



RELIABLE SCADA AND IT SOLUTIONS FOR RENEWABLE ENERGY POWER PLANTS

MAXIMUM IT SECURITY
FROM A SINGLE SOURCE

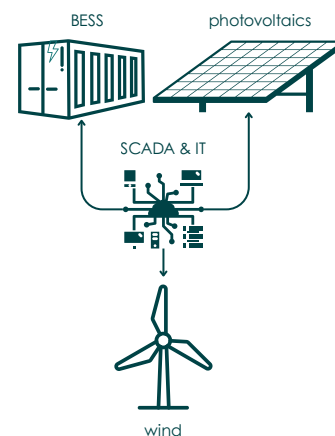
CREATING THE FUTURE.
WITH SUBSTANCE.

CHOOSE A SECURE AND RELIABLE SCADA AND IT SYSTEM.

- Is your commissioning being delayed because your IT components aren't working together smoothly?
- Does unstable communication with your energy trader lead to unnecessary losses?
- Are you losing money during negative electricity prices because your plant can't be controlled precisely?

The ability of renewable energy power plants or substations to communicate effectively is becoming increasingly important. This is driven by rising market and regulatory requirements and the resulting increase in connectivity. Our SCADA and IT systems ensure reliable monitoring and control of all functions and outputs at all times.

We transmit sensitive data securely and consistently protect access against unauthorised individuals. In this way, we combine maximum efficiency with maximum data security—for an energy future you can rely on.



IMPLEMENTATION OF PROJECT-SPECIFIC SCADA AND IT SOLUTIONS

As your SCADA and IT specialist, we take full responsibility for the technical implementation and regulatory compliance of your power plant system.

We start by comprehensively coordinating all requirements and timelines and act as the central interface between all stakeholders—from plant operators and grid operators to energy traders, EPCs, and equipment manufacturers. This enables smooth project delivery, fast response times, and flexible support when short-notice changes arise.

CYBERSECURITY AND REGULATORY REQUIREMENTS

Legal requirements for the cybersecurity of your renewable energy power plants are evolving rapidly. We make sure you don't just keep up, but you stay one step ahead.

The facts show the trend:

- Germany's **KRITIS regulation** initially applied only to large-scale plants (from 420 MW); since 2017, plant pools from 104 MW have already been affected.
- **NIS2** significantly expands the scope: the threshold will be lowered further and many more operators will be required to comply.
- In parallel, the **Cyber Resilience Act (CRA)** requires components to be secure and maintainable by design.

