



Integrating solar PV with energy storage: comprehensive approach to grid independence



Ilya Likhov
FOUNDER & CEO
of Neosun Energy



NEOSUN ENERGY NOW



NEOSUN is a Global Solar Energy EPC company:

Company provides Commercial Solar PV power stations & Energy Storage Solutions (ESS) with capacity from 200kW to 10MW for Commercial and Industrial projects Worldwide

2015

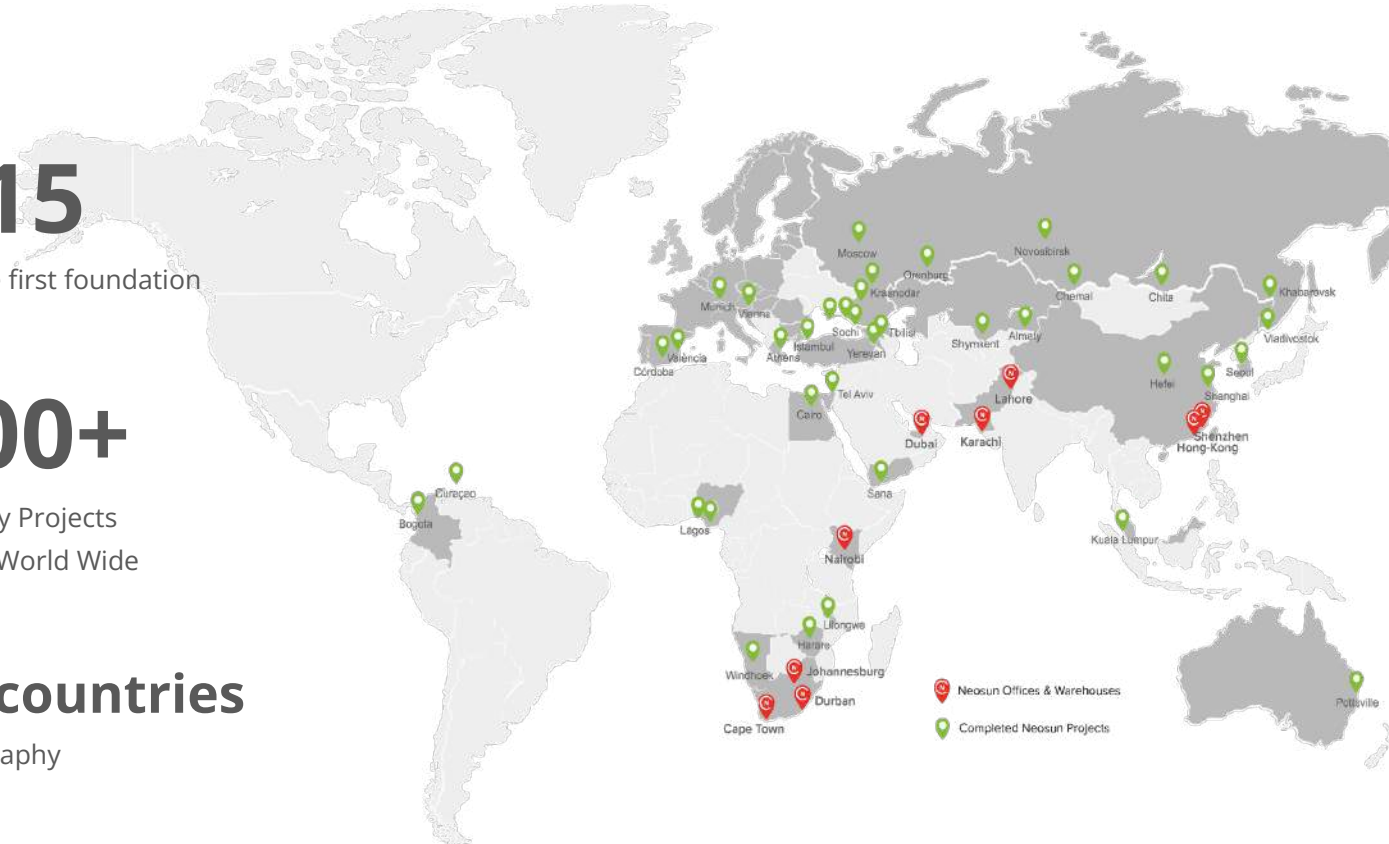
Year of the first foundation

1200+

Solar Energy Projects completed World Wide

16 countries

Sales geography



OUR MAIN ACTIVITIES

1. Solar PV Plants (200kW – 10MW) – full EPC Construction

NEOSUN Energy focuses on design and construction of commercial solar power plants of various capacities and efficiently integrates them into the existing infrastructure. Our world-class experts implement the most innovative and cost-effective solutions. Worldwide.

