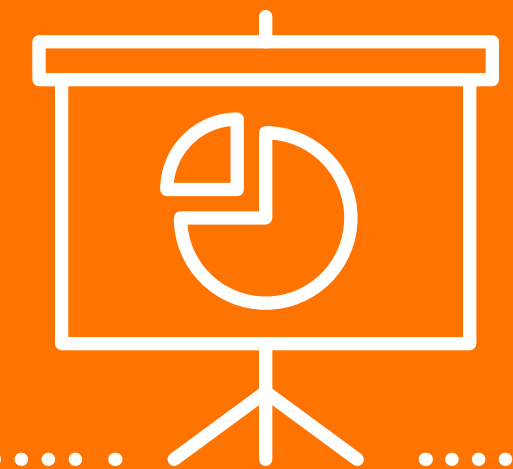




Facts & figures 2023



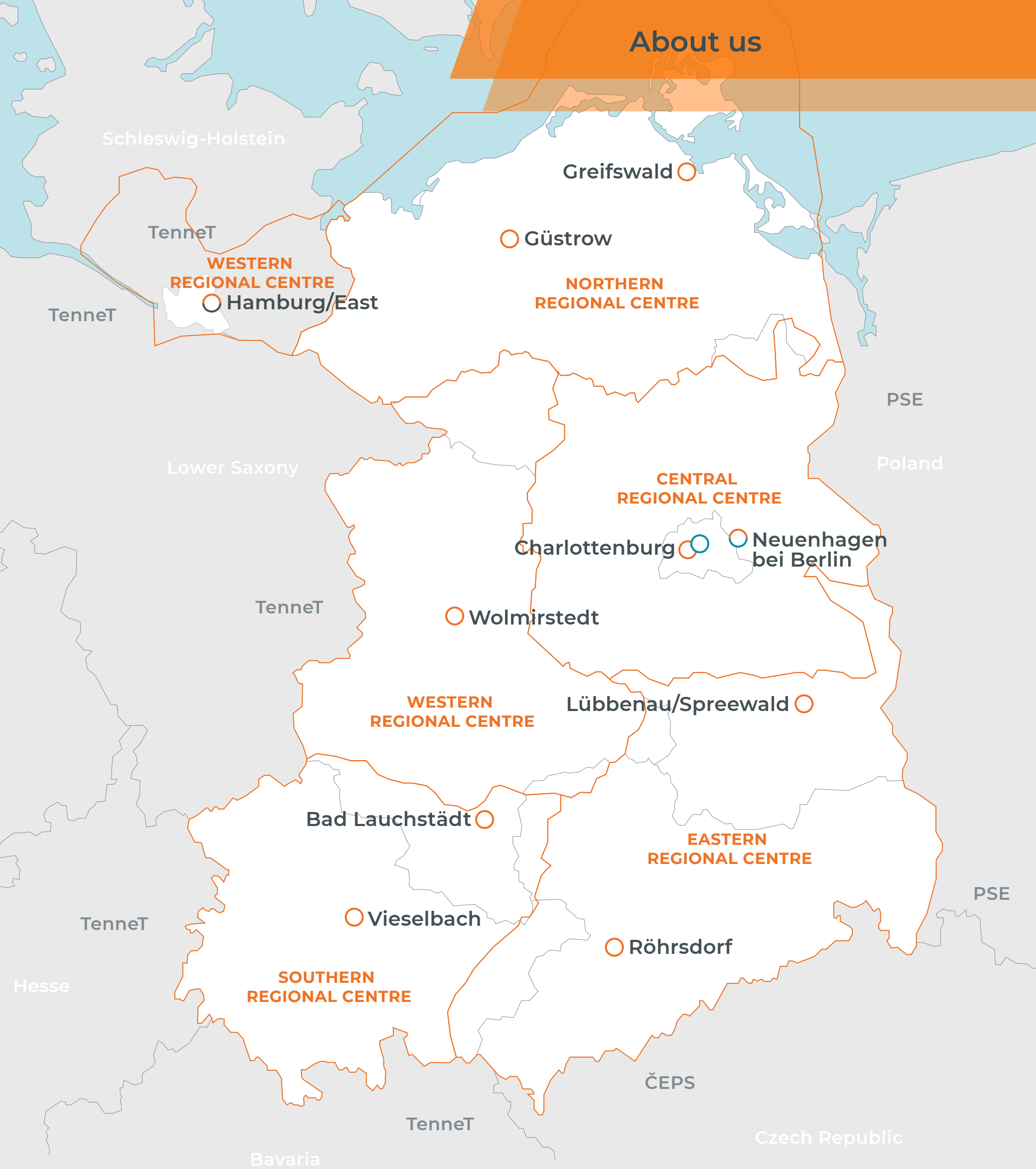
About us

We operate the electricity transmission system in the north and east of Germany, and are expanding it to meet the requirements of the energy transition. We are leaders in renewable energy sources (RE) – by 2032 we aim to move our grid and system over 100 per cent to RE, calculated over the course of a year.

