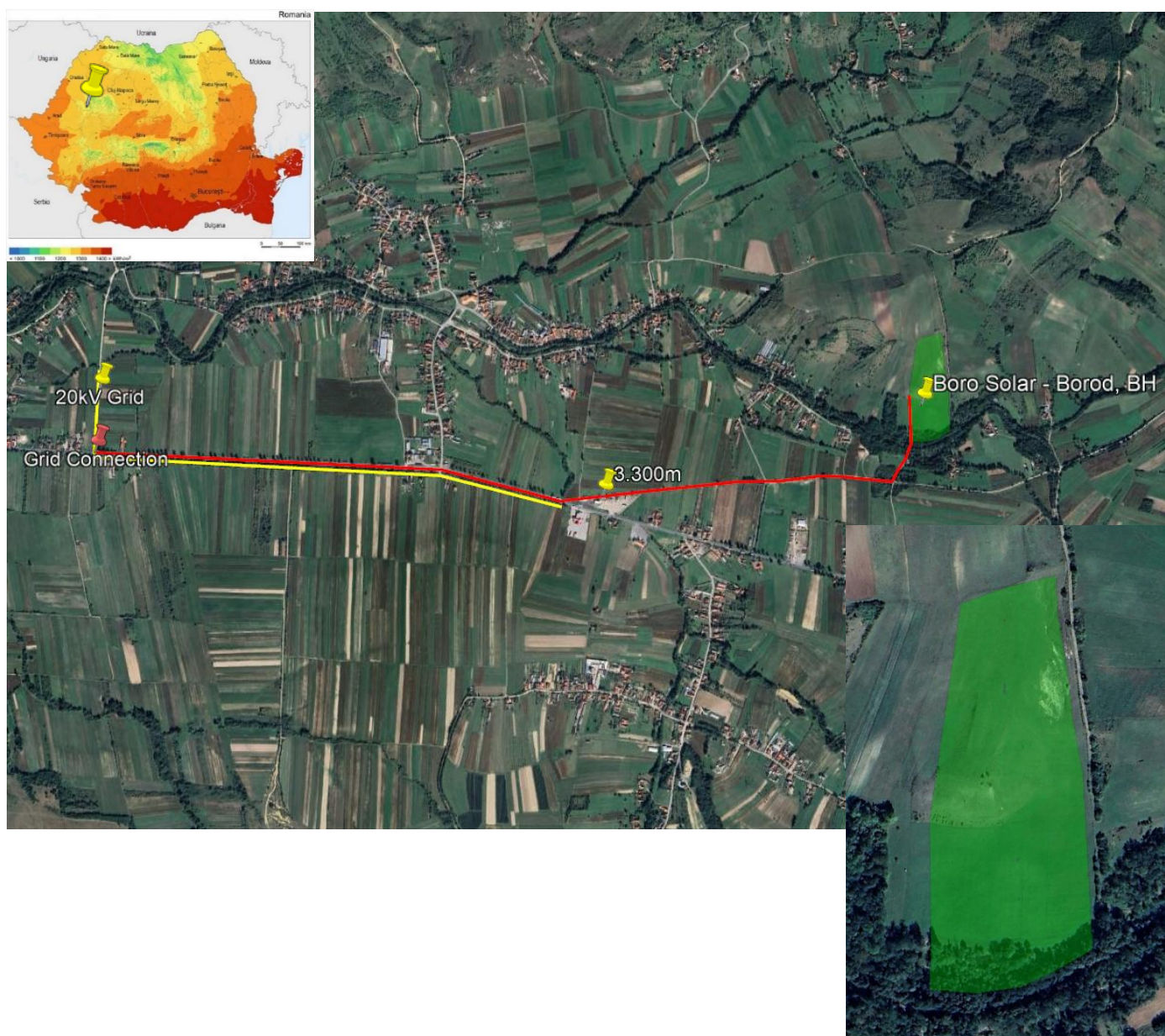




PV Park + BESS

Project: Borod, BH
Land Surface: 6.11 Ha
Installed PV Power: 1.544 MWp
BESS - Storage Capacity: 4.472 MWh