2. Solar modules & ESS production

We also manufacture high-performance solar modules. We use the world's most advanced technologies to achieve the highest efficiency which reduces the payback period.

3. Energy Storage (ESS) Design & Construction

4. Neosun PowerHub & Solar Carport

5. Projects Operation & Maintenance (O&M)

Some of our customers

[see more projects on our website](#)



NEOSUN COMPLETED PROJECTS



December 2024 | South Africa 

Dayizenza Mall

1 MW

Installed capacity

1600+ MWh

Energy Yield

2 months

Project duration

[Project installation video](#)

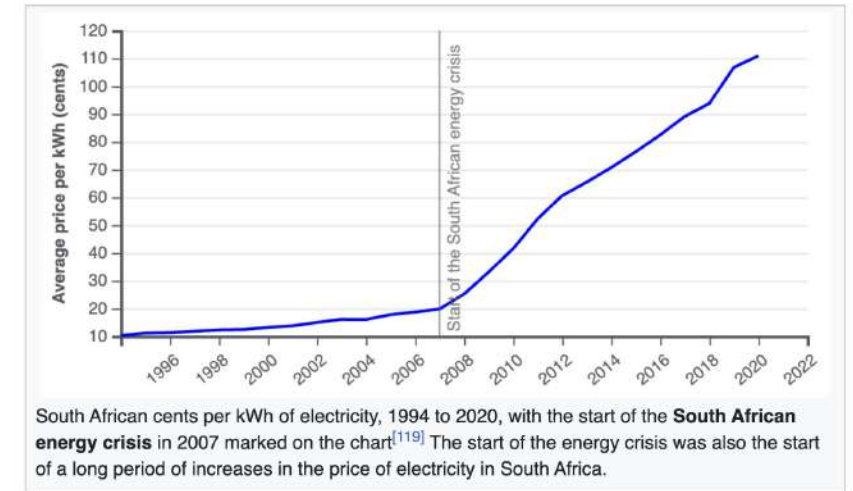
[Website link](#)



ENERGY CRISIS IN REMOTE AREAS

Around **750 million** people worldwide lack access to electricity, with Africa accounting for 80% of this total.

In sub-Saharan Africa alone, **600 million** people, or approximately 53% of the region's population, live without access to electricity.

