



wavecom

communications engineering



Case Study



EDP Renováveis - Romania

“Interconnection Portugal-Romania through optic fiber, including two Wind Farms and one power plant.”

Case Study

EDPR - EDP Renováveis

EDPR



EDP Renováveis is a world leader in the renewable energy sector that operates in the most attractive markets and is continuously expanding its business to new areas of the globe. They make the same commitment to lead each one of their markets.

Currently, they are the European and world's third largest wind energy company. This company has undergone exceptional development in recent years and they want to continue to grow and create value for their shareholders and stakeholders.

Their growth is the result of an extraordinary capacity to implement projects and to smoothly integrate the companies acquired during the period between 2005 and 2010. Their markets provide more attractive growth possibilities, mostly due to their growth prospects and the fact that they have a stable regulatory structure that allows profit generation.

They also possess a set of very high quality assets. The company is focused on the operational excellence of those assets, as shown by its above-average operating indicators for the markets in which it operates.

The EDP Group is EDP Renováveis's major shareholder. The EDP Group is the largest industrial Portuguese group and one of the main European's energy companies. It is currently the Iberian Peninsula's third largest energy operator, holding business interests in the generation, distribution and supply of electricity and gas in Portugal and Spain. Besides its leadership position at Iberian Peninsula, the EDP Group also holds a significant position in the Brazilian electricity sector.

Source: www.edprenovaveis.com



FRAMEWORK

EDP Renováveis is one power supplier, owner of Wind Farms spread around the World that, due to its dimension, needs to monitor in real time those farms, making use of several dispatch centers.

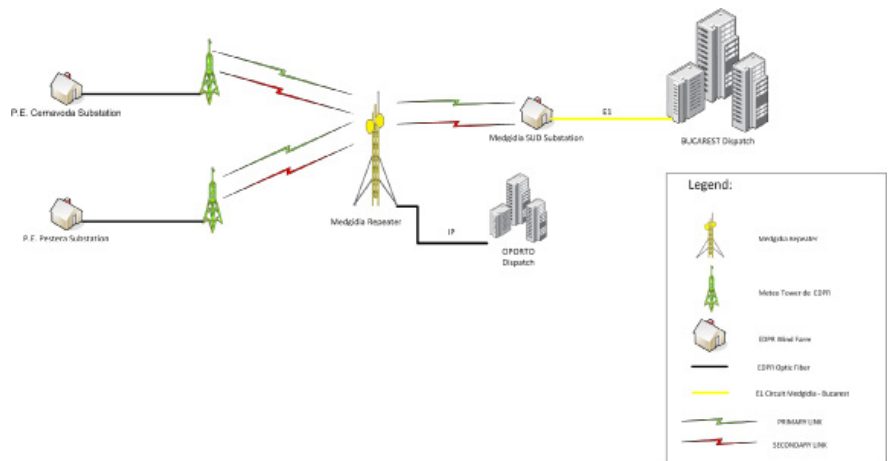
CHALLENGE

The lack of reliable and high bandwidth communications and the need to quickly deploy a network with requirements to deliver telemetry from the wind farms to Bucharest and to Oporto, were the main challenges of this project. Usually EDPR used satellite communications, with all the disadvantages of debt and very high costs. Wavecom's proposal consisted in the interconnection of the wind farms through a wireless links solution, providing guests with a private communication network, with high resilience and reduced opex costs.

SOLUTION

Wavecom's proposal was based on the interconnection of wind farms through unlicensed band radio solution. To EDPR this project guarantees redundancy, by using radio ring topology, connecting the wind farms directly to the centralized Dispatch center (Bucharest), or connecting indirectly via Telecommunications Operator POP.

Briefly, the solution implemented by Wavecom, connecting two wind farms of EDPR located in Romania, provided the telemetry collected in each parks, both directly to the Dispatch Center in Portugal, via IP, and to the dispatch Center of Bucharest, via E1. Despite the need of use two different technologies, IP and E1, this main solution is based on only one type of Radio equipment.



The Repeater point shown above in the figure, represents the node of all interconnections of the network, becoming a critical network point. With the intention to turn a reliable solution all the links are redundant.

INTERNAL PROJECT

- The challenge of this project is related to the operationalization logistics and to the inherent organization during the project implementation;
- Adverse weather conditions – Negative Temperatures;
- Antennas installation in meteorological towers;
- Short time implementation – 1 Month;
- Redundant network IP;
- Network-Based PDH radio links.

PROJECTO IN NUMBERS

- Total Radio Links: 6;
- Distances: between 20 and 40 km;
- Minimum Bandwithrate: 30Mbit/s;
- Availability over 99.99%.





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About Wavecom:

Wavecom was founded in 2000 and operates in three main areas: Networks and Wireless Networking, Unified Communications and I & D. Our core business is the development and integration of telecommunications solutions specializing in radio technologies and technologies for unified communications.

Began the activity as integrator specializing in telecommunications Wireless solutions, expanding the activity to the area of Unified Communications. In Portugal currently has 29 employees and is also present in Cape Verde and Brazil.

It is a market leader in wireless connectivity in unlicensed band and developed the largest project of VoIP (Open Source) in Europe.

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