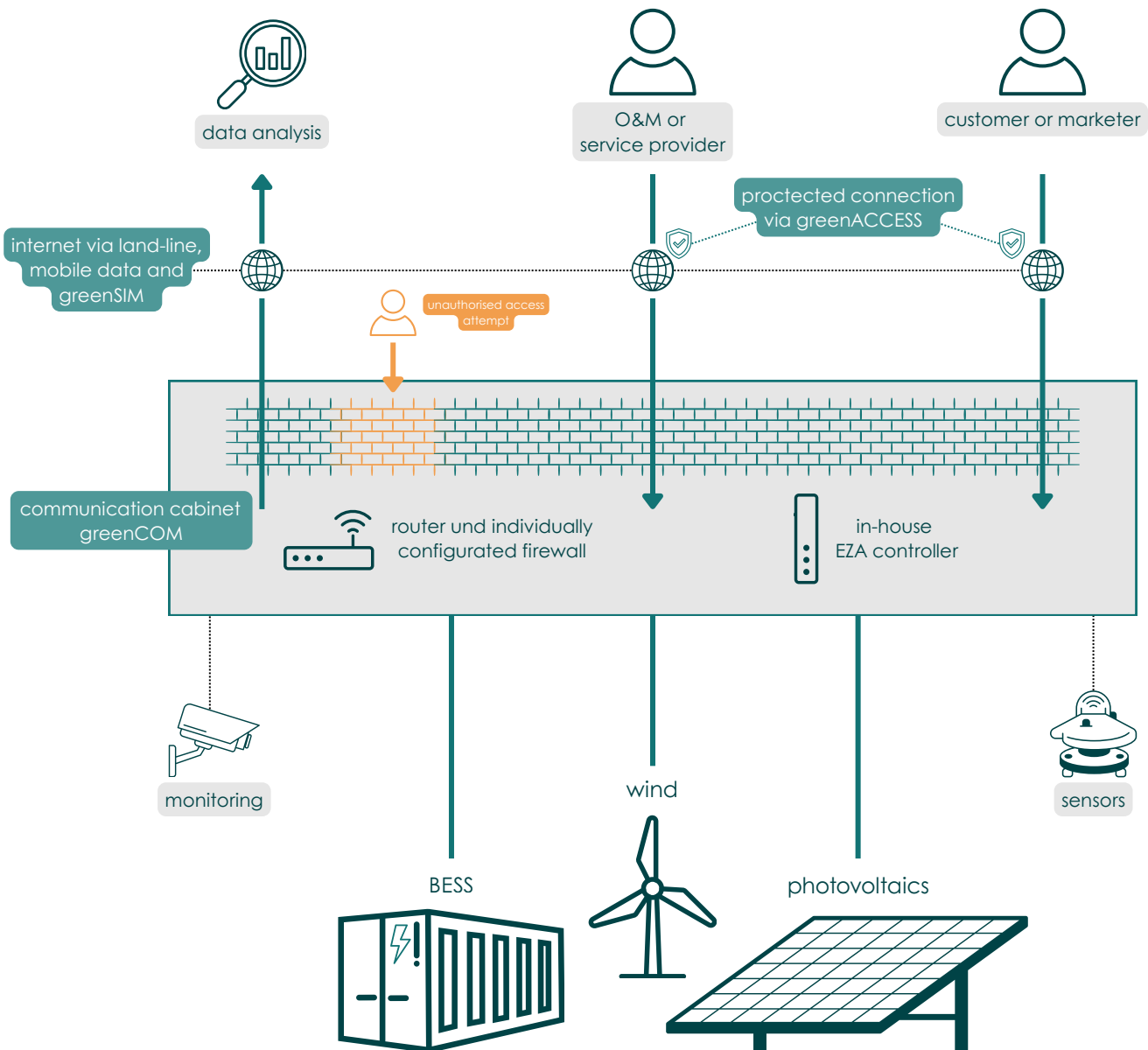
What does this mean for you? With us by your side: planning certainty.

We understand these complex requirements and translate them into practical implementation for you. Whether it's 104 MW today or an even lower threshold tomorrow, we design and operate your plant to meet the highest security and compliance standards at all times—secure, controllable, and future-ready.



HOW WE WORK: INTEGRATED IT CONCEPTS FROM A SINGLE SOURCE

Our integrated IT system provides a secure connection between the plant and the internet. At the same time, it ensures end-to-end communication for all stakeholders and gives each party the level of transparency they need.



If you wish, we can provide a full-service package covering everything—from the right hardware and software and secure internet access to complete IT services, including on-site support and remote diagnostics.

Interested?

Get in touch—we'll be happy to help. [You can find our contact details here.](#)



NEW AND EXISTING PLANTS—SECURELY AND RELIABLY CONNECTED TO THE GRID TO MEET YOUR NEEDS.

Whether it's a new plant or a modernisation project, we provide the digital backbone for your power plant—secure, stable and transparent from day one. For new plants, we design and implement the complete SCADA, IT and monitoring system. A clean, well-documented architecture also enables smooth commissioning.

For existing plants, we bring your set-up up to date based on a thorough on-site assessment. Our services range from a full renewal of the IT infrastructure to the targeted implementation of individual components—such as secure VPN access, dedicated firewalls, provider-independent SIM cards, or modern control technology in line with all applicable standards. Whether you need a complete solution or a pinpoint upgrade, we ensure your power plant technology operates reliably.