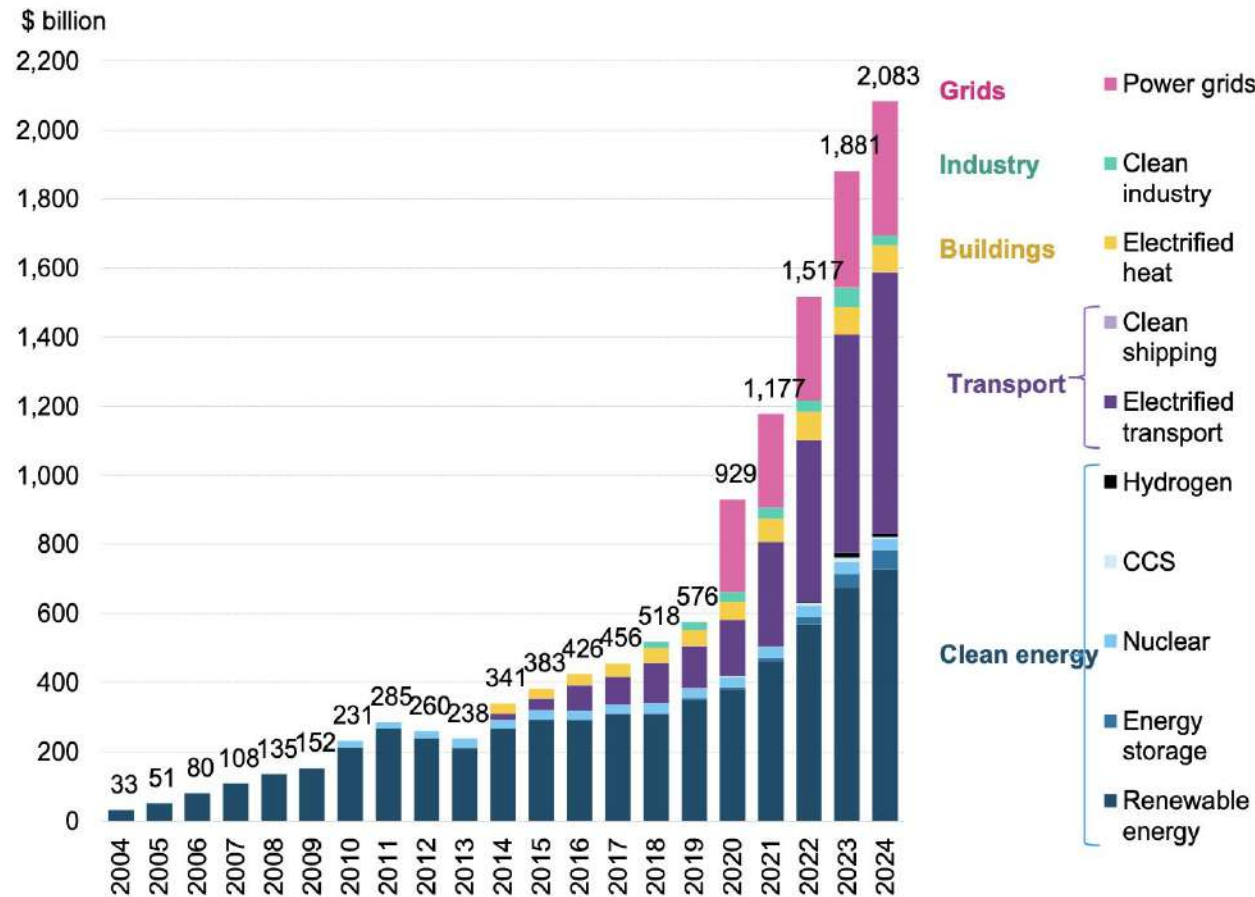


up to **80%**
of Africa has no access to Grid

over **10 Mln**
enterprises with limited or
no access to the Grid

STATISTICS: INVESTMENTS IN RENEWABLE ENERGY

Global investment in energy transition, by sector



\$728 billions in 2024

*source [Bloomberg](#)

Solar energy cost dropped to:

