



Iberwind: Renewables Management System

Modernize
to boost
operations



Iberwind partners with CGI

About Iberwind

Iberwind is an energy company based and operating in Portugal, where it promotes, develops and operates renewable energy projects. Since 1998, Iberwind has installed more than 300 wind turbines across the country, and is responsible for around 15% of the wind energy produced in Portugal – enough to run more than 550,000 households. Focused on the production of clean and renewable energy, the work done by Iberwind contributes a reduction in CO₂ emissions of more than one million tonnes every year.

What Iberwind needed

Iberwind's wind portfolio had grown exponentially since the early days, and included more than thirty wind farms across Portugal, including two with more than 100MW of installed capacity.

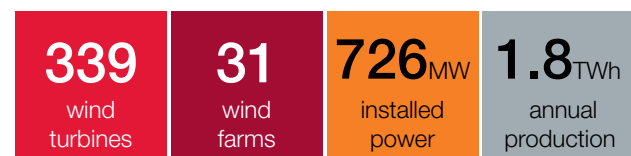
However, their control system was dated, and had not kept up with the rapid growth of the business. Their view of the portfolio was fragmented, and they needed a system which would give them a cohesive overview of the whole portfolio. There was also no mobile capability, which meant attempts to modernize their way of working were stymied.

Specifically, Iberwind needed a way to collect and record all the signal values from the PLCs and OPC servers in the wind farms. They wanted a real-time view of key data from the wind farms (such as active power, reactive power and wind speed), substations and the turbines themselves. And they needed a way for technicians to stay on top of park operations, without investing in a large-scale Renewables Operations Centre.

In a nutshell, Iberwind needed a modern system to match their business growth, while remaining flexible enough to accommodate future changes in the industry.

CGI boosts Iberwind's operations with RMS

In order to comply with Iberwind's operational management needs, it was vital to use a Level 2 SCADA system. This type of system gathers data from several data sources (with different manufacturers and communication protocols), and structures all information in a multi-feature platform that allows much more flexibility than a Level 1 system.



CGI's Renewables Management System (RMS) is based on a Level 2 SCADA, and allows Iberwind to efficiently manage their portfolio of renewable power plants and enjoy superior understanding of asset performance. RMS uses a unified data model which normalizes the data sources from multiple manufacturers, thus ensuring that all Iberwind's assets are incorporated into the system, whether they be manufactured by Enercon, GEWE, Nordex, Servion or Vestas.

The RMS solution built for Iberwind revolved around the following main features:

- Global monitoring tools
- SMS alerts
- Mobile platform
- Performance management and analysis

Global monitoring tools

RMS provides a real-time, global view across all renewable generators, power plants, substations and meteorological towers in the client's portfolio, from a single point of access. Users can choose to view the portfolio as a colour-coded matrix or an interactive map, alongside substation diagrams and detailed information about each turbine model. The monitoring features of RMS are used extensively throughout the organisation, and are central to Iberwind's operational model.

”

“RMS has proven to be a mature and stable system. It was developed in close collaboration with wind farm owners, and incorporates innovative operational and analysis modules designed to fully cover our needs.”

SMS alerts

As well as RMS's standard alarm and event management features, we developed specific tools for Iberwind using SMS technology:

- The SMS Alert tool notifies remote dispatchers immediately by SMS of any important production events – such as turbine stoppages or circuit trips – so they can act immediately to remedy the situation.
- With the SMS Request tool, the user can request information via SMS (such as wind park production, wind speed and turbine status information), and they will immediately receive an SMS with this information.

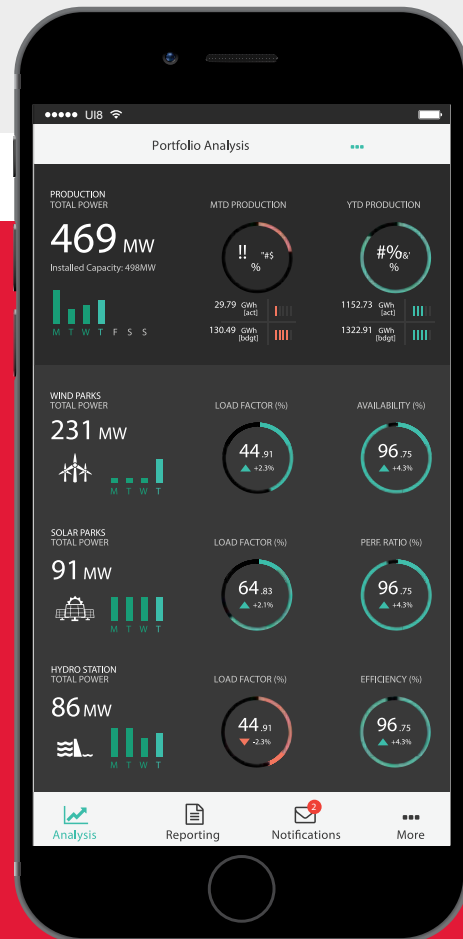
These SMS tools now play a key part in Iberwind's day-to-day operational procedures.

Mobile platform

As well as a web platform, the system's monitoring and analysis tools are available on a mobile platform, giving the client greater flexibility in their way of working, and giving higher management levels a valuable window onto daily asset operations. Managers and analysts have access to status and alarm information, and the remote monitoring tools permit them to view real-time snapshots of the operating performance of all assets, including power curve calculations for turbines and wind farms.

Performance management and analysis

CGI supplied Iberwind with several useful tools which provide performance analysis and reporting capabilities through an intuitive HTML interface, based on a historical database. The analysis dashboards are used to compare current and historical indicators (such as production, availability and efficiency indicators) across the portfolio, as well as incident analyses. RMS has built-in daily and monthly reporting capabilities, and the ability to schedule and send customised reports. CGI also worked to ensure that Iberwind's metering system was seamlessly integrated with RMS, and this metering data is used as input to the production dashboards.



Success story

CGI built a solution which not only brought Iberwind's systems up-to-date and introduced innovative new features, but also helped to improve the business in several key ways:

- Gave wind power plant supervisors the tools to react quickly to operational faults, leading to reduced downtime and increased production.
- Brought managers closer to the frontline of park operations.
- Streamlined operations through use of remote monitoring and a mobile platform.
- Improved the transparency and reliability of day-to-day operations.



“The tools that CGI tailor-made for Iberwind were only possible because of the outstanding development skills of the RMS project team.”



Experience the commitment®



For more information about RMS email us at rmsinfo.pt@cgi.com.

cgi.com

Founded in 1976, CGI is one of the largest IT and business process services providers in the world. Operating in hundreds of locations across the globe, CGI helps clients become customer-centric digital organizations. We deliver high-quality business and IT consulting, systems integration and transformational outsourcing services, complemented by more than 150 IP-based solutions, to support clients in transforming into digital enterprises end to end. CGI works with clients around the world through a unique client proximity and best-fit global delivery model to accelerate their digital transformation, ensure on-time, within budget delivery, and drive competitive advantage in today's increasingly digital world.

© 2017 CGI GROUP INC.