

Manufacturing. Engineering. Construction.

Global Solar EPC

SOLAR POWER PLANT | ENERGY STORAGE (ESS) | SOLAR PV MODULES | LI-ION BATTERIES | POWERHUB



About Neosun

NEOSUN Energy is an Global Solar EPC company provides Commercial Solar PV & Energy Storage Solutions (ESS) with capacity from 200kW to 10MW for Commercial and Industrial projects Worldwide.

Founded in 2015 as a manufacturer of advanced solar panels and lithium-ion batteries, today Neosun provides turnkey solutions and has spread its sales to more than 16 countries around the World.

With a strong focus on R&D we develop, produce and supply an advanced energy solutions for commercial applications, while our broad global presence allows us to reduce manufacturing and logistics costs.

Worldwide Certificates:





Building the Future of Energy



“We at Neosun believe that new energy sources such as sun as well as intelligent microgrids based on scalable storage systems have the same opportunity now as the Internet did 20 years ago. It will transform the energy market and ensure transition to local energy generation based on smart grids and the Internet of Things.

It will make electricity available in any corner of the world, will change and improve lives by bringing light, internet and water to people and communities in off-grid and remote areas.”

Ilya Likhov, Neosun Energy CEO

2015

year of foundation

200+

solar energy projects completed

20%

employees in R&D

16 countries

sales geography

Manufacturing. Engineering. Construction.

1. Manufacturing of Solar Modules and Li-Ion Batteries

Neosun Energy designs and manufactures unique line of high-performance solar modules. We use the world's most advanced technologies to achieve the highest efficiency which reduce the payback period.

Our main activities

1. Construction of Solar PV Power Plants for Commercial & Industrial use

We construct solar power plants on a turn-key basis. We guarantee a high level of performance at all construction stages. All on-site processes including obtaining permits, site preparation, construction, interconnection and commissioning are managed by our experienced team.

2. Engineering & Development of Solar PV and Energy Storage Solutions

Neosun designs solar power plants of any capacity and efficiently integrates them into existing infrastructure. Our world-class experts implement the most innovative and cost-effective solutions.

3. Manufacturing of advanced Solar Modules, Li-Ion Batteries, ESS and PowerHubs

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Our Geography

Neosun Energy supplies its products, constructs and operates projects in 16 countries on 5 continents.

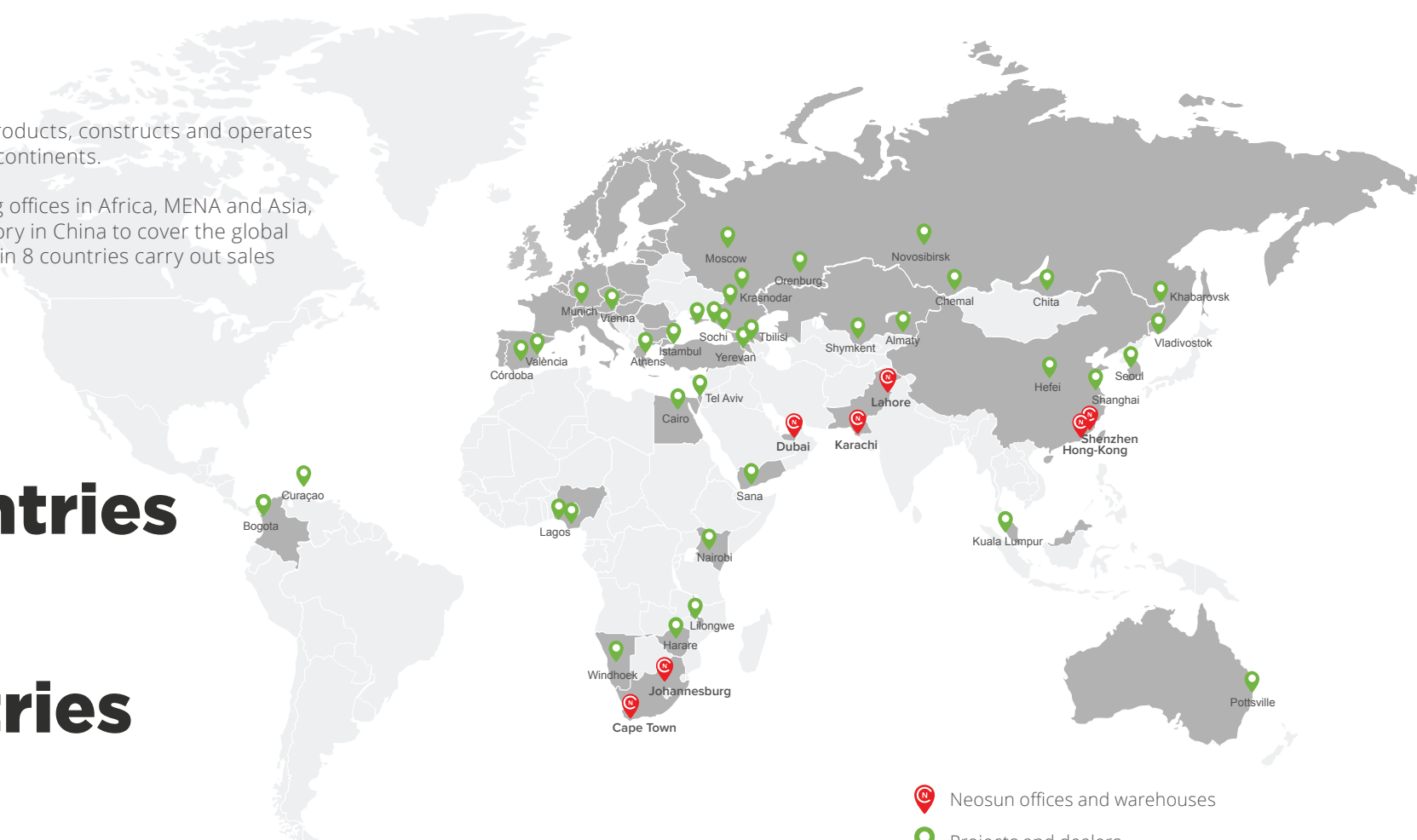
We manage 5 offices including offices in Africa, MENA and Asia, our own R&D center and factory in China to cover the global supply chain. Dealer network in 8 countries carry out sales and maintenance service.

