Prohresivka BESS

Investment Offer — 40 MW / 160 MWh

$39,984,000	10.03%	16.3%	6.1 years	160 MWh
Total CAPEX	Target IRR	Target ROI	Payback period	Capacity

Mykolaiv Oblast, Ukraine · LFP · Liquid-cooled · 35 kV Grid Connection · DAM · IDM Arbitrage

EXECUTIVE SUMMARY

Prohresivka Battery Energy Storage System

The Prohresivka BESS is a **40 MW / 160 MWh** grid-scale battery energy storage system located in Mykolaiv Oblast, Ukraine. The project participates in the Ukrainian Day-Ahead Market (DAM) and Intraday Market (IDM), executing automated 2-cycle daily arbitrage strategies that exploit the extreme intraday price volatility characteristic of the Ukrainian electricity market.

$39,984,000	10.03%	16.3%	6.1 yrs	$249.90/kWh
Total CAPEX	Target IRR	Target ROI	Payback period	Specific CAPEX

Parameter	Value	Parameter	Value
Location	Mykolaiv Oblast, Ukraine	Technology	LFP — Lithium Iron Phosphate
Grid	35 kV	Containers	32 × 5.015 MWh (Cornex)
Power	40 MW charge / discharge	MV Stations	4 × 10 MW PCS-Skid
Energy	160.48 MWh nameplate	Efficiency	91.3% combined (DC→POC)
Usable	112.34 MWh (15–85% SoC)	Cell life	8,000+ cycles rated
Operation	~8 months from start	Degradation	2% calendar / 6 mo (Y1)

Investment layers

Layer	Unit price (USD)	Units	Min. investment	IRR	ROI	Payback
Full system	$39,984,000	1	$40,119,912	**10.03%**	**16.3%**	6.1 yr
MV power station	$10,995,600	4	$11,029,847	**7.87%**	**14.8%**	6.8 yr
Battery container	$1,516,431	32	$1,516,437	**5.82%**	**13.5%**	7.4 yr
Battery rack	$139,013	384	$138,969	**3.87%**	**12.3%**	8.2 yr
Battery cell	$368	~20K	$3,680	**1.99%**	**11.1%**	9.0 yr

MARKET ANALYSIS

Ukrainian DAM/IDM — Price Volatility and Arbitrage

Ukraine's Day-Ahead Market (DAM), administered by OREE, exhibits among the highest intraday price volatility of any European electricity market. On a single delivery day (2026-04-14) the spread between the cheapest hour (11 UAH/MWh at 16:00) and the most expensive (13,767 UAH/MWh at 21:00) exceeded **1,250×**. This structural volatility is driven by inflexible generation mix, low interconnection capacity, and war-related demand patterns — conditions that are expected to persist through the project horizon.

Window	Hours	Price range (UAH/MWh)	Role
Night trough	01:00–07:00	1,500 – 4,500	Charge
Morning rise	08:00–11:00	4,000 – 7,000	Discharge
Midday low	12:00–16:00	11 – 2,000	Charge (Day→Eve cycle)
Evening peak	17:00–23:00	5,000 – 13,767	Discharge (primary)

Q1 2026 trailing performance (30-day backtest)

Metric	UAH	USD @ 44 UAH
Avg daily net revenue	**1,047,425**	**$23,805**
Avg daily gross revenue	1,125,643	$25,583
30-day total net revenue	**30,375,328**	**$690,348**
30-day total gross revenue	32,643,643	$741,901
Execution rate	29 / 30 days	96.7%
Avg net spread	**9,738 UAH/MWh**	**$221/MWh**

Dispatch strategy

The Wesfin v3 optimizer evaluates two candidate cycle families daily — **Night→Morning** (charge hours 1–6, discharge hours 7–11) and **Day→Evening** (charge hours 12–16, discharge hours 17–21) — selecting the higher net-profit option after accounting for round-trip efficiency (91.3%), per-MWh degradation cost, slippage, and transaction fees. If neither cycle exceeds the minimum spread threshold the battery is held idle, protecting cell life. The optimizer runs on a 36-hour rolling horizon and refines timing using IDM data when available.

INVESTMENT LAYERS

Five entry points — from cell to full system

Ownership is structured across five layers that mirror the physical architecture of the asset. All layers share the same real-time performance visibility and revenue attribution through the Wesfin investor portal. IRR figures reflect the base-case financial model with 12% discount rate, 2% annual degradation, and 10-year horizon.

