

FERCHAU

Engineering and IT Excellence for the Energy Sector

PORTFOLIO INSIGHTS | ENERGY

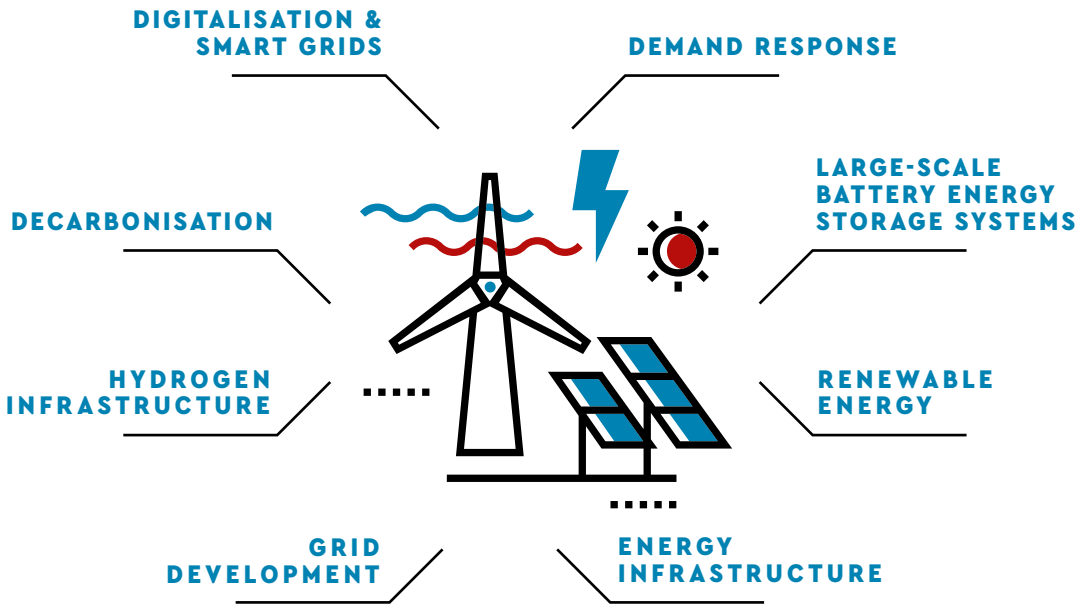
Status quo

The energy industry is undergoing rapid transformation, from the decommissioning of conventional assets to the extensive expansion of power grids, renewable generation, energy storage systems and future hydrogen infrastructure. At the same time, requirements relating to permitting, documentation, OT/IT security and on-time commissioning continue to increase, while the pressure resulting from the shortage of skilled labour is growing.

Scalable capacity and specialised expertise are required to avoid quality losses, delivery risks and compliance violations. FERCHAU provides qualified engineering and IT experts and supports utilities, infrastructure operators, developers and technology providers with reliable end-to-end solutions.

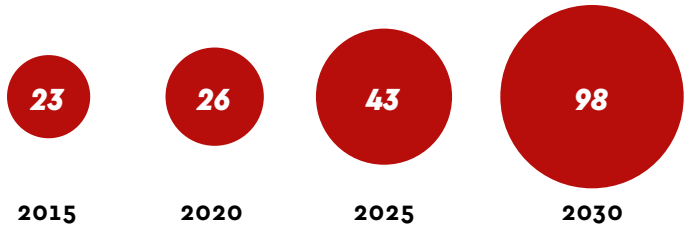
Trends in the Energy Industry

The industry's focus is shifting from planning to implementation. Smart metering systems are being rolled out, OT and IT are becoming increasingly integrated, and assets are monitored in real time. At the same time, security requirements, regulatory obligations and funding criteria continue to increase. What many organisations lack are the implementation capacities required, particularly in grid expansion projects. FERCHAU closes this gap with scalable engineering and IT teams.



Revenue from Power Grid Development

Statistics and Forecast in EUR million
Source: Federal Network Agency (Bundesnetzagentur)



KEY SUCCESS FACTORS IN THE INDUSTRY

- Regulation & Compliance
- Digitalisation, Standardisation & Automation
- Renewable Energy Expansion & Grid Integration
- Flexibility & Energy Storage
- Hydrogen Backbone Network & Gas Grid Conversion
- Funding Programmes & Accelerated Planning and Permitting

Players in the Energy Industry

Who drives capability development – and where does FERCHAU provide support with engineering and IT excellence?

Transmission System Operators (TSOs)

- **Challenges:** Accelerated grid expansion and substation modernisation, congestion management and redispatch, OT/IT security, complex permitting requirements
- **Top priorities:** PHVDC corridor projects, substation digitalisation (IEC 61850), NIS2 and critical infrastructure compliance
- **Our levers & expertise:** Route planning and permitting, primary and secondary engineering, protection, control and SCADA systems, FAT, SAT and commissioning, PMO, quality and compliance management, brownfield conversions and decommissioning projects

Distribution System Operators & Municipal Utilities

- **Challenges:** Growing grid connection volumes for PV, EV and heat pumps, Redispatch 2.0 implementation, smart meter rollout, shortage of skilled labour
- **Top priorities:** Medium- and low-voltage grid expansion, asset and GIS data quality, workforce and field-service optimization
- **Our levers & expertise:** Grid studies and protection settings, connection assessments, GIS, ADMS and MDM integration, process and workflow automation, customer and renewable energy administration