16 countries

Neosun's sales geography

8 countries

where our dealers present



- Neosun offices and warehouses
- Projects and dealers

Solar Engineering & Construction

NEOSUN
ENERGY



Precise Investment Evaluation

We strive to maximise the return on customer investment in each of our solutions and provide a full range of evaluation services. Starting from the analysis of a site, feasibility and business case study to financial consulting. A thorough evaluation of the project allows the Neosun team to provide each customer with the most suitable technical solutions and financial tools.



In-House R&D & Manufacture Facility

The efficiency and durability of a solar power plant are determined by the components used in its construction. Our own cutting-edge production of solar modules ensures high quality standards of equipment and the R&D center works to provide you with the most advanced and reliable components for your power system.



World-Class EPC Contracting

Neosun engineering team consists of world-class specialists with experience in implementing projects from tens kilowatts to megawatt-sized power plants. We work in conjunction with the customer, equipment suppliers and the construction team to create a project that will exceed customer expectations and meet all technical and business requirements.



Advanced Project Management

The main goal of the construction team is the effective and timely completion of the project together with the best quality at each stage. We use modern approaches to construction and management so that both the customer and the Neosun team can monitor the work progress in real time and be confident in its quality.

Smart Factory & Quality Control



1 200 m²

1200 m2 of high-tech manufacturing facilities are part of Neosun Energy's perfect product philosophy. Our factory is equipped with advanced systems of automatic assembly, material inspection and quality control.

Z zero-defect strategy by Neosun

Zero-Defect Strategy

52 automatic tests detect 99.99% of defects of all kinds. Due to this, Neosun's customer return ratio is one of the lowest in the industry - less than 0.001%.



Quality Starts with R&D

Neosun products quality control starts at the stage of development. Before new product gets to mass production it undergoes rigorous testing. We are constantly improving our defect prevention system and new material verification procedures in order to improve product development processes and achieve zero defect rate.

Human-Robot Integrated Control

In the past only manual and visual quality control was available but these days photometric robots equipped with high-precision optical sensors and take on multi-stage control. Each component of Neosun product is tested for micro cracks, hot spots and precise current-voltage characteristics. Robots do not miss the tiniest defect and help to achieve the highest quality possible.



Sun Catchers

Neosun™ Solar Modules

In-house production and development department allows Neosun Energy to quickly launch the latest technologies to the market. We strive to integrate the world's best photovoltaic trends into our solutions. As a result, our solar panels are one of the most powerful, reliable and financially efficient on the market.



PERC Technology

Neosun produces mono-crystalline solar modules made with PERC technology only. These modules have a special layer on the back of the solar cell which is the thinnest laser perforated plate and increases the efficiency of the cell by 15-20%.



