

Drive operational excellence,  
increase energy production  
and reduce costs

Queiroz  
Galvão  
Energia



# QGE partners with CGI

## Using CGI's Renewables Management System (RMS) to drive operational excellence, increase energy production and reduce costs

As one of the largest wind power generation companies in Brazil, Queiroz Galvão Energia (QGE) is at the forefront of the country's commitment to renewable energy. QGE was looking for a solution that would simplify the management and control of its wind power assets spread across Brazil, to enable it to continue to expand production and improve operational efficiency.

### About the client

QGE has 20 wind power plants, grouped in five wind farms across Brazil: three are located in Ceará (with 86 wind turbines and an installed capacity of 198MW), one in Rio Grande do Norte (with 54 wind turbines and an installed capacity of 146MW), and one in Piauí (with 77 wind turbines and an installed capacity of 208MW). In the pipeline is another large wind farm in Piauí, slated to have 77 wind turbines with a capacity of 208MW.

QGE also owns and operates three hydroelectric plants across three states in Brazil—Minas Gerais, Mato Grosso, and Santa Catarina—that together amount to an installed capacity of about 300MW.

### What QGE was looking for

To keep pace with its expanding wind portfolio and improve operational efficiency, QGE wanted a single, powerful platform to manage its entire wind power portfolio and to control all the wind turbines remotely. The company wanted a solution that offered them better efficiency, a real-time view of the operational performance of assets, and the ability to collect and consolidate data from the turbines as well as automatically generate daily reports.

QGE chose to implement CGI's Renewables Management System (RMS), a comprehensive solution for the real-time monitoring, control and maintenance of renewable power plants. RMS also provided the added feature of analytics for the advanced management of operational performance. With this solution, the energy company aimed to achieve its strategic objective of operating its entire wind portfolio centrally and improving agility through automation.

Teams from CGI and QGE worked in close collaboration to assess the current environment and understand existing challenges. QGE operated wind turbines from two vendors (Alstom and Suzlon) and each of them had their own SCADA system to control their wind turbines. This made it difficult for

QGE to independently control the turbines and consolidate data from all the plants. Information extracted from each vendor's system had to be consolidated manually—a time-consuming process that was prone to human error.

RMS harnesses turbine data and transforms it into valuable insights via user-friendly and decision-ready dashboards.

### CGI's Renewables Management System (RMS)

CGI's RMS offers an integrated operational platform to supervise, control and analyze all of QGE's wind turbines, irrespective of their make or model. The solution provides QGE with a complete view of all its wind asset data in real time from a control center in Fortaleza. With RMS in place, operators can remotely restart or stop turbines, monitor turbine performance and alert local teams about issues as they happen, manage maintenance contracts more efficiently, and better respond to grid demands.

All data that is harnessed from each wind turbine is processed and transformed into valuable and actionable insights with pre-configured dashboards that use KPIs for analysis. This ensures the standardization of reports and omits the need for manual intervention, which in turn reduces the risk of human error and greatly improves process efficiency.

RMS has brought QGE's complete wind power portfolio onto a single IT platform. By bringing together disparate systems into a central control location, QGE is now able to operate and monitor all its wind turbines efficiently. The solution offers web and mobile access, which enables field teams and managers to stay informed of performance issues, wherever they are. Stable and resilient, the new solution is instrumental in helping QGE customize information for faster decision making, and also offers the scalability to incorporate multiple technologies across its renewables portfolio in the future.

## Improvements in day-to-day operations

Implementation of the RMS solution has led to a range of improvements in QGE's day-to-day operations, including:

### Better control of the complete portfolio of assets

- Reduction in wind turbine stoppages
- Online monitoring and analysis of the performance and efficiency of wind turbines
- Decreased average repair time per machine

### Improved reporting

- Standardization of reports and elimination of human error
- More efficient preparation of pre- and post-operational reports
- Generation of new reports which were previously unfeasible

### Flexibility of a mobile platform

- Web and mobile access to facilitate real-time visualization of turbine performance

## Why CGI?

With decades of experience in the utilities industry, CGI has an in-depth understanding of our clients' challenges and a proven track record in delivering results.

- **Nearly 40 years** supporting the transformation of the utilities market around the world
- **Over 6,000** dedicated utility professionals supporting a major presence in the Americas, Europe and Australia
- **Partner to 450+** utility providers in electric, water and natural gas worldwide, including 8 of the top 10 utilities in Europe and North America
- RMS is part of CGI's portfolio of **150+ IP solutions** that accelerate clients' digital transformation.
- **7,800 turbines on 380 wind farms in 11 countries** are controlled by CGI's RMS

## Digital utility of the future

As part of the next phase of this project, CGI will support the integration of QGE's three hydroelectric plants in Minas Gerais, Mato Grosso and Santa Catarina, as well as a number of substations, into the RMS solution. This will enable QGE to transition to a utility of the future with a fully integrated renewables portfolio that further streamlines their operations and improves efficiency.

## Key benefits

With CGI's Renewables Management System, QGE is now able to:

- Remotely control and manage close to 220 wind turbines, spread across 20 wind power plants in three states across Brazil
- Access wind performance information via web and mobile platforms
- Gain rich data insight to improve operational efficiency
- Reduce downtime and maintenance costs
- Lower operational costs
- Enhance energy production
- Automate the generation of reports
- Customize information for faster decision making

“The implementation of the CGI RMS solution will allow us to transform data into strategic information that will improve our decision-making process, adding value to the business and mitigating its risks.”

**Max Xavier Lins,**  
QGE President





Experience the commitment®

For more information about RMS email us at [rmsinfo.pt@cgi.com](mailto:rmsinfo.pt@cgi.com).

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