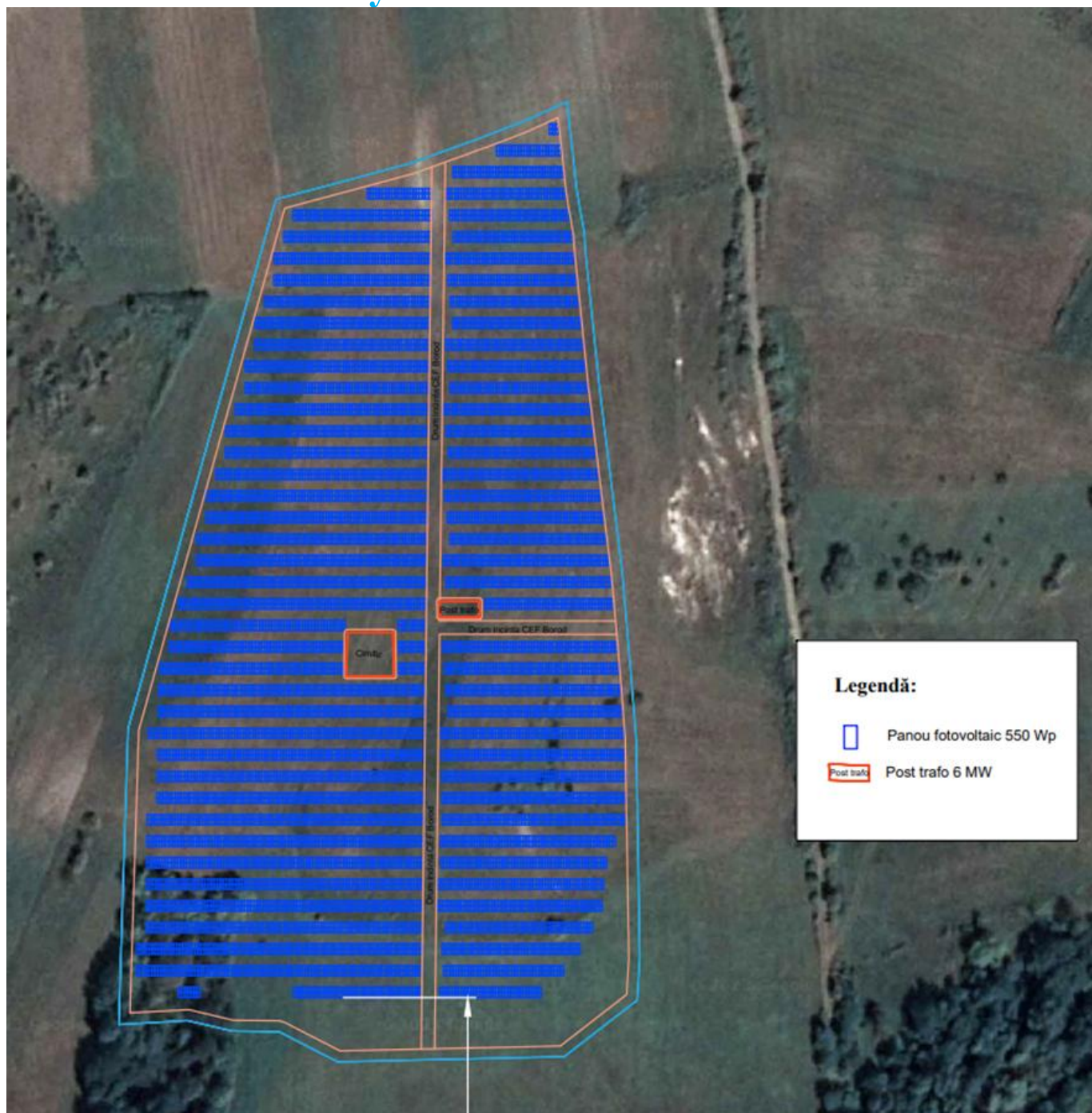


Curves Level





Layout Photovoltaic Park





Layout BESS





PV Productions

Peak power: 1.54 MWp

Module surface: 6 301.9 m²

Total number of modules: 2 333

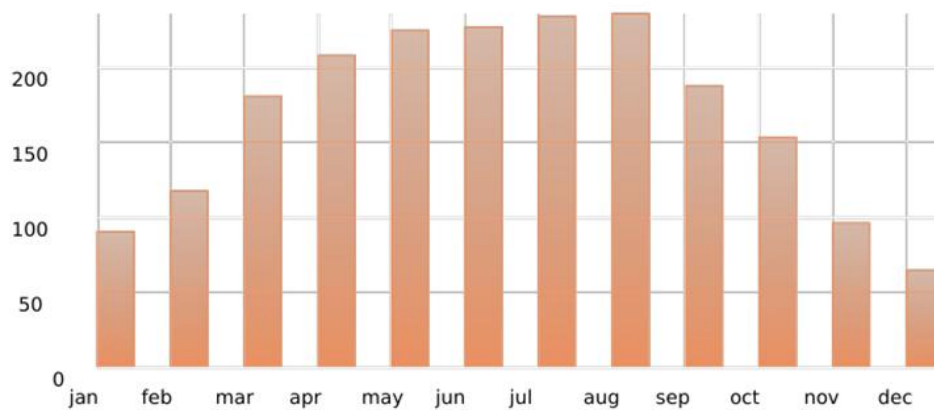
Total number of inverters: 15

Average values:

Annual production (DC) : 2 140 MWh

Annual production (AC) : 2 017 MWh

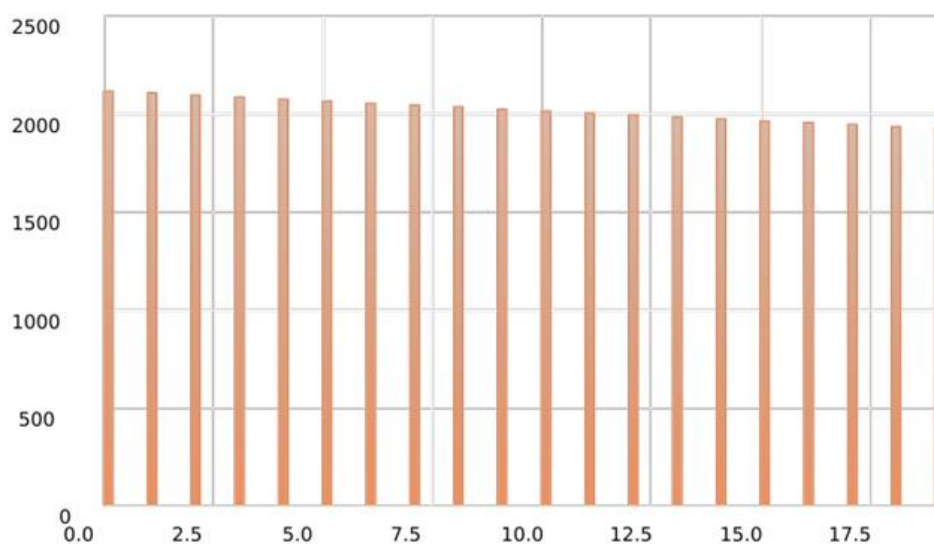
Monthly AC production (MWh/month):



Months	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec
MWh	90	117	180	208	224	227	234	235	187	153	96	64



AC production year by year (MWh):



Years	1	2	3	4	5	6	7	8	9	10
MWh	2 114	2 103	2 093	2 082	2 072	2 062	2 051	2 041	2 031	2 021

Years	11	12	13	14	15	16	17	18	19	20
MWh	2 011	2 001	1 991	1 981	1 971	1 961	1 952	1 942	1 932	1 922

EMISSIONS AVOIDED: 802 CO₂ equivalent (ton) *

* Quantity of greenhouse gases that would have been emitted during the observation period if this electricity had been generated through conventional means (20 g eq CO₂/kWh)

* Important: this does not mean that all the emissions would be avoided, since the process of manufacturing and transporting PV modules also generates greenhouse gas emissions.



