

InterConti Trading

Connecting the World

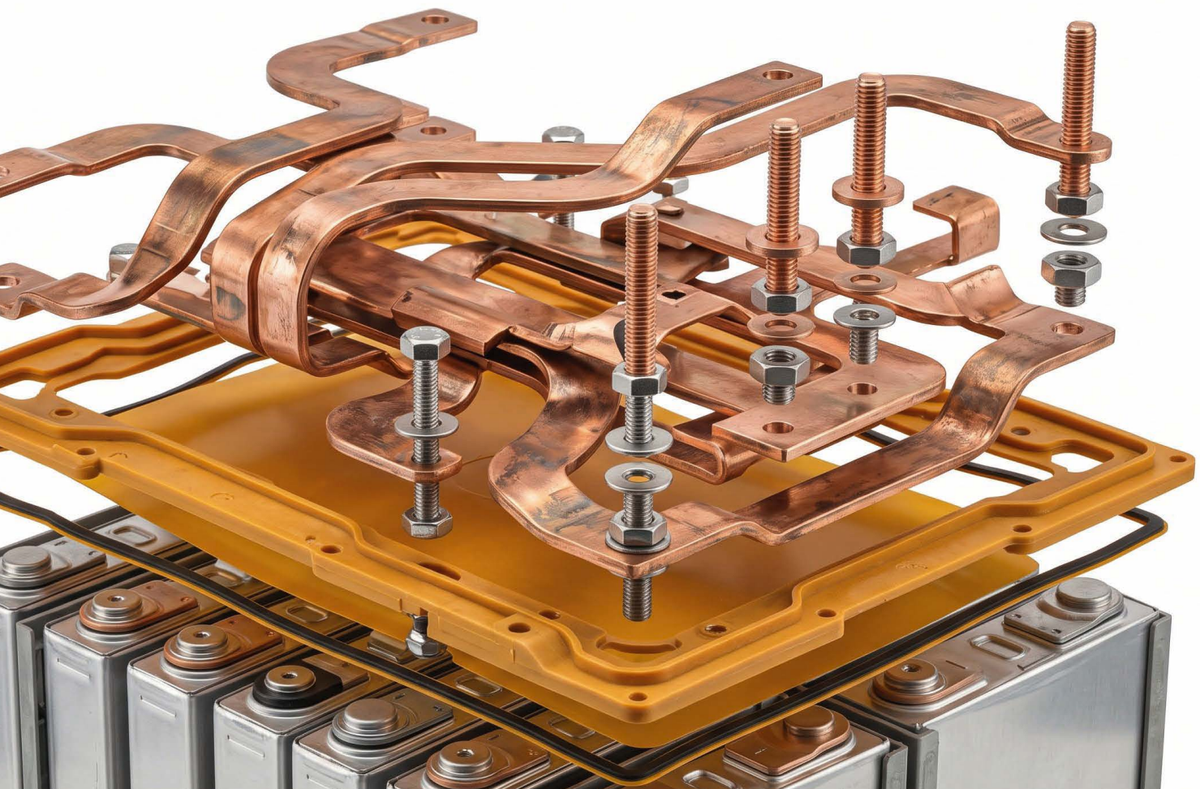
ENERGY SOLUTIONS

Adaptable, modular
Energy Storage Systems
generating value across
the entire power grid

InterConti Trading s.r.o.

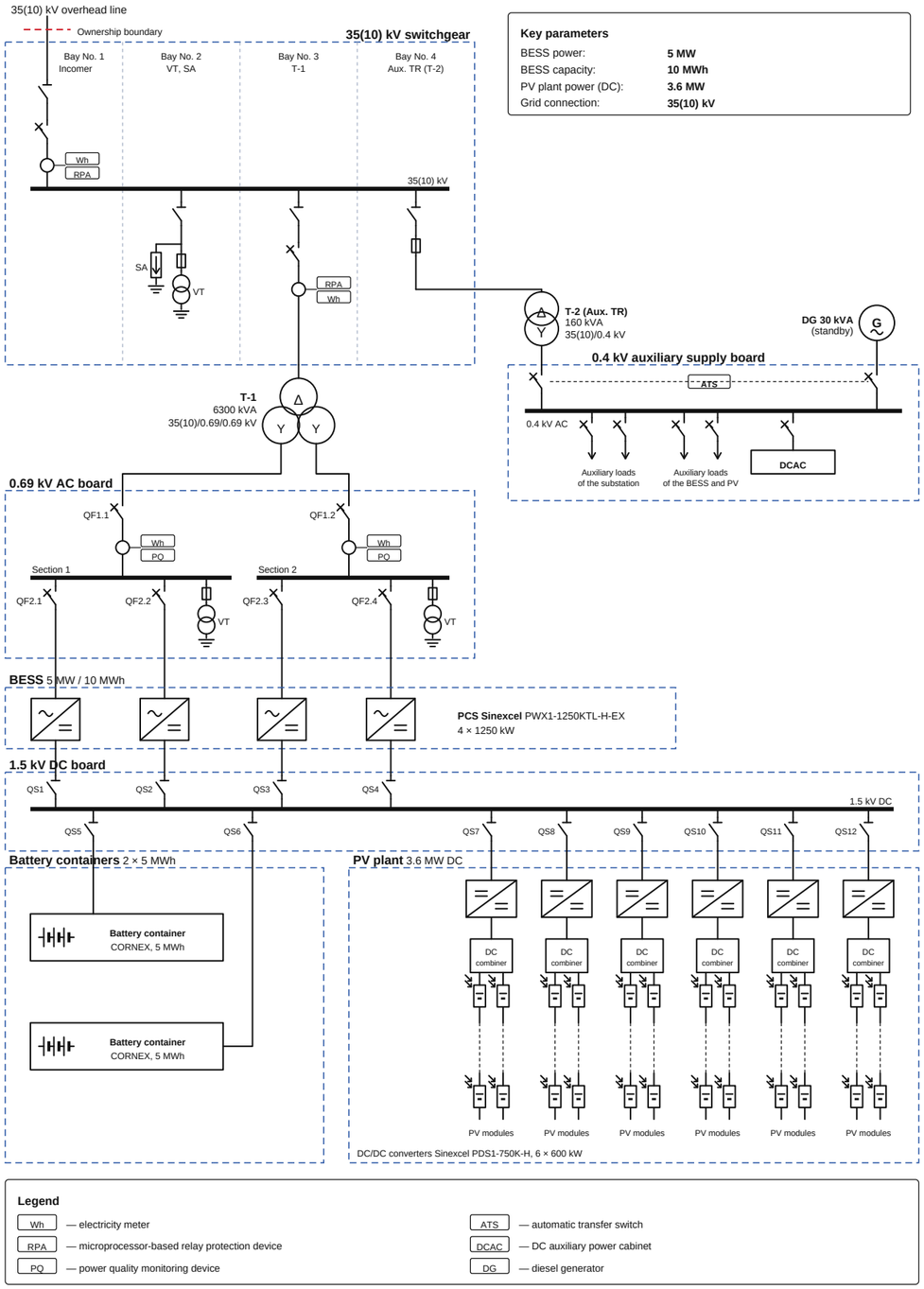
TRANSFORMING

your **energy needs** into
a **competitive advantage**



SINGLE-LINE DIAGRAM: PV PLANT + BESS

DC-coupled integration of the PV plant and the BESS



Key parameters

BESS power:	**5 MW**
BESS capacity:	**10 MWh**
PV plant power (DC):	**3.6 MW**
Grid connection:	**35(10) kV**

Legend

- Wh — electricity meter
- RPA — microprocessor-based relay protection device
- PQ — power quality monitoring device
- ATS — automatic transfer switch
- DCAC — DC auxiliary power cabinet
- DG — diesel generator

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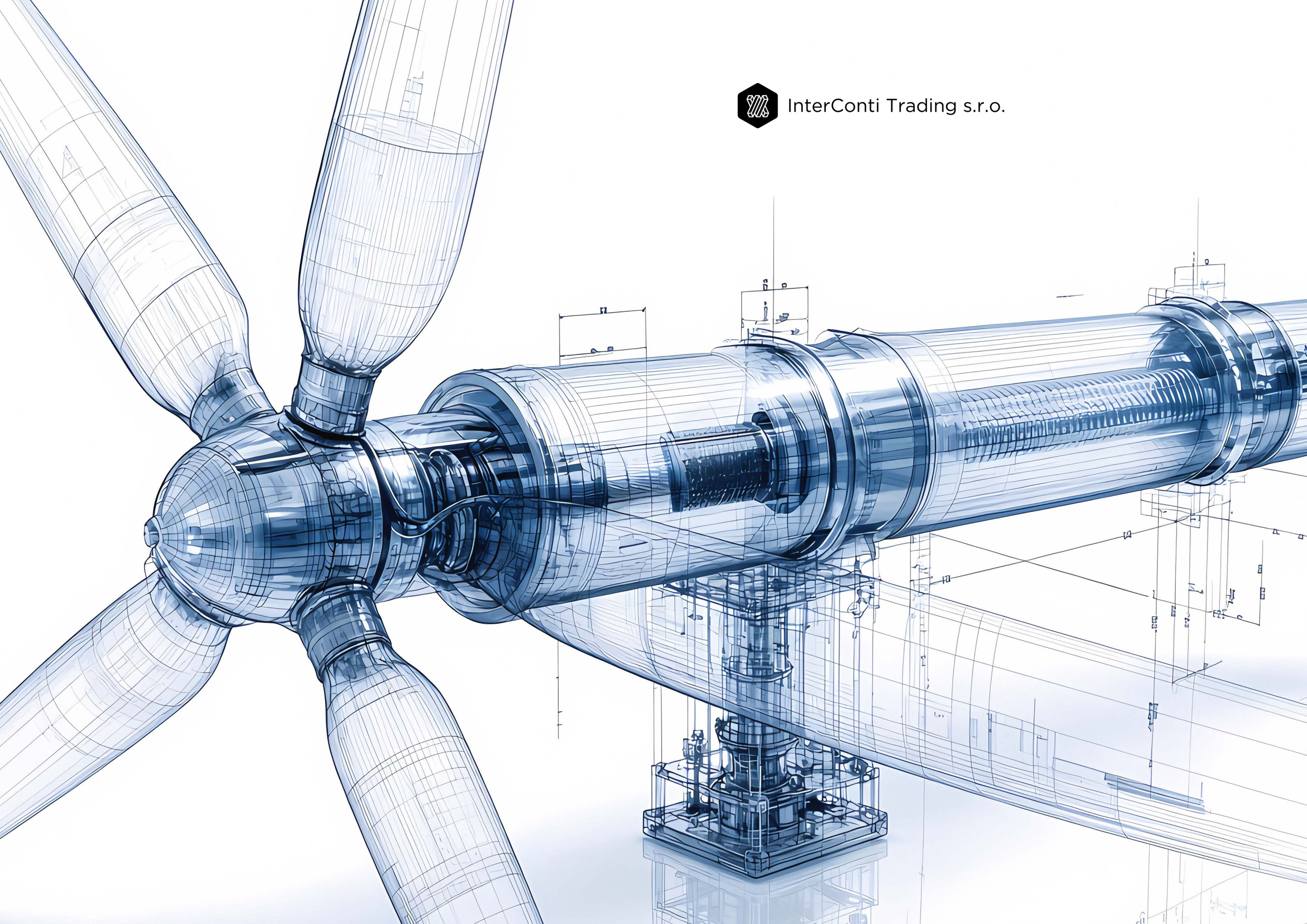
48 About MINGYANG ELECTRIC

50 MINGYANG ELECTRIC products

74 About SINEXCEL

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InterConti Trading s.r.o.



INTERCONTI TRADING S.R.O.

InterConti Trading s.r.o. is a European system integrator and BESS solutions architect for energy projects.
The company specialises in the design and delivery of turnkey Battery Energy Storage Systems (BESS) for the Commercial & Industrial (C&I) and Utility-Scale segments across Ukraine and the EU.
As a single accountable partner, we combine expertise in system architecture, system integration and EPC delivery to provide reliable, end-to-end energy storage solutions.

WE INTEGRATE EQUIPMENT FROM DIFFERENT SUPPLIERS **FOR EFFICIENCY** AND RELIABILITY

WE DESIGN THE ARCHITECTURE AROUND **SITE REQUIREMENTS** AND OPERATING CONDITIONS

WE PROVIDE ON-SITE SCADA TO INTEGRATE ALL DEVICES

WE ADAPT SOLUTIONS TO UKRAINIAN AND EU REQUIREMENTS, **INTEGRATING THEM INTO EXISTING INFRASTRUCTURE**

We deliver the full project life cycle

Feasibility study and design

- Comprehensive site and market analysis
- Optimized Solution & Specifications
- Permits and certification

Construction and commissioning

- Turnkey construction and installation
- Factory acceptance and site testing
- Safe and compliant grid connection

Management and operation

- Single-point project accountability
- Reliable long-term asset operation
- Lifecycle Care & Monitoring

Technical support and development

- Continuous upgrades & modernization
- 24/7 technical support
- Knowledge transfer & staff training

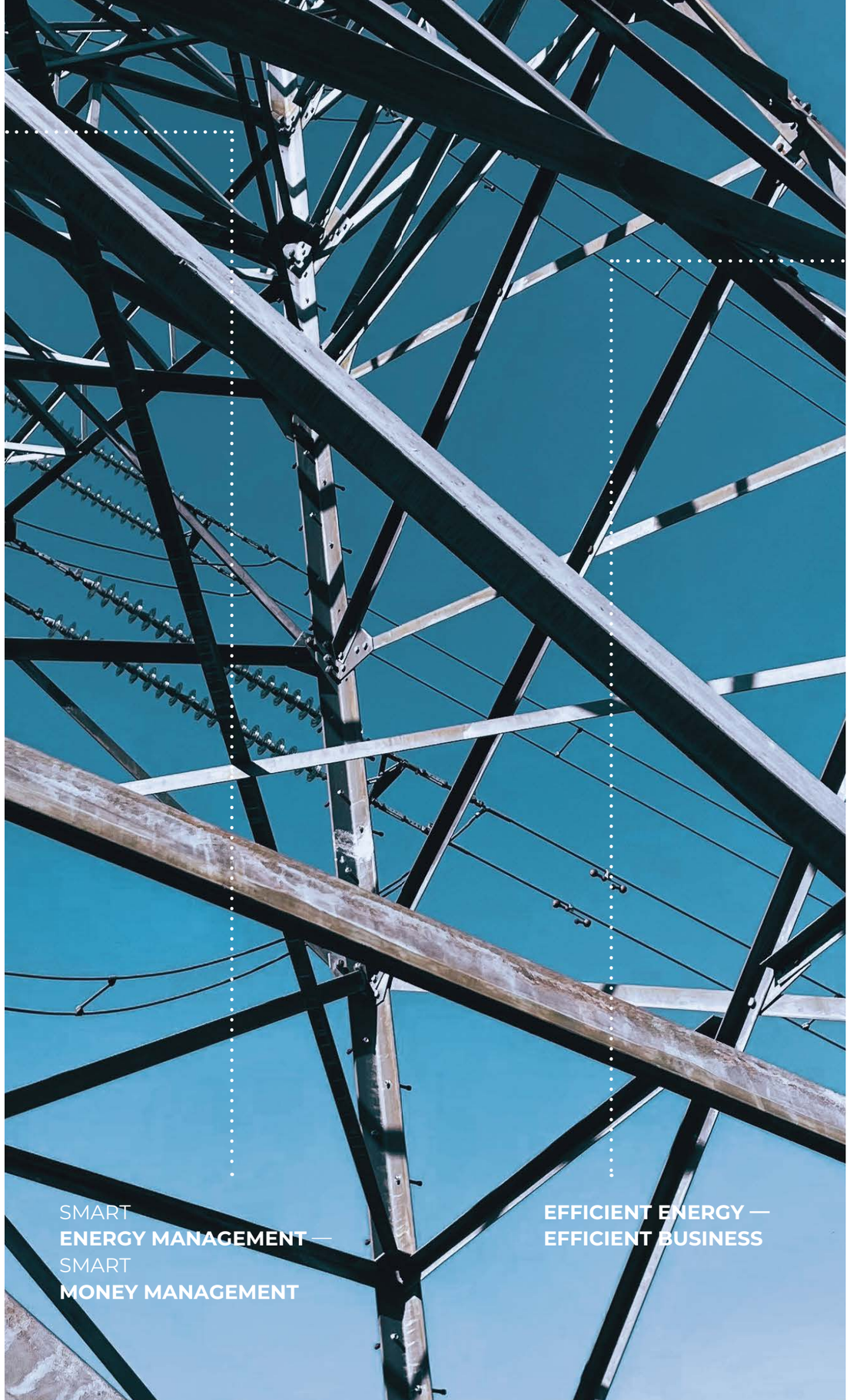
OUR PROJECTS ARE BACKED BY **RELIABLE** LOCAL **SERVICE**, **OUR OWN WAREHOUSE** IN UKRAINE, **EFFICIENT LOGISTICS** AND **PROMPT PROJECT EXECUTION**

EXPERTISE. EXPERIENCE. KNOW-HOW.

