



ARSOS

Automation Suite

Energy Trader Use Case



Intelligent Trading and Automated Operations with ARSOS Automation Suite

Context: Trading Across a Dynamic Global Energy Landscape

This case reflects a typical situation among energy traders operating across volatile, high-renewable markets. Through this representative example, we show how ARSOS can transform market participation, automate curtailments, and turn real-time data into higher margins.

Iberia Power Markets (IPM) is a Spanish energy trading company specializing in the optimization of renewable portfolios within the Iberian electricity market. The company manages a diversified portfolio of 2.4 GW of wind, solar, and hybrid assets, combining its own plants and those operated for third-party producers.

Operating in one of Europe's most volatile and renewable-rich markets, IPM faced increasing challenges:

- Frequent negative price periods and sharp market fluctuations.
- Growing TSO curtailment events and regional grid constraints.
- The need to react instantly to forecast deviations and real-time imbalance risks.
- Limited integration between operational data and the company's trading platforms.

To address them, IPM needed to automate curtailment management by orchestrating multiple curtailment requests and ensuring that assets operated only under profitable scenarios.

Operational Challenge: Limited Agility in a Fast Market

Before adopting ARSOS, the company's operations and trading teams worked with separate tools.

- Control room operators manually executed curtailments, often taking several minutes to process each event.
- Traders reacted with delays, adjusting market positions based on incomplete data.
- Forecast deviations and communication gaps led to imbalance penalties and inefficient decisions.

In an increasingly digital market, IPM realized it was reacting slower than the system demanded — leaving potential profit on the table.

The Solution: Linking Trading and Operations with ARSOS Automation Suite

To close this gap, Iberia Power Markets implemented ARSOS Automation Suite as its unified platform for operational automation and compliance — fully integrated with the Spanish TSO (REE) and market systems.

Automated Energy Market-driven Curtailments

- ARSOS integrates with energy market platforms to automate the bidding process, optimizing bids based on real-time conditions.
- Real-Time Market Integration: ARSOS adjusts power output in response to market fluctuations, ensuring optimal market participation in day-ahead, intraday, and balancing markets.
- Price-Based Curtailment: ARSOS can automatically curtail energy production during negative price periods, preventing financial losses and enhancing profitability.

- **Forecast Adjustments:** In cases where third-party energy forecasts are inaccurate, ARSOS adjusts forecasts to better reflect real-time conditions. Operators can select different percentiles of the energy forecast, based on load factor conditions, to improve accuracy and reduce penalties from market deviations.
- **Curtailment Planner:** Enables users to implement curtailment plans, allowing operators to schedule and manage curtailments in advance to preempt negative pricing events.

Participation in Grid Balancing & Ancillary Services

With increasing renewable energy penetration, grid balancing services have become critical to ensuring grid stability. ARSOS offers a fully automated approach to managing these services, ensuring compliance with TSO requirements.

- **Automated Curtailments:** Responds instantly to grid operator curtailment requests, ensuring that excess energy generation is curtailed efficiently and in compliance with TSO instructions.
- **Frequency Response:** ARSOS adjusts generation output in real-time to help balance supply and demand, ensuring grid stability and compliance with TSO regulations.
- **Voltage Control:** Continuously monitors voltage levels and adjusts reactive power to stabilize the grid as required by the grid operator.

Cybersecurity

- The platform meets NIS2, ISO/IEC 27001, IEC 62443, and SOC 2 Type II certifications, and is compliant with NERC-Rules providing enterprise-grade cybersecurity resilience.
- It works on Cloud or it can be installed On Premises.

Projected Results

KPI	Before ARSOS	With ARSOS (Projected)
Average curtailment execution time	8–12 min	< 30 sec
Imbalancing costs	1% from Annual Revenue	0% from Annual Revenue
Price Capture Upside from Ancillary Market Participation	-	+11,43 €/MWh

Conclusion: Real-Time Market Intelligence in Action

With ARSOS Automation Suite, Iberia Power Markets bridged the gap between market trading and operational control — achieving a level of speed, precision, and compliance impossible with manual processes.

Today, the company can:

- Execute curtailments automatically and compliantly in seconds.
- Optimize its trading strategy based on live operational data.
- Reduce imbalance exposure and maximize daily margins.
- Operate a fully automated model aligned with fast-moving market dynamics.

Disclaimer:

The figures and scenarios described are based on estimates from comparable ARSOS implementations. Actual results may vary depending on each organization's operational profile.

Request a demo to see how ARSOS can transform your operations.

**Want to see how
ARSOS can
transform your
operations?**

Let's Talk!