Your advantages at a glance

- Cost savings through the development of standard transformer substations for renewable energy projects
- Rapid processing and delivery of components through framework contracts with reputable suppliers
- The execution period lasts approximately 22–24 months only** (after the order receipt has been clarified and the approval planning has been carried out)
- Safety is guaranteed through compliance with all applicable regulations and guidelines – such as EN, DIN, VDE, AGI and BG
- The supplier Netze BW has been certified according to the VDN guidelines S1000, DIN EN ISO 14001 und NLF/ILOOSH 2001 in accordance with OHSAS 18001:2007
- There is the possibility of bundling several wind parks to a single feeding transformer substation, which is a cheaper alternative to getting a separate substation for each wind park.
- Regular inspection and maintenance of your wind socket to minimize downtimes

**This time specification refers only to the construction phase of the wind socket. The connection to the regulated grid connection point is not included in this period and must be arranged and agreed upon with the local grid operator.

Your reliable partner in close proximity

Services for companies, municipal energy suppliers and renewable energy project corporations:

- Innovative services
- Customer proximity through our regional branches
- Customized and intelligent solutions
- Excellent customer service

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Our supplier Netze BW is certified as follows:

TSM (Technisches Sicherheits-managementInach VDE-Richtlinien

Arbeitsschutz-, Umwelt- und Energie-managementsystem

AMS (Arbeitsschutz-Management-System) nach BG-Richtlinien

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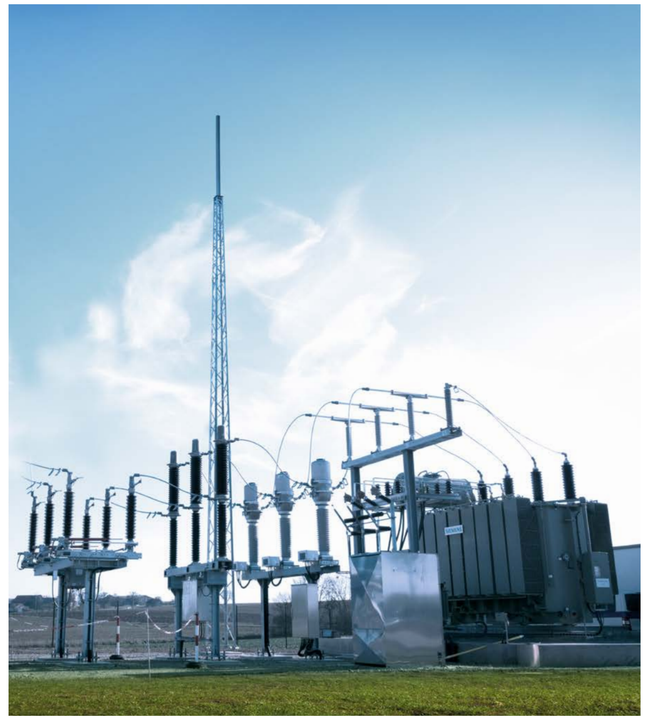
Electricity grid services

The wind socket: The feeding transformer substation for wind parks



Ein Unternehmen der EnBW

Netze BW
Sparte Dienstleistungen

Efficient integration of your wind parks into the 110kV-grid

Sustainable generation of electricity from wind energy is a model for success. The direct feeding of the electricity generated from wind parks directly into the 110 kV grid is coupled with several benefits. Netze BW division of services, provides secure, speedy and reliable technological solutions, coupled with a comprehensive service package to make this task possible, thereby relieving you of many tasks you may have performed previously.

Our concept is customized and finely tuned to meet your requirements.

The direct feeding of wind energy into the high voltage grid is a profitable and technically mature technology. This is guaranteed through the use of "Wind sockets". The wind sockets are basically standard 110/30(20) kV feeding transformer substations of Netze BW division of services. To spare you from getting cost-intensive individual connections for the high voltage grid, there is the possibility of connecting several wind parks to a single feeding transformer substation.

Individual solutions for your requirements

The wind sockets have been devised as a modular kit in various performance classes (25/40/63 MVA). The feeding transformer substation is usually installed in the immediate vicinity of a 110 kV overhead cable. As your partner, we take care of all necessary tasks: From the project planning and conception of the transformer substation, right up to its construction and technical management.

