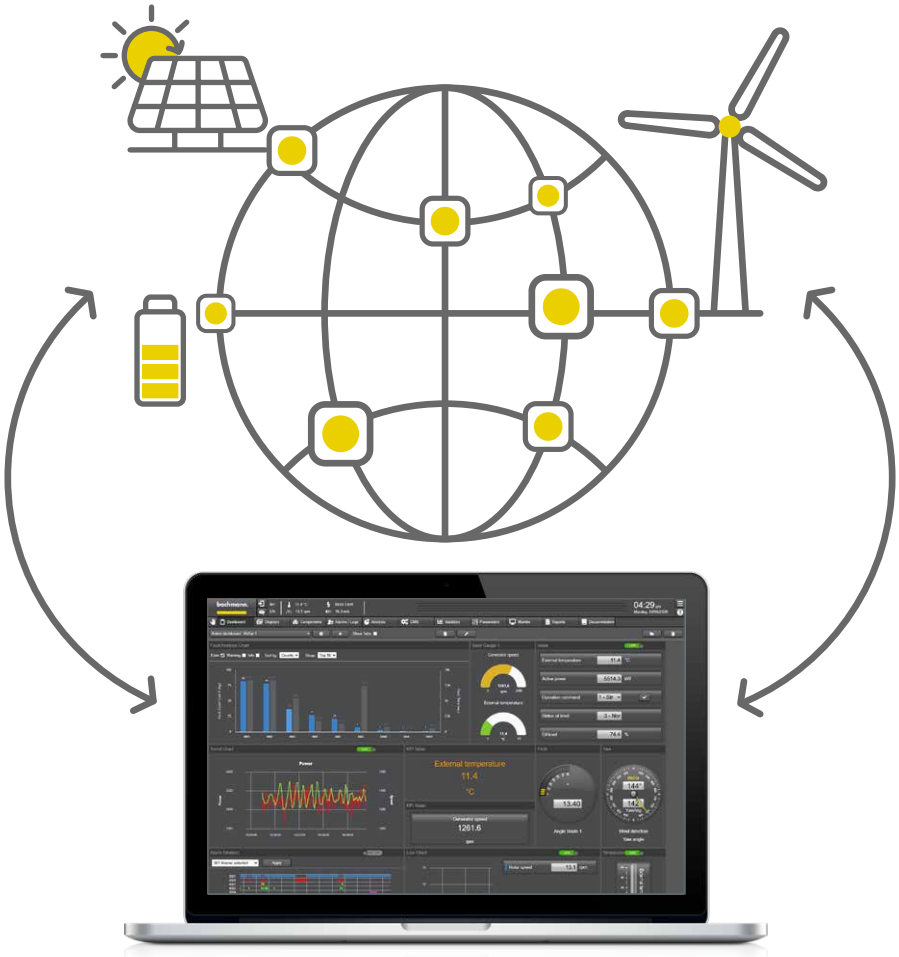
the power to control

bachmann.

# forsiteSCADA

The smarter SCADA system for hybrid energy parks.



**energy.**industry.maritime.

# Make renewables more efficient

*SCADA system designed for the energy sector*

Bachmann's forsiteSCADA offers an easy-to-use engineering tool for any type of energy project. Maximum flexibility and openness ensure rapid implementation, straightforward maintenance, and the possibility to expand the installation efficiently. Comprehensive representation of process values according to the IEC 61400-25 and IEC 61850-7-420 interface not only simplifies internal communication but also provides external operators and energy companies with uniform access to the specific characteristic values.

### Scalability

The fully browser-based visualization guarantees a perfect display on any device. Clear structures and numerous user-specific configurations within the visualization are ideally suited for single turbines as well as large energy parks.

### History

Long-term data retention and compression, as well as the complete logging of user accesses and events, enable extensive and comprehensive analysis. Standardized database technology facilitates integration into third-party evaluation systems.

### OPC UA and IEC 61400-25/IEC 61850-7-420

OPC UA and IEC 61400-25 Standard communication protocols provide transparency to energy suppliers and other systems which can be monitored via the infrastructure in forsiteSCADA.