Layer 1 — Full System			$249.90/kWh IRR 10.03%
Capacity	160.48 MWh / 40 MW	Min. investment	$40,119,912
Annual net revenue	**$6,516,651/yr**	Payback period	6.1 years
ROI	**16.3%**	Available units	1 of 1

Layer 2 — MV Power Station			$274.89/kWh IRR 7.87%
Capacity	40.12 MWh / 10 MW	Min. investment	$11,029,847
Annual net revenue	**$1,629,163/yr**	Payback period	6.8 years
ROI	**14.8%**	Available units	3 of 4

Layer 3 — Battery Container			$302.38/kWh IRR 5.82%
Capacity	5.015 MWh / 1.25 MW	Min. investment	$1,516,437
Annual net revenue	**$204,256/yr**	Payback period	7.4 years
ROI	**13.5%**	Available units	24 of 32

Layer 4 — Battery Rack			$332.57/kWh IRR 3.87%
Capacity	417.996 kWh / 104 kW	Min. investment	$138,969
Annual net revenue	**$17,025/yr**	Payback period	8.2 years
ROI	**12.3%**	Available units	278 of 384

Layer 5 — Battery Cell			$366.00/kWh IRR 1.99%
Capacity	1.005 kWh / 314Ah	Min. investment	$3,680 (min)
Annual net revenue	**$41/yr per cell**	Payback period	9.0 years
ROI	**11.1%**	Available units	~11K avail

FINANCIAL PROJECTIONS

10-year base case — full system

Base-case assumptions: 12% discount rate · 44 UAH/USD FX · 2% annual revenue degradation · 10-year analysis horizon · Revenue based on 30-day trailing average at commercial operation date.

Year	Gross revenue (USD)	Net revenue (USD)	Cumulative net (USD)
2026*	$9,337,719	**$6,516,651**	**$6,516,651**
2027	$9,150,964	**$6,386,318**	**$12,902,969**
2028	$8,967,945	**$6,258,591**	**$19,161,560**
2029	$8,788,546	**$6,133,419**	**$25,294,979**
2030	$8,612,775	**$6,010,750**	**$31,305,729**
2031	$8,440,519	**$5,890,535**	**$37,196,264**
2032	$8,271,709	**$5,772,724**	**$42,968,988**
2033	$8,106,274	**$5,657,269**	**$48,626,257**
2034	$7,944,148	**$5,544,124**	**$54,170,381**
2035	$7,785,265	**$5,433,242**	**$59,603,623**

* Pro-rated from commercial operation date (~8 months from construction start)

Daily revenue waterfall — typical day

Component	UAH	USD @ 44
Discharge revenue	1,060,669	$24,106
Charging cost	(10,336)	($235)
Degradation cost	(49,428)	($1,124)
Transaction cost	(2,149)	($49)
Net investor revenue	**998,756**	**$22,699**

IRR sensitivity analysis

Scenario	Revenue change	IRR	Comment
Bull case	**+20%**	**13.2%**	Strong market, new capacity mechanisms
Base case	0%	**10.0%**	30-day trailing average, 2% degradation
Bear case	–20%	6.5%	Lower spreads, increased competition
Stress case	–40%	2.1%	Significant market disruption

TECHNICAL SPECIFICATIONS

System architecture and component specifications

Battery system

Component	Specification	Component	Specification
Chemistry	LFP — Lithium Iron Phosphate	Cell	314Ah / 3.2V prismatic
Configuration	416S per rack (1P416S)	Cell energy	1,004.8 Wh per cell
Racks/container	12 racks	Cell weight	5.6 kg
Container cap.	5,015.961 kWh	Cycle life	8,000+ @ rated conditions
Cooling	Liquid-cooled (30 kW unit)	Certif.	UL9540A / IEC62619
Fire suppress.	Aerosol (FM-200 equivalent)	IP rating	IP55 / C4 corrosion
BMS arch.	3-level: BMU / BCU / BAU	Comms	Modbus TCP / IEC 61850
Voltage	1,331.2V rated DC	SOH year 10	80.5% (manufacturer model)

Power conversion and MV infrastructure

Component	Specification
PCS units	8 × 1,250 kVA per MV station (Sinexcel PWX1-1250KTL-H-EX)
PCS efficiency	≥98.5% at rated power; 98.4% nominal
DC voltage range	1,000–1,500 V (1,070–1,500 V full load discharge)
AC output	690 V 3-phase, stepped up to 22 kV via transformer
Transformer	10,050 kVA oil-immersed, ONAN cooling, 690V/22kV Dy11y11
MV connection	35 kV grid connection via RMU with vacuum circuit breaker
Grid support	LVRT, HVRT, VSG, PQ, VF modes; <3% THDi
Container (MV)	40-ft HQ, IP55, C5 external, –40°C to +60°C operating