InterConti Trading delivers energy storage projects across the full life cycle — from designing the architecture for different use cases to commissioning and subsequent operation.

USE CASES DELIVERED:

- Peak shaving and consumption optimisation
- Energy arbitrage and market participation
- Backup power and improved reliability
- Island mode with renewable integration
- aFRR service provision
- Utility-scale projects



INTERCONTI TRADING – YOUR **TRUSTED PARTNER** IN ENERGY PROJECTS ACROSS UKRAINE AND THE EU


LETTER OF
GRATITUDE
PRESENTED TO
INTERCONTI TRADING S.R.O.
On behalf of all Ukrainian nation accept our respect and appreciation for being a significant part of ReBuild Ukraine exhibition and conference
13-14 November 2025
Warsaw | Poland
DEVELOPED BY PREMIER
ReBuildUkraine.in.ua


ГРОМАДСЬКА СПІЛКА «ЕНЕРГЕТИЧНИЙ СОЮЗ»
PUBLIC ASSOCIATION «ENERGY UNION»
СЕРТИФІКАТ
ЧЛЕНА ГРОМАДСЬКОЇ СПІЛКИ
"ЕНЕРГЕТИЧНИЙ СОЮЗ"
цим сертифікатом підтверджується, що
ТОВ "ІКТ ЕНЕРГІЯ"
є дійсним членом
Громадської Спілки «Енергетичний Союз»
Голова Спілки Таїсіна Ольга
м. Київ
23.01.2025


REBUILD UKRAINE
CONSTRUCTION & ENERGY
LETTER
OF GRATITUDE
presented to
INTERCONTI TRADING S.R.O.
On behalf of all Ukrainian nation accept our respect and appreciation for being a significant part of ReBuild Ukraine exhibition and conference
13-14 November 2024
Warsaw | Poland
DEVELOPED BY PREMIER
ReBuildUkraine.in.ua

BESS PROJECTS DEPLOYED

Ukraine

>500 MWh in progress



43 sites

9 regions

70 integrated solutions in 2026

76 solutions in progress (Q1–Q2 2027)

EU

>100 MWh in progress



>20 integrated solutions

8 projects in progress (Q2–Q3 2027)

BESS
USE CASES



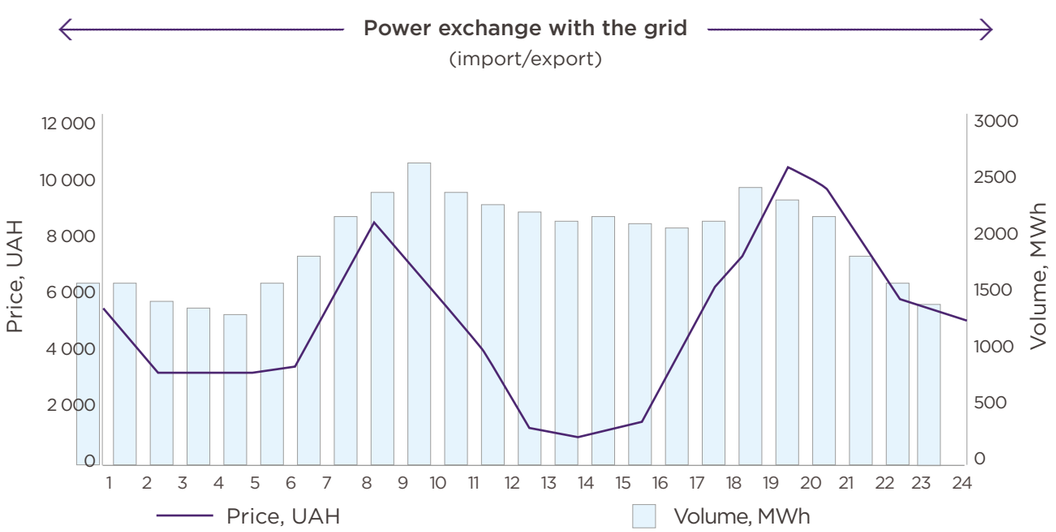
ENERGY ARBITRAGE ON THE DAM

A strategy of buying electricity during low-price hours and selling it (or offsetting consumption) during high-price hours using energy storage systems.

Night-time charging (low price)
Purchase on the DAM/IDM

Daytime discharging (high price)
Sales or portfolio optimisation





Day-ahead and intraday markets

Price arbitrage

Price-based optimisation

BACKUP POWER AND ISLAND OPERATION

Uninterrupted power supply to critical loads during external grid outages through automatic transition to island mode. The system maintains stable voltage and frequency, so operations continue without process interruption. A classic solution for critical infrastructure sites.



Island mode
Autonomous system operation

Off-grid operation
Support for critical loads

Fast transfer switchover < 100 ms
Seamless switchover

Backup for industry
Uninterrupted power for industrial sites

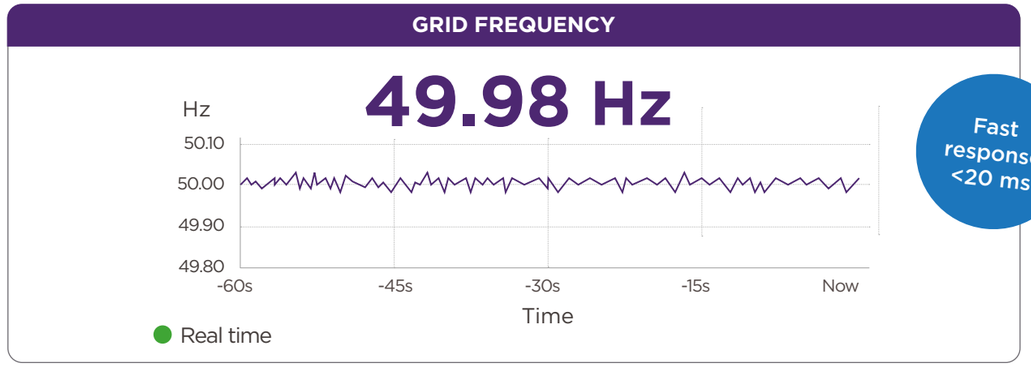
Flexible control
Load prioritisation

Protection of critical processes
Reliable operation of critical equipment

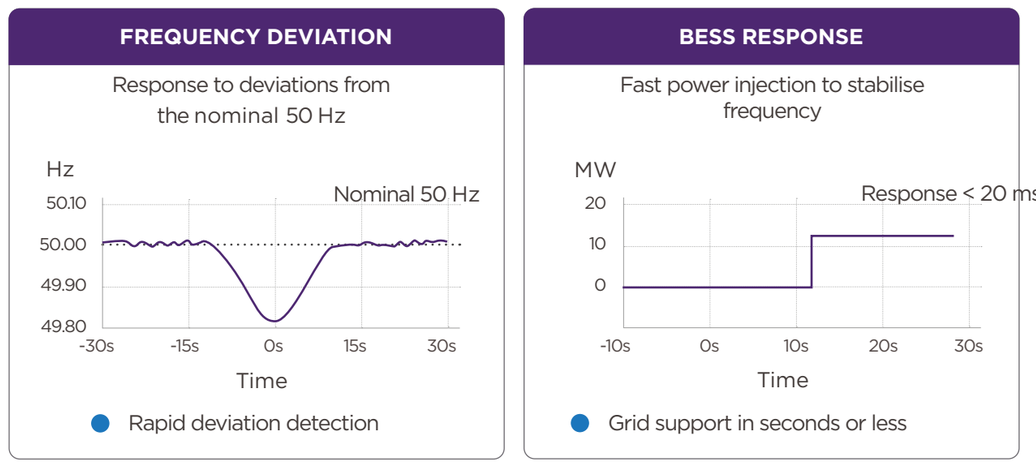
UNINTERRUPTED OPERATION. EQUIPMENT PROTECTION. COST OPTIMISATION.

FREQUENCY REGULATION

A BESS responds rapidly to grid frequency deviations — within fractions of a second to a few seconds — supporting power system stability.
Typical applications are Primary Frequency Response and Fast Frequency Response, which help maintain the balance between generation and consumption.







ANCILLARY MARKET SERVICES (FCR / aFRR)

Energy storage systems participate in the ancillary services market, providing fast frequency support and power system balancing.
A BESS can respond within milliseconds, helping grid operators maintain stability and quality of supply.

Key Features

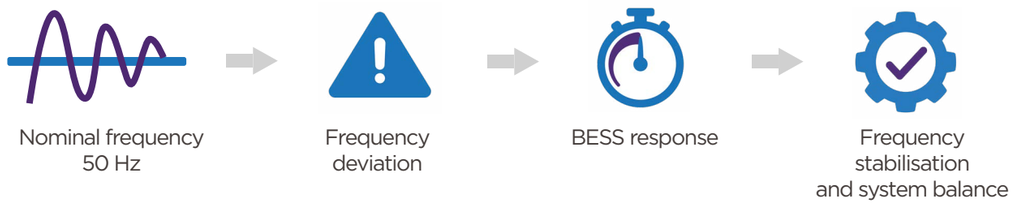
01 POWER
MW-scale systems

02 OPERATING MODES
FCR / aFRR

03 FREQUENCY SUPPORT
Fast and accurate response



How a BESS responds to frequency deviations



POWER SURPLUS ON THE GRID (>50 HZ) → **BESS CHARGES / ABSORBS POWER**

POWER DEFICIT ON THE GRID (< 50 HZ) → **BESS DISCHARGES / INJECTS POWER**

PEAK SHAVING

An energy storage system reduces peak grid demand by discharging during periods of maximum consumption. This helps lower demand-related charges, optimise the site's load profile and reduce grid dependence during expensive periods. The system operates automatically according to predefined schedules or real-time load conditions.
By supplying additional power during demand peaks, a BESS helps maintain grid import within defined limits. Intelligent EMS control optimises charging and discharging, reduces operating costs and improves the use of existing grid infrastructure.

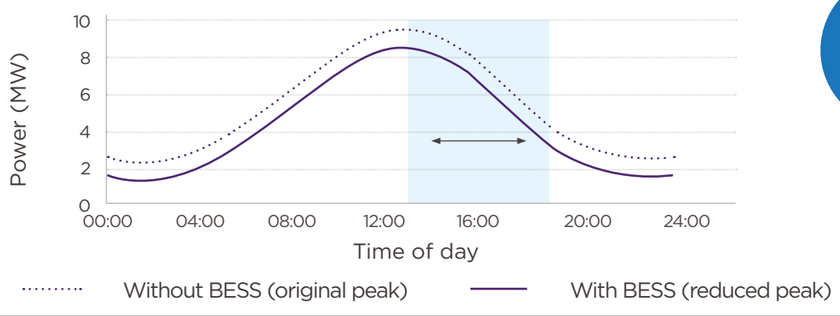
Lower capacity charges

Optimised use of capacity

Reduced peak load



LOAD PROFILE

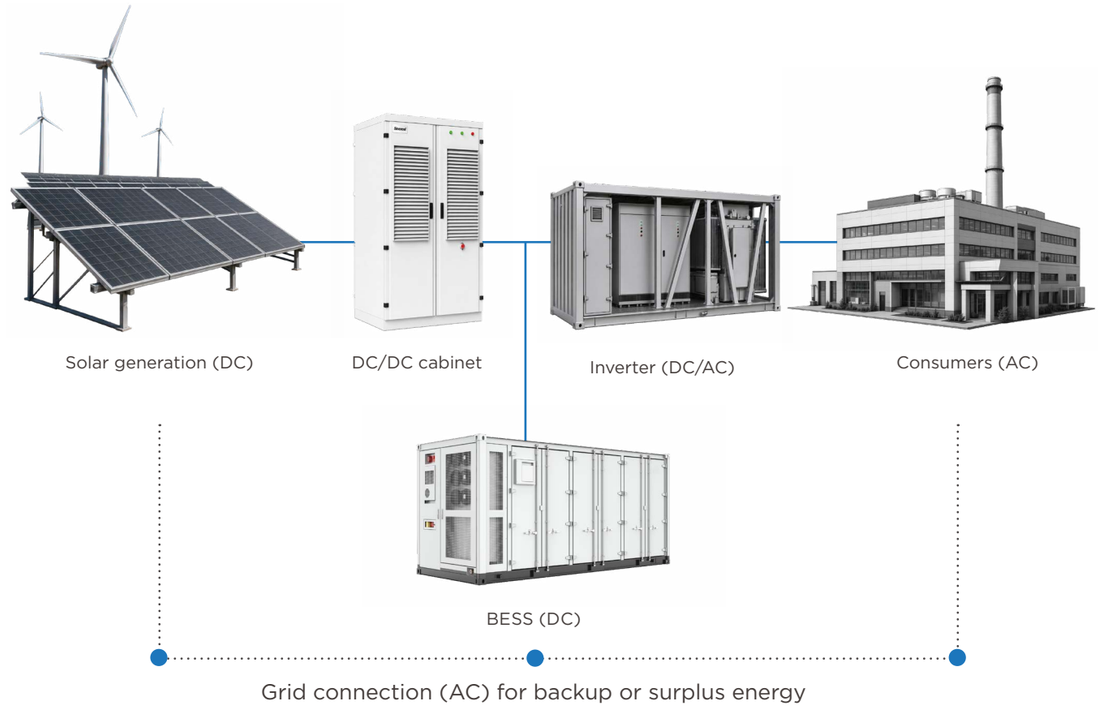


BESS discharge during peak hours

SPP + BESS VIA A DC/DC CABINET

A hybrid solar generation and energy storage solution using a DC/DC cabinet for efficient DC coupling and flexible energy management.

