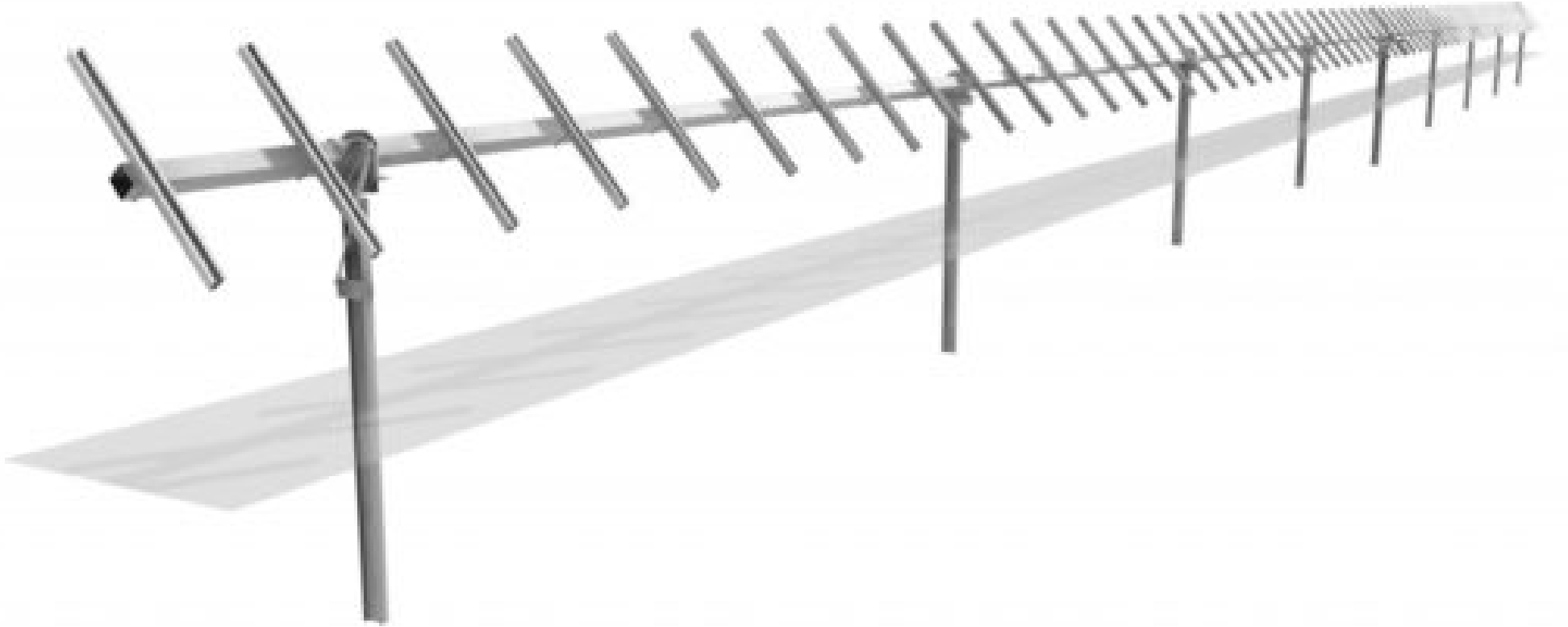
MAX POWER: 445WATT

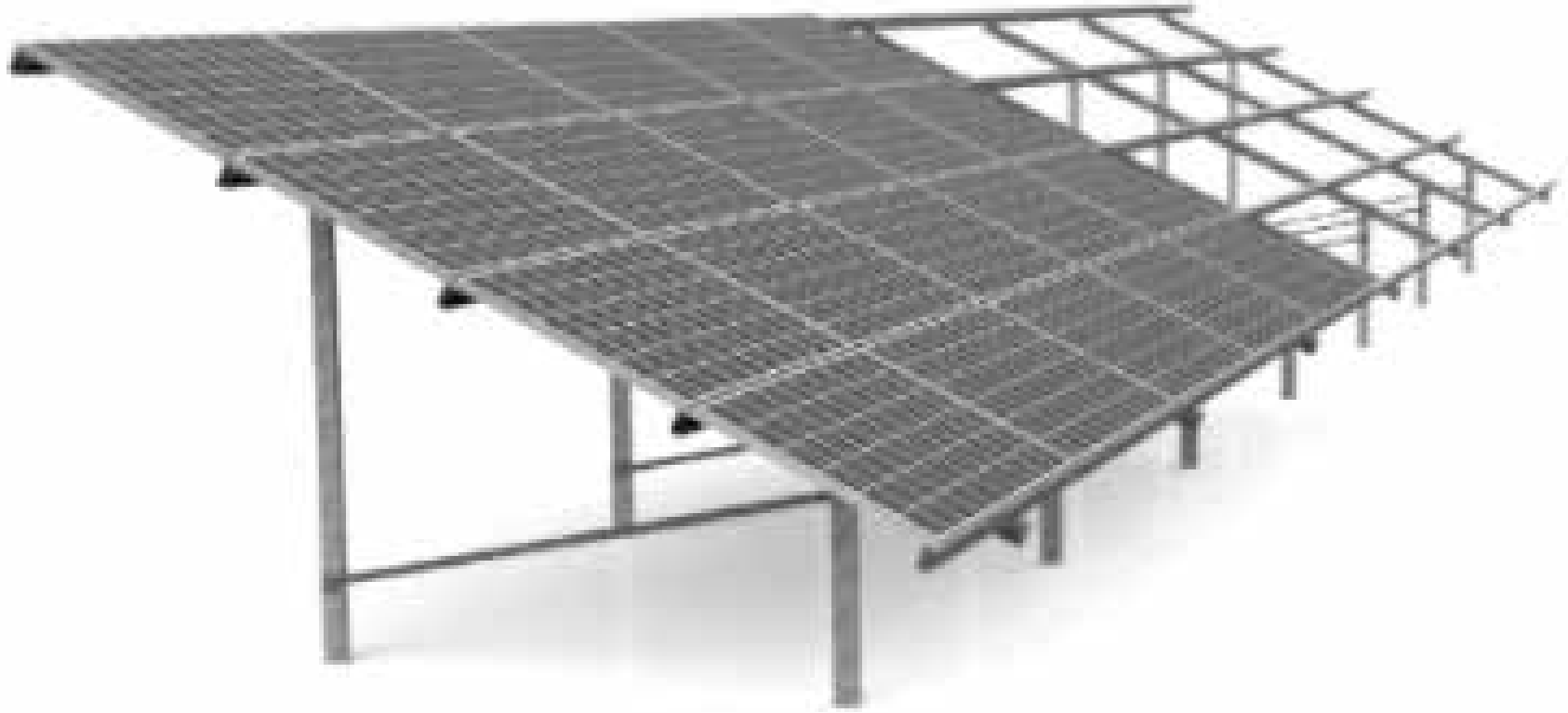
Trinasolar

**Vertex 550W
modules**
have commenced
mass production

Vertex











PANEL

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HT-SAE