\$0.04 / kWh for Solar on-grid

\$0.06 ~ \$0.12 / kWh for Solar Off-grid

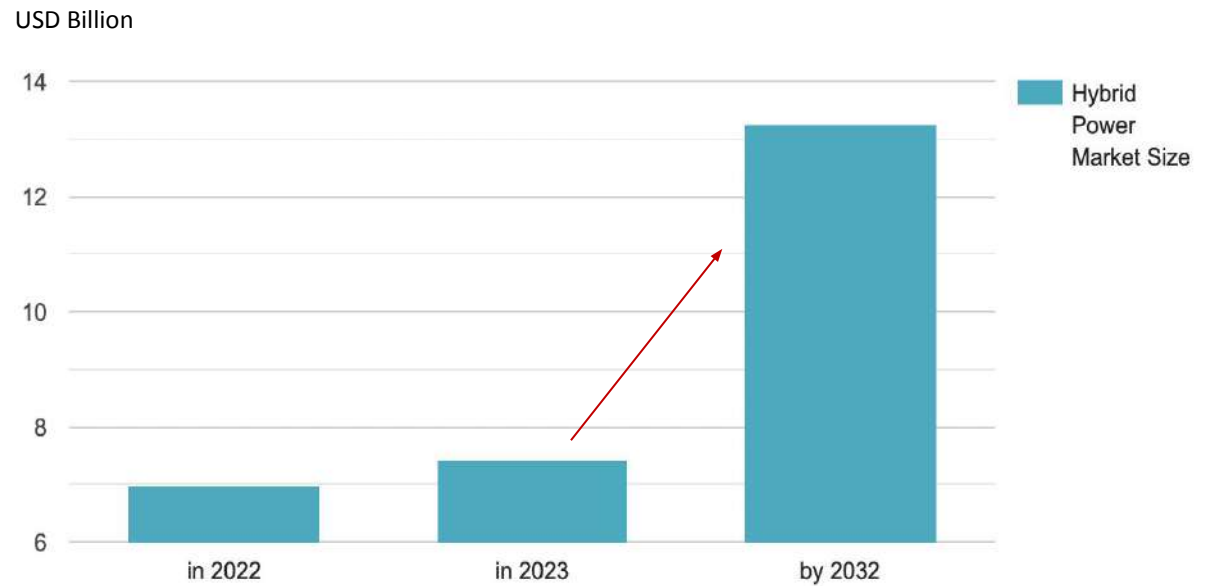
VS

\$0.35 ~ \$0.50 / kWh for Diesel Genset

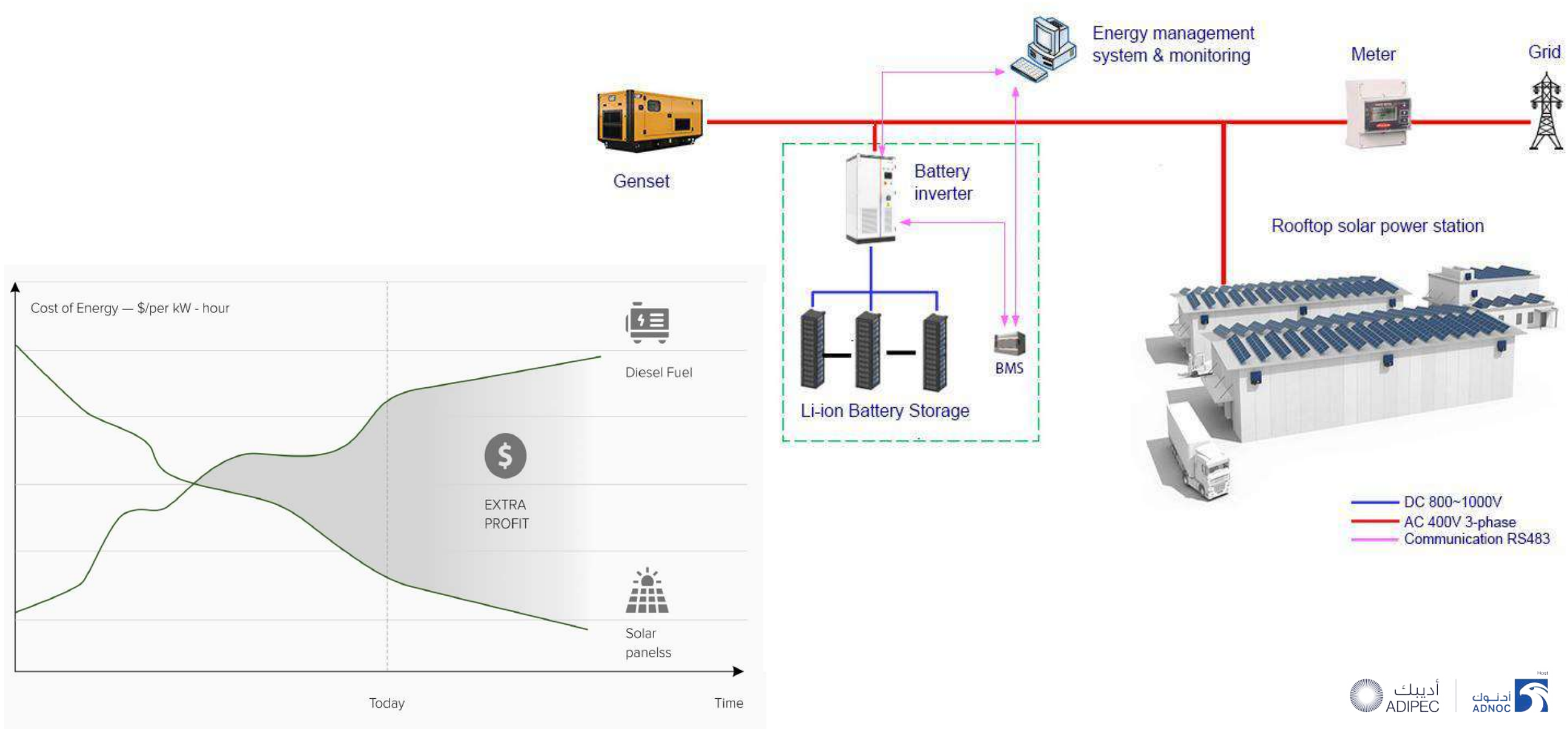
Source: BloombergNEF. Note: Start years differ by sector but all sectors are present from 2020 onwards; see [Methodology](#) for more detail. Most notably, nuclear figures start in 2015 and power grids in 2020. CCS refers to carbon capture and storage.