Extended DC-Coupled System Architecture



DC coupling
Efficient control of energy flows

Maximised self-consumption
Maximises use of solar generation

Flexible storage
PV-charged BESS

No Additional grid-tied inverters
Faster installation

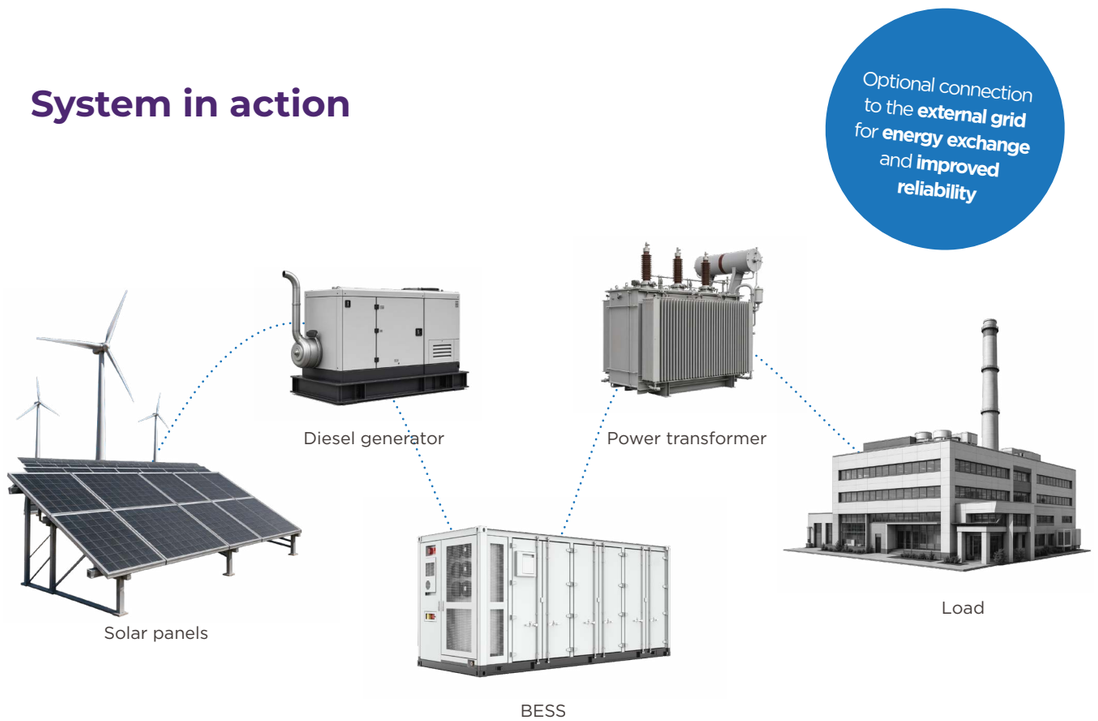
No additional transformer needed
Lower Capital Expenditure

+5–7% PV efficiency
Lower energy losses

MICROGRIDS AND HYBRID SYSTEMS

A microgrid is a local power system able to operate either autonomously or in conjunction with the main grid. The BESS is the key element, balancing generation, storage and consumption, and increasing the reliability and flexibility of the site's power supply.

System in action



Applications

Remote sites
Stable power supply in isolated areas

Campuses and infrastructure
Optimised power supply for educational and commercial buildings

Industrial sites
Greater reliability and energy independence

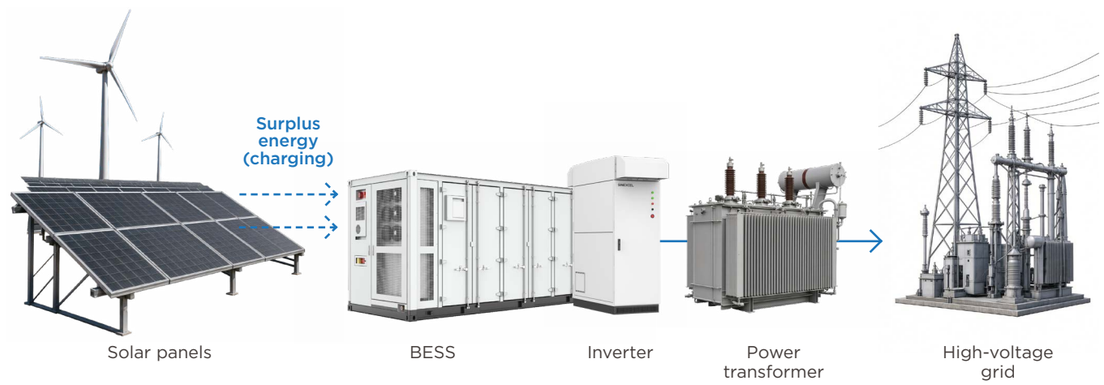
RENEWABLE GENERATION SMOOTHING AND INTEGRATION

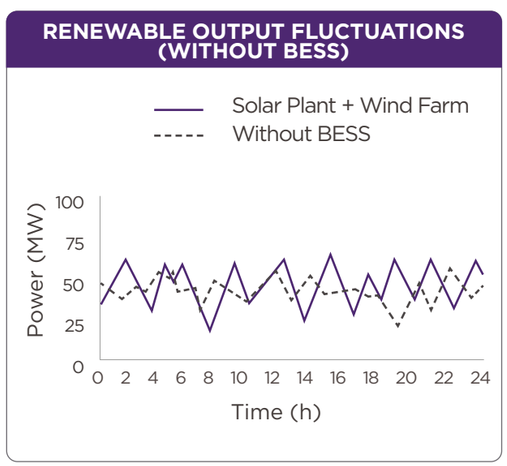
A BESS offsets fluctuations in PV and wind output, makes grid export more predictable and reduces curtailment.
Classic application: co-location with solar and wind farms.

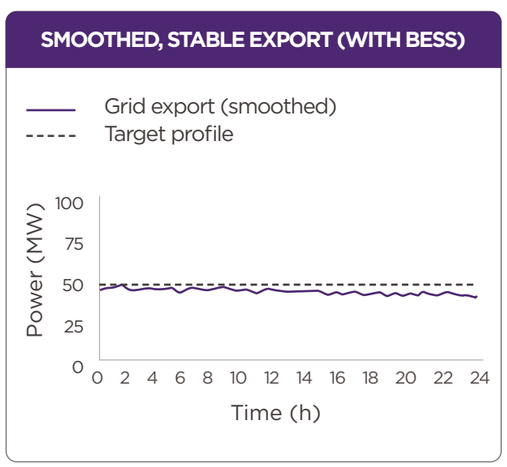
01 Reduced curtailment
More renewable energy used, fewer disconnections

02 Predictable export
Stable, predictable grid export

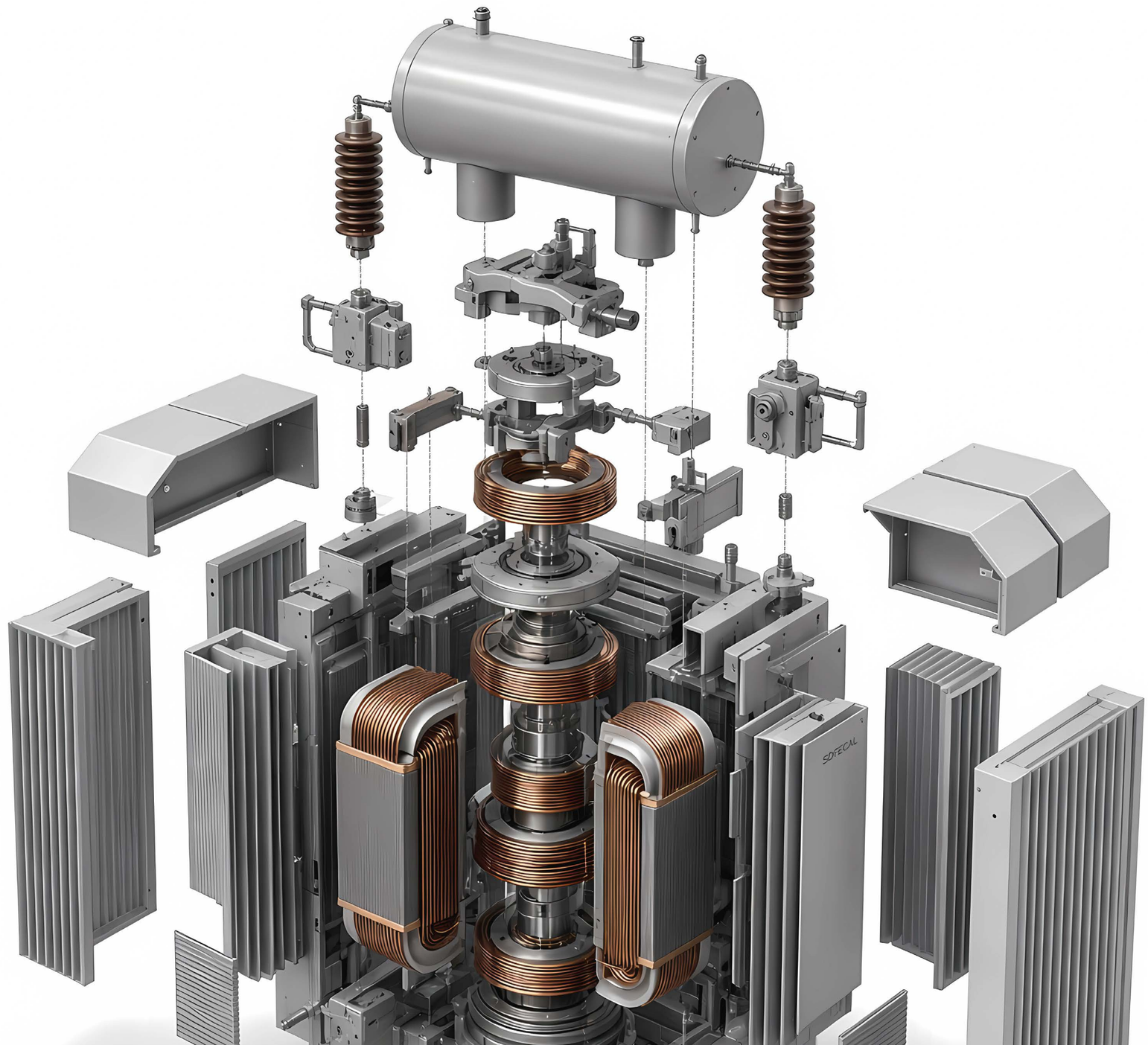
03 Co-location with renewables
Efficient use of resources







FLEXIBLE
TECHNICAL
SOLUTIONS



SOLUTIONS FOR **LOW-VOLTAGE CONNECTION**
0.4 kV – 0.8 kV

With frequent supply restrictions and high tariffs, a BESS connected directly at 0.4 kV or 0.8 kV makes a project viable without major capital expenditure on transformer equipment. A 5 or 10 MWh system strengthens a company's energy resilience and significantly cuts electricity costs — by buying during cheap hours or storing PV energy for use during expensive peak hours. The solution can also provide uninterruptible power and optimises operating costs.

Key use cases

- Direct connection to the transformer substation of an industrial or commercial facility.
- Integration with existing PV plants: grid-tied solar inverters connect directly to the BESS, with no additional transformer costs.

Key technical advantages

- Direct connection at 0.4 kV or 0.8 kV — no transformer costs and lower losses.
- Modular containerised architecture — fast installation and scalability.
- Integrated inverter section ensures high power quality.

SYSTEM OPERATING MODES

Island mode
Autonomous power supply when disconnected from the grid. Keeps critical equipment running during blackouts

Active consumer / DAM
Smart demand management, load optimisation and response to market signals

Peak shaving
Lower peak load through storage discharge. Allows the contracted capacity to be reduced

Lower electricity costs
Charging during low-tariff hours and discharging during peak hours

TECHNICAL CONFIGURATIONS

Power	Capacity	Voltage
2 × 576 kW – 1.1 MW	5 MWh	0.4 kV







Power	Capacity	Voltage
2.5 MW or 3.15 MW	5–10 MWh	0.4–0.8 kV







SOLUTIONS FOR **MEDIUM-VOLTAGE CONNECTION 6 kV – 10 kV – 35 kV**

BESS solutions for medium and large enterprises, connected at 6, 10 or 35 kV with 5 to 40 MWh of storage, deliver comprehensive energy resilience, market participation and substantial savings. Designed for high-consumption sites, they support cost optimisation, ancillary services and autonomous supply.
Integrated energy management enables intelligent coordination of storage, on-site generation and grid demand. Flexible system architecture ensures seamless integration with existing electrical infrastructure and adapts to the specific operational requirements of each facility.

Key use cases

- Higher business revenue from day-ahead market (DAM) trading.
- Island mode and uninterruptible power during blackouts.
- Savings through energy arbitrage and optimization of PV-generated energy usage.

Key technical advantages

- 6, 10 and 35 kV connection: for medium and large enterprises without unnecessary voltage conversion.
- Capacity from 5 to 40 MWh, expandable in stages.
- Modular containers: fast installation and easy maintenance.
- Inverter with power quality control and fast market response.

SYSTEM OPERATING MODES

Island mode
Autonomous power supply when disconnected from the grid. Keeps critical equipment running during blackouts

DAM and ancillary services
Charging and discharging based on price signals, frequency regulation, reserve provision and energy balancing

Peak shaving
Discharging during peak hours lowers contracted capacity and its cost

Arbitrage and PV integration
Charging at low prices or from solar, discharging at peaks for maximum savings

TECHNICAL CONFIGURATIONS

Power	Capacity	Voltage
2.5 MW or 3.15 MW	5 MWh	6 kV – 10 kV – 35 kV
	10 MWh	
3.7 MW or 4.72 MW	15 MWh	
5.0 MW or 6.30 MW	10 MWh	
	20 MWh	
6.2 MW or 7.87 MW	25 MWh	
7.5 MW or 9.45 MW	15 MWh	
	30 MWh	
10 MW	20 MWh	
	40 MWh	





ICT ENERGY

EMS+SCADA

FOR INTELLIGENT BESS MONITORING,
ANALYTICS AND CONTROL

ICT ENERGY

INTEGRATED ENERGY ASSET MANAGEMENT PLATFORM

**ICT ENERGY is an EMS (Energy Management System) software platform for centralised monitoring, dispatch and optimisation of energy facilities.
It provides unified control of diverse generation sources, energy storage systems and loads.**

ONE PLATFORM FOR **EFFICIENT** ENERGY MANAGEMENT

Brings together in a single control loop

1	2	3	4
Generation sources (PV, wind turbines, diesel generators)	Energy storage systems (ESS / BESS) and PCS	Grid infrastructure and connection points	Key loads and critical consumers



Key capabilities

- Real-time telemetry acquisition, visualisation and analysis
- Dispatch supervision and remote equipment control
- Forecast-based management of charging and discharging modes
- Generation and consumption forecasting
- Mode optimisation to reduce costs and improve reliability
- Architecture based on the classic three-tier model

Key benefits

- Shorter, lower-cost integration thanks to support for standard protocols (IEC 104, Modbus, DNP3, DLMS, IEC 61850)
- Compatibility with equipment from different manufacturers without replacing existing systems
- Live market prices and automated decisions based on economic signals
- Single interface for monitoring and control: generation, ESS, loads, HVAC and lighting

INTEGRATION DELIVERS **A FULL MANAGEMENT CYCLE**: FROM ANALYSIS TO DECISION-MAKING

UNIFIED SCADA PLATFORM

The platform provides comprehensive control of battery energy storage systems (BESS) based on data, forecasts and optimisation algorithms.