HOLISTIC SCADA AND IT SOLUTIONS FROM GREENTECH OFFER:

MAXIMUM IT SECURITY

through comprehensive protection and encrypted internet connectivity in line with the IT security requirements of ISO 27001, ISMS, the German BSI requirements under the Energy Industry Act (EnWG) Section 11 (1a), and the BDEW white paper "Requirements for Secure Control and Telecommunication Systems".

SUITABLE FOR KRITIS, NIS2 AND THE CRA

in accordance with the requirements applicable to the energy sector.

GDPR COMPLIANCE

through appropriate control and authorisation management systems.

FULL DATA TRANSPARENCY

for all relevant users.

CONSIDERATION OF SPECIFIC REQUIREMENTS FROM OTHER STAKEHOLDERS

such as O&M service providers, insurers, energy traders or utilities—for example in retrofit and repair projects, including existing plants in line with BDEW MSR 2008.

SOLUTIONS TO MEET LEGAL REQUIREMENTS AND GUIDELINES


within the scope of power plant control, such as certified EZA controllers in accordance with VDE-AR-N 4110/4120/4130, or energy-trader interfaces.



OUR SCADA AND IT SOLUTIONS FOR RENEWABLE ENERGY POWER PLANTS

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OUR SCADA AND IT SYSTEM

As your SCADA and IT specialist, we take full responsibility—from precise planning and technical implementation through to regulatory compliance.

CENTRAL COORDINATION FOR A SMOOTH PROCESS

We act as the central interface and coordinate all requirements and timelines between all stakeholders—from plant operators and grid operators to energy traders and EPCs. As cybersecurity requirements for SCADA and IT continue to rise and standards such as IEC 62443 become increasingly important, we ensure clear alignment on security specifications.

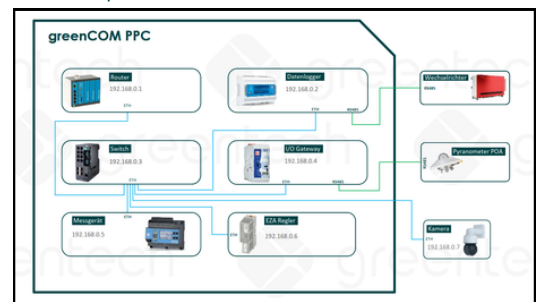
The result for you is smooth project delivery in German and a successful acceptance on the scheduled date.

ON-SITE COMMISSIONING AND QUALITY ASSURANCE

Our service includes plant-specific configuration and commissioning of all components:

- Router
- Firewall
- EZA controller
- Metering device
- Data logger
- Switch
- Control cabinets
- Sensors and instrumentation
- Video surveillance
- Energy trader interface

A key step is our pre-commissioning carried out directly on site. This allows us to identify and rectify defects or installation errors early, ensuring quality before issues become critical.



Picture: Example system architecture

CERTIFICATION AND DOCUMENTATION FOR FULL TRANSPARENCY

We actively support you with plant certification, prepare the declaration of conformity, and handle all communication with the grid-connection contacts. After successful commissioning, you will receive complete, project-specific documentation that provides you with a clear, at-a-glance overview of your plant at any time.

YOUR TECHNICAL PARTNER — EVEN AFTER PROJECT COMPLETION

Our service doesn't end at handover. To ensure long-term secure and efficient operation, we also support the future O&M service provider as a permanent technical point of contact for the entire SCADA and IT system.

OUR SCADA SYSTEM FROM EXCLUSIVELY GERMAN SUPPLIERS

We deliver a SCADA system as the central control hub for your project. It integrates control, monitoring and data management into a seamless end-to-end system. This ensures grid compliance, secure connectivity, transparent operations and stable market integration across all project set-ups and stakeholder constellations.