Costs:

Investment: 918 680 EUR
Inverter renewal: 104 774 EUR
Maintenance: 1.00 %

Bank loan:

Amount: 918 680 EUR
Interest rate: 3.50 %

Discounting:

Inflation rate: 2.00 %
Equity rate: 3.00 %

Project type:

Total sale

Energy sales price produced:

0.0700 EUR/kWh

Price evolution:

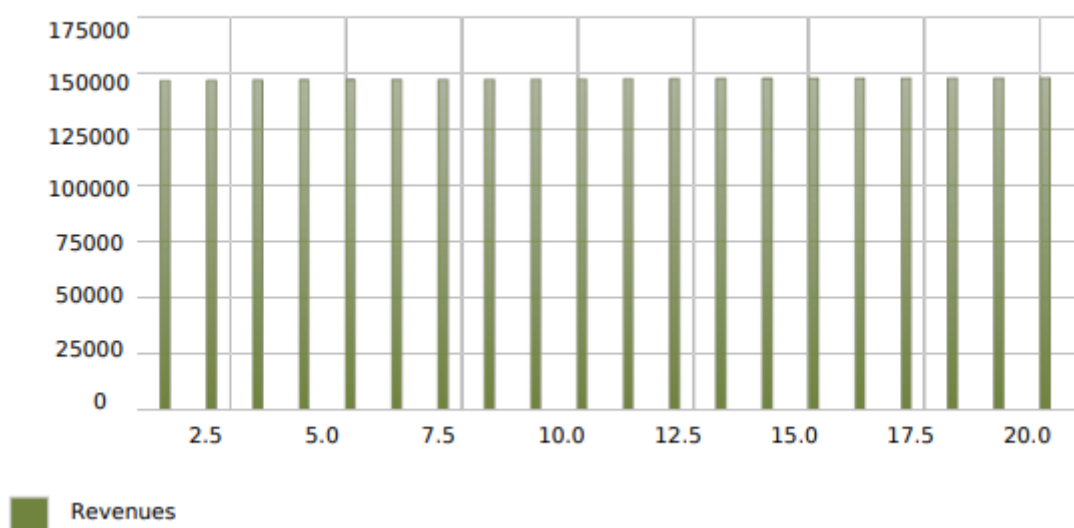
+ 0.5 %/year

Economic results:

Annual revenue: 146 910 EUR/year
Cumulated revenues: 2.938 million EUR
Maintenance cost: 11 384 EUR/year

LCOE: 0.034 EUR/kWh
Net present value: 938 240 EUR
Payback period: 7 year(s)
Discounted payback period: 8 year(s)
Internal rate of return: 13.20 %

Revenues year by year (EUR):





****According to www.opcom.ro**



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stepping forward to the future*

opcom Romanian gas and electricity market operator




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Important for prosumers!
DAM weighted average price for December 2025: 607.92 lei/MWh

EU IPO		ROPEX_DAM_15min			Day-Ahead Market - Delivery Day 12/1/2026 [lei/MWh]											
		1	2	3	4	5	6	7	8	9	10	11	12			
ROPEX_DAM_Base	202.93	64.77	82.85	85.83	92.66	85.57	84.51	87.71	87.67	88.94	87.79	87.78	87.30	82		
ROPEX_DAM_Peak	272.36	49	50	51	52	53	54	55	56	57	58	59	60	61		
ROPEX_DAM_Off_Peak	133.50	209.51	221.49	227.08	236.60	249.93	247.96	252.85	231.81	229.55	243.73	254.26	282.97	25		

	ROPEX_FM_M					Forward Market 2024-2026 [Euro/MWh]											
	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec					
ROPEX_FM_2024	100.66	115.62	114.80	95.31	95.74	92.81	94.10	98.20	100.33	100.40	102.81	102.96	103.18				
ROPEX_FM_2025	105.99	105.97	105.80	104.49	101.60	101.50	101.93	107.96	107.01	106.61	107.56	109.51	110.30				
ROPEX_FM_2026	113.47	115.80	114.83	114.36	112.55	112.12	111.90	112.89	112.88	112.89	113.02	113.02	113.03				

	Green Certificates (GCACSM) 2024-2025 [Euro/GC]											
	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
ROPEX_GC_M	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40

70 EUR / MWh
Price for 5-years average-PPA
(Public Purchase Agreement)

Announcements

- ★ **08/01/2026**
The new limit values for trading green certificates
- ★ **08/01/2026**
The new limit values for trading green certificates
- ★ **05/01/2026**
In accordance with the provisions of ANRE Order no. 15/2022, OPCOM publishes the weighted average price of the Day Ahead Market for December 2025 amounting to 607.92 lei/MWh
- ★ **05/01/2026**
In accordance with the provisions of ANRE Order no. 15/2022, OPCOM publishes the weighted average price of the Day Ahead