OPTIMISATION

01

Upper level — management and optimisation

- 24-hour charging schedule
- Modes: Profit, Self-consumption, Hybrid, Autarky, Peak Shaving
- Balance between efficiency and service life

AUTOMATION

02

Middle level — data acquisition and automation

- Real-time telemetry acquisition
- Single decision point

MONITORING

03

Lower level — field assets

- Solar generation
- Energy storage system
- Grid
- Consumers
- PCS

INTEGRATION WITH ANY EQUIPMENT AND SYSTEM

The EMS provides unified management of energy infrastructure through support for industry protocols and open interfaces.
The system combines generation, energy storage, consumption and external data in real time, cutting integration costs and project deployment.

Market operator — live price feed

Solar inverters and data loggers Modbus, DNP3

HVAC control of heating, ventilation and air conditioning

Power analysers PM8xxx, PQI-Dx, Janitza, Lumel

Lighting (DMX / DALI) — centralised control

External systems REST API

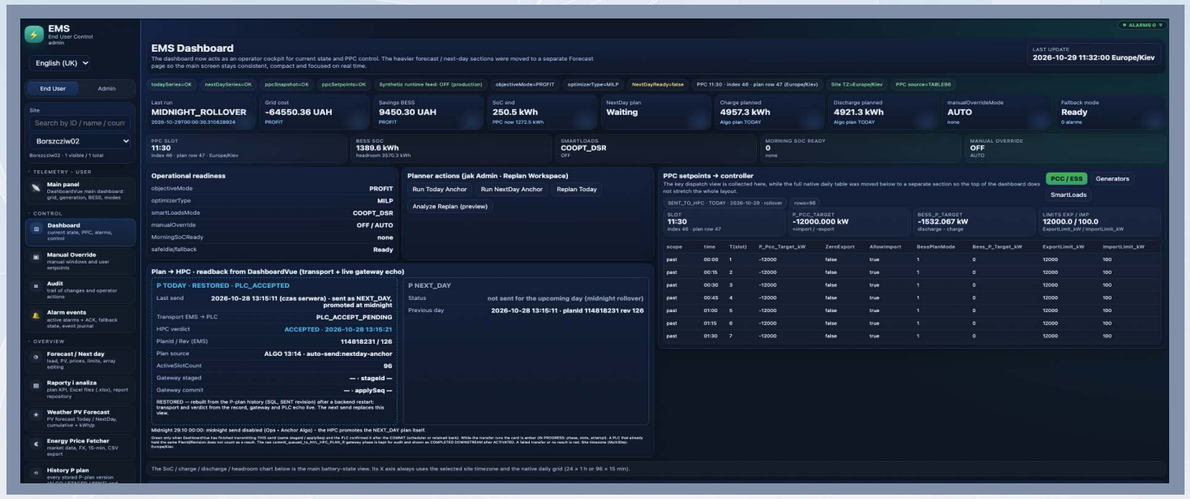
PCS (Huawei, Deye, Sinexcel, NR, etc.) IEC 60870-5-104

Meters (Landis+Gyr, EMH, Pozytor) DLMS, IEC 61850

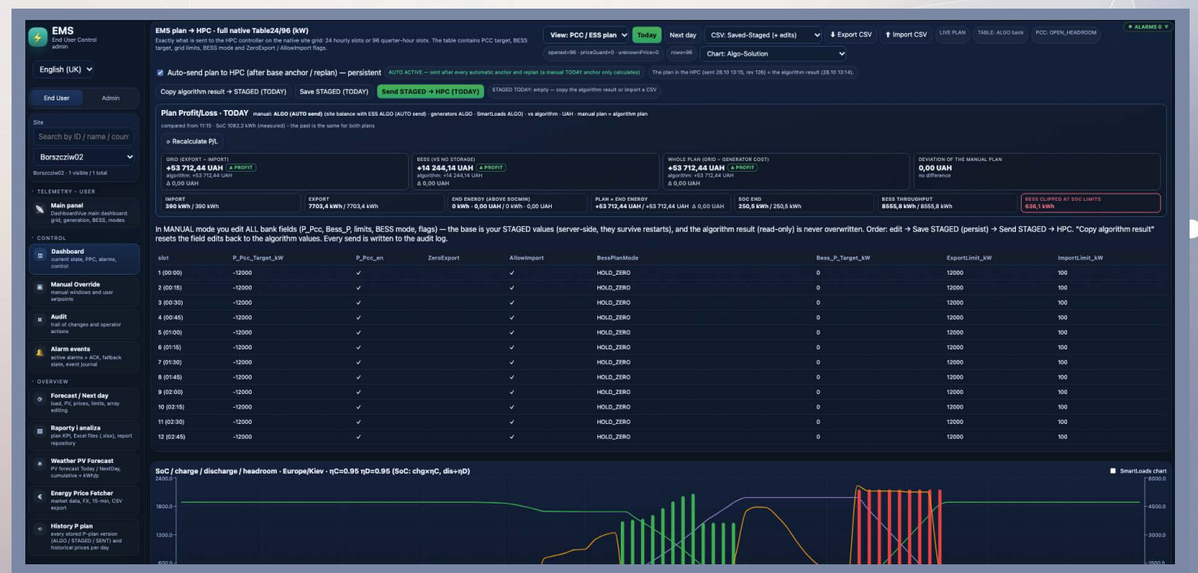
SUPPORT FOR MULTIPLE PROTOCOLS

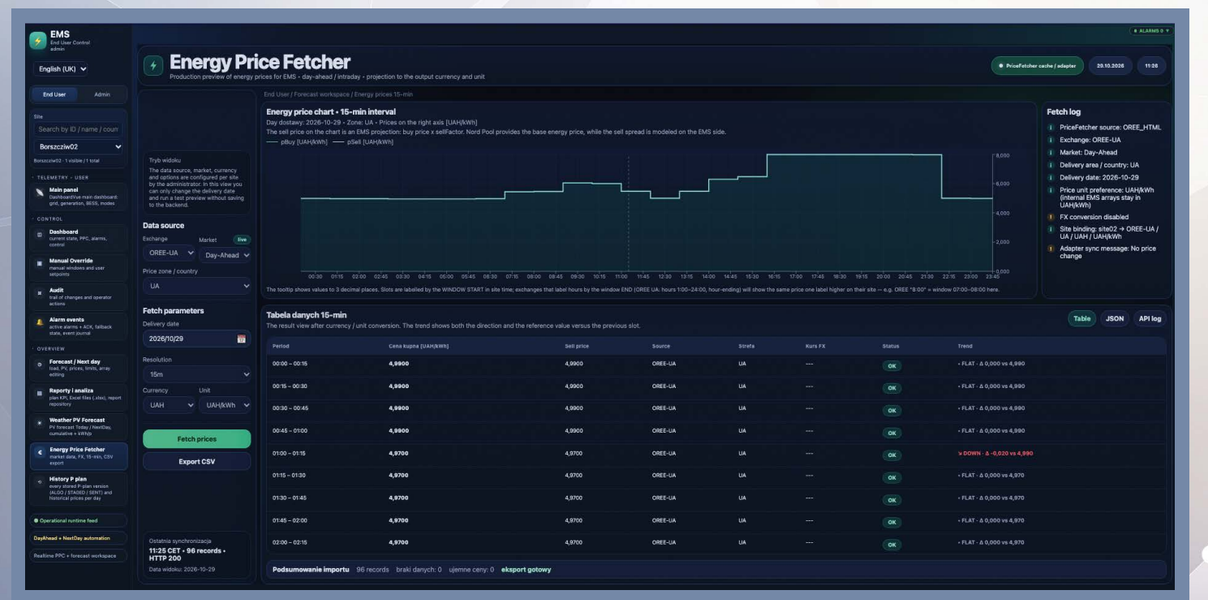
UNIFIED ENERGY **INFRASTRUCTURE —** SEAMLESS INTEGRATION**, LOWER COSTS** AND **FASTER** PROJECT **DEPLOYMEN**T

