# **Cobadin** 50 MW Wind Park Romania



## **Project** introduction

Global Wind Power is proud to offer the wind turbine project "Cobadin" as an investment opportunity in Romania. The project was originally planned for 25 x Vestas V90-2.0 MW wind turbines. All permits have been obtained for the original design, the main building permit is however expired and is subject to a renewal process. In this respect it is possible to redraw the project for other more modern and efficient technology suitable for the site, where Global Wind Power would recommend the the Nordex Acciona AW125 3.0 MW WTG. The teaser will outline the main figures for the Nordex Acciona AW125 WTG for the purpose of comparison.

You have received this project sales teaser because we see you as a potential investor for the project. We hope the project matches your specific investment needs and the market conditions in general are within your requirements. If this proves not to be the case, or you are interested in further projects from us, please see our additional project for sale on our updated project sales list covering all markets at:

www.globalwindpower.com/projects-for-sale.





Project ownership:



## Project location

The wind turbine project Cobadin is positioned in the South East of Romania within the Constanta County region. This area is known as one of the windiest regions in South East Europe, with strong winds coming from the nearby Black Sea.

The project will connect to the utility distribution company, ENEL. The Project is not expected to experience any restrictions regarding the input of electricity into the grid. Further- more, there are no outstanding environmental issues in the vicinity.

Cobadin is located within easy access to major road networks. The main access points to the site are done directly from the County Road. In addition to this, the project is located in the proximity of major cargo ports on the Black Sea, ensuring that turbine delivery can be executed without difficulty.

## Status of the project

#### 17 x Acciona AW125 - 3.0 MW HH 120

- Wind measurement campaign already performed.
- The land is secured through superficies agreements for 49 years, all the payments related to superficies are paid up-to-date.
- The grid connection agreement has been secured and paid in total.
- The Urbanism Certificate is obtained.
- The expired building permit is pending renewal, subject to final turbine choice.
- The environmental permit is obtained without any major environment issue.
- The project has the approval to use a turbine with a maximum of 70 m for the blades and a maximum of 140 m for the tower (210 m tip height).



# Wind data and energy production

## Wind data

 The mean wind speed at hub height (105 m) is 7.3 m/s, based on two wind reports by BBB Umwelttechnik Erneuerbare Energien GmbH and CUBE Engineering GmbH. Each report is based on data from two measuring stations (September 2008 - January 2010 and July 2008 - January 2010, respectively) and NCAR - Reanalysis data from the next grid points.

## Energy production - 17 x Acciona AW125 3.0 MW HH 120

- 207,116 MWh Park AEP P50 including a park efficiency of 94.3 %.
- 199,930 MWh AEP/ 11,760 MWh per turbine AEP Net P50 based on:
  - 98 % for availability.
  - 1.5 % for electrical losses (estimated turbines and grid).
- 46.8 % Capacity factor Net P50.
- 4,107 Full load hours Net P50.





# Operational expenditures of the project

#### Land lease (superficies rights)

• € 51,000/annually (No adjustment for inflation).

#### Insurance

• € 47,600/annually.

#### Service agreement

- € 45,000 / WTG /annually Full O&M Services for year 1 to 2
- € 49,000 / WTG /annually Full O&M Services for year 3 to 5
- € 59,000 / WTG /annually Full O&M Services for year 6 to 10
- € 69,000 / WTG /annually Full O&M Services for year 11 to 15

#### **Power consumption**

• € 44,500/annually.

## Transformer station (maintenance, insurance, technical management)

• € 20,500/annually.

## Additional costs (maintenance, telephone, SCADA, bank fees, etc)

• € 31,350/annually.

All OPEX expensives are adjusted for inflation unless otherwise stated. All the OPEX are estimative and subject to contract negotiation. Note: We are not aware of any local taxes that might be imposed.



# Market conditions and off-take scheme

The price of electricity is determined by the spot price on the energy market.



Historical prices average per year:

2011: 52.13 €/MWh 2012: 48.80 €/MWh 2013: 35.34 €/MWh 2014: 34.66 €/MWh 2015: 37.48 €/MWh 2016: 37.48 €/MWh 2017: 45.46 €/MWh 2018: 45.31 €/MWh 2019: 52.78 €/MWh (January to July)

Some of the components that are build on the electricity market are:

- Cross Border Capacity Allocation Serbia, Hungary, Bulgaria, Ucraine
- Centralized Market for Electricity Bilateral Contracts
- The Day-Ahead and Intra-Day Market

# Energy price Romania 2015/2019





## About Global Wind Power

Global Wind Power is a leading international project developer specialising in developing, implementing, selling and managing wind turbine projects for professional investment. The wind turbine projects are sold to a range of international customers: Industrial, institutional and private.

Global Wind Power is a dynamic company which has experienced rapid growth since its foundation in 1999. We closely monitor the opportunities on the global market, and advance in line with the needs of customers. Today, we have more than 570 MW of international experience and an even larger project pipeline on the way.

Our ambition to Turn Wind into Value on new and mature markets demands both know-how and adaptability. With more than 305 wind turbines built in 57 wind parks across Europe, we have established a business concept with global potential.

#### **Locally Rooted**

Global Wind Power

Local representation and involvement are crucial for the successful completion and monitoring of wind turbine projects.

This is why we have strong and independent offices in countries in which we develop projects. Besides our Danish Headquarters, we have office Romania with local employees,

#### **Corporate Values**

Global Wind Power's four focused, committed and dynami the way we develop proje customers or our long list c a shared set of values am achieve success in the lor our organisation.

ate values; empathetic, impact everything from he way we engage with ntractors. We believe that employees enables us to

and generate value across

Germany, France and

#### Vision

Global Wind Power is t projects.

#### Mission

Global Wind Power concept to reality.

a wind turbine project from

red partner for wind turbine

## Disclaimer

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The information in this project teaser reflects prevailing conditions and our views as of this date, which is accordingly subject to change.



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