Our **greenCORE PPC** (plant controller / EZA controller) is the heart of our SCADA system. Certified in accordance with VDE-AR-N 4110/4120/4130, it enables connectivity to energy traders and adapts flexibly to the grid operator's requirements. Its smart interfaces allow authorised partners to access data with both read and write permissions. Operation requires only an internet connection—the secure remote access to the power plant network is provided via greenACCESS. We implement hybrid project set-ups, including a wide range of trading and operating models. Our SCADA and IT systems are also regularly delivered all the way to the substation, where hybrid power plants are centrally controlled and monitored.

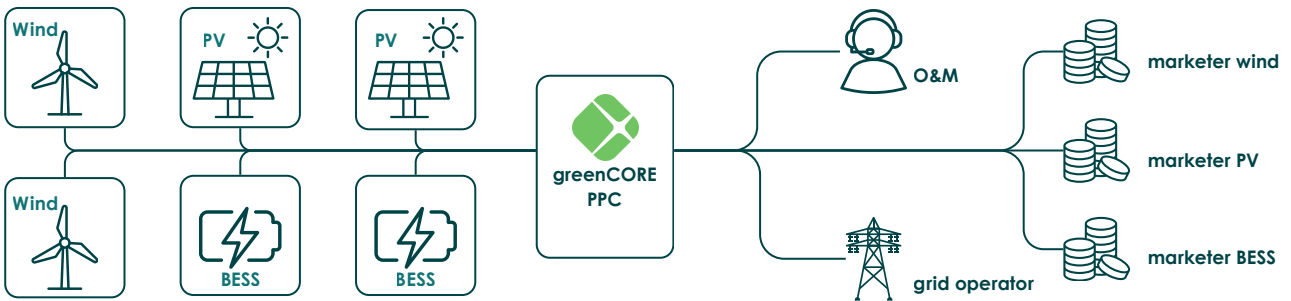


Diagram: Hybrid greenCORE PPC

Did you know?



The greenCORE PPC is the heart of the SCADA system—nothing works without it. Stability and our recommended redundancy are critical: if an EZA controller fails, the plant may be shut down or market operations may come to a standstill. We minimise this risk and help secure reliable revenues.

Our **greenCORE DM P & E** (central data loggers) integrate sensors, the weather station and a wide range of signals from the plant/substation. They capture measurement data and provide it in a flexible, manufacturer-independent and standardised way. To ensure all relevant data points are included from the outset, we get involved early in planning the substation equipment. This keeps data acquisition independent of the selected inverter data logger and consistently follows a clear standard.

FURTHER HIGH-QUALITY SCADA HARDWARE



Our **greenCOMs** are communication cabinets that combine numerous key SCADA and IT components for plant control. They are developed and manufactured in close cooperation with an experienced regional partner.



The **pyranometers** and **albedometers** measure irradiance precisely in accordance with ISO and IEC Class A standards and provide reliable data for performance analysis of the PV plant.



The **metering device** precisely measures the currents and voltages of all phases at the grid connection point, providing essential data for the plant's control concept.



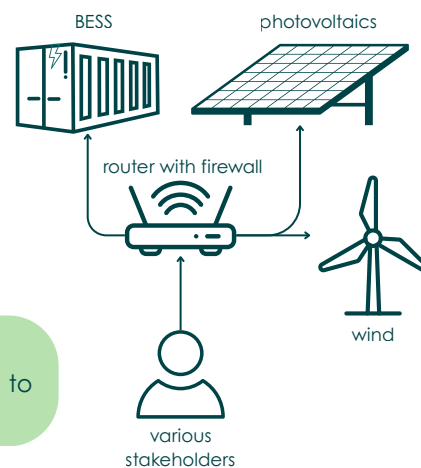
The **cameras** provide high-resolution images and feature powerful zoom capabilities. Even at night, they capture razor-sharp images over long distances.

