
MCL
GROUP
READY-TO-INVEST
UKRAINIAN
WIND FARM
VOLODYMYRETS —
YOUR NEXT BIG THING!

MCL GROUP — YOUR FUTURE RELIABLE BUSINESS PARTNER!

MCL Group — Ukrainian company that was founded in 2011 with a key focus on ecology and environmental protection. As of today, we united qualified ecologists and naturalists as well as formed strong RES design development team.

OUR SERVICES FOCUS ON:

- development of autonomous wind energy projects;
- environmental & social management;
- preparation of environmental & technical documentation;
- ecology consulting;
- design and engineering;
- development of green hydrogen and other RE projects.

WE ARE AN ACTIVE MEMBER OF

OUR CLIENTS AND PARTNERS

THIS IS VOLODYMYRETS WPP!

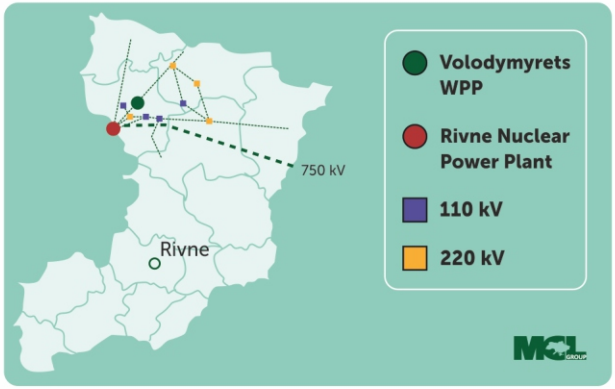
- Project status:
  RtB
  12 months
  for construction
- Safe location:
  North-West of Ukraine,
  Rivne region, ~130 km
  to the EU border
- Installed capacity:
  72 MW - 12 WTGs
  (first phase)
- Cutting-edge wind turbines:
  - Unit capacity - 6 MW Hub
  - height - up to 170 m
  - Rotor diameter - up to 162 m
- High average wind speed:
  6,9 m/s
- Effective annual electricity generation:
  ~ 240 GWh
  (forecast by Geo-Net GmbH)
- Reduction of CO_2 emissions:
  108 927 ton per year
- Bankable revenue tool:
  Corporate PPA + export
- Insignificant wake loss:
  3,5%
  (P50 calculation
  by Geo-Net GmbH)
- The prospect of project expansion:
  Second wind phase -
  from 72 MW (early
  development) Green
  hydrogen production

The WPP located in the western part of Ukraine, very closely to the EU border!

VOLODYMYRETS WPP:

YOUR SMALL EXPENSES AND GOOD PROFIT

OUR PARTNERS: UKRENERGO РІВНЕОБЛЕНЕРГО ЕНЕРГОАТОМ



FACT ABOUT WPP:

The close proximity of the Volodymyrets WPP to the Rivne NPP suggests connection to highly developed and modern power grid.

It is planned to build only its own 110/35 kV substation 1 km from the wind farm.

FACT ABOUT WPP:

The Rivne region provides the project with an advantageous geographical position and access to a highly developed transport network. The region is located at the crossroads of 5 highways and numerous railway lines

VOLODYMYRETS WPP:

high wind speed & efficient electricity production

OUR PARTNERS: DNV GEO-NET

Name	Height above sea level (m)	Hub height (m)	Annual wind speed (m/s)
WTG 01	167	150	6,9
WTG 02	166		7,0
WTG 03	165		7,0
WTG 04	161		6,6
WTG 05	162		6,8
WTG 06	163		7,0
WTG 07	159		6,8
WTG 08	158		6,7
WTG 09	163		7,1
WTG 10	159		7,0
WTG 11	162		7,0
WTG 12	167		7,2

GE6.0-164

Hub height
Up to 151.0 m

Average capacity factor
94,8%

Annual generation
243,744 MWh

V162-6.0

Hub height
Up to 149.0 m

Average capacity factor
94,5%

Annual generation
239,927 MWh

FACT ABOUT WPP:

The wind measurement campaign lasted for 2 years since March 2020: the height of the wind/met mast was 120 m, the upper anemometer was 123 m above the ground.

The generation forecast is made in accordance with P50 calculation method. The produced volume of electricity will be enough both for sale to the consumer and green hydrogen production as well as for export.

