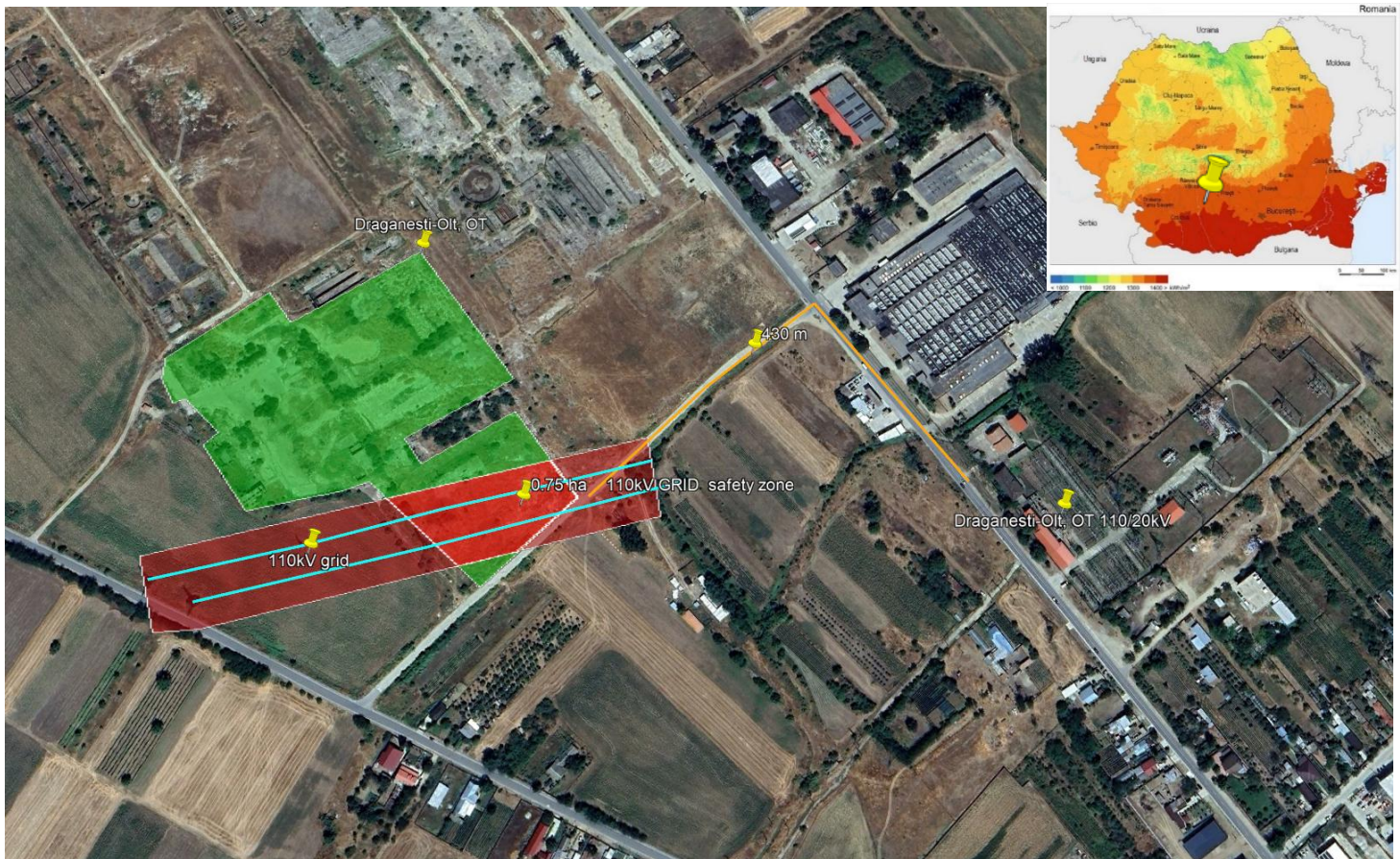




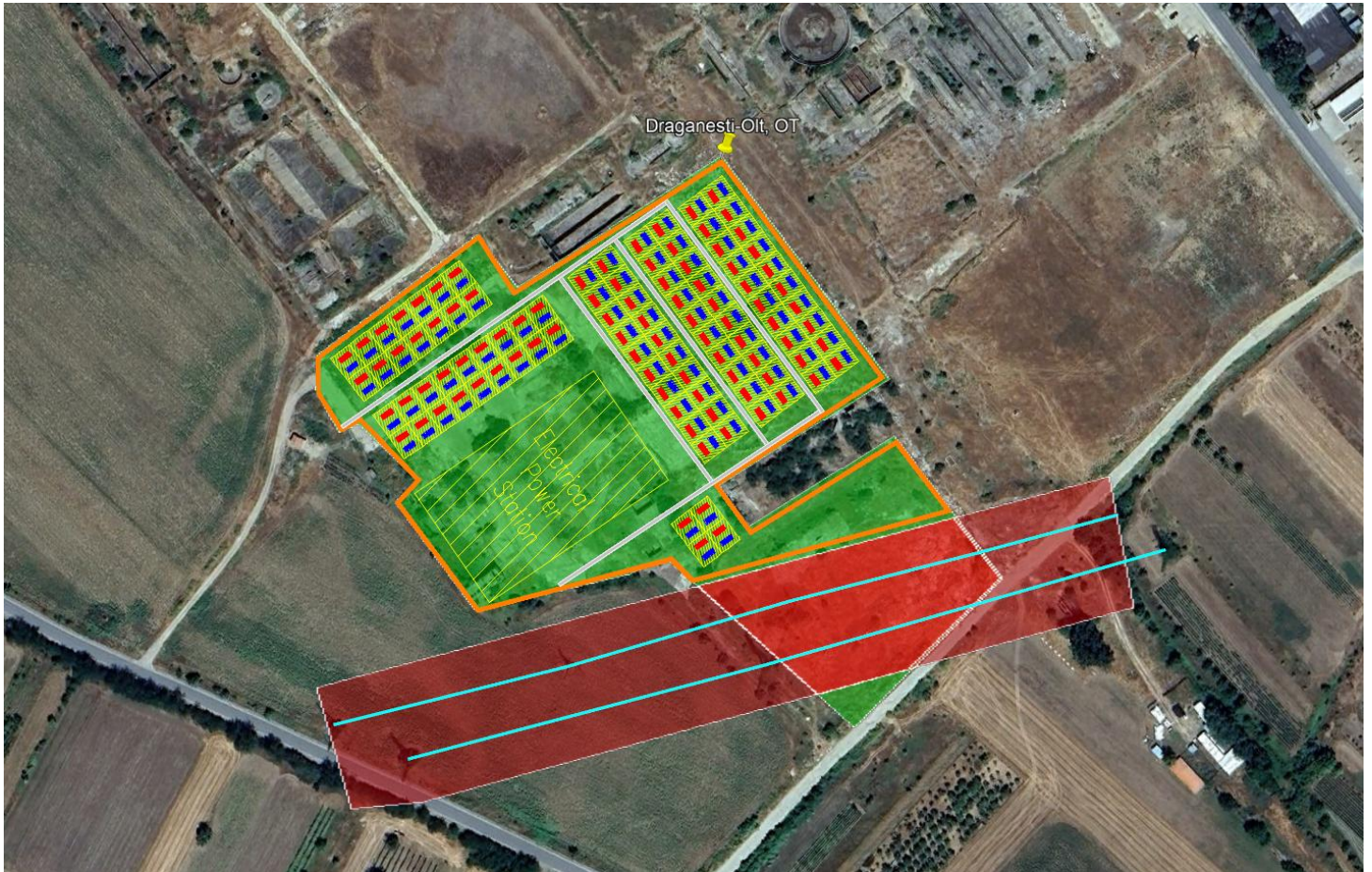
BESS

Project: Draganesti-Olt, OT
Total surface: 4.66 Ha
Storage capacity: 400,00 MWh





Layout



Transformation equipment



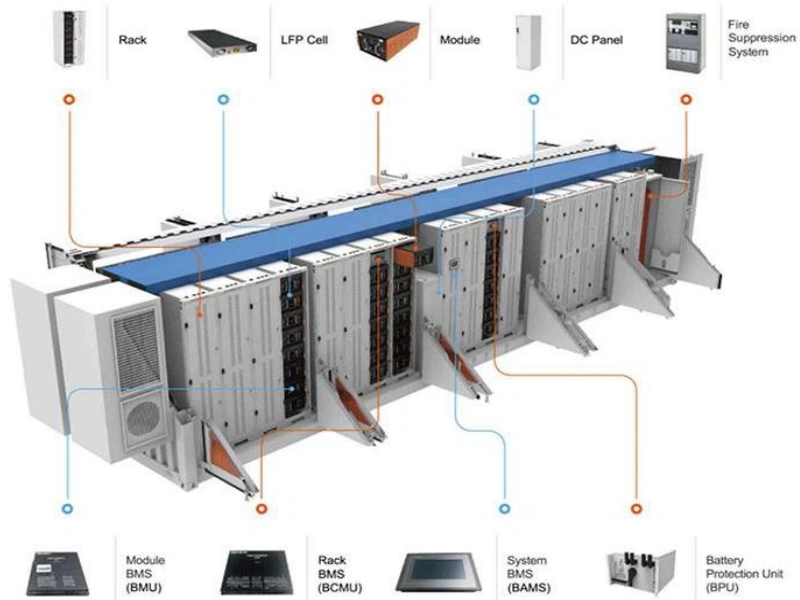
Battery container





Technical description of the storage facility

- (Battery container)



- Transformation unit - (MV SKID)





Economic Data

Project assumptions		
Project name	Draganesti-Olt, OT	
Installed Storage Capacity	400	MWh
Charge-Discharge Battery cycles/days	2	hours
Annual BESS degradation	3%	p.a.
Energy produced base price	60	€/MWh
Balancing Market energy price	900	€/MWh
DAM energy price	100	€/MWh
IDM energy price	200	€/MWh
Inflation rate	2%	p.a.
Project cost		
Storage equipment cost	150,000	€/MWh
Other cost related to storage (connection et	50,000	€/MWh