### Flexible use

Shorter engineering, testing and commissioning times thanks to object-oriented structures and complete generation on the PC.

### Detailed analysis

The comparison of live data from energy parks facilitates ad-hoc analysis. There are also a number of predefined reports, including performance values, specific plant data such as energy meters, and switch counters in the form of graphs and/or tables.

### Integration

The ISO-VDI 3834 compliant condition monitoring solution (CMS) from Bachmann Monitoring, WebLog Ticket System, as well as Bachmann's Smart Power Plant Controller (SPPC) are fully integrated in forsiteSCADA.


SCADA
webMI

# forsiteSCADA

*Energy generation automation solutions with high availability and state-of-the-art technology, backed by decades of experience*

## Comprehensive overview at all times

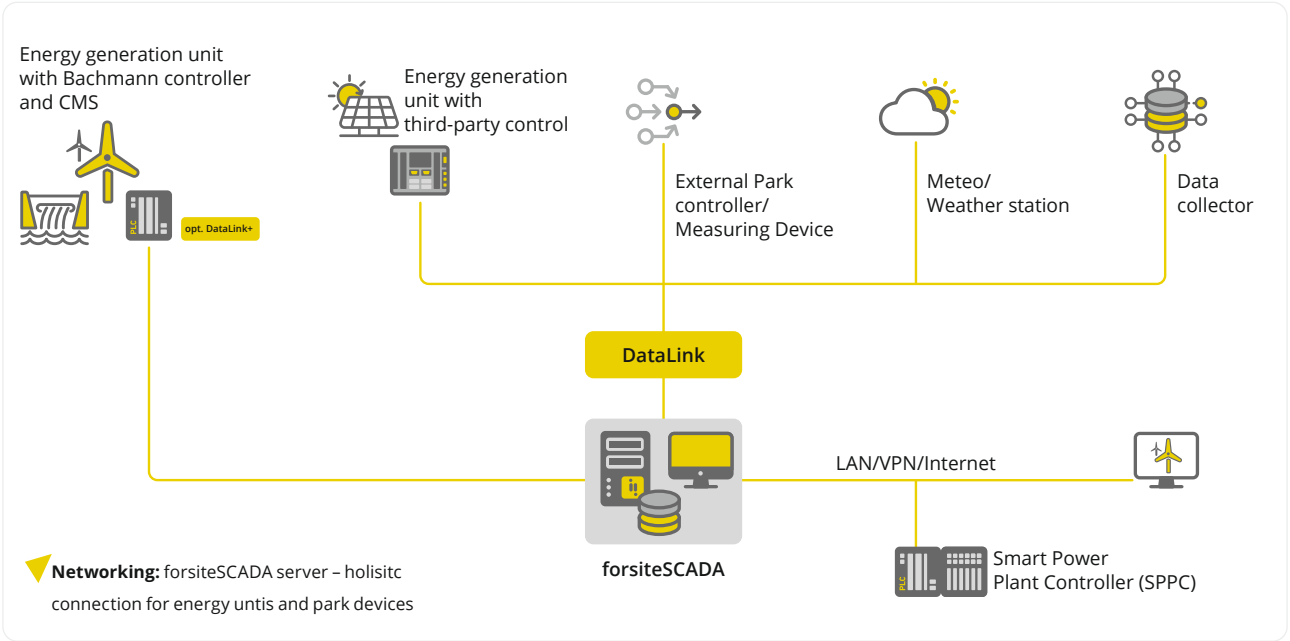
Decades of experience in the wind energy industry formed the basis for developing Bachmann's open, flexible, future-proof, energy-specific SCADA system. The relaunch of Bachmann's existing WindPowerSCADA (WPS) system was in response to growing momentum towards hybrid park structures. These incorporate not only wind power, but also battery storage and PV systems. Rebranding to forsiteSCADA wasn't just about changing the name; we redeveloped the system to better meet the needs of our customers. Like its predecessor, forsiteSCADA is entirely web-based. This allows a wide range of end devices to access the SCADA system. All that is required to obtain comprehensive, detailed energy park information – only by using a browser.