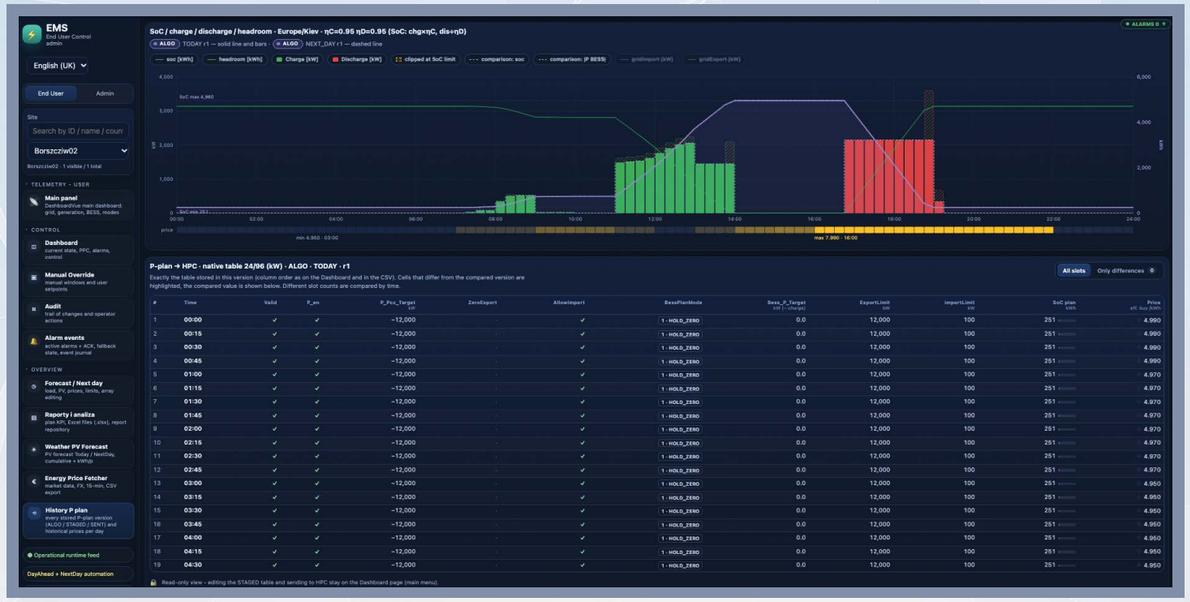


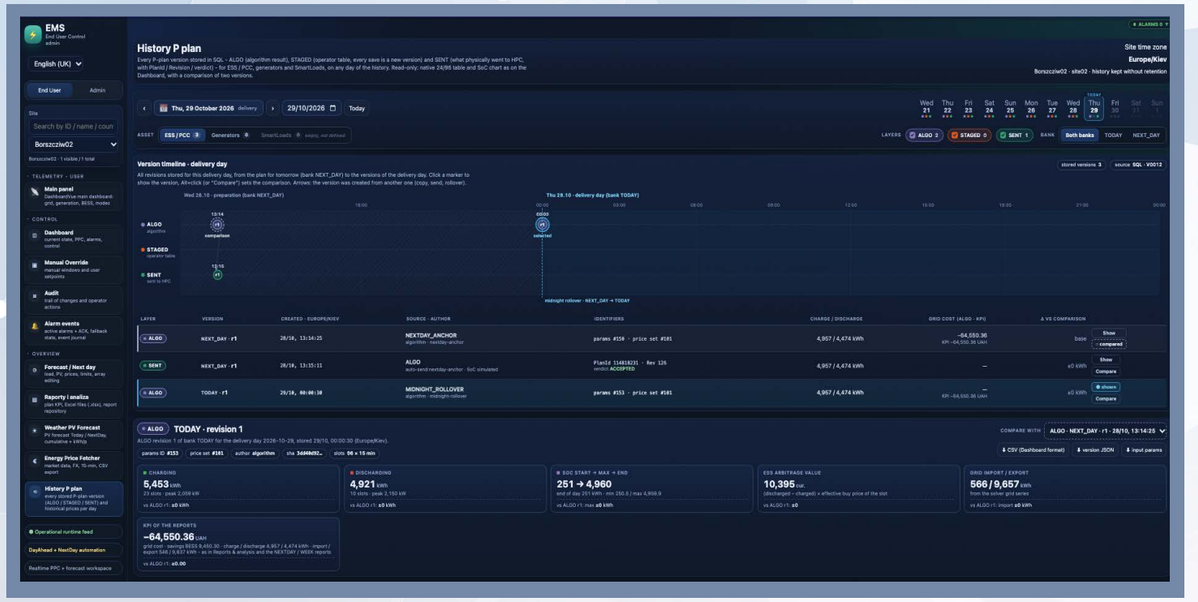

EMS
End User Control
admin
English (UK)
End User
Admin
Site
Search by ID / name / coun
Borszcziw02
Borszcziw02 · 1 visible / 1 total
· TELEMETRY · USER
Main panel
Dashboard/true main dashboard: grid, generation, BESS, modes
· CONTROL
Dashboard
current state, PPC, alarms, control
Manual Override
manual windows and user setpoints
Audit
trail of changes and operator actions
Alarm events
active alarms + ACK, fallback state, event journal
· OVERVIEW
Forecast / Next day
load, PV, prices, limits, array editing
Raporty i analiza
plan KPI, Excel files (.xlsx), report repository
Weather PV Forecast
PV forecast Today / NextDay, cumulative + kWh/p
Energy Price Fetcher
market data, FX, 15-min, CSV export
History P plan
every stored P-plan version (ALGO / STAGED / SENT) and historical prices per day
ALARMS 0
EMS Dashboard
The dashboard now acts as an operator cockpit for current state and PPC control. The heavier forecast / next-day sections were moved to a separate Forecast page so the main screen stays consistent, compact and focused on real time.
LAST UPDATE
2026-10-29 11:32:00 Europe/Kiev
todaySeries=OK
nextDaySeries=OK
pccSnapshot=OK
pccSetpoints=OK
Synthetic runtime feed: OFF (production)
objectiveMode=PROFIT
optimizerType=MILP
NextDayReady=false
PPC 11:30 · index 46 · plan row 47 (Europe/Kiev)
Site TZ=Europe/Kiev
PPC source=TABLE/96
Last run
MIDNIGHT_ROLLOVER
2026-10-29T00:00:30.310828934
Grid cost
-64550.36 UAH
PROFIT
Savings BESS
9450.30 UAH
PROFIT
SoC end
250.5 kWh
PPC now 1272.5 kWh
NextDay plan
Waiting
Charge planned
4957.3 kWh
Algo plan TODAY
Discharge planned
4921.3 kWh
Algo plan TODAY
manualOverrideMode
AUTO
none
Fallback mode
Ready
0 alarms
PPC SLOT
11:30
index 46 · plan row 47 · Europe/Kiev
BESS SOC
1389.6 kWh
headroom 3570.3 kWh
SMARTLOADS
COOPT_DSR
OFF
MORNING SOC READY
0
none
MANUAL OVERRIDE
OFF
AUTO
Operational readiness
objectiveMode PROFIT
optimizerType MILP
smartLoadsMode COOPT_DSR
manualOverride OFF / AUTO
MorningSocReady none
safeIdleFallback Ready
Planner actions (jak Admin · Replan Workspace)
Run Today Anchor
Run NextDay Anchor
Replan Today
Analyze Replan (preview)
PPC setpoints → controller
The key dispatch view is collected here, while the full native daily table was moved below to a separate section so the top of the dashboard does not stretch the whole layout.
PCC / ESS
Generators
SmartLoads
SENT_TO_HPC · TODAY · 2026-10-29 · rollover
rows=96
SLOT
11:30
index 45 · plan row 47
P_PCC_TARGET
-12000.000 kW
rolsport / -export
BESS_P_TARGET
-1532.067 kW
discharge · charge
LIMITS EXP / IMP
12000.0 / 100.0
ExportLimit_kW / importLimit_kW
scope time T(slot) P_Pcc_Target_kW ZeroExport AllowImport BessPlanMode Bess_P_Target_kW ExportLimit_kW ImportLimit_kW
past 00:00 1 -12000 false true 1 0 12000 100
past 00:15 2 -12000 false true 1 0 12000 100
past 00:30 3 -12000 false true 1 0 12000 100
past 00:45 4 -12000 false true 1 0 12000 100
past 01:00 5 -12000 false true 1 0 12000 100
past 01:15 6 -12000 false true 1 0 12000 100
past 01:30 7 -12000 false true 1 0 12000 100
Plan → HPC · readback from DashboardVue (transport + live gateway echo)
P TODAY · RESTORED · PLC_ACCEPTED
Last send 2026-10-28 13:15:11 (czas serwera) · sent as NEXT_DAY, promoted at midnight
Transport EMS → PLC PLC_ACCEPT_PENDING
HPC verdict ACCEPTED · 2026-10-28 13:15:21
PlanId / Rev (EMS) 114818231 / 128
Plan source ALGO 13:14 · auto-send:nextday-anchor
ActiveSlotCount 96
Gateway staged — · stageId —
Gateway commit — · applySeq —
RESTORED — rebuilt from the P-plan history (SQL, SENT revision) after a backend restart. transport and verdict from the record, gateway and PLC echo live. The next send replaces this view.
P NEXT_DAY
Status not sent for the upcoming day (midnight rollover)
Previous day 2026-10-28 13:15:11 · planId 114818231 rev 128
Midnight 29.10 00:00: midnight send disabled (IQps + Anchor Algo) — the HPC promotes the NEXT_DAY plan itself
Shows only when DashboardVue has finished transmitting THIS send (same stageId / applySeq) and the PLC confirmed it after the [TODAY] rollover or restarted banS. While the transfer runs the card is written (IN PROGRESS: phase, slots, attempts). A PLC that already held the same PlanID/revision does not count as a result. The raw commit_accept_to_hpc_HPC_PLAN_R gateway phase is kept for audit and shown as COMPLETED (DOWNSTREAM after ACTIVATED). A failed transfer or no result in red. Site timezone (Kiev/Zdw). Europe/Kiev.
The SoC / charge / discharge / headroom chart below is the main battery-state view. Its X axis always uses the selected site timezone and the native daily grid (24 × 1 h or 96 × 15 min).
SoC / charge / discharge / headroom - Europe/Kiev - ηC=0.95 ηD=0.95 (SoC: chg×ηC, dis÷ηD)
SmartLoads chart
2400.0
1800.0
1200.0
600.0
6000.0
4500.0
3000.0
1500.0


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PV forecast Today / NextDay, cumulative + kWh/p
Energy Price Fetcher
market data, FX, 15-min, CSV export
History P plan
every stored P-plan version (ALGO / STAGED / SENT) and historical prices per day
Operational runtime feed
DayAhead + NextDay automation
8 (01:45) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
9 (02:00) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
10 (02:15) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
11 (02:30) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
12 (02:45) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
SoC / charge / discharge / headroom - Europe/Kiev - ηC=0.95 ηD=0.95 (SoC: chg×ηC, dis÷ηD)
SmartLoads chart
2400.0
1800.0
1200.0
600.0
0.0
6000.0
4500.0
3000.0
1500.0
0.0
soc [kWh]
headroom [kWh]
charge [kW]
discharge [kW]
gridImport [kW]
gridExport [kW]
Plan vs execution - TODAY - Europe/Kiev
EMS plan compared with actual execution in the native site-local daily grid (24 × 1 h or 96 × 15 min). Grid: +P import, −P export. BESS chart convention (EMS standard, plan and actual alike): +P discharge, −P charge. Actual BESS = raw SCADA REST value × configured BESS sign ×1. SoC is shown in kWh on the right axis; actual SoC requires bessMeter.SoC_pct mapped as REST. Actual values are aligned to the same native site-local slots as the active plan.
Export CSV
sync: 2026-10-29 11:20:33 Europe/Kiev
BESS +x1 · +discharge / −charge
3000.0
1500.0
0.0
1500.0
3000.0
6000.0
4500.0
3000.0
1500.0
0.0
planned grid P [kW]
actual grid P [kW]
planned BESS P [kW]
actual BESS P [kW]
planned SoC [kWh]
actual SoC [kWh]
Today prices - Europe/Kiev
Export to CSV
8.0
6.0
4.0
2.0
0.0
pBuy [UAH/kWh]
pSell [UAH/kWh]
pBuyDistribution [UAH/kWh]
pSellDistribution [UAH/kWh]
NextDay prices - Europe/Kiev - HIDDEN — NO TRUSTED EVIDENCE
Export to CSV
pBuy is missing.

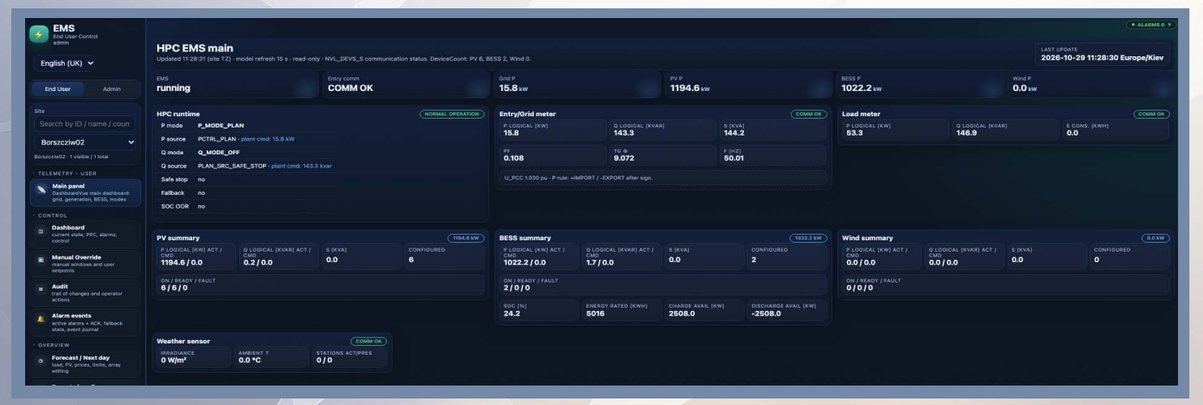

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ALARMS 0
EMS plan → HPC · full native Table24/96 (kW)
Exactly what is sent to the HPC controller on the native site grid: 24 hourly slots or 96 quarter-hour slots. The table contains PCC target, BESS target, grid limits, BESS mode and ZeroExport / AllowImport flags.
View: PCC / ESS plan
Today
Next day
CSV: Saved-Staged (+ edits)
Export CSV
Import CSV
LIVE PLAN
TABLE: ALGO bank
PCC: OPEN_HEADROOM
opened=96 · priceGuard=0 · unknownPrice=0
rows=96
Chart: Algo-Solution
Auto-send plan to HPC (after base anchor / replan) — persistent
AUTO ACTIVE — sent after every automatic anchor and replan (a manual TODAY anchor only calculates)
The plan in the HPC (sent 28.10 13:15, rev 126) = the algorithm result (28.10 13:14).
Copy algorithm result → STAGED (TODAY)
Save STAGED (TODAY)
Send STAGED → HPC (TODAY)
STAGED TODAY: empty — copy the algorithm result or import a CSV
Plan Profit/Loss - TODAY
manual: ALGO (AUTO send) (site balance with ESS ALGO (AUTO send) · generators ALGO · SmartLoads ALGO) · vs algorithm · UAH · manual plan = algorithm plan
compared from 11:15 · SoC 1082.2 kWh (measured) · the past is the same for both plans
Recalculate P/L
GRID (EXPORT − IMPORT)
+53 712,44 UAH
PROFIT
algorithm: +53 712,44 UAH
Δ 0,00 UAH
BESS (VS NO STORAGE)
+14 244,14 UAH
PROFIT
algorithm: +14 244,14 UAH
Δ 0,00 UAH
WHOLE PLAN (GRID − GENERATOR COST)
+53 712,44 UAH
PROFIT
algorithm: +53 712,44 UAH
Δ 0,00 UAH
DEVIATION OF THE MANUAL PLAN
0,00 UAH
no difference
IMPORT
390 kWh / 390 kWh
EXPORT
7703,4 kWh / 7703,4 kWh
END ENERGY (ABOVE SOCMIN)
0 kWh · 0,00 UAH / 0 kWh · 0,00 UAH
PLAN = END ENERGY
+53 712,44 UAH / +53 712,44 UAH Δ 0,00 UAH
SOC END
250,5 kWh / 250,5 kWh
BESS THROUGHPUT
8555,6 kWh / 8555,8 kWh
BESS CLIPPED AT SOC LIMITS
636,1 kWh
In MANUAL mode you edit ALL bank fields (P_Pcc, Bess_P, limits, BESS mode, flags) — the base is your STAGED values (server-side, they survive restarts), and the algorithm result (read-only) is never overwritten. Order: edit → Save STAGED (persist) → Send STAGED → HPC. "Copy algorithm result" resets the field edits back to the algorithm values. Every send is written to the audit log.
slot P_Pcc_Target_kW P_Pcc_an ZeroExport AllowImport BessPlanMode Bess_P_Target_kW ExportLimit_kW ImportLimit_kW
1 (00:00) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
2 (00:15) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
3 (00:30) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
4 (00:45) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
5 (01:00) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
6 (01:15) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
7 (01:30) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
8 (01:45) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
9 (02:00) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
10 (02:15) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
11 (02:30) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
12 (02:45) -12000 ✓ ✓ HOLD_ZERO 0 12000 100
SoC / charge / discharge / headroom - Europe/Kiev - ηC=0.95 ηD=0.95 (SoC: chg×ηC, dis÷ηD)
SmartLoads chart
2400.0
1800.0
1200.0
600.0
6000.0
4500.0
3000.0
1500.0


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Realtime PPC + forecast workspace
ALARMS 0
Energy Price Fetcher
Production preview of energy prices for EMS - day-ahead / intraday - projection to the output currency and unit
PriceFetcher cache / adapter
20.10.2026
11:28
End User / Forecast workspace / Energy prices 15-min
Tryb widoku
The data source, market, currency and options are configured per site by the administrator. In this view you can only change the delivery date and run a test preview without saving to the backend.
Data source
Exchange
OREE-UA
Market
Live
Day-Ahead
Price zone / country
UA
Fetch parameters
Delivery date
2026/10/29
Resolution
15m
Currency
UAH
Unit
UAH/kWh
Fetch prices
Export CSV
Ostatnia synchronizacja
11:25 CET · 96 records · HTTP 200
Data widoku: 2026-10-29
Energy price chart · 15-min interval
Day dostawy: 2026-10-29 · Zone: UA · Prices on the right axis [UAH/kWh]
The sell price on the chart is an EMS projection: buy price x sellFactor. Nord Pool provides the base energy price, while the sell spread is modeled on the EMS side.
pBuy [UAH/kWh]
pSell [UAH/kWh]
8,000
6,000
4,000
2,000
0,000
The tooltip shows values to 3 decimal places. Slots are labeled by the WINDOW START in site time; exchanges that label hours by the window END (OREE UA: hours 1:00–24:00, hour-ending) will show the same price one label higher on their site — e.g. OREE "8:00" = window 07:00–08:00 here.
Fetch log
PriceFetcher source: OREE_HTML
Exchange: OREE-UA
Market: Day-Ahead
Delivery area / country: UA
Delivery date: 2026-10-29
Price unit preference: UAH/kWh (internal EMS arrays stay in UAH/kWh)
FX conversion disabled
Site binding: site52 → OREE-UA / UA / UAH / UAH/kWh
Adapter sync message: No price change
Tabela danych 15-min
The result view after currency / unit conversion. The trend shows both the direction and the reference value versus the previous slot.
Table
JSON
API log
Period Cena kupna [UAH/kWh] Sell price Source Strefa Kurs FX Status Trend
00:00 – 00:15 4,9900 4,9900 OREE-UA UA --- OK · FLAT · Δ 0,000 vs 4,990
00:15 – 00:30 4,9900 4,9900 OREE-UA UA --- OK · FLAT · Δ 0,000 vs 4,990
00:30 – 00:45 4,9900 4,9900 OREE-UA UA --- OK · FLAT · Δ 0,000 vs 4,990
00:45 – 01:00 4,9900 4,9900 OREE-UA UA --- OK · FLAT · Δ 0,000 vs 4,990
01:00 – 01:15 4,9700 4,9700 OREE-UA UA --- OK ↘ DOWN · Δ -0,020 vs 4,990
01:15 – 01:30 4,9700 4,9700 OREE-UA UA --- OK · FLAT · Δ 0,000 vs 4,970
01:30 – 01:45 4,9700 4,9700 OREE-UA UA --- OK · FLAT · Δ 0,000 vs 4,970
01:45 – 02:00 4,9700 4,9700 OREE-UA UA --- OK · FLAT · Δ 0,000 vs 4,970
02:00 – 02:15 4,9700 4,9700 OREE-UA UA --- OK · FLAT · Δ 0,000 vs 4,970
Podsumowanie importu 96 records braki danych: 0 ujemne ceny: 0 eksport gotowy


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Operational runtime feed
DayAhead + NextDay automation
SoC / charge / discharge / headroom - Europe/Kiev - ηC=0.95 ηD=0.95 (SoC: chg×ηC, dis÷ηD)
ALGO TODAY r1 — solid line and bars
ALGO NEXT_DAY r1 — dashed line
soc [kWh]
headroom [kWh]
Charge [kW]
Discharge [kW]
clipped at SoC limit
comparison: soc
comparison: [P BESS]
gridImport [kW]
gridExport [kW]
SoC max 4,960
kW
kWh
price
min 4.960 · 03:00
max 7.990 · 16:00
P-plan → HPC - native table 24/86 (kW) · ALGO · TODAY · r1
Exactly the table stored in this version (column order as on the Dashboard and in the CSV). Cells that differ from the compared version are highlighted, the compared value is shown below. Different slot counts are compared by time.
All slots
Only differences
| Time | Valid | P_en | P_Pcc_Target kW | ZeroExport | AllowImport | BessPlanMode | Bess_P_Target kW · + = charge | ExportLimit kW | ImportLimit kW | SoC plan kWh | Price eR/ kW/h
1 | 00:00 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.990
2 | 00:15 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.990
3 | 00:30 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.990
4 | 00:45 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.990
5 | 01:00 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.970
6 | 01:15 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.970
7 | 01:30 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.970
8 | 01:45 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.970
9 | 02:00 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.970
10 | 02:15 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.970
11 | 02:30 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.970
12 | 02:45 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.970
13 | 03:00 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.950
14 | 03:15 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.950
15 | 03:30 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.950
16 | 03:45 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.950
17 | 04:00 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.950
18 | 04:15 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.950
19 | 04:30 | ✓ | ✓ | −12,000 | | ✓ | 1 - HOLD_ZERO | 0.0 | 12,000 | 100 | 251 | 4.950
Read-only view - editing the STAGED table and sending to HPC stay on the Dashboard page (main menu).