VOLODYMYRETS WPP:

with high responsibility to your investments

Financial model, thousands of Euros

Period	Total Until 2036
INVESTMENTS	
(+) Equity required	21 296
(+) Bank loan	63 700
(-) Capital expenditure	84 996
(=) Investment cash-flow	
OPERATING ACTIVITIES	
Production, Mwh	**4 252 550**
Tariff, Euro per MW	0,080
Revenue, without VAT	**340 204**
(+) Gross proceeds, incl.VAT	340 204
(-) Operating costs	62 369
Production costs	9 988
Administrative expenses	6 234
Maintenance costs	38 801
Insurance	7 345
(-) VAT for payment	46 256
(=) EBITDA	**299 621**
EBITDA margin	73,4%

Period	Total Until 2036
Total investments	**84 996**
IRR	**17,4%**
NVP (12%)	**43 330**
Payback:	84 996
Since the beginning of construction	4,5
Since the beginning of generation	3,9
(-)Income tax (18%)	32 297
(=)Net operating cash-flow	**267 324**
FINANCIAL EXPENSES	
(-)Bank loan	97 734
Loan repayment	63 700
Interest payment	34 034
(=) Cash-flow	**169 590**
EQUITY	**21 296**
IRR	**45,4%**
NVP (12%)	**61 108**
Payback:	84 996
Since the beginning of construction	4,5
Since the beginning of generation	3,9
Discounted cash-flow	**82 405**

Indicator:
0,08 Eurocents per kW

FACT ABOUT WPP:

The project is implemented with the possibility of several options for the sale of electricity.

VOLODYMYRETS WPP:

YOUR FINISHED ASSET

We have already done:

- Land lease agreement: 12 agreements for 49 years each
- Land management documentation, the purpose of land is “energy land”
- Urban planning conditions and restrictions
- Ornithology, birdwatching reports
- EIA’s results
- Civil/military aviation permit
- Geological/topological assessment, geotechnical investigations for foundations and roads
- Wind assessment study
- Electricity generation forecast
- Agreement on grid connection

We will do for you:

- [ ] Grid impact study
- [ ] External scope (TSO/DSO/3d party) estimate. (Full risk picture: financing, schedule, technical)
- [ ] Servitude agreement for grid and access roads
- [ ] Tree cutting permit
- [ ] Technical conditions for crossing reclamation channels
- [ ] Working design of the wind field
- [ ] Logistics report
- [ ] Construction permit

This list above describes the final stage of development and requires the investor’s contribution. The maximum term of execution is 6-8 months.

SWOT ANALYSIS OF THE PROJECT

Strengths

- Guaranteed in-grid sales of 100% electricity produced.
- Independent and guaranteed generation source (wind power). No need in fuel supply.
- EU grid integration makes it possible to export electricity under a higher tariff.
- Use of international financing sources provides additional protection from local fraud elements.

Weaknesses

- Generation level in the region is slightly lower than than in the south of Ukraine.
- War, military and country risks

Threats

- Outdated high voltage grid equipment.
- Governmental suggestions on implementing energy production forecast limitations.

Opportunities

- Refusal from Russian energy sources by Ukraine (and EU countries) should foster the development of renewable energy sector.
- Green hydrogen production
- Constant reduction in WPP equipment costs.

UKRAINIAN WIND POWER SECTOR DURING WAR

Wind energy - energy of freedom!

Some facts for you about Ukraine:

Ukraine has enough resources and capacity to achieve at least 50% of renewables in electricity production by 2032, through a combination of rooftop and ground-mounted solar, as well as onshore and offshore wind, and to become completely carbon neutral by 2050.

The total capacity of all green energy facilities at the beginning of 2022 reached 9.6 GW, including industrial SPPs – 6.4 GW, WPPs – 1.7 GW. The majority of industrial RES power plants (namely about 60% SPPs and more than 85% WPPs) are concentrated in the southern and south- eastern regions of Ukraine. Despite all horrors of the war, the Ukraine's wind power market has grown by 40 MW only over the first half of war year. Later, small capacities were added in 2023 as well, for example 114 MW in Mykolaiv region.

In recent years the RES sector of Ukraine has been significantly enriched by international investors. Thus, before the war started, the share of foreign investors in the Ukrainian RES market exceeded 35%; investors from Sweden, Norway, France, the United States, Belgium, Turkey, Germany, Poland and China actively developed wind projects in Ukraine. About EUR 3 bln has been invested in the wind power sector by 2022.

Ukraine has significant reserves of raw materials which together with a developed metallurgy and machine buildings industries could satisfy local production of wind turbines components. To realize this potential we require real technological and industrial partnership.

The Ukraine Recovery Plan by 2032 presented by the Ukrainian Government at Ukraine Recovery Conference in Lugano in the early July 2022, provides for 5 - 10 GW of wind and solar capacities and 30+ GW of RES capacity for the production of renewable hydrogen to be installed in the country by 2032. So, Ukraine`s post-war recovery period will open up new opportunities for investors not only to develop new onshore and offshore wind projects, but to produce renewable hydrogen as well.

The integration of the Ukrainian power system into the European power network ENTSO-E, in turn, opens another investment-attractive area such as electricity trading.

When investing in our project:

1. you become a contributor to Ukraine's green recovery;
2. you fix your place at Ukraine's RES market;
3. you build the energy independence and security of the European continent;
4. you receive a strategic asset with a stable profit and the possibility of further development;
5. you get a reliable local partner in Ukraine.

MCL GROUP

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