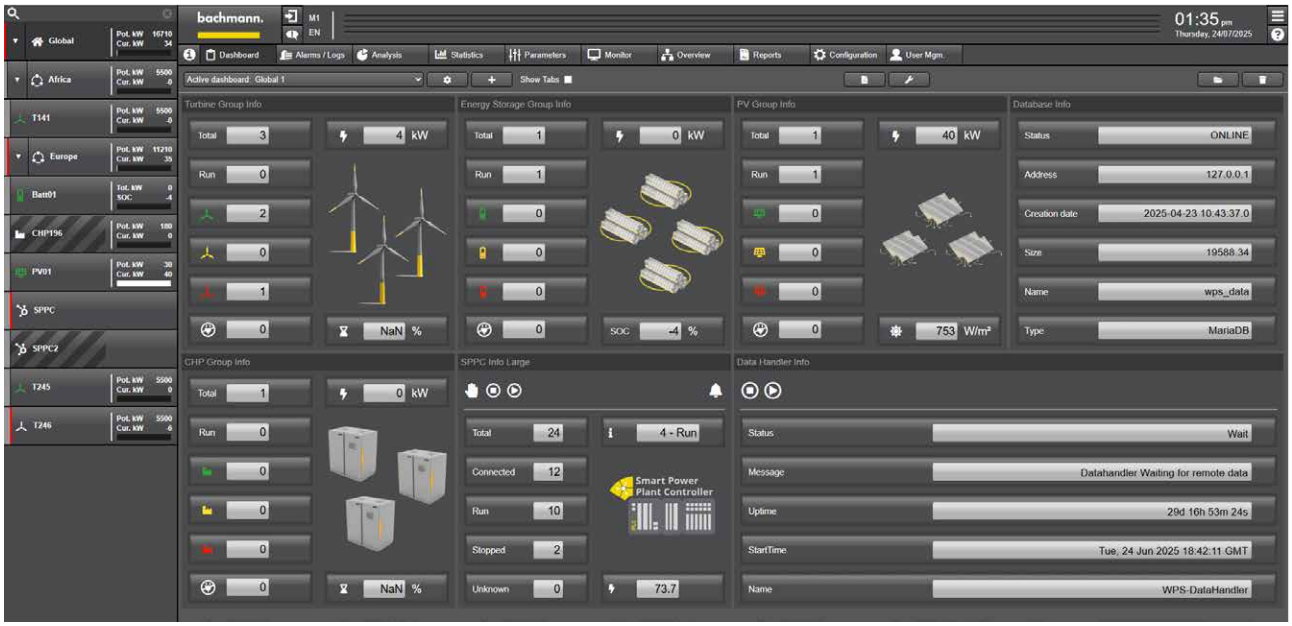
## Reach your goals faster

Developed specifically for the energy industry, Bachmann's forsiteSCADA can be seamlessly extended with a further software package for the Bachmann control system: The most important components, analytics and functions for operations management are readily available. Based on IEC 61400-25/61850-7-420 data structures, the software package displays all process values using the compliant namespace. This results in the complete generation of the object type, which is created automatically in forsiteSCADA. The process data integration is then complete, and a visualization of the power plant, with all its components, is done simply by moving the instance with drag and drop. Customers achieve goals quickly and cost-effectively.

## Proven technology for every application

forsiteSCADA is based on atvise® scada from Bachmann Visutec, part of the Bachmann Group. atvise® scada provides the ideal foundation for forsiteSCADA with its multi-client-server architecture. Multilingual support and device and operating system independence complete the portfolio, enabling users to monitor energy generation at global level. A forsiteSCADA server is accessible simultaneously via PC, tablet and smartphone. All required information is automatically scaled and displayed on the target device, according to the respective user settings.






In addition to wind turbines, the forsiteSCADA solution can integrate solar farms, battery storage systems and combined heat and power plants.

## Secure operation made simple

forsiteSCADA is deployable at numerous levels: At the energy park level, but also as a cascading solution that consolidates and correlates data from multiple, connected parks. Location-based priorities and configurable, user-specific access rights guarantee secure access to the power generation unit. All activities, commands and parameter changes made through the SCADA system are comprehensively logged. This enables complete traceability for maintenance or in the event of a fault. A comprehensive reporting system provides a complete history of system functionality and yield.

