

Altair SmartCore™ Improves Energy Performance and Profitability of UNATEC



Energy generation and management, when not optimized, can severely impact economic results. If costs are not closely controlled or production is not predicted accurately, profits can be dramatically diminished and losses can even be incurred. It is essential for energy producers to optimize energy management to maximize profitability.

Many countries have started to dramatically reduce economic subsidies for production and have introduced more regulations. In some cases, it is even mandatory for energy producers to optimize energy management to increase profit and avoid sanctions and penalties. To help improve energy management and profits, Unatec partners with Altair SmartCore to create Smart Grids. With more than 10 years of consulting experience in energy solutions working with the largest utility companies in Spain, Unatec (www.unatec.es) launched Energy Smart Generation, its own solution for small and medium renewable energy producers. These producers normally operate and maintain small- and medium-sized power plants for solar and wind energy.

UNATEC'S ENERGY SMART GENERATION USES ALTAIR SMARTCORE.
IT IS A CLOUD SOLUTION WITH A COMPLETE LIST OF MODULES:

- **Energy Prediction:** Better production forecasting by comparing different prediction models
 - » Considering production breaks (scheduled and non-scheduled)
- **Operations Monitoring:** Detecting and reporting production issues. Issues and production breaks can be detected in real-time. Monitoring is done on main assets to analyze status and optimize performance and maintenance.
- **Field Actuations:** Data supports decision making for issue-related operations by showing:
 - » When to schedule production stops
 - » When to mobilize emergency teams
 - » When to increase cost control and identify non-profitable work



Industry

Smart Energy • Region, Europe

CHALLENGE

Unatec, a company with over 10 years in energy solutions consulting, faced the challenge of controlling costs and improving production for energy producers. Uncontrolled costs and incorrect predictions can greatly diminish profits, potentially incurring losses.

SOLUTION

By using the Altair SmartCore platform to improve the performance and profitability of renewable energy companies, Unatec was able to bring this innovative technology to market in just 6 months. The platform includes:

- Multiple prediction models comparison
- Smart metering system deployment
- Extended production prediction capabilities
- Customized KPIs tracked in real-time
- Control of deviation and energy measurements

The Technology

From the beginning of the project, Unatec decided to rely solely on Altair SmartCore as a core element of their technology stack. The Altair SmartCore platform was implemented within 6 months, allowing Unatec to save significant money in development costs. The core of Altair SmartCore is its ability to collect all the information from different Smart Grid elements (Smart Meters, SCADA systems and other elements) and IT systems (weather forecast systems, energy prediction systems, energy market, and 3th party companies operating the energy grid).

Unatec's Energy Smart Generation platform uses different prediction services and compares them using Altair SmartCore's core to increase forecasting accuracy. The prediction model receives feedback to continuously enhance accuracy in the energy offering calculation.

A customized set of KPIs is permanently tracked and displayed in real-time graphs to compare production with predictions and generate customized performance reports, budget tracking and plants comparison.

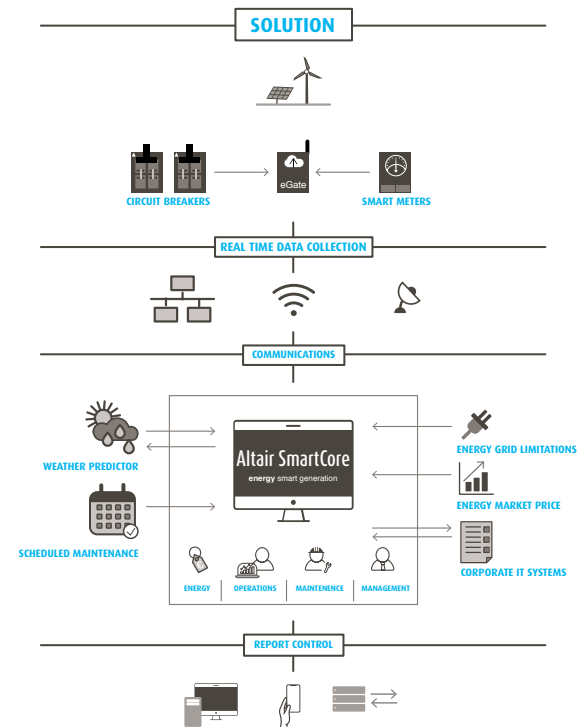
The Team

The team included local partners for field interventions and hardware partners.



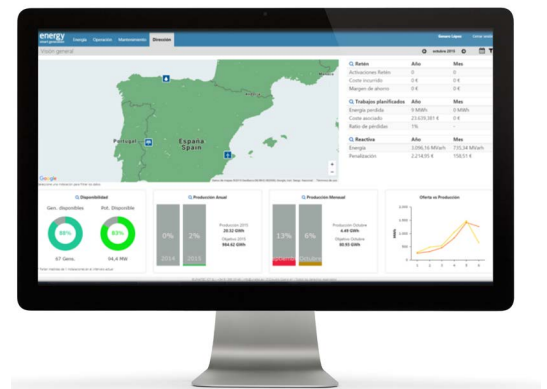
RESULTS

- Increased forecast accuracy
- Reduced penalty fees
- Outages prevention
- Optimal maintenance scheduling
- Efficient intervention task management



"Altair SmartCore was the perfect partner to launch Energy Smart Generation as it shortened our time to market to develop and test the product and later on proved to be a reliable partner to support the product for our key clients."

Raúl Gil García,
Business Development Manager at Unatec



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