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History P plan
Every P-plan version stored in SQL - ALGO (algorithm result), STAGED (operator table, every save is a new version) and SENT (what physically went to HPC, with Plan(id / Revision / verdict) – for ESS / PCC; generators and SmartLoads, on any day of the history. Read-only: native 24/96 table and SoC chart as on the Dashboard, with a comparison of two versions.
Site time zone
Europe/Kiev
Borszczów02 · site02 · history kept without retention
Thu, 29 October 2026 delivery
29/10/2026
Today
ASSET
ESS / PCC 3
Generators 0
SmartLoads 0 empty, not defined
LAYERS
ALGO 3
STAGED 0
SENT 1
RANK
Both banks
TODAY
NEXT_DAY
Wed 21 · Thu 22 · Fri 23 · Sat 24 · Sun 25 · Mon 26 · Tue 27 · Wed 28 · TODAY Thu 29 · Fri 30 · Sat 31 · Sun 1
Version timeline - delivery day
stored versions 3
source SQL · V0012
All revisions stored for this delivery day, from the plan for tomorrow (bank NEXT_DAY) to the versions of the delivery day. Click a marker to show the version, Alt+click (or "Compare") sets the comparison. Arrows: the version was created from another one (copy, send, rollover).
Wed 28.10 - preparation (bank NEXT_DAY)
Thu 29.10 - delivery day (bank TODAY)
ALGO algorithm
STAGED now on table
SENT on HPC
13:14 comparison
10:15 r1
00:00 selected
midnight rollover · NEXT_DAY → TODAY
LAYER | VERSION | CREATED · EUROPE/KIEV | SOURCE · AUTHOR | IDENTIFIERS | CHARGE / DISCHARGE | GRID COST (ALGO · KPI) | Δ VS COMPARISON
ALGO | NEXT_DAY · r1 | 28/10, 13:14:25 | NEXTDAY_ANCHOR algorithm · nextday-anchor | params #158 · price set #101 | 4,957 / 4,474 kWh | −64,550.36 KPI: −64,550.36 UAH | base · Show · compared
SENT | NEXT_DAY · r1 | 28/10, 13:15:11 | ALGO auto-send-nextday-anchor · SoC simulated | Plan№ 1148182J1 · Rev 126 verdict ACCEPTED | 4,957 / 4,474 kWh | — | ±0 kWh · Show · Compare
ALGO | TODAY · r1 | 29/10, 00:00:30 | MIDNIGHT_ROLLOVER algorithm · midnight-rollover | params #153 · price set #101 | 4,957 / 4,474 kWh | — KPI: −64,550.36 UAH | ±0 kWh · shown · Compare
ALGO TODAY · revision 1
ALGO revision 1 of bank TODAY for the delivery day 2026-10-29, stored 29/10, 00:00:30 (Europe/Kiev).
params ID #153
price set #101
author algorithm
sha 3d4f4b32…
slots 96 × 15 min
COMPARE WITH ALGO · NEXT_DAY · r1 · 28/10, 13:14:25
CSV (Dashboard format)
version JSON
input params
CHARGING
5,453 kWh
33 slots · peak 2,059 kW
vs ALGO r1: ±0 kWh
DISCHARGING
4,921 kWh
19 slots · peak 2,150 kW
vs ALGO r1: ±0 kWh
SOC START → MAX → END
251 → 4,960
end of day 251 kWh · min 250.0 | max 4,959.9
vs ALGO r1: max ±0 kWh
ESS ARBITRAGE VALUE
10,395 eur
(discharged − charged) × effective buy price of the slot
vs ALGO r1: ±0
GRID IMPORT / EXPORT
566 / 9,657 kWh
from the active grid series
vs ALGO r1: import ±0 kWh
KPI OF THE REPORTS
−64,550.36 UAH
grid cost · savings 9,650.30 · charge / discharge 4,957 / 4,474 kWh · import / export 566 / 9,657 kWh · as in Reports & analysis and the NEXTDAY / WEEK reports
vs ALGO r1: ±0.00


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Forecast source
Provider, source and energy balance.
Provider
OPEN_METEO
Source
OPEN_METEO_API
Today PV
8585,74 kWh
NextDay PV
18 263,78 kWh
Today Wind
0,00 kWh
NextDay Wind
0,00 kWh
Forecast TODAY
Power forecast vs EMS PV array and Wind forecast
TODAY
forecastPvKw [kW]
emsPvKw [kW]
forecastWindKw [kW]
Forecast NEXT_DAY
Power forecast vs EMS PV array and Wind forecast
NEXT_DAY
forecastPvKw [kW]
emsPvKw [kW]
forecastWindKw [kW]
Cumulative energy
Cumulative forecast energy (PV).
TODAY CUMULATIVE
forecastCumulativeKwh [kWh]
windCumulativeKwh [kWh]
Per-slot energy
Energia na okres EMS 15 min (PV i Wind).
NEXT_DAY ENERGY/SLOT
forecastPvEnergyKwhPerPeriod [kWh]
forecastWindEnergyKwhPerPeriod [kWh]


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HPC EMS main
Updated 11:28:31 (site TZ) · model refresh 15 s · read-only · NVL_DEVS_S communication status. DeviceCount: PV 6, BESS 2, Wind 0.
LAST UPDATE
2026-10-29 11:28:30 Europe/Kiev
EMS
running
Grey comm
COMM OK
Grid P
15.8 kW
PV P
1194.6 kW
BESS P
1022.2 kW
Wind P
0.0 kW
HPC runtime
NORMAL OPERATION
P mode P_MODE_PLAN
P source PCTRL_PLAN - plant cmd: 15.8 kW
Q mode Q_MODE_OFF
Q source PLAN_SRC_SAFE_STOP - plant cmd: 143.3 kvar
Safe stop no
Fallback no
SOC OOR no
Entry/Grid meter
COMM OK
P LOGICAL [KW] 15.8
Q LOGICAL [KVAR] 143.3
S [KVA] 144.2
PF 0.108
FR_P 9.072
F [HZ] 50.01
U_PCC 1.030 pu - P rule: +IMPORT / -EXPORT after sign.
Load meter
COMM OK
P LOGICAL [KW] 53.3
Q LOGICAL [KVAR] 146.9
S CONS. [KWH] 0.0
PV summary
1194.6 kW
P LOGICAL [KW] ACT / CMD 1194.6 / 0.0
Q LOGICAL [KVAR] ACT / CMD 0.2 / 0.0
S [KVA] 0.0
CONFIGURED 6
ON / READY / FAULT 6 / 6 / 0
BESS summary
1022.2 kW
P LOGICAL [KW] ACT / CMD 1022.2 / 0.0
Q LOGICAL [KVAR] ACT / CMD 1.7 / 0.0
S [KVA] 0.0
CONFIGURED 2
ON / READY / FAULT 2 / 0 / 0
SOC [%] 24.2
ENERGY RATED [KWH] 5016
CHARGE AVAIL [KW] 2508.0
DISCHARGE AVAIL [KW] -2508.0
Wind summary
0.0 kW
P LOGICAL [KW] ACT / CMD 0.0 / 0.0
Q LOGICAL [KVAR] ACT / CMD 0.0 / 0.0
S [KVA] 0.0
CONFIGURED 0
ON / READY / FAULT 0 / 0 / 0
Weather sensor
COMM OK
IRRADIANCE 0 W/m²
AMBIENT T 0.0 °C
STATIONS ACT/PRES 0 / 0

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CORNEX

Company profile

CORNEX NEW ENERGY CO., LTD. (“CORNEX”) is an innovative high-tech new energy company engaged in the research, development, manufacture, sale and servicing of energy storage batteries, electric vehicle (EV) batteries and energy storage systems (ESS). The company delivers world-class solutions under a strategy of “one generation in production, one in launch and one in development”, ensuring leadership, scale and coverage of the entire value chain.

Guided by its philosophy of “Technological innovation and green energy”, CORNEX focuses on intelligent manufacturing and covers the entire lithium-ion battery value chain, targeting global ESS and traction battery markets and supporting the transition to green, low-carbon development.

2000+
patents granted

4
manufacturing bases in China

2250+
R&D employees

Product range

EV products

Battery cell ▶ Module ▶ Pack systems

ESS products

Battery cell ▶ Module ▶ Pack systems ▶ Containerised system

CORE ENERGY · LEADING THE FUTURE · INFINITE POSSIBILITIES

Development roadmap

Four manufacturing bases together drive CORNEX's rapid growth



01

Wuhan CORNEX commenced operation on 8 November 2022



02

Xiaogan CORNEX commenced operation on 28 June 2023



03

Yichang CORNEX commenced operation on 28 August 2023



04

Xiangyang CORNEX broke ground on 28 October 2025

Intelligent manufacturing

Smart factory, energy-efficient production

CORNEX applies advanced technologies and builds its production capacity to the highest industry standards of automation, digitalisation and intelligent manufacturing, creating an AI Smart Factory — a smart factory powered by artificial intelligence.

Through the wide adoption of the latest smart manufacturing technologies (artificial intelligence, big data, cloud services, VR/AR and machine vision), the production process is capable of self-sensing, autonomous decision-making, self-execution, self-regulation and self-learning. As a result, the company achieves extreme manufacturing — maximum efficiency, top quality and optimal cost.

AUTOMATION

The automation rate exceeds 98%. Every production line is flexible and compatible with multiple product models.

DIGITALISATION

The entire process — from demand definition, project initiation, design and R&D to planning, scheduling, production and sales — is fully digitalised. This delivers integrated commercial, information and logistics flows.

INTELLIGENCE

By applying batch control methods focused on consistent product quality, the company implements intelligent manufacturing to ensure product safety and reliability.

cornex M5 APEX

20-foot 5 MWh Battery Energy Storage Container



Product specification	PF173-314A-C5015L
Cell capacity (Ah)	314 Ah
Configuration	12×1P416S
Nominal energy (kWh)	5015 kWh
Rated power (kW)	2500 kW
Operating voltage range (V)	1040–1500 V
Operating temperature range (°C)	–30 to +55°C
Thermal management	Liquid cooling and heating
System communication	RS485/CAN/Ethernet
IP rating	IP55
Dimensions (L×W×H, mm)	6,058×2,438×2,896 mm (20 ft)
Weight (t)	42.5 t
Testing and certification	GB/UL/IEC/UN/NFPA

ENERGY STORAGE CELL



Product specification	PF173-314A
Rated capacity (Ah)	314 Ah
Charge/discharge rate (P)	0.5P
Energy efficiency (0.5P)	≥94.5%
Cycle life	12000
Dimensions (W×L×H, mm)	71.7×174.4×207.2 mm
Weight (kg)	5.6 kg
Testing and certification	GB/UN38.3/UL/IEC

ESS PACK/SYSTEM



Product specification	PF173-314A-P104L
Configuration	1P104S
Rated capacity (Ah)	314 Ah
Nominal energy (kWh)	104.49 kWh
Charge/discharge rate (P)	0.25P & 0.5P
Energy efficiency	≥94%
Cooling	Liquid cooling
Dimensions (W×L×H, mm)	790×2,216×240 mm
Weight (kg)	650 kg
Testing and certification	GB/UL/IEC/UN

cornex M6

20-foot 6.26 MWh Battery Energy Storage Container



Product specification	PF288-588A-C6262L
Cell capacity (Ah)	588 Ah
Configuration	8×1P416S
Nominal energy (kWh)	6262 kWh
Rated power (kW)	1565 kW
Operating voltage range (V)	1040–1500 V
Operating temperature range (°C)	−30 to +55°C
Thermal management	Liquid cooling and heating
System communication	RS485/CAN/Ethernet
IP rating	IP55
Dimensions (L×W×H, mm)	6,058×2,438×2,896 mm (20 ft)
Weight (t)	49 t
Testing and certification	GB/UL/IEC/UN/NFPA

ENERGY STORAGE CELL



Product specification	PF288-588A
Rated capacity (Ah)	588 Ah
Charge/discharge rate (P)	0.5P
Energy efficiency (0.5P)	≥94.5%
Cycle life	12000
Dimensions (W×L×H, mm)	72.5×288×216.3 mm
Weight (kg)	10.1 kg
Testing and certification	GB/UN38.3/UL/IEC

ESS PACK/SYSTEM



Product specification	PF288-588A-P195L
Configuration	1P104S
Rated capacity (Ah)	588 Ah
Nominal energy (kWh)	195.68 kWh
Charge/discharge rate (P)	0.25P & 0.5P
Energy efficiency	≥94%
Cooling	Liquid cooling
Dimensions (W×L×H, mm)	1,243×2,230×251 mm
Weight (kg)	1,170 kg
Testing and certification	GB/UL/IEC/UN

MINGYANG ELECTRIC



Company profile

1993
Year founded

1000+ acres
Industrial park area

3000+
Employees

Market presence

3000+ New-energy wind and PV plants

600+ Large thermal power plants

300+ Substations

2000+ Telecom and data centres

200+ Large infrastructure facilities

Total installed new-energy capacity of over **200+** GW

Quality today — Leadership tomorrow

MingYang Electric (301291.SZ) brings together top talent and advanced resources to improve the efficiency of power transmission worldwide. The company is a leader in its domestic market, operates in almost 80 countries and regions, and holds more than 460 certificates (TÜV, UL, DEKRA, DNV GL, CE, CESI, GOST, etc.). MingYang Electric is committed to supporting the global transition to green, low-carbon energy.