Efficiency chain — DC to point of connection

Stage	Equipment	Efficiency	Notes
1	DC cable — container to PCS	99.80%	Low-resistance copper busbars
2	PCS — power conversion	98.40%	Nominal at rated power
3	Transformer — 690V/35kV	99.00%	Oil-immersed ONAN, Tier 2 EU
4	AC LV cable — PCS to transformer	99.80%	Short run, minimal losses
	Combined AC chain	**97.07%**	99.8 × 98.4 × 99.0 × 99.8
	DC battery internal	**94.00%**	FAT standard, excl. auxiliary
	End-to-end (DC→POC)	**91.3%**	0.94 × 0.9707 — used for P&L;

RISK FACTORS

Key risks and mitigation measures

Market risk

Risk	Impact	Mitigation
DAM price volatility	High	Diversified 2-cycle dispatch strategy; minimum spread threshold prevents low-value cycling
FX exposure (UAH/USD)	Medium	Revenue in UAH, CAPEX in USD; hedging strategy available; FX pass-through in waterfall
Liquidity	Medium	Positioned in most liquid Ukrainian electricity market segment
Price caps / regulation	Low	NEURC regulatory engagement; ancillary services and capacity market as alternative revenue

Operational risk

Risk	Impact	Mitigation
Battery degradation	Medium	2% annual budget modelled; LFP chemistry selected for longevity; 8,000+ cycle rating
Asset availability	Medium	95%+ target; EMS predictive maintenance; redundant liquid cooling (dual compressor)
Grid curtailment	Medium	Grid-friendly specs; frequency regulation contracts; LVRT/HVRT capabilities
Cyber / SCADA	Low	Air-gapped control network; VPN access; IEC 61850 security extensions

Construction and delivery risk

Risk	Impact	Mitigation
Supply chain	High	Direct relationships with Tier-1 manufacturers (Cornex, Sinexcel); contracted lead times
Construction delay	Medium	Experienced EPC partner; 5-month construction + 3-month commissioning buffer
Permitting	Low	Local partner with established NEURC and Ukrenergo relationships

Country and legal risk

Risk	Impact	Mitigation
Geopolitical	Medium	Mykolaiv region; force majeure provisions; war risk insurance available
Regulatory change	Medium	EU-aligned energy regulations (ENTSO-E observer); transparent DAM framework
Legal jurisdiction	Low	Cyprus SPV structure; EU-compliant legal framework; ICSID arbitration clause

REGULATORY FRAMEWORK

Ukrainian energy market and legal structure

Parameter	Detail
Market	Day-Ahead Market (DAM) + Intraday Market (IDM) — OREE platform
Regulator	National Energy and Utilities Regulatory Commission (NEURC)
Grid operator	Ukrenergo — national transmission system operator
Grid connection	35 kV to national transmission network
Legal jurisdiction	Cyprus (EU-compliant); SPV per project
Investor options	Direct equity participation or fund structure
Standards	IEC 62619, UL 9540A, EN 50549, Grid Code Ukraine (KODEX)
Future revenue	Capacity market auctions (expected); ancillary services (frequency regulation)

INVESTMENT PROCESS

How to proceed

01 **Initial inquiry**
Select investment layer and quantity. Contact investor relations or use the online portal.

02 **Reservation**
Place booking with refundable deposit. Immediate confirmation.

03 **Due diligence**
Review technical, legal, and financial documentation. 2–4 weeks.

04 **Documentation**
Receive investment agreement and subscription documents. 1–2 weeks.

05 **Allocation**
Confirm allocation and receive wire instructions. 1 week.

06 **Closing**
Execute documents and receive confirmation of investment.

Channel	Details
Investor portal	https://wesfin.energy/invest/prohresivka
Book a demo	https://wesfin.energy/portal
Contact	https://wesfin.energy/contact
API documentation	https://api.wesfin.energy/docs
Live dashboard	https://wesfin.energy/dashboard

energy projects involve significant risks including, but not limited to, market, operational, regulatory, and geopolitical risks. Past performance data is not indicative of future results. Recipients should conduct their own due diligence and seek independent legal, financial, and technical advice before making any investment decision.

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