The global hybrid power system market size was exhibited at USD 6.96 billion in 2023 and is projected to hit around **USD 13.26 billion** by 2032, growing at of 6.66% during the period 2023 to 2032.



HYBRID ENERGY SYSTEM CONFIGURATION



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 MW 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.



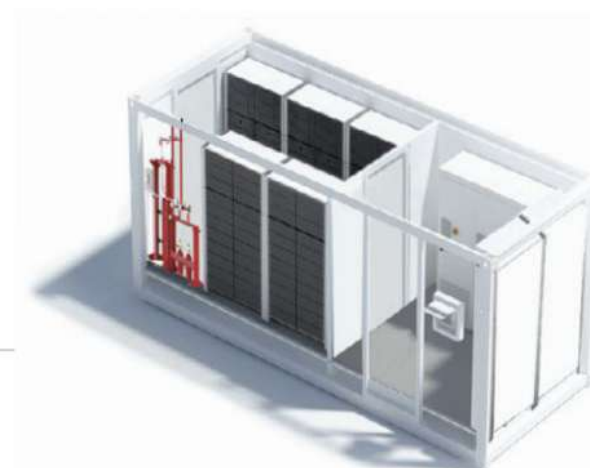
Data centres



Telecom



Light and medium-sized industries



NEOSUN PowerHub

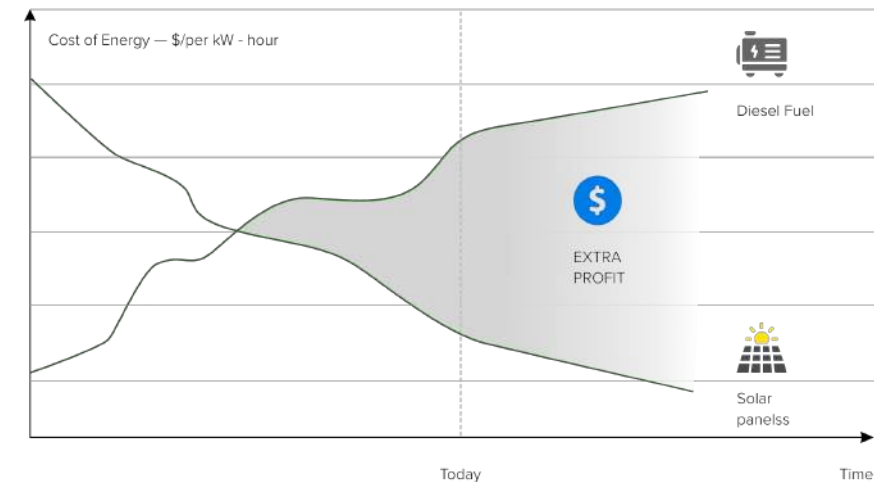
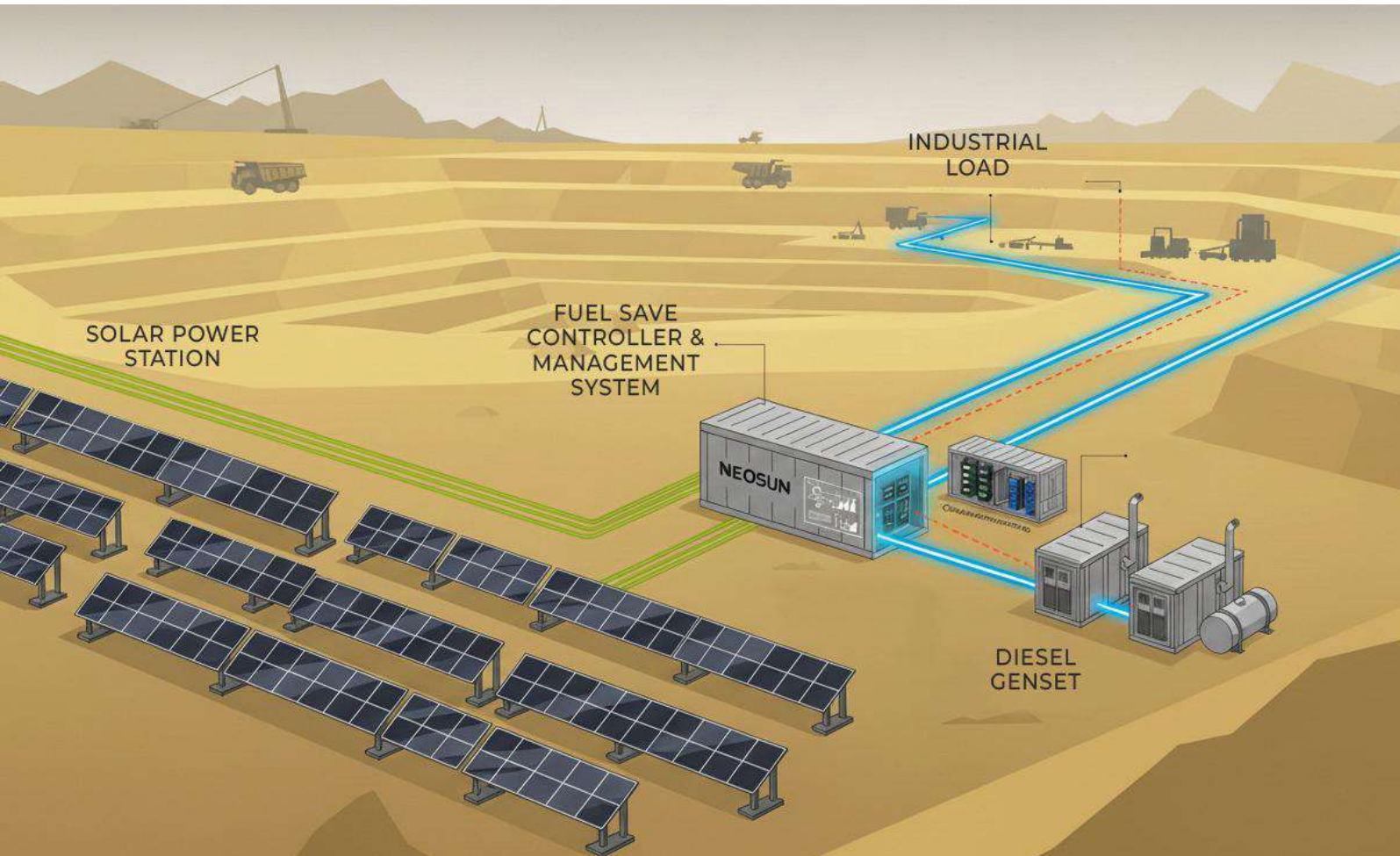
The simple and flexible solution for off-grid and remote applications