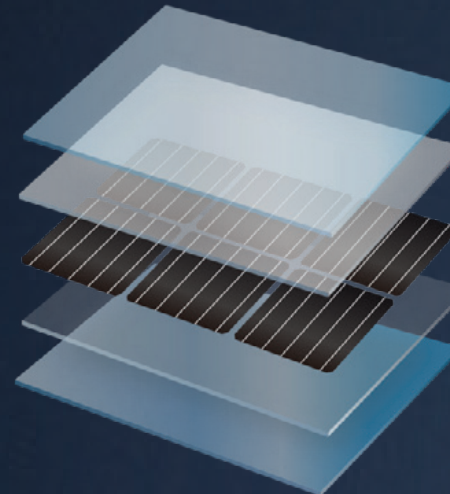
Half-Cut Cells

The laser separation of cells into two separate parts reduces resistance, increases productivity and durability of the element which together allows you to increase the module efficiency by 1.5-2% and reduce the possibility of cracks and chips of the cell if deformed.



Multi-Busbar (MBB)

The latest generation of Neosun solar modules is equipped with 9, 12 or 16 conductive buses instead of 5, which results in reduced resistance and up to 2-2.5% higher module efficiency.



25 years

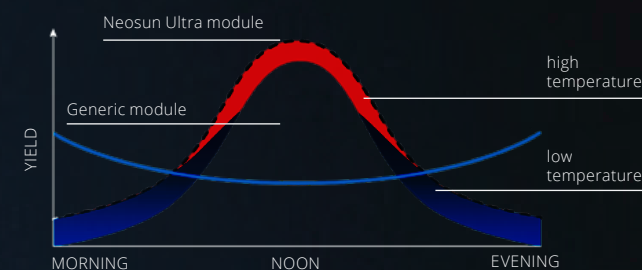
performance warranty

550 w

high power

1500 v

system operating voltage

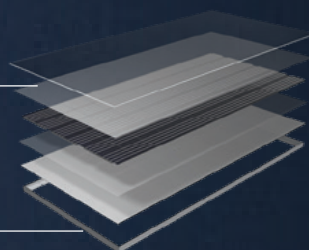


High Energy Yield

Special chemically tempered glass with AR coating reduces light reflection. Advanced PERC cells with an efficiency of up to 23% with a high tolerance to changes in temperature allow Neosun modules to maximise energy generation.

tempered glass

strengthened
aluminum frame



Durability

Neosun solar panels are certified for high snow pressure up to 5400Pa and wind pressure up to 2400Pa. It is achieved by the use of a strengthened aluminum frame and 3.2 mm tempered glass.



Lower Shading Loss

Due to the unique parallel connection system and operating voltage up to 1500V Neosun Half-cut modules continue to generate energy in low light conditions at sunset, dawn or on cloudy days.

ESS energy storage systems

Neosun Energy strives to be a leader in the new era of high-performance energy storage systems (ESS) based on lithium-ion batteries. We deliver eco-friendly, safe and durable energy storage systems for homes and business with capacities from 5 kWh to 10 MWh and make innovations affordable.



Industrial Power Systems

Customisable container ESS for industrial use



Solar and wind power plants



Power grid substations



Industries and construction



Storages for Enterprises

Neosun HV Cluster allows you to connect up to 16 lithium-ion battery modules.



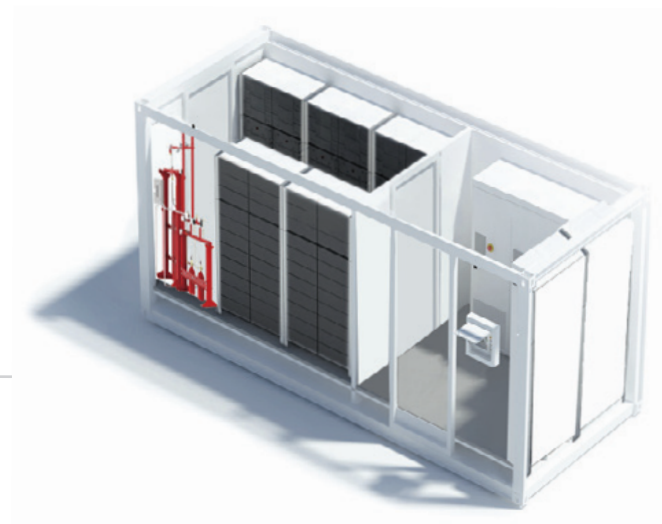
Data centres



Telecom



Light and medium-sized industries



NEOSUN PowerHub

The simple and flexible solution for off-grid and remote applications



Build Smart Grids and Microgrids

The Neosun ESS Li-ion cluster system with capacities from 30kWh to 500kWh combined with the energy management system (EMS) are able to coordinate various sources of power and form the basis for the construction of microgrids, smart grids and even smart cities.



Peak Shaving

The system allows to compensate for peak loads and to avoid the use of high power transformers. Li-ion batteries instantly respond to any changes in power and keep it within specified limits.



Reliable Backup Power (UPS)

Energy storage solutions based on Neosun Li-ion batteries increase power supply reliability and provide backup power during an emergency shutdown. They are indispensable at facilities where full autonomy is required.



