

OFFER WIND ENERGY SERVICES

Works

1. BRIEFING ON CURRENT STATUS AND TRENDS OF WIND ENERGY MARKET IN ROMANIA
2. GENERAL ANALYZE OF A SITE WIND POTENTIAL, BASED ON AVAILABLE WIND DATA
3. ON SITE WIND MEASUREMENTS
4. WIND POTENTIAL AND WIND FARM ASSESSMENT, BASED ON ON-SITE MEASURED WIND DATA
5. ENVIRONMENT ASSESSMENT OF THE WIND FARM
6. TOPOGRAPHIC AND CADASTRAL WORKS

Details on works

1. BRIEFING ON CURRENT STATUS AND TRENDS OF WIND ENERGY MARKET IN ROMANIA

Synthetic study with information on wind energy in Romania (12-15 pages) regarding: present status, market actors, barriers, legislation, strategy policy, financial mechanisms, licensing, market stakeholders, environment conditions, scenarios and targets for future development etc.

2. GENERAL ANALYZE OF A SITE WIND POTENTIAL, BASED ON AVAILABLE WIND DATA

2.1. Wind potential assessment based on available wind data:

- procurement of meteo data from a nearby meteo station, or use of known nearby data
- procurement of needed local maps analyze and digitization
- use of the WAsP softwares working with digitized local maps to extrapolate wind data (see details on www.wasp.dk).
- on-site visits to identify general conditions and restrictions.

2.2 Preliminary wind farm size assessment

3. ON SITE WIND MEASUREMENTS

3.1. Procurement of a complete wind data acquisition systems, on different mast heights, calibrated anemometers

3.2. System mounting (mast and transducers)

The upper part of the mast will be painted red/white according the civil aviation rules.

The permits for mast mounting, if needed, are the responsibility of the *Client*.

The mounting works are guaranteed for one year, under normal operation conditions.

3.3. Wind data system operation and maintenance

ENERO will perform regular on site inspections.

ENERO will check data for consistency (realistic values) and correlation, and will produce and forward to the client a **regular monthly report** on data acquisitions results (average wind speed, wind direction rose, other statistics etc).

4. WIND POTENTIAL AND WIND FARM ASSESSMENT, BASED ON MEASURED WIND DATA

The report will be developed after 12 to 14 months of data acquisition.

The report will present the measured average wind speed, the wind speed distribution on directions and speed intervals, the wind rose, the energy wind rose, turbulence, wind profile etc.

The report will perform the long term statistical data calibration, based on wind data procured for a nearby meteo station.

Also the report will asses the wind farm units micrositing and the wind farm output for a specific type of wind generators (using Windfarmer software).

An uncertainty and sensibility analysis is performed on the wind potential and the output.

5. ENVIRONMENT ASSESSMENT OF THE WIND FARM

Environment impact assessment performed by MMDD licensed expert, needed for:

- 3.1. approval of zonal urban planning PUZ procedure, including biodiversity study
- 3.2. environmental approval for building authorization

6. LAND MEASUREMENT AND CADASTER WORKS

References

ENERO developed wind energy activities as market analyses, wind potential assessments, wind measurements, wind potential and wind farm studies for:

- Elsid, 2003
- Pentium, 2003
- Bigland, 2005
- Dedeman, 2005
- Martifer, 2005
- Electricom, 2006
- Euro Drinks, 2006
- Sinus Holding, 2006
- Tecneira, 2007
- EnergoEco Cluj, 2007
- Enex Cluj, 2007
- Solaris, 2008
- Euopp, 2008
- Trafic Serv, 2008
- Egnatia Rom, 2008
- MADI SERVICE, 2008
- Customline, 2008
- Grupo Detea, 2008
- MFG, 2008
- ANTO-ROB, 2008
- Prefabricate Nord, 2008
- EOL Energy, 2008

Our partner performing the masts mounting, installed more than 25 masts in Romania and Bulgaria.