Cost Storage Batteries (BESS)	80,000,000	€
TOTAL COST Storage	80,000,000	€
Operational cost		
Land lease	13,000	€/MWh/year
Insurance/ MW/year	3,000	€/MWh/year
Operation& Maintenance/ MW/year	3,000	€/MWh/year
Balancing & forecasting services	1,000	€/MWh/year
Accounting, bank, legal, Opcom fees etc	6,000	€/year
Utlities (energy and water)	2,000	€/MWh/year
Contingencies/year	5%	p.a.
Security services	1,000	€/MWh/year
Tax on land and construction	2,500	€/year
Depreciable assets	80,000,000	€
Depreciation period	10	years
Annual depreciation	8,000,000	€
Financial assumptions		
Equity	24,000,000	€
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	40%	%
IRR equity	135%	%
NPV project	87,513,209	€
Payback period	2	years



Revenues produced by the storage facility

Year		1	2	3	4	5	6	7	8	9	10
400.00 MWh 1.5 Cycles Charging/discharging	Income	EUR 49,492,800.00	EUR 48,502,944.00	EUR 47,513,088.00	EUR 46,523,232.00	EUR 45,533,376.00	EUR 44,543,520.00	EUR 42,682,590.72	EUR 42,563,808.00	EUR 41,573,952.00	EUR 40,584,096.00
	Operational Cost	EUR 3,464,496.00	EUR 3,395,206.08	EUR 3,325,916.16	EUR 3,256,626.24	EUR 3,187,336.32	EUR 3,118,046.40	EUR 2,987,781.35	EUR 2,979,466.56	EUR 2,910,176.64	EUR 2,840,886.72
	Profit	EUR 46,028,304.00	EUR 45,107,737.92	EUR 44,187,171.84	EUR 43,266,605.76	EUR 42,346,039.68	EUR 41,425,473.60	EUR 39,694,809.37	EUR 39,584,341.44	EUR 38,663,775.36	EUR 37,743,209.28

Cashflow

Year	1	2	3	4	5	6	7	8	9	10
400.00 MWh 1.5 Cycles Charging/discharging	-53,971,696.00 €	-8,863,958.08 €	35,323,213.76 €	78,589,819.52 €	120,935,859.20 €	162,361,332.80 €	202,056,142.17 €	241,640,483.61 €	280,304,258.97 €	318,047,468.25 €