Store Excess Power from Solar and Wind

Storage of the excess electricity that the solar power plant generates during the day maximises the efficiency of the plant and reduces energy costs. Intelligent software predicts electricity consumption and automatically distributes the accumulated electricity to reduce charges.

ESS Application

Hybrid Solar Gas-Turbine Power Plant with ESS 10 MWh, 3 MWh

Neosun™ Li-ion batteries

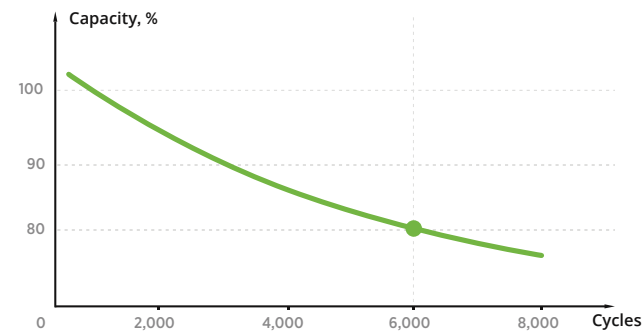
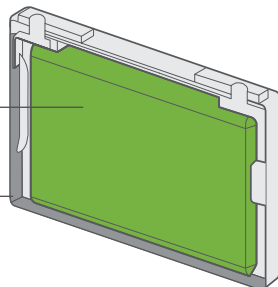
Neosun Li-ion batteries with a high specific power density and a lifetime of more than 20 years are the ideal solution for storage systems of any capacity. Compact and scalable with a modular design for a 19" rack, it makes it easy to increase the system capacity from a few kWh to megawatt scale.

8000 cycles

Unlike lead batteries, Li-ion ones do not significantly degrade from discharge — they can be discharged up to 90-95%. The built-in charge management system (BMS) and the latest 80 production technologies make it possible to achieve Neosun battery lifetime of more than 8,000 cycles with at least 80% of initial capacity.

Multi-layer cell protection

External aluminium case



*Neosun Lab testing (DoD 90%, 1C/1C at 25°C)

Safety First

Safety is Neosun's top priority. The battery cells are covered with multi-layer protection. The external aluminium case has a high thermal conductivity which allows to safely remove heat and serves as reliable battery protection.





PRESENT



FUTURE

Sustainable Design

Modular design of Neosun batteries allows you to quickly install and scale the system to increase the capacity to megawatt size.

We are constantly improving the battery capacity and characteristics keeping the form factor unaltered so that you can increase the capacity of the system without changing the infrastructure.

Rack 19"

standard rack size for easy scalability

4x smaller

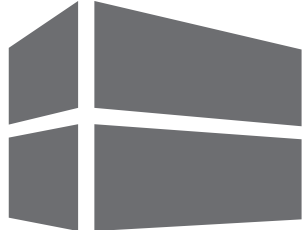
than lead-acid batteries

Less Space for Higher Capacity

High density is one of the main advantages of Li-ion batteries which makes them much smaller in comparison to traditional lead batteries. This means less storage space and no need to expand the infrastructure when upgrading.



Li-ion



Lead-acid

Operation & Maintenance of Solar Power Plants

Even the best technology needs supervision and maintenance. The proper service and maintenance of solar systems can reduce the payback period, extend the service life and increase annual electricity generation by up to 30%.

Neosun Energy provides a comprehensive service for solar power plants. We install structural elements, inspect solar plants with thermal imaging, do remote monitoring and even clean modules and remove vegetation.

Cleanness of modules is crucial since their pollution leads to faster degradation and loss in generated electricity which extends the payback period.

Trust maintenance to Neosun professionals to ensure your solar installation always works at its best.



Service in Details

Even the most insignificant factors can sometimes cause serious problems that negatively affect your profit. In addition to technical services Neosun offers pest removal, module cleaning, system protection and vegetation control.



ESS Maintenance

Inspection and maintenance are critical to energy storage systems performance. Neosun offers comprehensive maintenance services for batteries, BMS, inverters, communications and medium and high voltage equipment to identify problems in advance and minimise the risk of downtime.

Neosun Projects Worldwide

Reference list of selected projects constructed with Neosun equipment

Neosun products meet the diverse array of customer's aims and purposes. Extensive experience in implementing projects around the world allows us to design and construct truly unique and interesting objects.

Neosun strives to provide high-end solutions to meet the demands of any customer regardless of industry. It can be a small grid for private house or a huge solar power plant built for industrial and commercial enterprise or government.





SOLAR EPC

SOLAR MODULES

LI-ION BATTERIES

ENERGY STORAGES

POWERHUB

SOLAR POWER PLANTS

CONSTRUCTION



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