OUR IT CONCEPT

We provide a robust network foundation for your project—high-performance, resilient and consistently protected. This ensures stable, clearly segregated data flows, properly controlled access, and reliable reachability for operations, service and monitoring—even as complexity grows.

The **router** is your plant's gateway to the outside world and is essential for external data communication. It establishes a secure internet connection and ensures that data is reliably routed to the right destinations—from remote monitoring to data exchange with grid operators.

greentech implements high-performance industrial routers and, through correct configuration, ensures stable data transfer—an essential prerequisite for smooth operation.



Did you know?

We install multiple SIM cards and high-quality antenna technology to ensure continuous availability.



The **firewall** is the central line of defence for your plant's IT infrastructure. It reliably protects your internal network against cyberattacks and unauthorised access from the internet by controlling traffic and allowing only defined connections.

greentech provides the professional implementation and configuration of a robust, project-specific firewall solution. Through network segmentation, we clearly separate communication domains—for example, keeping CCTV separate from SCADA—so that different user groups (such as security providers) can access only the systems they need, maintaining the long-term integrity of your plant.

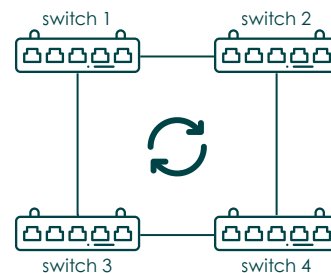


Did you know?

More data traffic means a larger attack surface. Our firewalls combine policy rules, VPN and IDS/IPS to ensure that only authorised connections get through.

The **switch** is configured individually for each plant and meets the highest IT security standards. This ensures a clean, high-performance and clearly structured network infrastructure.

Redundancy is provided by an integrated fibre-optic ring, enabling stable data communication even in the event of cable or component failures.





greenCARE: IT SECURITY FOR YOUR ASSETS

With **greenCARE**, we provide end-to-end security, updates and protection for the IT and network infrastructure of your power plant. This includes data backups and firmware updates, as well as protection against cyberattacks and tampering. Centralised password management ensures maximum security. A connection via greenACCESS is required.

WHY greenCARE IS IMPORTANT FOR YOUR POWER PLANT

Modern plants are highly interconnected: routers, firewalls, switches, security cameras, controllers, data loggers, remote-control systems and other components communicate with each other continuously. This connectivity increases the risk of security vulnerabilities. If weaknesses are not addressed quickly, attacks can lead to tampering, outages and substantial follow-on costs.

YOUR ADVANTAGES WITH greenCARE:

REGULAR FIRMWARE UPDATES

for security-critical IT components

BACKUP AND ENCRYPTED STORAGE

of all network configurations and settings for rapid recovery, stored on secure servers

FAST TROUBLESHOOTING AND RESTORATION

to minimise downtime and reduce financial losses

PROACTIVE PROTECTION AGAINST CYBERATTACKS

through targeted vulnerability remediation and monitoring

PREVENTION OF TAMPERING AND SYSTEM OUTAGES,

e.g. caused by ransomware or targeted control-system attacks

TRANSPARENT REPORTS AND EVIDENCE

of up-to-date security status

TAILORED IT SERVICE PACKAGES

to suit different requirements and investment budgets

RISKS WITHOUT greenCARE

- **Open doors for attackers into your plant** due to undiscovered vulnerabilities
- **Manipulation of control systems** through cyberattacks that disrupt operations or cause prolonged downtime
- **Significant financial losses** due to long recovery times
- **A larger, broader attack surface** if updates are not performed
- **Delayed or even prevented recommissioning** due to missing backups after attacks or hardware failures

greenCARE SERVICE PACKAGES FROM GREENTECH:

Services in packages	Essential	Exclusive	Enterprise
Initial assessment of the SCADA and IT infrastructure	✓	✓	✓
Implementation of encrypted backup servers for maximum data security	✓	✓	✓
Systematic recording and maintenance of hardware in an asset database	✓	✓	✓
Secure password management for all system access	✓	✓	✓
Set-up of efficient remote management for fast remote maintenance	✓	✓	✓
Analyse der Konfiguration, Firewall- und Sicherheitsregeln inkl. Handlungsempfehlungen	✓	✓	✓
Analysis of configurations, firewall and security rules, including recommendations for action	annually	annually and whenever the manufacturer releases security-critical updates	annually and whenever the manufacturer releases security-critical updates
Transparent performance reporting on all updates and measures	annually	annually on overall system status, and within 4 weeks for remediated vulnerabilities	annually on overall system status, and within 2 weeks for remediated vulnerabilities
Reliable backups for all your IT components	annually	annually and after any configuration changes	annually and after any configuration changes
Dedicated backups of your critical SCADA components	annually	annually	annually
Review of internet redundancy for maximum resilience	annually	twice a year	quarterly
Guaranteed fast response times in case of service issues	Within 72 hours, Monday to Friday, 09:00–17:00	Within 24 hours, Monday to Friday, 09:00–17:00	Within 4 hours, Monday to Friday, 09:00–17:00
Set-up of centralised network monitoring for end-to-end visibility	✗	✗	✓
Network monitoring and incident detection with clear recommendations for action	✗	✗	Monday to Friday, 09:00–17:00
Secure storage of your critical SCADA and IT spare parts	✗	✗	✓

ADDITIONAL ADD-ONS — also available separately

CREATION OF A SYSTEM DIAGRAM

A comprehensive visualisation of your power plant's SCADA and IT components (Layers 2 & 3) forms the basis for efficient fault diagnosis and rapid troubleshooting.

SET-UP OF A FIREWALL WITH IDS/IPS

A professionally configured firewall with integrated IDS/IPS reliably protects your power plant against anomalies, unauthorised access and cyber threats.

EXTENDED IT/OT SECURITY

Advanced network monitoring is provided via a firewall with IDS/IPS and active anomaly detection. During service hours (Monday to Friday, 09:00–17:00), detected IT security incidents are identified immediately and all relevant stakeholders are informed. In addition, you will receive monthly reports.



greenACCESS: VPN-PROTECTED PLANT COMMUNICATION

Access via our VPN service **greenACCESS** enables all authorised stakeholders to securely connect to the plant's components through the service. From current data logger values and the EZA controller to the power quality analyser and the CCTV system for monitoring—right through to plant control and operational data analysis— all information and access are optimally protected against unauthorised access and tampering. If the VPN connection drops, the service automatically re-establishes it.

Access is GDPR-compliant via individual or group-based permission management, which can be adjusted flexibly. For example, an EPC can be granted time-limited access to the EZA controller, or a security provider can be set up with permanent access to the alarm system.



OPTIMISE AND REDUCE COSTLY ON-SITE TECHNICIAN VISITS

through remote access and monitoring

INDEPENDENT

of the type and provider of the internet connection

STABLE VPN ENVIRONMENT

with automated backups and fast recovery processes to minimise downtime

DIRECT ACCESS for simple, temporary access

SUITABLE FOR KRITIS, NIS2 AND THE CRA

- Time-limiting individual connections
- Traceability through enhanced logging features
- Continuous hardening of system security

MAXIMUM DATA SECURITY & GDPR COMPLIANCE

- Two-factor authentication (2FA)
- Server location: Germany
- Certificate-based authentication
- All communication via a highly secure, encrypted VPN tunnel