Solutions:

- **Transformer solutions (up to 500 kV):** liquid-immersed and dry-type designs engineered for reliability and efficiency
- **Switchgear solutions (up to 252 kV):** MV/LV switchgear assemblies and GIS, optimised for compactness and safety
- **Prefabricated and integrated all-in-one systems (up to 110 kV):** modular units for rapid deployment at urban, industrial and renewable energy sites.



01

SWITCHGEAR PRODUCTS

Reliable, functional and intelligent equipment for power transmission and distribution. The range of high- and low-voltage switchgear rated at 0.4–252 kV is widely used in power generation, grids, telecoms, data centres, transport and other industries.

Gas-insulated switchgear (GIS), 252 kV



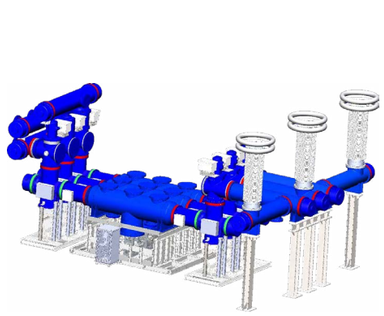
252kV Rated voltage

4000A Rated current

50kA Rated short-circuit breaking current

Compact, highly reliable 252 kV GIS for harsh conditions: high humidity, salinity and pollution, wide temperature swings and high altitude. Can be fitted with intelligent devices for integration into smart substation infrastructure.

Eco-friendly 252 kV metal-enclosed gas-insulated switchgear with vacuum interruption



252kV Rated voltage

4000A Rated current

50kA Rated short-circuit breaking current

Eco-friendly 252 kV GIS with vacuum interruption and dry air instead of SF_6. For smart grids, renewables and urban networks; reliable in extreme conditions with minimal environmental impact.

Gas-insulated switchgear (GIS), 126 kV



126kV Rated voltage

3150A Rated current

40kA Rated short-circuit breaking current

Compact, highly reliable intelligent 126 kV GIS for extreme conditions. Can be fitted with intelligent devices for use in smart substations.

Metal-enclosed gas-insulated switchgear



72.5kV Rated voltage

1250A Rated current

31.5kA Rated short-circuit breaking current

MYS20-72.5: SF_6 insulation + vacuum interruption. Reduces construction costs and losses. For large offshore wind and PV plants in deep-water areas.

Eco-friendly metal-enclosed gas-insulated switchgear



72.5kV Rated voltage

1250A Rated current

31.5kA Rated short-circuit breaking current

MYS22-72.5: eco-friendly gas + vacuum interruption, SF_6-free. Environmentally friendly and safe, reducing costs and losses. For offshore wind farms in deep-water areas.

Indoor metal-clad withdrawable AC switchgear



40.5kV Rated voltage

630/1250/ 1600/2500/ 3150/4000A Rated current

IP4X Enclosure protection rating

Indoor metal-clad switchgear with withdrawable units, 40.5 kV. For receiving/distribution, control and protection in 35 kV systems. Complies with IEC 62271 and DL/T 404.

Metal-enclosed gas-insulated AC ring main unit (for offshore and high-altitude sites)



40.5kV Rated voltage

630A, 1250A Rated current

25kA, 31.5kA Rated short-circuit breaking current

MYS10-40.5: low-pressure SF_6 GIS in a sealed stainless-steel tank. Virtually maintenance-free, service life >30 years. For compact substations, industry, wind power and urban sites.

Eco-friendly metal-enclosed gas-insulated AC switchgear



40.5kV Rated voltage

1250A, 2500A Rated current

31.5kA Rated short-circuit breaking current

MYS9-40.5: eco-friendly dry-air GIS. Sealed stainless-steel tank. For new power systems, grids and railways; suitable for high altitude, cold, coastal areas and offshore platforms. Service life >30 years.

Indoor metal-clad withdrawable AC switchgear



12kV/24kV Rated voltage

630/1250/1600/2500/3150/4000A Rated current

25/31.5/40/50kA 4s Rated short-circuit breaking current

Metal-clad switchgear with withdrawable units, 12/24 kV. For power plants, substations, industry, urban networks and starting large motors. Complies with IEC 62271 and DL/T 404.

Metal-enclosed gas-insulated AC switchgear (for high altitude)



40.5kV Rated voltage

1250A, 2500A, 3150A Rated current

31.5kA, 40kA Rated short-circuit breaking current

MYS12-40.5: low-pressure SF_6 GIS in a sealed tank. For new 40.5 kV power systems and grids. Suitable for high altitude, cold, coastal areas and offshore platforms. Service life >30 years.

Metal-enclosed gas-insulated AC ring main unit



24kV Rated voltage

630–1250A Rated current

20-25kA Rated short-circuit breaking current

MYS11-24: GIS for 24 kV networks (630–1,250 A). Metering, protection, control and sectionalising functions. For harsh conditions: humidity, altitude, coastal areas, mines, urban networks, renewables.

Eco-friendly metal-enclosed gas-insulated switchgear



12kV Rated voltage

1250A, 3150A Rated current

31.5kA, 40kA Rated short-circuit breaking current

MYS15-12: eco-friendly dry-air GIS. Sealed tank. For new 12 kV power systems, grids and railways. Suitable for high altitude, cold, coastal and polluted areas.

Sealed metal-enclosed AC ring main unit with atmospheric-pressure air insulation (standard type II)



12kV Rated voltage

630A Rated current

25kA Rated short-circuit breaking current

MYS14-12: sealed RMU with atmospheric-pressure air insulation + vacuum interruption. Eco-friendly and maintenance-free. For hospitals, schools, airports, railways and sites with high reliability requirements.

Sealed metal-enclosed AC ring main unit with atmospheric-pressure air insulation (standard type I)



12kV Rated voltage

630A Rated current

25kA Rated short-circuit breaking current

MYS14-12: sealed RMU with atmospheric-pressure air insulation + vacuum interruption. Eco-friendly and maintenance-free. For hospitals, schools, airports, railways and sites with high reliability requirements.

Metal-clad withdrawable AC switchgear



12kV Rated voltage

630/1250/1600/2500/3150A Rated current

25-40kA Rated short-circuit breaking current

MVnex metal-clad switchgear with HVX vacuum circuit breakers. High ratings, a full set of circuit schemes, monitoring and protection. Safe and reliable.

Fully insulated, fully enclosed gas-insulated compact ring main unit — automation cabinet with circuit breaker (load-break switch), fully SF_6-insulated (for high altitude)



12kV Rated voltage

630A, 1250A Rated current

25kA, 31.5kA Rated short-circuit breaking current

MYG-12: fully insulated SF_6 ring main GIS (630/1,250 A). Distribution automation solution. For harsh conditions: humidity, altitude, coastal areas, mines, urban networks, renewables.

Prefabricated metal-enclosed AC distribution switchgear



12kV	630A	25kA
Rated voltage	Rated current	Rated short-circuit breaking current

Prefabricated metal-enclosed switchgear for 3–10 kV urban networks. Ring main node or terminal equipment for distribution, control and protection. Can be installed in package substations.

Eco-friendly metal-enclosed gas-insulated AC ring main unit



12kV	630A	20kA, 25kA
Rated voltage	Rated current	Rated short-circuit breaking current

MYS8-12: eco-friendly SF_6-free ring main GIS. Compact, easy to install, meets State Grid requirements. For small substations, industry, urban districts, airports and railways.

MNSG low-voltage switchgear assembly



400V/690V	1000 V	100–6300A	30/50/65/80/100kA 1s
Rated voltage	Insulation voltage	Rated current	Short-time withstand current

MNSG: modular low-voltage switchgear (basic module 8E). Up to 36 functional units in an MCC cabinet. PC and MCC can be installed together.

GGD low-voltage switchgear assembly



400V	1000 V	100–6300A	30/50/65/80/100kA 1s
Rated voltage	Rated current	Rated insulation voltage	Short-time withstand current

GGD: fixed-type low-voltage switchgear. Flexible schemes, easy combination. A standard fixed-type switchgear assembly.

Low-voltage cabinet for offshore wind



800V/1140V	2000 V	100–6300A	50/65/80/100/120kA 1s
Rated voltage	Insulation voltage	Rated current	Short-time withstand current

Low-voltage cabinet for offshore wind. Compact modular design, more than 200 unit types. High standardisation and interchangeability.

GCK low-voltage switchgear assembly



400V/690V	1000 V	100–6300A	30/50/65/80/100kA 1s
Rated voltage	Rated insulation voltage	Rated current	Short-time withstand current

GCK: low-voltage switchgear for incoming supply, feeders, bus couplers, lighting, motor control and power factor correction. Combines PC and MCC functions.

BlokSet low-voltage switchgear (Schneider authorised)



400V/690 V	100A-6300A
Rated voltage	Rated current

BlokSet (Schneider authorised): resistant to corrosion and salt mist, high EMC, internal arc withstand 85 kA / 0.5 s, seismic resistance up to intensity 9.

8PT low-voltage switchgear assembly



400V/690 V	100A-6300A
Rated voltage	Rated current

8PT: high ratings (Icw up to 150 kA, internal arc withstand). Wide range of applications.



02

TRANSFORMER PRODUCTS

A range of oil-immersed and dry-type power transformers up to 550 kV, as well as special-purpose transformers. The products are widely used in onshore and offshore renewable energy, power grids, rail transport, data centres and large municipal projects.

550 kV liquid-immersed transformers



330–550kV
Rated voltage

Up to 800 000kVA
Rated power

Large liquid-immersed power transformers, 330–550 kV, up to 800 MVA. For power plants, transmission substations, renewables and industry.

220 kV liquid-immersed transformers



66–220kV
Rated voltage

Up to 400 000kVA
Rated power

Liquid-immersed power transformers, 66–220 kV, up to 400 MVA. For power plants, substations, renewables and industry.

500 kV single-phase off-circuit tap-changing autotransformer



36–500kV
Rated voltage

100 000–334 000kVA
Power range

500 kV single-phase autotransformer with off-circuit tap changer. Self-bonding continuously transposed conductor; design without clamping screws gives high short-circuit withstand.

110 kV nacelle-mounted liquid-immersed transformers



1.14kV / 35–110kV
Rated voltage

13 200–28 000kVA
Power range

Liquid-immersed transformers for offshore wind turbine nacelles (1.14 / 35–110 kV, 13.2–28 MVA). High fire-point insulating liquid.

35/66 kV wind turbine liquid-immersed transformers



0.69–1.14kV/35–66kV
Rated voltage

6000–20 000kVA
Power range

Liquid-immersed transformers for offshore wind turbine towers (0.69–1.14 / 35–66 kV). Forced oil circulation with water cooling.

66 kV low-frequency liquid-immersed transformers



0.69–1.14kV/35–66kV
Rated voltage

13 200–26 400kVA
Power range

20Hz
Rated frequency

Low-frequency (20 Hz) liquid-immersed 66 kV transformers for deep-water offshore wind. Water cooling.

Top-suspended ester-immersed transformers

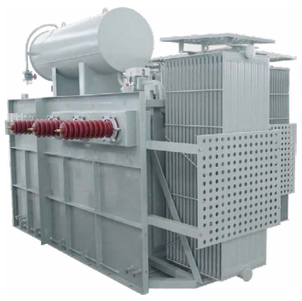


37×2.5%/1.14kV
Rated voltage

5000–20000kVA
Power range

Top-suspended transformers immersed in natural/synthetic ester for wind turbine nacelles. Comply with IEC 60076; low losses.

New-energy liquid-immersed transformers



0.68–0.8kV/10–35kV
Rated voltage

500–10000kVA
Power range

Liquid-immersed transformers for renewable energy sites. More compact than standard solutions, IEC-compliant, easier to maintain than pad-mounted transformers. Hermetically sealed tank.

Natural and synthetic ester transformers (IEEE standard)



34.5±22.5%/0.645kV
Rated voltage

73.6/3938.5A
Rated current

Natural/synthetic ester transformers (IEEE). High fire point of 360°C, extended insulation life, biodegradable. UL certified.

Split-winding string transformers (IEC standard)



33±22.5%/0.8–0.8kV
Rated voltage

157/3233–3233A
Rated current

Split-winding transformers for string inverters (IEC). Low losses, vacuum filling, fully sealed. CE certified.

Split-winding central transformers (IEC standard)



33±22.5%/0.66–0.66kV
Rated voltage

155/3880–3880A
Rated current

Split-winding transformers (IEC) for PV central inverter step-up skids.

Liquid-immersed distribution transformers



10kV/0.4kV
Rated voltage

30–2500kVA
Rated power

Liquid-immersed distribution transformers 10 kV / 0.4 kV (30–2,500 kVA). For industry, agriculture and civil buildings.

UPS transformers



0.1–6kV
Rated voltage

1kVA–1000kVA
Rated power

UPS transformers (input/output isolation). Change of earthing system, suppression of common-mode interference and harmonics.

Low-voltage control transformers



0.1–6kV
Rated voltage

1kVA–1000kVA
Rated power

Low-voltage control transformers for lighting, control and signalling circuits. Shell or core type, vertical or horizontal.

DC reactors



0.1–6kV
Rated voltage

5–2000A
Rated current

DC reactors for converters. Limit the AC component, reduce ripple and improve power factor.

Reactors for PV systems



0.38–3kV
Rated voltage

5–2000A
Rated current

Reactors for PV and wind converters. Stable operation in harsh climates.

Epoxy cast-resin dry-type transformers



6–66kV
Rated voltage

50–40000kVA
Rated power

Dry-type transformers with cast epoxy resin insulation. Fire-safe, explosion-proof, high overload capacity. For buildings, airports and data centres.

Nacelle-mounted dry-type transformers

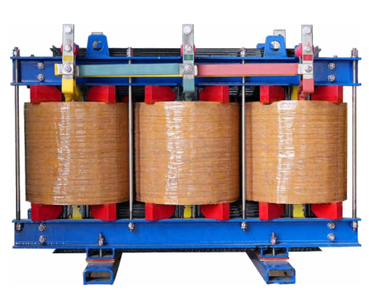


35/1.14–0.69/0.4kV
Rated voltage

4000–17600kVA
Rated power

Dry-type transformers for wind turbine nacelles. Lightweight (aluminium windings available), forced air cooling.

Dry-type auxiliary transformers for wind power



1.14–0.69/0.4kV
Rated voltage

30–550kVA
Rated power

Dry-type auxiliary transformers for wind power. Supply for control and lighting circuits (400 V / 220 V).

Stationary offshore wind step-up dry-type transformers



35–66/0.69–1.14kV
Rated voltage

3300–28000kVA
Rated power

Fixed-foundation dry-type step-up transformers for offshore wind turbines. Water cooling, arc protection.