Press Releases

- ★ **23/12/2025**
CMBC-EA-flex – Trading record
- ★ **18/12/2025**
Successful launch of the Intra-Day Market from Republic of Moldova
- ★ **11/12/2025**
Successful launch of the DAM from Republic of Moldova

News

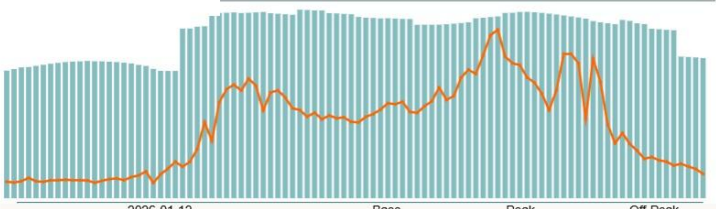
- ★ **24/03/2025**
Energynomics: Maria De Melo (EBRD) sees the Romanian renewable energy market as a model for Europe
- ★ **10/03/2022**
Initial Europex reaction to Commission communication on joint European action for more

Day-Ahead (SDAC)

Intra-Day (SIDC CT/IDA)



DAM Results



	Base	Peak	Off-Peak
2025-01-12 ROPEX_DAM [euro/MWh]	202.93	272.36	133.50
Volume [MWh]	52,605.4	28,720.9	23,884.5



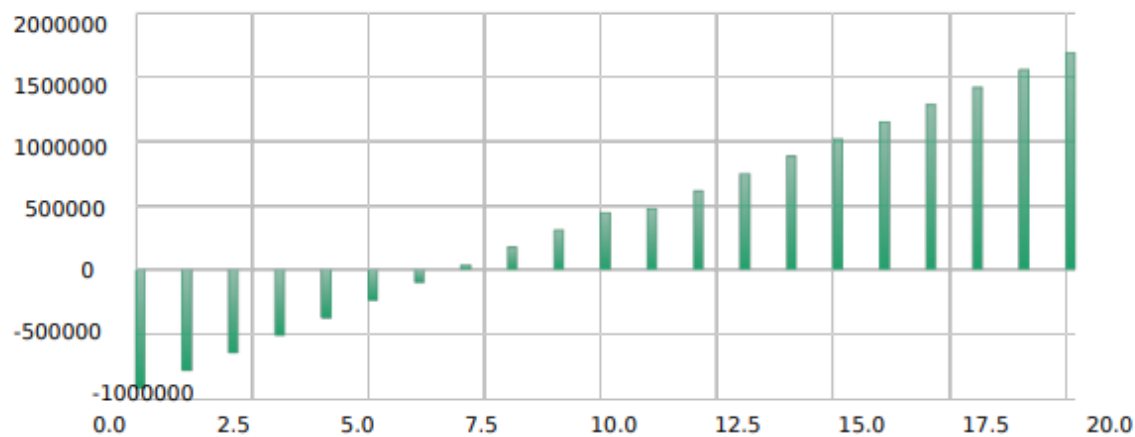
Estimated Results

Year	1	2	3	4	5	6	7	8	9	10
Production (kWh)	2 078 432	2 069 287	2 060 158	2 051 042	2 041 949	2 032 866	2 023 795	2 014 711	2 005 653	1 996 618
Selling										
Prices (EUR/kWh)	0.0704	0.0707	0.0711	0.0714	0.0718	0.0721	0.0725	0.0728	0.0732	0.0736
Sales revenue (EUR)	146 217.7	146 302.2	146 385.0	146 466.0	146 545.7	146 623.4	146 698.9	146 770.7	146 841.3	146 910.8
Total (EUR)										
Revenues	146 217.7	146 302.2	146 385.0	146 466.0	146 545.7	146 623.4	146 698.9	146 770.7	146 841.3	146 910.8
Maintenance	9 370.5	9 557.9	9 749.1	9 944.1	10 143.0	10 345.8	10 552.7	10 763.8	10 979.1	11 198.7
Inverter renewal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Results	136 847.1	136 744.2	136 635.9	136 521.9	136 402.8	136 277.5	136 146.2	136 006.9	135 862.3	135 712.1