JA SOLAR

Trinasolar

INVERTOR

SUNGROW

ABB



HUAWEI

solaredge

TAŞIYICI SİSTEMLER

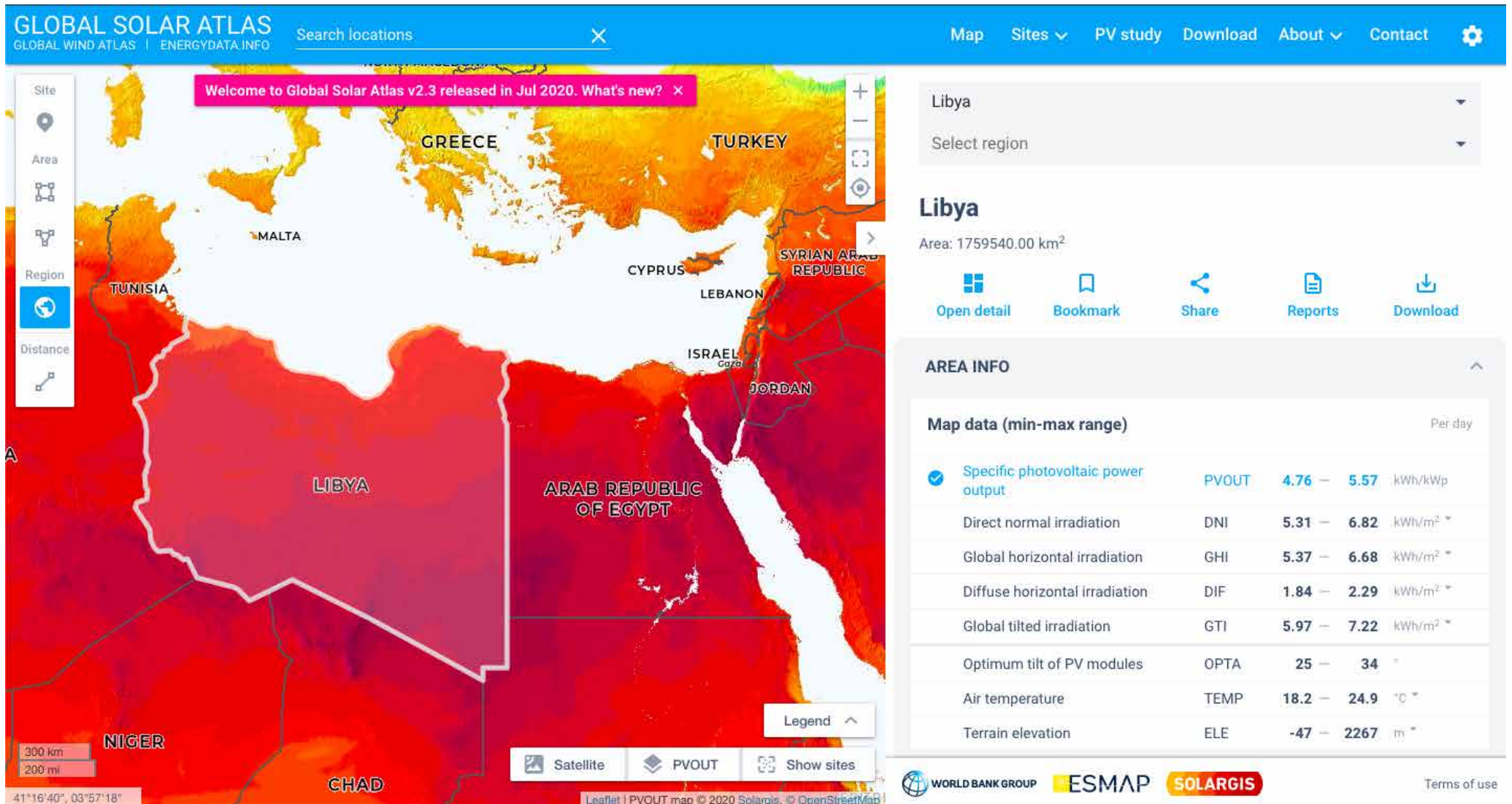


DEGER
IBERICA

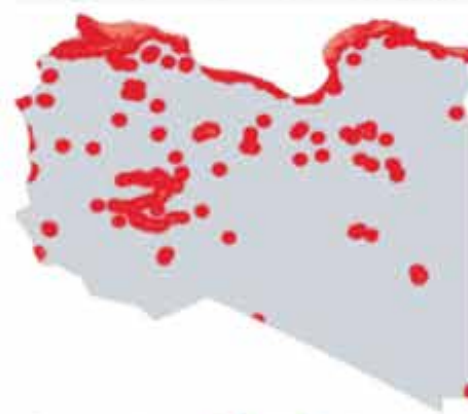
ISOTEC
Solar Mounting Systems

REFERANSLAR





Libya



Practical potential potential: ■ Level 2 ■ Level 1 ■ Level 0

The boundaries, colors, denominations and any other information shown on the maps do not imply, on the part of The World Bank, any judgement on the legal status of any territory, or acknowledgment of such jurisdiction.