## Scalable SCADA solutions – for plants of any size

forsiteSCADA is available to users in four product tiers. For individual units and smaller plants, »forsiteSCADA light« provides all essential monitoring functions with predefined displays.

»forsiteSCADA basic« or »forsiteSCADA advanced« are designed for medium-sized energy parks. With these variants, users can configure individual displays/dashboards or use display functions from the atvise® portfolio. Users can create project-specific circuit diagrams with dynamic components that integrate fully with forsiteSCADA.

»forsiteSCADA premium« is recommended for larger plants, such as wind farms with multiple turbines. Users have access to the full range of displays, reports and analysis options. With custom configurations, the SCADA system can be precisely configured to match user needs – within the existing visualization and without development tools.

Optional additional packages, such as for the cascading solution or a redundant SCADA application, increase the flexibility of project design and allow expansion at any time.

### BENEFITS

- *Sector-specific SCADA system for hybrid parks*
- *Use of standard OPC UA, IEC 61400-25 and IEC 61850-7-420 communication protocols*
- *High scalability, open system*
- *Live process data on all visualization levels*
- *Integrated wind farm/ object configurator*
- *Automatic adaption of the graphic solution for PC, tablet or smartphone*
- *Standard user management for SCADA and device, also online*
- *Active status/access control*
- *Dashboards and Widgets*
- *Freely-configurable online reporting*
- *Online/offline trending*
- *Online language selection*
- *Alarm and data history*
- *CMS WebLog Ticket System integration*
- *CMS ISO VDI 3834*
- *Integration Smart Power Plant Controller (SPPC)*

## Measure

Hierarchical structures provide a perfect overview of the entire fleet. Freely configurable dashboards at each level ensure all important and distinctive values can be viewed at a glance. A detailed view of the power generation unit based on IEC 61400-25/61850-7-420 components supplies the live process values clearly displayed.

## Compare

forsiteSCADA offers the key values as status of the turbines, energy or produced power as well as meteorological data in clear and structured views, both for individual generation units and the entire fleet. Freely-configurable diagrams allow measurements from any combination of energy generation and plant type to be displayed simultaneously. Furthermore, power curves from all generation units can be directly compared.

## Analyze

forsiteSCADA offers online and offline trending, thus allowing the user to observe and evaluate live values of different turbines and wind farms in a graph. Event triggered snapshots can also be analyzed. All data and values are recorded with maximum precision and depict events on the controller at the precise time.

## Operate

The IEC interface defines the sending of commands to the controller and thus to the power generation unit. Commands from forsiteSCADA account for access rights and active status handling. This prevents several clients from making write accesses to the controller at the same time. This mechanism also allows any changes to be made to parameters as well as alarm acknowledgments.


## Inform

forsiteSCADA integrates Bachmann CMS according to ISO VDI 3834. This classification according to fault frequency provides useful information and can be traced with a trend diagram. It is used to provide information for the service personnel and is a useful addition to the professional CMS Remote Monitoring Service. This is followed by the integration of the WebLog ticket server. Tickets created remotely can be displayed and answered in forsiteSCADA. In addition, any relevant historical characteristic values are automatically displayed in forsiteSCADA.

## Archiving

A freely-configurable report generation function prepares necessary data for archiving. As an example, on-demand reports, displayed immediately in the forsiteSCADA, as well as automatically generated time-triggered reports are both configurable. Report content can be created and managed individually by each user via the dashboard.


## Configure

The entire generation of plants available in forsiteSCADA is processed by the Bachmann software package. This ensures all process data connections to the control system are ready to go. Project planning for energy parks can then be carried out via an online configurator. The user management can likewise be operated by administrators from the online project.

## Evaluate

The acquisition of performance data as well as wind distribution and availability values is just as much a part of a modern SCADA system as the graphical or tabular display of energy and status meters. All tabular data can be exported as PDF, CSV or XLS files and thus made available for other analysis tools.

bachmann.

forsiteSCADA EN | Subject to alterations without notice


**www.bachmann.info**

The future in view.
Follow us on LinkedIn:

**go.bachmann.info/linkedin**