Onshore new-energy dry-type transformers



10–35kV/0.4–1.14kV
Rated voltage

800–10000kVA
Rated power

Dry-type transformers for onshore renewables (PV, wind, storage). Operate as step-up or step-down units.

Class H non-encapsulated dry-type transformers



6–20kV/0.4kV
Rated voltage

50kVA–2500kVA
Rated power

Class H dry-type transformers without encapsulation. For load centres requiring low losses and easy maintenance.

Floating offshore wind step-up dry-type transformers



35–66/1.14kV
Rated voltage

5000–20000kVA
Rated power

Floating dry-type step-up transformers for offshore wind turbines. Vibration damping, vibration monitoring, water cooling.

Cast-resin dry-type transformers



35/1.14–0.69kV
Rated voltage

4000–17600kVA
Rated power

Cast-resin dry-type transformers for compact onshore wind turbines. Water or air cooling.



03

SUBSTATIONS AND SKIDS

The range covers combined transformers up to 40.5 kV, high- and low-voltage package substations, and integrated skid solutions for PV and energy storage systems.
The products are widely used in renewable energy (generation and storage), power grids and large municipal projects.

Pad-mounted transformer, single-phase and three-phase



6–34.5kV
Rated voltage

30–5000kVA
Rated power

Pad-mounted transformer (single- and three-phase). Active part, load-break switch and fuses in a single tank. Compact; for parks, residential and retail areas.

HV/LV prefabricated substations



6-34.5kV
Rated voltage

30–1250kVA
Rated power

HV/LV prefabricated substation. Transformer plus HV and LV switchgear in a single enclosure. For urban, rural and industrial sites and EV charging infrastructure.

Compact substations (IEEE standard)



10–35kV
Rated voltage

300–5000kVA
Rated power

Compact substations (IEEE). For PV and wind plants and energy storage systems as a collection and step-up node.

PV power generation all-in-one substations



72.5kV
Rated voltage

9600kVA
Rated power

All-in-one package substation for PV plants (72.5 kV / 9,600 kVA). Factory pre-assembled.

HV/LV prefabricated substations



10–35kV
Rated voltage

300–7100kVA
Rated power

Package prefabricated substation combining a transformer, HV and LV switchgear and auxiliary equipment in a single enclosure. For power collection and step-up in solar, wind and energy storage systems.

HV/LV prefabricated substations



10–35kV
Rated voltage

300–17600kVA
Rated power

Package prefabricated HV/LV substation combining a transformer, HV and LV switchgear and auxiliary equipment in a single assembly. For power collection and step-up in solar, wind and energy storage systems.

Energy storage PCS integrated skid



Integrated unit for energy storage systems combining the PCS, step-up transformer, MV switchgear and an LV control and communication cabinet. Provides bidirectional power conversion, load balancing and stable grid operation.

PV inverter integrated skid



Integrated skid with a PV inverter: inverter, transformer, switchgear and monitoring system in a single unit. DC input, AC output. For PV plants of all types.



04

PREFABRICATED PRODUCTS AND INTELLIGENT COMPONENTS

Prefabricated modular step-up substations with factory-integrated equipment. Customised to client needs, they enable rapid deployment, high reliability and shorter project timelines.

Emergency power supply pods



50kW–320kW
Rated genset power

Common rail / electronic fuel pump
Fuel system

Diesel emergency power supply pods for offshore wind turbines. Designed for salt mist, humidity and heat.

Prefabricated module for offshore step-up systems



66kV/1.14kV
Rated voltage

17600kVA and below
Rated power

Prefabricated offshore step-up module (66/1.14 kV). Containerised unit with switchgear, transformer and interconnections.

Power modules



12kV/0.4kV
Rated voltage

2500kVA and below
Rated power

Power modules (12/0.4 kV). Prefabricated assembly with transformers, switchgear, UPS and SVG. Rapid deployment.

Power container for data centres



Power container for data centres. Factory-assembled on a plug-and-play basis, shortening construction and commissioning times.

MYC7-1.5 vacuum circuit breaker



1500V
Rated voltage

4000/5000/6300A
Rated current

MYC7-1.5 vacuum circuit breaker (1,500 V). Spring-operated mechanism, vacuum interrupter. For high-altitude, coastal and offshore conditions. Service life >30 years.

Indoor vacuum circuit breaker

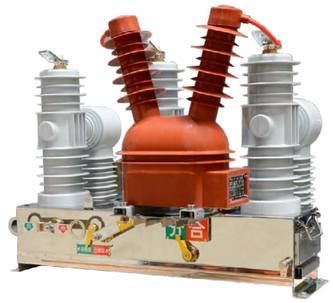


12kV
Rated voltage

630/1250/1600/ 2000/2500/3150/ 4000A
Rated current

Indoor vacuum circuit breaker, 12 kV. Fully modular, interchangeable, integrated design (>70 parts).

ZW32-12 outdoor HV AC vacuum circuit breaker



12kV
Rated voltage

1250A, 2500A
Rated current

ZW32-12 outdoor vacuum circuit breaker. With current and zero-sequence current transformers. For 12 kV substations and networks.

ZW20-12 outdoor HV AC vacuum circuit breaker



12kV
Rated voltage

630A
Rated current

ZW20-12 outdoor pole-mounted intelligent vacuum circuit breaker. For frequent switching and rural networks. Recloser function.



SINEXCEL

Company profile

SINEXCEL is a global manufacturer of innovative solutions in energy technology, power electronics and new energy. The company specialises in modular energy storage systems, EV charging, power quality and power inverters. SINEXCEL is ranked by BloombergNEF as a Tier 1 inverter manufacturer.

Founded in 2007 in Shenzhen, the company has been listed on the ChiNext exchange since 2017. SINEXCEL offers efficient and safe solutions for industry, high-tech manufacturing, data centres, the power sector and rail transport, as well as complete equipment for energy storage systems, charging infrastructure and battery swapping, and for the manufacture of consumer electronics batteries and traction batteries.

The company has a manufacturing centre in Huizhou, an R&D centre in Xi'an, an operations centre in Suzhou, and subsidiaries in the USA, Germany, Australia, Singapore and South Korea.

IMPROVING ENERGY EFFICIENCY — DELIVERING ENERGY FREEDOM

5000+
energy storage projects delivered

60
countries of operation

280+
patents

300k+
battery testing channels in stable operation

20k+
power quality projects delivered

200k+
EV charging systems online

4*PWS1-160M-H Rack Solution



Features

Flexible configuration

- Accommodates 1–4 PWS1-160M-H-EX/NA modules
- Pre-installed AC busbar with a main isolating switch and a circuit breaker for each connection circuit
- Modular design for scalable energy solutions

High efficiency and stability

- Integrated U2 control board for parallel PCS operation
- Ethernet switch for centralised communication between modules
- Simplified EMS communication via PMS-U2-P

Versatile use

- Four independent DC inputs with individual fuses and DC disconnectors
- Optional common DC busbar for a single battery connection
- Designed for scalable integration into various energy solutions

Safety and compatibility

- Robust rack design for secure module mounting
- Pre-installed protection devices for AC and DC connections
- Centralised control for greater system reliability and safety

Specifications

Model	Max 4×PWS1-160M-H-EX	Max 4×PWS1-160M-H-NA
Utility-interactive mode		
Rated power	640 kVA (4×160 kVA) at 720–1200 V DC 576 kVA (4×144 kVA) at 1200–1500 V DC	640 kVA (4×160 kVA) at 850–1200 V DC 576 kVA (4×144 kVA) at 1200–1500 V DC
Maximum AC power	4×160×1.1 kVA	
AC voltage	400 V (−15%...+15%)	480 V (−15%...+15%)
DC voltage range	720–1500 V; above 1200 V power is derated to 90%	850–1500 V; above 1200 V power is derated to 90%
AC current	4×231 A	4×193 A
Maximum DC current at rated power	4×230 A	4×195 A
AC connection	3P3W/3P4W	
AC frequency	50 Hz (−2.5...+2.5 Hz)	60 Hz (−2.5...+2.5 Hz)
Total harmonic distortion (THDi)	≤3%	
Power factor (PF)	−1...+1	
Current overload	1.1 × continuous	
System parameters		
Dimensions (W×H×D)	1340×2400×960 mm (excluding screws)	
Number of modules	4	
DC inputs	1/4 circuits	
AC connection	Pre-installed AC busbar with a circuit breaker for each connection circuit	
DC connection	Each PCS DC side fitted with a fuse and a disconnector	
Control system	Integrated U2 control board for parallel PCS operation	
Communication interface	One Ethernet port for EMS communication; 8-port Ethernet switch for communication between the EMS and modules	
Enclosure	Module: IP66; cabinet: IP55	
Weight	approx. 1200 kg	
Operating temperature	−25°C to +60°C (derating above 45°C)	
Cooling	Forced air cooling	
Operating humidity	0–100% (non-condensing)	
Communication	RS485, Ethernet, CAN	
Communication protocol	Modbus TCP/RTU, CAN 2.0	

PDS1-750K-H DC-DC Converter



Features

Flexible configuration

- Power from 100 kW to 750 kW using 1–8 power modules
- Wide DC range: 500–1500 V
- Automatic bidirectional operation

Safety and compatibility

- Multi-string configuration with control of individual modules or module groups
- Flexible use with PV and batteries

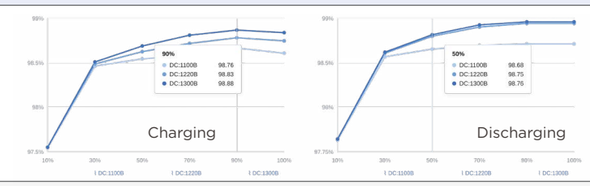
Intelligent collaboration

- 2/4 inputs or 1 output
- Multiple MPPTs
- Compatible with various battery system types

High efficiency and stability

- Peak efficiency up to 98.96%
- Multi-string technology for improved battery safety and performance

Specifications

Model	PDS1-750K-H
Rated power	750 kW
Battery /bus side	
Maximum DC voltage	1500 V
Voltage range	500–1500 V
Rated voltage	1000 V
Rated current	750 A
Maximum current	825 A
Physical characteristics	
Cooling	Forced air cooling
Noise level	<85 dB
Enclosure	IP54
Maximum altitude	3000 m (derating above 3000 m)
Operating temperature	−20°C to +50°C (derating above 45°C)
Humidity	0–95% (non-condensing)
Dimensions (W×H×D)	1200×2100×970 mm (to be confirmed)
Weight	Cabinet 292 kg + module 51 kg × n (n = 1, 2, ..., 8)
Installation	Floor-standing
Other	
Efficiency curve	
Peak efficiency	98.96%
Auxiliary power supply (AUX)	Built-in
Protection	OTP (over-temperature protection), EPO (emergency power off), fan/relay fault, OLP (overload protection), reverse polarity protection
Configurable protection limits	Battery EOD voltage
Communication protocols	Modbus TCP/IP
Communication ports	RS485, CAN, Ethernet
Isolation	Non-isolated
System monitoring	Real-time monitoring with automatic alerts and data logging
Certification	CE LVD IEC 62109/62477, CE EMC IEC 61000, UL 1741

PWX1-1250KTL-H-EX/NA Power Conversion System



Features

Flexible configuration

- For 5 MWh applications at 1C, 0.5C and 0.25C
- Global grid certification: CN/EX/NA

Grid-friendly

- Grid-forming capability, 100+ MW
- LVRT and HVRT capability
- Precise source–grid–load switchover

Intelligent collaboration

- Operating modes: VSG, PQ, VF
- Four-quadrant P/Q control
- Parallel operation 100+ MW + black start

High efficiency and stability

- Large 1500 V high-voltage module design; 99% system availability; IP65, C5
- Parallel operation of 4 units on both the AC and DC sides

Specifications

Model	PWX1-1250KTL-H-EX	PWX1-1250KTL-H-NA
AC parameters		
Rated AC power	1250 kW	
AC connection	3-phase, 3-wire	
AC overload capacity	1.1× continuous, 1.8× for 10 s	
AC voltage	690 V (–15% to +10%)	
AC frequency	50/60 Hz (–5 to +5 Hz)	60 Hz (–5 to +5 Hz)
THDi	≤3%	
Power factor (PF)	0.99 / –1 to +1	
DC parameters		
Maximum DC power	1375 kW	
DC voltage range	1040–1500 V	
Number of DC inputs	1	
Rated DC current	1202 A	
System parameters		
Maximum efficiency	99%	
Dimensions (W×H×D)	720×2300×1600 mm; 720×2300×2135 mm (with bent ducts)	
Weight	1300 kg	
Noise level	<75 dB; <68 dB (with acoustic hood)	
Enclosure and corrosion protection	IP65 and C5	NEMA 3R
Operating temperature	–40 to +60°C (derating above 55°C)	
Cooling	Air cooling	
Operating humidity	0–100% (non-condensing)	
Operating altitude	3000 m (derating above 3000 m)	
Communication		
Communication interfaces	RS485, Ethernet, CAN	
Communication protocol	Modbus TCP/RTU, IEC 104, IEC 61850 (optional)	

PWX1-1575KTL-H-EX/NA Power Conversion System



Features

Flexible configuration

- For 6.25 MWh applications at 0.5C and 0.25C
- Global grid certification: CN/EX/NA

Grid-friendly

- Grid-forming capability, 100+ MW
- LVRT and HVRT capability
- Precise source–grid–load switchover

Intelligent collaboration

- Modes: VSG, PQ, VF
- Four-quadrant P/Q control
- Parallel operation 100+ MW + black start

High efficiency and stability

- Large 1,500 V high-voltage module design; 99% system availability; IP65, C5
- Parallel operation of 4 units on both the AC and DC sides

Specifications

Model	PWX1-1575KTL-H-EX	PWX1-1575KTL-H-NA
AC parameters		
Rated AC power	1575 kW	
AC connection	3-phase, 3-wire	
AC overload capacity	1.1× continuous, 1.5× for 10 s	
AC voltage	690 V (–15% to +10%)	
AC frequency	50/60 Hz (–5 to +5 Hz)	60 Hz (–5 to +5 Hz)
THDi	≤3%	
Power factor (PF)	0.99 / –1 to +1	
DC parameters		
Maximum DC power	1732 kW	
DC voltage range	1040–1500 V	
Number of DC inputs	1	
Rated DC current	1515 A	
System parameters		
Maximum efficiency	99%	
Dimensions (W×H×D)	720×2300×1600 mm; 720×2300×2135 mm (with bent ducts)	
Weight	1300 kg	
Noise level	<75 dB; <70 dB (with acoustic hood)	
Enclosure and corrosion protection	IP65 and C5	NEMA 3R
Operating temperature	–40 to +60°C (derating above 45°C)	
Cooling	Air cooling	
Operating humidity	0–100% (non-condensing)	
Operating altitude	3000 m (derating above 3000 m)	
Communication		
Communication interfaces	RS485, Ethernet, CAN	
Communication protocol	Modbus TCP/RTU, IEC 104, IEC 61850 (optional)	

Efficient Energy — Efficient Business

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