The BaxEnergy Solution

WIND | SOLAR | HYDRO | GEO | COMBINED CYCLE | LIQUID HYDROGEN | STORAGE

Asset Connectivity
Data Modeling & Archiving

Asset Management

Maintenance | Document management | Business process management | Human resources | SLAs, contracts & obligations | HSE

24x7 IT & ICT Infrastructure
Monitoring & Customer Support

One System for All
Connects historical and real-time data across all technologies and manufacturers.

Open & Configurable
Highly customizable for the end user (ad hoc KPIs, alarms, reports) and highly interoperable with external systems (BI, AI, ERP) and feeds (weather, maps, protocols)

Cloud & Mobile ready
Works installed on-premise and deployed to the cloud, from desktop workstations afrom mobile devices well as from mobile devices

Big Data and IoT ready
Handles large volumes of data from multiple remote sources and unifies them to a common object model

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Top 10 Reasons for Energy Studio Pro®

1. Unify under one roof all renewable technologies and OEMs
2. Get all data in real-time from your assets for their entire lifetime
3. Scale up from a single power plant to thousands ones of various types
4. Access data from anywhere at any time with HTML5 and mobile support
5. Become independent from the OEM, EPC contractors and service providers
6. Detect production losses and recapture lost yield with effective diagnostic tools
7. Build your own customized alarm rules to extend OEM capabilities
8. Turn your data into effective decisions via preconfigured and customized reports
9. Extend your system at any point in time with open connectors and SDKs
10. Measure and enhance ROI with a measurable overall impact

Contact us

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Energy Studio Pro®
One platform for all technologies

BAXENERGY Software Solutions for Energy and Beyond™

Transforming valuable insights into actionable decisions

We deliver **innovative turn-key solutions** to visualize and analyze power plants' data, optimizing operations across **multiple technologies and manufacturers.**

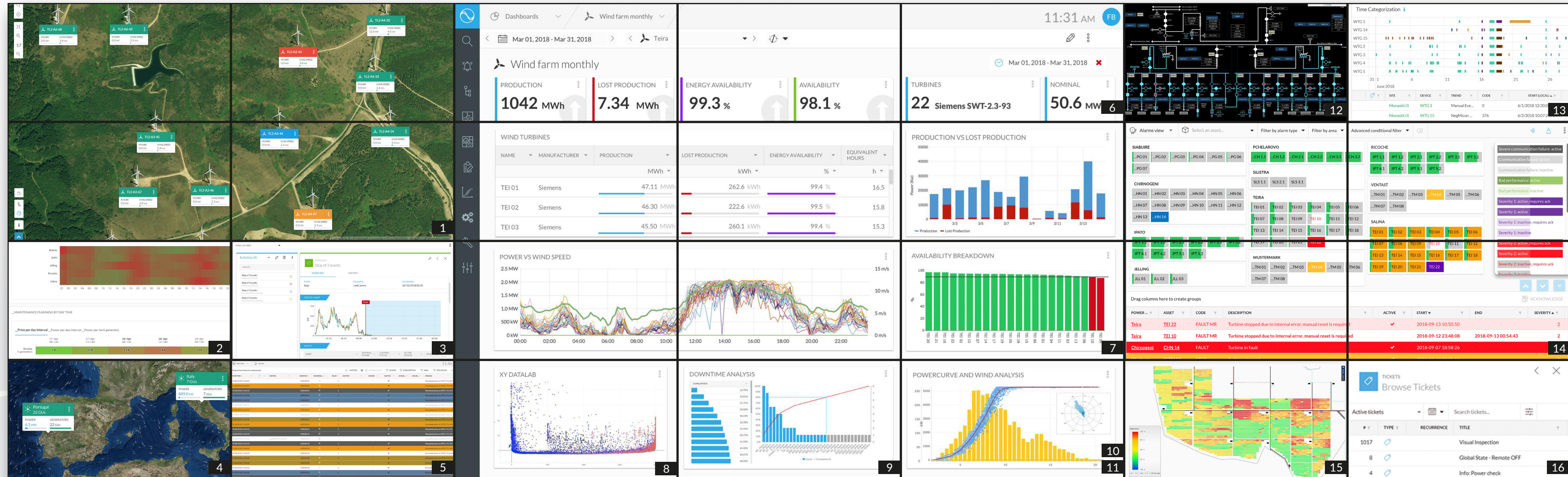We provide three different solutions for data connection and acquisition:

End-to-end direct connection | Via any SCADA manufacturer | On top of third-party data

We implement **Store & Forward** thus avoiding the typical issues of intermittent connectivity and **minimizing the risk of data losses.**

Real Time Monitoring

Energy Studio Pro® is state-of-the-art Human Machine Interface (HMI) for mobile access of real-time data from web client, tablets and smartphones.