INDICATORS

Total area / Evaluated area	1,759,540 / 1,619,078 km ²
Population (2018)	6,678,567
GDP per capita (2018)	7,235 USD
HDI / rank (2017)	0.71 / 106
Electricity consumption per capita (2014)	1,811 kWh/year
PV installed capacity (2018)	5 MWp
Average theoretical potential (GH _t) / rank	6.135 kWh/m ² / 9
Average practical potential, level 1 / rank	5.124 kWh/kWp / 9
PV equivalent area	0.003%
PVOUT seasonality index (country range)	1.33 (1.11 – 2.05)
LCOE average (country range)	0.08 (0.08 – 0.09)

DISTRIBUTION OF PHOTOVOLTAIC POWER OUTPUT

kWh/kWp	14.4 %	15.7 %	100.0 %	of evaluated area
over 5.4	0.4 %	0.4 %	27.6 %	
5.4 – 5.2	6.4 %	6.5 %	49.0 %	
5.2 – 5.0	4.2 %	4.3 %	18.1 %	
below 5.0	3.5 %	4.5 %	5.3 %	

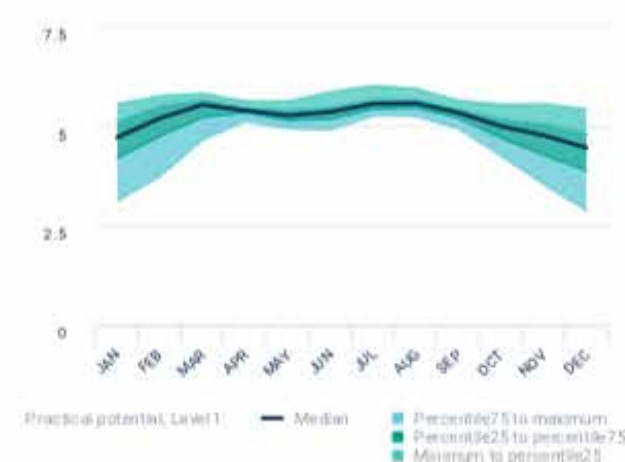
Practical potential: ■ Level 2 ■ Level 1 ■ Level 0

SUMMARY STATISTICS

Maximum	6.52	Maximum	5.47
Percentile 75	6.08	Percentile 75	5.26
Median	5.87	Median	5.18
Average	5.85	Average	5.12
Percentile 25	5.60	Percentile 25	4.98
Minimum	5.24	Minimum	4.61

Theoretical potential: kWh/m² ■ GH_t Practical potential, level 1: kWh/kWp ■ PVOUT

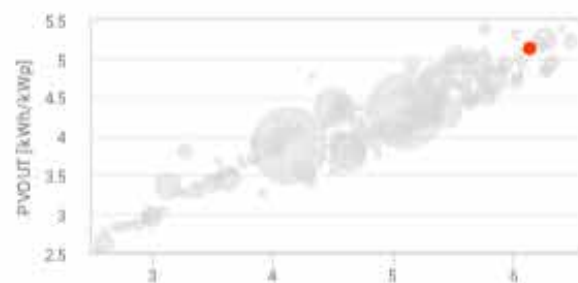
MONTHLY VARIATION OF PHOTOVOLTAIC POWER OUTPUT



Libya

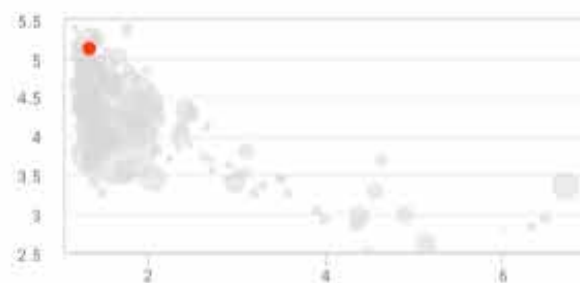
Average theoretical potential (GHI, kWh/m²)