Year	11	12	13	14	15	16	17	18	19	20
Production (kWh)	1 987 605	1 978 612	1 969 633	1 960 645	1 951 657	1 942 672	1 933 695	1 924 731	1 915 762	1 906 767
Selling										
Prices (EUR/kWh)	0.0739	0.0743	0.0747	0.0751	0.0754	0.0758	0.0762	0.0766	0.0770	0.0773
Sales revenue (EUR)	146 978.8	147 045.4	147 110.0	147 170.9	147 228.7	147 283.6	147 336.1	147 386.4	147 433.0	147 474.5
Total (EUR)										
Revenues	146 978.8	147 045.4	147 110.0	147 170.9	147 228.7	147 283.6	147 336.1	147 386.4	147 433.0	147 474.5
Maintenance	11 422.6	11 651.1	11 884.1	12 121.8	12 364.2	12 611.5	12 863.7	13 121.0	13 383.4	13 651.1
Inverter renewal	104 773.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Results	30 782.7	135 394.3	135 225.9	135 049.1	134 864.5	134 672.1	134 472.4	134 265.3	134 049.6	133 823.4



Cash flow illustration (EUR):



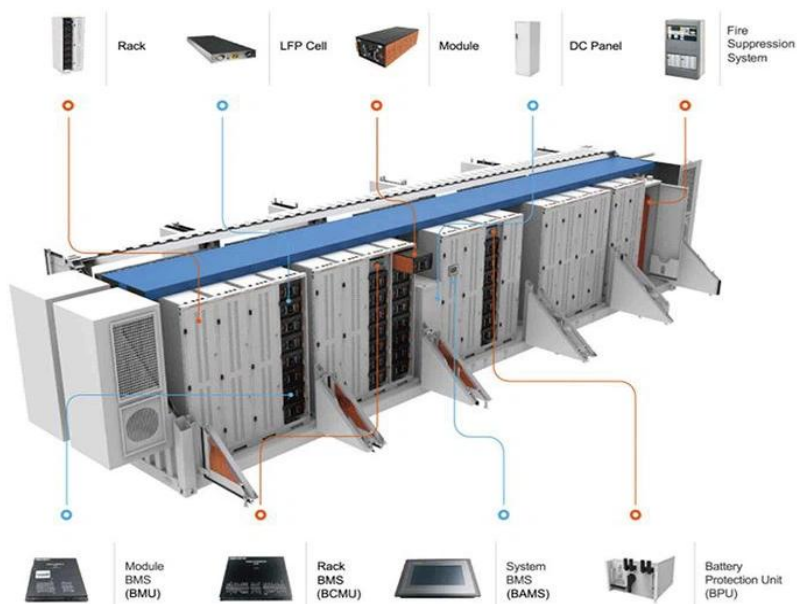
Years	1	2	3	4	5	6	7	8	9	10
EUR	-781 833	-645 089	-508 453	-371 931	-235 528	-99 250	36 896	172 903	308 765	444 477

Years	11	12	13	14	15	16	17	18	19	20
EUR	475 260	610 654	745 880	880 929	1 015 793	1 150 465	1 284 937	1 419 202	1 553 252	1 687 075



Technical description of the storage facility

- (Battery container)**



- Transformation unit - (MV SKID)**





Economic Data Storage Facility

1. Investment cost

	Storage Capacity 4,472 MWh	
Investment	EUR	894.400,00

2. Income

For an energy storage facility, there are several opportunities to utilize its electricity storage capacity, including:

- Balancing Market:
 - Revenues: €800–1,000/MWh
 - Charge/discharge cycles per day: ~0.2
- Day-Ahead Market (DAM) Arbitrage:
 - Revenues: ~€100/MWh
 - Charge/discharge cycles per day: ~1
- Intra-Day Market (IDM) Arbitrage:
 - Revenues: ~€200/MWh
 - Charge/discharge cycles per day: ~0.5–1
- Peak Production Curtailment Reduction:
 - Revenues: ~€100/MWh
 - Charge/discharge cycles per day: ~0.3–0.5
- Imbalance Compensation:
 - Revenues: ~€65/MWh
 - Charge/discharge cycles per day: ~1