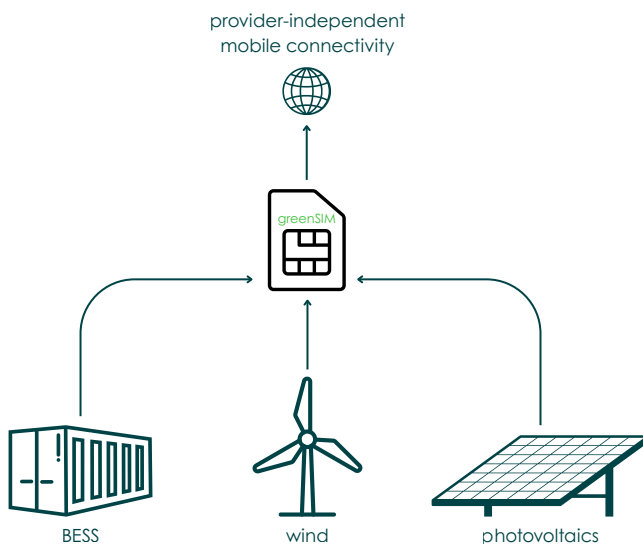


greenSIM: ALWAYS THE BEST CONNECTION

Essential control actions, the transmission of real-time sensor data, and continuous plant monitoring should take place in real time today. This allows faults to be identified quickly and efficiently. A reliable internet connection and a stable network are prerequisites for consistent, disruption-free data transmission.

WORLDWIDE NETWORK COVERAGE

The **greenSIM** is a mobile SIM card that is not tied to a single network and supports national and international roaming. It connects to the strongest available network, ensuring that plant data and control commands are transmitted quickly and reliably at all times. This can be a major advantage, particularly in remote rural areas with limited coverage or in border regions. Your contractual partner always remains greentech—regardless of the mobile network used.





POWER PLANT IT SECURITY AUDIT

How does plant communication work in your power plant? How are the various SCADA and IT components connected and communicating with each other? How are the individual devices connected to the internet, and which party is allowed to access which device—with what permissions?

AN OVERVIEW OF YOUR POWER PLANT IT STATUS PROVIDES FAST SUPPORT IN AN EMERGENCY

Our IT security audit provides a clear and detailed picture of the current status of your power plant's communications infrastructure. For example, the network is documented in a single-line diagram, including the names and locations of all endpoint devices in use.

This makes vulnerabilities and system risks visible—issues that should be addressed as quickly as possible to achieve the required level of IT security for plant communications. At the same time, in an emergency the documented information can be used to speed up root-cause analysis in the event of outages, incidents or equipment failures, to procure the right spare parts in a targeted way, and to install them so that all affected systems, interfaces and stakeholders can resume operation as quickly as possible, in line with your needs.

FURTHER CONSULTING SERVICES ON POWER PLANT IT TOPICS

From a faulty patch cable and selecting the right IT equipment through to a comprehensive IT security concept aligned with KRITIS regulations and GDPR requirements—we support you with all questions relating to power plant IT. This includes, for example:

- Holistic SCADA planning and implementation of power plant IT
 - Consulting on IT infrastructure changes and support with implementation
 - Development of tailored security concepts
 - Retrospective creation or revision of documentation and network diagrams
 - Support in the event of unplanned failures of SCADA and IT components through remote diagnostics, in-depth analysis and subsequent troubleshooting
 - Consulting on and implementation of suitable software solutions for the specific plant
 - Ongoing support to ensure power plant IT availability and assumption of IT responsibility
- Tailored training on relevant power plant IT topics and IT security



NOTICE

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ABOUT GREENTECH

greentech is an integrated solar and storage specialist. Our services cover project development, design, construction and operations of renewable energy power plants and BESS across selected European markets. With an interdisciplinary team of around 200 people across multiple locations in Germany, the UK, Ireland and Italy, greentech is active in nine countries. We manage a portfolio of more than 1.5 GW through our technical asset and portfolio management services and have our own 10 GW project development pipeline in Germany, the UK and Italy. In addition, the company offers services in engineering, technical advisory, financing and power marketing.

greentech's dedicated Power Plant IT and ICS team ensures the professional integration and stable connectivity of power plant and storage communications to the internet and the relevant interfaces. The team also advises plant operators on control and interface solutions, as well as on the design and configuration of a robust and secure IT infrastructure.

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