6.135



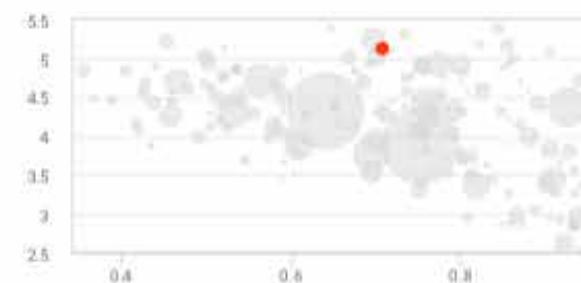
Seasonality index

1.33



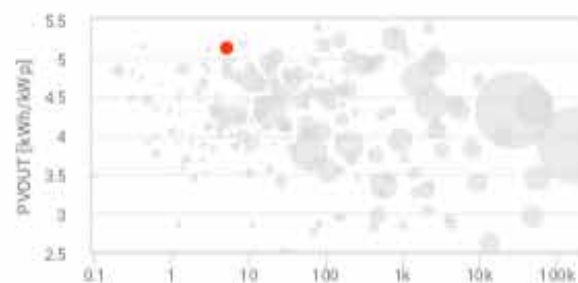
Human development index (2018)

0.71



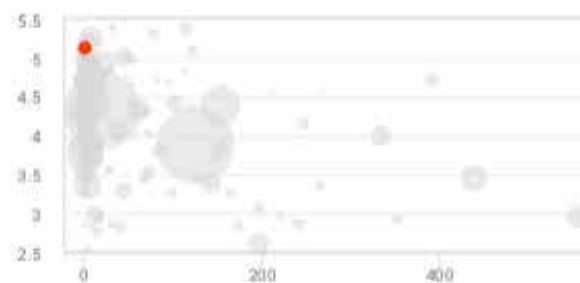
PV installed capacity (MWp, 2018)

5



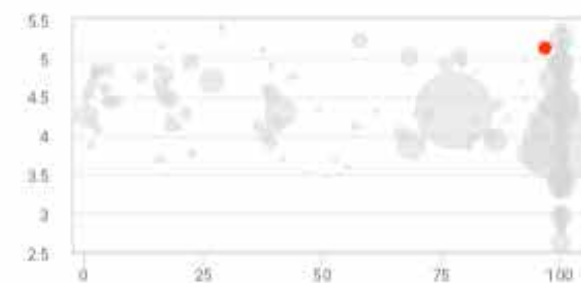
PV installed capacity per capita (Wp, 2018)

1



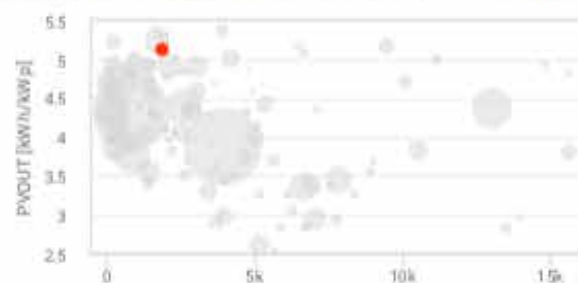
Access to electricity (% of rural population, 2016)

96.4



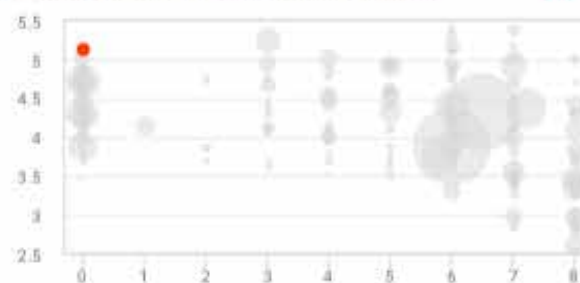
Electricity consumption (kWh/capita/year, 2014)

1,811



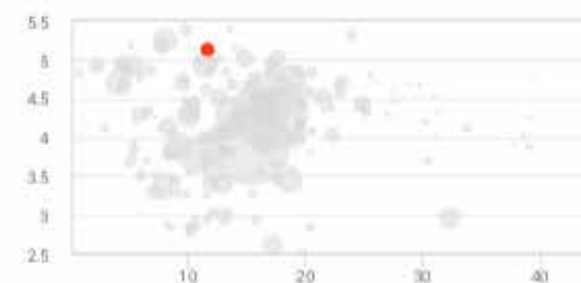
Reliability of supply and transparency of tariff

N/A



Approximate electricity tariffs (USD cents, 2019)

11.6



ABOUT

The World Bank Group publishes this factsheet as a part of the [Global Photovoltaic Power Potential study](#), analyzing data from the Global Solar Atlas, World Bank Open Data, and other public sources. It is a part of the ESMAP initiative on Renewable Energy Resource Mapping, to support the appropriate scale-up of solar power in the worldwide energy mix.