For a combined scenario of using the storage facility, the following calculation will result, per MWh:

Combined scenario usage per MWh of storage			
	Cycles per day	Price [€/MWh]	Daily income [€]
Balancing market arbitrage	0,2	850	170
DAM arbitrage	0,7	100	70
IDM Arbitrage	0,75	166	124,5
Total			364,5



Revenues produced by the storage facility

Year		1	2	3	4	5	6	7	8	9	10
4,472MWh 2.75 Cycles Charge/Discharge	Income	EUR 586.332,86	EUR 574.606,21	EUR 562.879,55	EUR 551.152,89	EUR 539.426,23	EUR 527.699,58	EUR 505.653,46	EUR 504.246,26	EUR 492.519,61	EUR 480.792,95
	Operational costs	EUR 41.043,30	EUR 40.222,43	EUR 39.401,57	EUR 38.580,70	EUR 37.759,84	EUR 36.938,97	EUR 35.395,74	EUR 35.297,24	EUR 34.476,37	EUR 33.655,51
	Profits	EUR 545.289,56	EUR 534.383,77	EUR 523.477,98	EUR 512.572,19	EUR 501.666,40	EUR 490.760,61	EUR 470.257,72	EUR 468.949,02	EUR 458.043,23	EUR 447.137,44

Cashflow

An	1	2	3	4	5	6	7	8	9	10
4,472 MWh 2.75 Cycles Charging/Discharging	-349.110,44 €	185.273,34 €	708.751,32 €	1.221.323,51 €	1.722.989,90 €	2.213.750,51 €	2.684.008,23 €	3.152.957,26 €	3.611.000,49 €	4.058.137,93 €



Economics PV + BESS

Project assumptions		
Project name	Borod, BH	
PV Installed Capacity	1,544	MWp
Annual energy production AC/MWp	1.398	MWh/Mwp/year
Annual PV pannel degradation	0,5%	p.a.
Installed Storage Capacity	4,472	MWh
Charge-Discharge Battery cycles/days	2	hours
Annual BESS degradation	3%	a
Energy produced base price	70	€/MWh
Balancing Market energy price	900	€/MWh
DAM energy price	100	€/MWh
IDM energy price	200	€/MWh
Inflation rate	3%	p.a.
Project cost		
Storage equipment cost	150.000	€/MWh
Other cost related to storage (connection et	50.000	€/MWh
Cost PV park per MWp	595.000	€/MWp
Cost Storage Batteries (BESS)	894.400	€
Cost PV park	918.680	€
Customer-Side Works Tu	500	€
Grid Connection Installations Tr	47.069	€
Grid Reinforcement Ti	-	€
Grid Connection Route	132.000	€
TOTAL COST PV park + Storage	1.992.648	€
Operational cost		
Land lease	3.000	€/MWp/year
Insurance/ MW/year	3.000	€/MWp/year
Operation& Maintenance/ MW/year	3.000	€/MWp/year
Balancing & forecasting services	1.000	€/MWp/year
Accounting, bank, legal, Opcom fees etc	6.000	€/year
Utlities (energy and water)	2.000	€/MWp/year
Contingencies/year	5%	p.a.
Security services	1.000	€/MWp/year
Tax on land and construction	2.500	€/year
Financial assumptions		
Equity	597.795	€
Loan Amount	1.394.854	€
Leverage	70%	%
VAT credit line (21% of CAPEX hard cost)	418.456	€
Interest rate loan - Euribor 1 M	2,68	%
Interest Margin	4,00	%
Loan Maturity	10	years
Grace period	12	months
Monthly Instalments	108	months
Nominal cost of equity	15%	% p.a.
Cost of debt	6,4%	% p.a.
Tax rate	16%	% p.a.
WACC	8,3%	% p.a.
Financial ratios project		
IRR project	18%	%
IRR equity	49%	%
NPV project	693.794	€
Payback period	4	years

According to the approved Engineering Solution Study, the indicative cost of grid reinforcement works (TI) is estimated at approximately 5.527,04€. This value will be reassessed at the commissioning stage, and experience from similar projects shows that the final reinforcement costs tend to decrease significantly.