Renewable Energy Developers & Operators

- **Challenges:** Land acquisition and permitting, supply chain and construction management, grid connection, monitoring and performance optimization
- **Top priorities:** Repowering projects, hybrid renewable parks, PPA readiness
- **Our levers & expertise:** Permitting documentation and yield modelling, Electrical Balance of Plant, grid connection planning, site management and HSE, SCADA and monitoring systems, data analytics

Energy Storage & Flexibility Providers

- **Challenges:** Business case development and prequalification, EMS and control systems, fire protection and compliance requirements, grid integration
- **Top priorities:** Utility-scale battery storage systems, redispatch and ancillary services markets
- **Our levers & expertise:** System sizing and grid studies, EMS integration and cybersecurity, plant engineering and FAT/SAT, operational data analytics

Hydrogen Infrastructure & Energy-Intensive Industry

- **Challenges:** Hydrogen backbone network implementation, material and safety requirements, electrolyser projects, industrial decarbonization
- **Top priorities:** Hydrogen backbone projects, hydrogen readiness programmes
- **Our levers & expertise:** Pipeline and plant engineering, material and pressure-class assessments, functional and explosion safety, OT/IT integration, project management and compliance

How we work together

In today's dynamic industry landscape, it is crucial to be able to respond quickly to changing requirements. With our flexible solutions, we ensure that you always have exactly the right experts on board.

YOUR BENEFITS AT A GLANCE

- » Reduction in project costs
- » FERCHAU quality standards
- » Higher BCC rate
- » Increased capacity
- » Over 15 years of experience in the BCC business

OUR COMMITMENT

SPECIALISED KNOW-HOW

Benefit from expert knowledge for your individual challenges.

HIGH QUALITY EXPERTS

Our consultants have an excellent track record and proven expertise.

FAST AVAILABILITY

You have access to a broad network of experts who are available at short notice.

YOUR BENEFITS

RELIABLE PLANNING

With our consultants, you can plan your projects reliably and implement them on schedule.

HIGH FLEXIBILITY

Scale your team according to your needs and reduce fixed costs.

COMPLIANCE INCLUDED

We take care of legally compliant contract processing and administration by our consultants.

COOPERATION MODELS

FERCHAU SUPPORT
Experts on Demand

In case of order peaks, capacity bottlenecks or if specialist know-how is required, our employees reinforce your development teams.

FERCHAU COMPETENCE
Solutions for your Projects

Our experts solve technological challenges in interdisciplinary teams: from the initial idea to after-sales service, we assume responsibility for your projects.

FERCHAU CONTRACT
Flexibility with Freelancers

Our proven network in technology contracting: carefully selected freelancers provide relief and safety for your success-critical projects.

FERCHAU DIRECT
Professional & Executive Search

Fill vacancies fast and precisely: whether you are looking for a manager, engineer, or IT specialist, we have the perfect search strategy and the best selection process for all vacancies.

Real-life Projects

Our Success Stories





Heat Pump Development for a Data Centre

As part of a renewable energy initiative, additional energy storage capabilities were developed and integrated into a newly constructed data centre.

The project's objective was to utilise waste heat generated by the facility as a sustainable source of energy.

TO THE SUCCESS STORY

Successful Customer Management Support for a Grid Operator

The customer faced the challenge of registering photovoltaic systems with the Federal Network Agency. The registration of PV systems is a legal requirement and subject to strict regulatory guidelines.

FERCHAU provided operational support to ensure efficient and compliant processing.

TO THE SUCCESS STORY

We trust FERCHAU

Our references

ABB
AEROVIDE
AIRBUS
ALSTOM
ATLAS ELEKTRONIK
A joint company of ThyssenKrupp and EADS
Audi
AURAS GMBH
Beiersdorf
BERTELSMANN
BMW GROUP
BOSCH
B BRAUN SHARING EXPERTISE
BRAUN
brose Excellence In Mechatronics
B/S/H/
Continental
DFS Deutsche Flugsicherung
DIEHL
DND Dynamit Nobel Defence
DOW
DÜRR
ELIN
Ford
FORVIA HELLA
Fronius
HEIDELBERG
Heraeus
JUNGHEINRICH
KAUTEX A Textron Company
KNAUF
KNORR-BREMSE
KRONES
KUKA
Lufthansa Technik
MAGNA
MAHLE
MAX-PLANCK-INSTITUT FÜR PLASMAPHYSIK
MEYER WERFT PAPENBURG 1795
Miele
motorola
MTU Aero Engines
NORDEX
OSRAM
PHILIPS
PREMIUM AEROTEC
DR. RECKEWEG & CO
rexroth A Bosch Company
SIEMENS
TenneT
thyssenkrupp
TRANSNET BW
VIESMANN
VOITH
ZEISS

Around
10,000
employees

Over
130
branches

More than
150,000
applications p. a.

More than
200,000
candidates in the pool

More than
2,400
active customers

Enquiries
24/7
via our customer portal

Over
10,000
successful project launches last year

All relevant
certifications

Optionally with
Best-Cost-Countries



60 YEARS CREATING TOMORROW

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Connecting People and Technologies for the Next Level