100%

Off-grid

FUEL SAVE SOLUTION - WITHOUT BESS

The Fuel Save Controller (FSC) measures the load and available solar power in real time and sets the operating points for PV inverters, synchronizing their operation with the gensets. It prevents reverse power flow into the diesel generators and keeps them running within an optimal range of speed and fuel consumption, reducing expensive fuel usage by up to 70%.



up to **70%**

fuel usage reducing

\$0.06 ~ \$0.12 / kWh
for Solar Off-grid

NEOSUN PowerHub

Unit power
50+ kW

Battery storage
100+ kWh

Deploy
2~4 hours

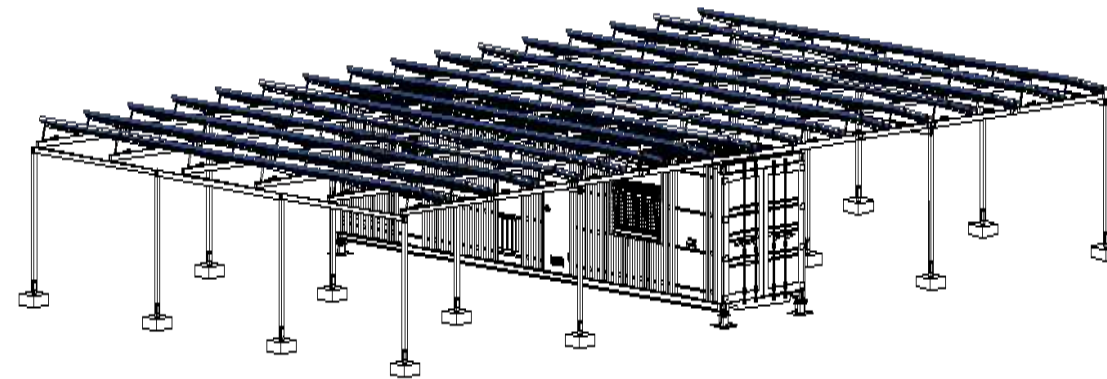
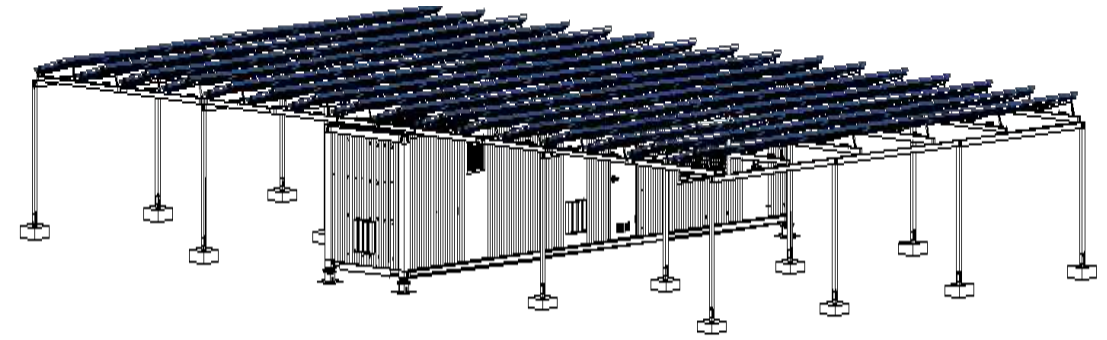
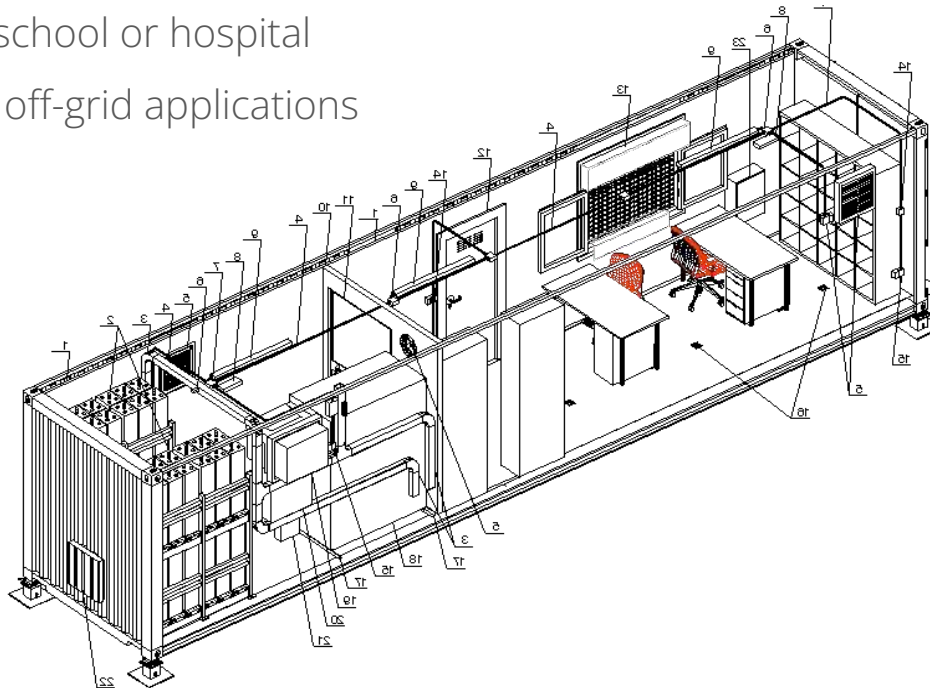
Configuration
Scalable



PowerHub Functionality

Applications:

- Mining & Industrial facilities
- Road construction
- Rural grocery shop
- Post Office
- Bank branch
- Rural school or hospital
- Other off-grid applications



PowerHub Functionality

Inside, the container serves as a fully independent and functional office space



EXAMPLE OF COMPLETED PROJECT



December 2021

Polymetal & Neftisa

Siberia, Russia

300 kW

installed capacity





MICROGRID:
a local energy grid with
capability control



Contacts



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