Energy Studio Pro® generates alarm rules to detect silent outages, shadow maintenances, turbine inefficiency, power regulation and de-rating, and other events that are not notified by the OEM or first-level SCADA system.

Reporting & KPIs

Big Data-aware, Energy Studio Pro® processes large volumes of historical data (digital and analog measurements, events and statuses) and calculates the KPIs that best support your decision-making process.

Take advantage of pre-built reports for Wind, Solar and Hydro power plants or create custom reports using the intuitive and user-friendly editor. Generate reports on-demand directly from a smartphone or schedule it for execution and automatic delivery at the most suitable time.

1. Geographic Information System (GIS)

Explore the full portfolio of geographically distributed assets zooming in and out to set the desired level of detail. The GIS maps are overlaid by current meteorological data, weather forecasts and actual wind speed and radiation.

2. Power Forecast

Power Forecast and Energy Trading integrates data gathering, modelling and predictive analysis, continuously improved by machine learning technologies, in order to forecast energy production and improve O&M process.

6. Executive Dashboard

Energy Studio Pro® dashboard makes available assets data in real-time and provides easy-to-use automated tools which allow to quickly calculate the most meaningful KPIs, as well as to prepare advanced reports with ease.

7. Availability

With Energy Studio Pro® users can calculate Time-based and Energy-based Availability to monitor assets performance. Furthermore, it is possible to perform specific Availability calculations based on custom processes and criteria.

8. XY Analysis

Data Lab with XY analysis empowers data analyst to correlate measurements such as wind speed and gearbox temperature, calculate correlation and use linear and polynomial regressions that can proof extremely useful in the root cause analysis.

12. SCADA with Editor

Energy Studio Pro® is equipped with a fully configurable SCADA system to visualize generation units and substations in multiple custom screens designed according to customer's need and control room conventions.

13. Events Management

Events Management manages events collected from the devices in a controllable and customizable way, defining KPI calculation with a high degree of customization to best-fit any different, specific process.

3. Power Control

An independent dashboard enables to control all activities related to power control: start/stop commands, curtails and audit view. Advanced tools allow to schedule actions based on specific condition.

4. Weather Forecast

Weather Forecast module integrates with meteorological data in real-time and visualizes on-site weather conditions and weather forecast to take decisions on how to schedule upcoming activities.

5. Alarms & Remote Notifications

Energy Studio Pro® generates alarm rules to detect silent outages, shadow maintenances, turbine inefficiency, power regulation and derating, and other events that are not notified by the OEM or first-level SCADA system.

9. Downtime Analytics

Energy Studio Pro® helps users with the determination of Mean Time between Failures (MTBF) and Mean Time to Repair (MTTR) which can help monitor the performance of OEMs and independent service contractors.

10. Wind Analysis

Energy Studio Pro® is equipped with a complete wind data analysis toolkit which utilizes the data coming from the met mast, wind turbines or Lidar systems, generating analysis based on wind speed and direction.

11. Power Curve Analysis

Power Curve Studio calculates power curves instantaneously, verifying wind turbine performances over a period of time, and compares them with different wind turbines applying the same or different time range and other advanced filters.

14. Portfolio

Portfolio allows to view large portfolios at glance – up to 500 devices on a full HD screen - quickly identifying issues. It shows Real-Time status of your assets portfolio. Porfolio includes data such as Power Plants, WTGs/Inverters and statuses.

15. Advanced PV Map

The 3D Engine for PV allows 3D visualization of the power plants, enabling mobile monitoring functionalities and to perform remote control operations, such as open and close of the switches through a dedicated user interface.

16. Ticketing System

Users can open a ticket directly from GIS interface and being promptly notified of any issues through automatically generated work orders. All ticket state transitions are stored in an historical data flow.