*The connection to the regulated grid connection point is not a part of this service. This must be ordered separately from the local network operator.

Our service portfolio

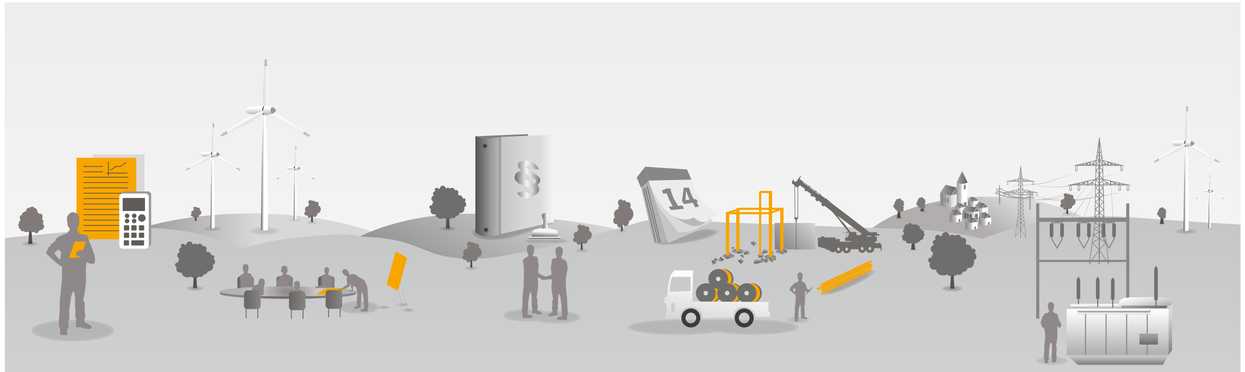
Analysis and Consulting

- On-site profitability verification and technical feasibility study, pertaining to grid connection points specified by the local grid operator.

Planning and construction

- Project execution is carried out by a general contractor. This includes the project and approval acquisition planning, as well as the design and construction of a turnkey feeding transformer substation.
- Complete offer comprising of all components. For instance 110 kV switch gears, 110 kV transformers, medium voltage switchboards, operation buildings, protection technology, auxiliary power and communications, as well as instrumentation and control equipment.
- Planning and project engineering of compensation systems in compliance with the technical connection requirements of energy supply companies
- Individually expandable number of parallel incoming feeder cubicles.
- Installation of the 110 kV switch gears, based on elaborate technical specifications for renewable energy projects
- Functional test of the substation, according to the parameters defined in the technical connection requirements of energy supply companies, VDE and the Netze BW standards.
- Start of operation

Our specialists assume full responsibility of your wind socket project



Phase 1:
We analyze the underlying conditions und determine your exact requirements

Phase 2:
We design customized solutions for your feeding transformer substation – The Netze BW wind socket.

Phase 3:
Our team takes care of the approval acquisition planning

Phase 4:
We plan, organize and supervise all construction activities and ensure a timely completion of the project.

Phase 5:
We also assume responsibility of a consistent and long-term technical management, including maintenance, servicing and fault repairs.

Operation

- Full responsibility assumption of the substation and documentation.
- Inspection and servicing as well as frequent cleaning and maintenance of the substation
- Rapid fault repair services
- Renewal of components to enhance performance optimization

Other services related to the wind socket

- Procurement process for European countries, request for proposals, selection, negotiation, quality control, delivery and acceptance
- Evaluation of the grid connection points (grid compatibility test)
- Verification of the technical connection requirements
- Design and modeling of the wind park network

Our extensive experience cares for a safe long-term running of the substation

Our References

- **ZEAG Energie AG, Heilbronn:** Construction 110-kV feeding transformer station for the Windpark Harthäuser Wald in Züttlingen
- **WIRSOL Windpark Straubenhardt:** Construction 110-kV-feeding transformer station
- **Reg.En regenerative energien GmbH:** Construction 110-kV-feeding transformer station for the Windpark Niederstetten
- **W-I-N-D Energien GmbH, Kirchheim unter Teck:** Construction 110-kV-feeding transformer station for the Windpark Burgberg

Our Clients benefit from ...

- a comprehensive and extensive range of products and services
- our longstanding experience in the construction and operation of transformer stations
- our highly specialized technical expertise
- a 24-hour on call service
- a single contact person for all project phases pertaining to your wind socket to enable a smooth communication