The methodology and details behind the data analytics, explaining the graphics and figures in this factsheet, are discussed in the study. The findings aim to address the needs of policymakers, project developers, financial and academic sectors, as well as professionals and individuals interested in solar energy.

This factsheet involves numerical and graphical components:

- Photovoltaic power potential map of the country with the unified color legend for all countries worldwide (thus maps from various factsheets are comparable). Minima and maxima intervals for the country are marked in the legend.
- Country zonation map, showing how the country area is split into practical potential levels 0, 1 and 2.
- Indicators section present basic country facts and statistics relevant to PV status in the country.
- Summary statistics provide selected results of country-based evaluation of theoretical (GHI) and practical potential on level 1 (PVOUT).
- Distribution of photovoltaic power output histogram communicates how much land in the country is available in practical potential levels 0, 1 and 2, and various PVOUT ranges. It helps to understand, what might be the approximate area for PV development available in the best or moderate parts of the country.
- Monthly variation of the photovoltaic power potential details the seasonal PV electricity generation throughout a typical year; it is an important supplement to the seasonality index.
- The bubble charts portray the position of the country in the global context of socio-economic and energy-related indicators. The bubble size is proportional to the population of the country. Current country is highlighted, other countries are in grey. Axis X represents the given indicator, axis Y represents the average practical PV potential at level 1.

Explore more

For more country fact-sheets, country and regional maps, interactive tools, PV calculator, statistics, reports and raster data in GIS formats visit Global Solar Atlas at <https://globalsolaratlas.info>.

More detailed data and technical solutions for specialists are provided by Solargis company (<https://solargis.com>).

GLOSSARY

Theoretical PV Potential

Global horizontal irradiation (GHI, measured in kWh/m²/day), the long-term amount of solar resource available on a horizontal surface on Earth.

Practical PV Potential

Photovoltaic power output of a PV system (specific yield, measured in kWh/kWp/day); in this case, the long-term power output produced by a utility-scale installation with fixed-mounted, monofacial c-Si modules with optimum tilt.

- **Level 0** – Practical potential disregarding any land-use constraints
- **Level 1** – Level 0 practical potential, excluding land with identifiable physical obstacles to utility-scale PV plants
- **Level 2** – Level 1 practical potential, excluding land possibly under land use regulations due to nature and cropland protection

Economic PV Potential

Levelized cost of electricity (USD/kWh) – the lifetime costs associated with construction and operation of the power plant divided by the electricity produced during this lifetime (the lower the cost, the higher is the economic potential).

PV seasonality index

Ratio between the highest and the lowest of monthly long-term PVOUT averages.

PV equivalent area

Presumed country area proportion to be covered by PV plants producing the equivalent of yearly electricity consumption. The estimated area includes both the active area of PV modules and the area between the module rows (assuming the optimum row spacing).

Total/ Evaluated area

Total area is a surface area of a country derived from official statistics, including inland water bodies and some coastal waterways. Evaluated area is a true area, from which the statistics were calculated. It includes land areas, without coastal waters, interior parts of the large water bodies, areas with missing input data and minor outliers caused by input data resolution.

Acronyms

DIF – Diffuse horizontal irradiance
 DNI – Direct normal irradiance
 GDP – Gross domestic product
 GHI – Global horizontal irradiance
 HDI – Human development index
 LCOE – Levelized cost of electricity
 PVOUT – Photovoltaic power output
 PV – Photovoltaic

DATA SOURCES

Solargis

Average theoretical potential – GHI (kWh/m²/day)
 Average practical potential – PVOUT (kWh/kWp/day)
 Distribution of photovoltaic power output
 Monthly variation of photovoltaic power output
 PV equivalent area (% of the total country area)
 PV seasonality index

The World Bank

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