The 50Hertz grid area covers the federal states of Brandenburg, Mecklenburg-Western Pomerania, Saxony, Saxony-Anhalt and Thuringia, as well as the federal city states of Berlin and Hamburg. In these regions, the 50Hertz team of roughly 1,800 employees ensures the power supply for 18 million people around the clock. In 2023, our extra high-voltage grid had a total circuit length of over 10,660 kilometres – or the distance from Berlin to Rio de Janeiro.

The shareholders of 50Hertz are the listed Belgian holding company Elia Group (80 per cent) and the KfW banking group (20 per cent). As a European transmission system operator, we are members of the European association ENTSO-E.





Where to find us

50Hertz-Netzquartier

Company Headquarters in Berlin
+49 30 5150 0
info@50hertz.com

Northern Regional Centre

+49 3843 2852 95
ralf.plischke@50hertz.com

Central Regional Centre

+49 3342 2332 21
carsten.hose@50hertz.com

Eastern Regional Centre

+49 3542 8719 0431
+49 3722 6393 00
uwe.granzow@50hertz.com

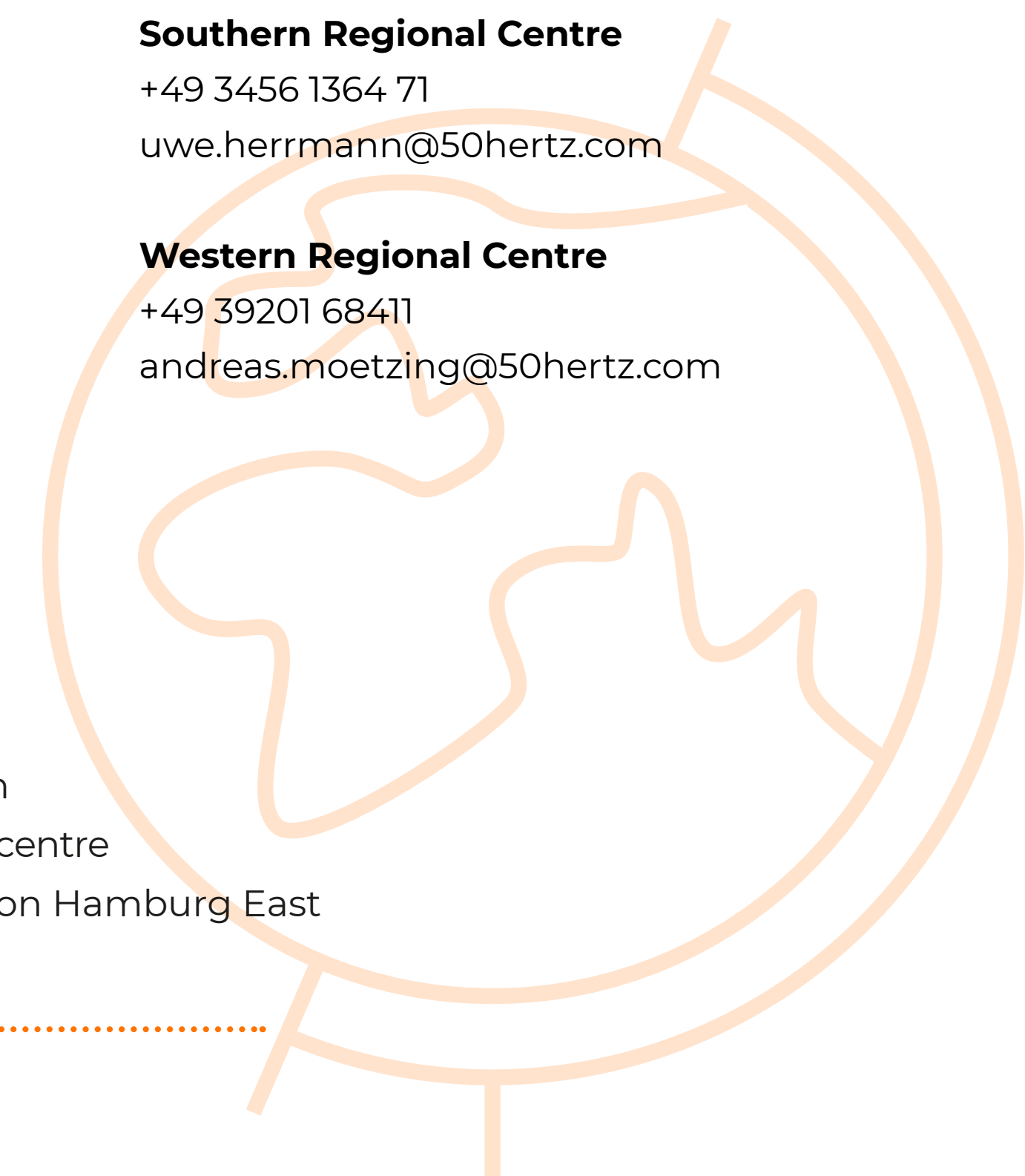
Southern Regional Centre

+49 3456 1364 71
uwe.herrmann@50hertz.com

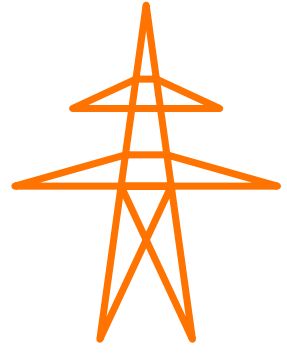
Western Regional Centre

+49 39201 68411
andreas.moetzing@50hertz.com

- Headquarter
- Regional centre / service location
- Central regional centre / control centre
- Central regional west / Sub Station Hamburg East



Our duties



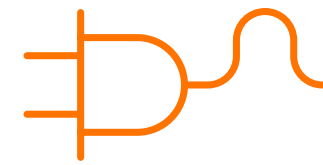
Transmission system operator

We provide the electricity network infrastructure of today and tomorrow.



System controller

We keep the electricity system in balance.



Market facilitator

We are part of the integrated European energy market.



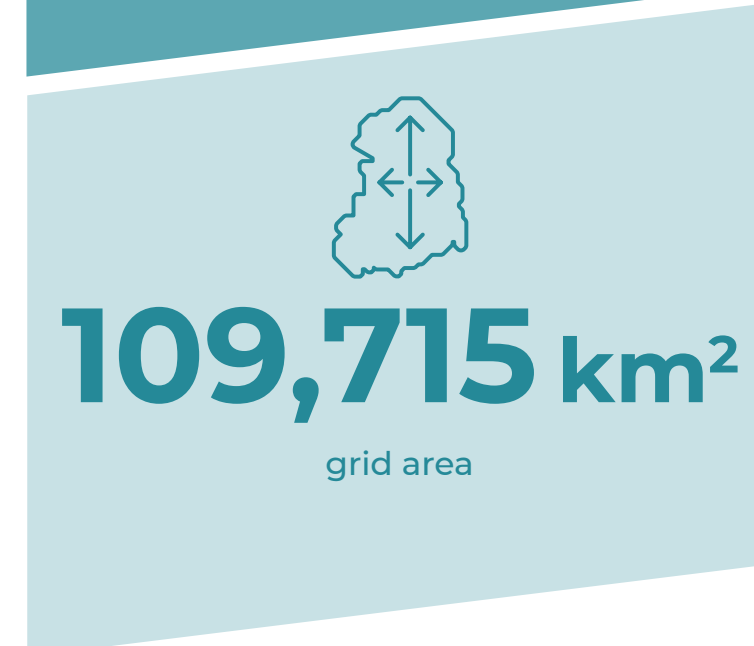
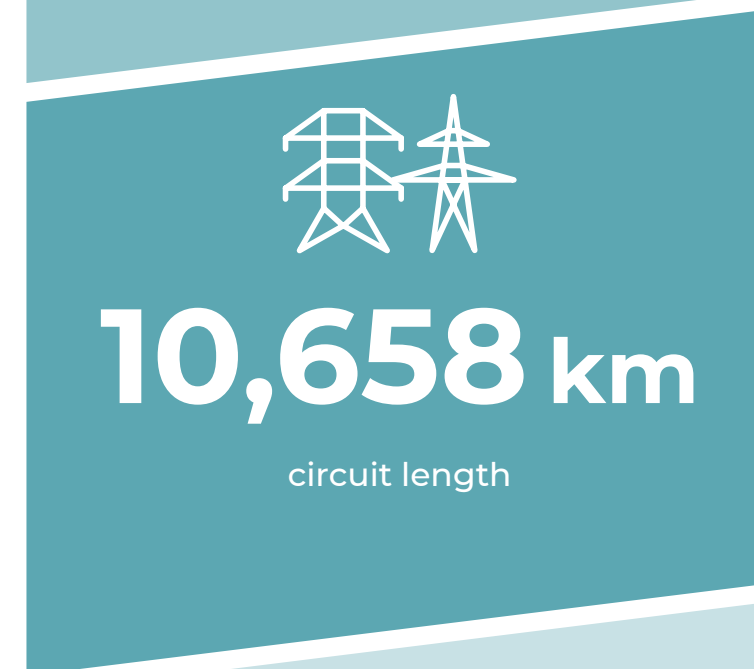
Trustee

We integrate renewable energies into the market transparently.



2023 in overview

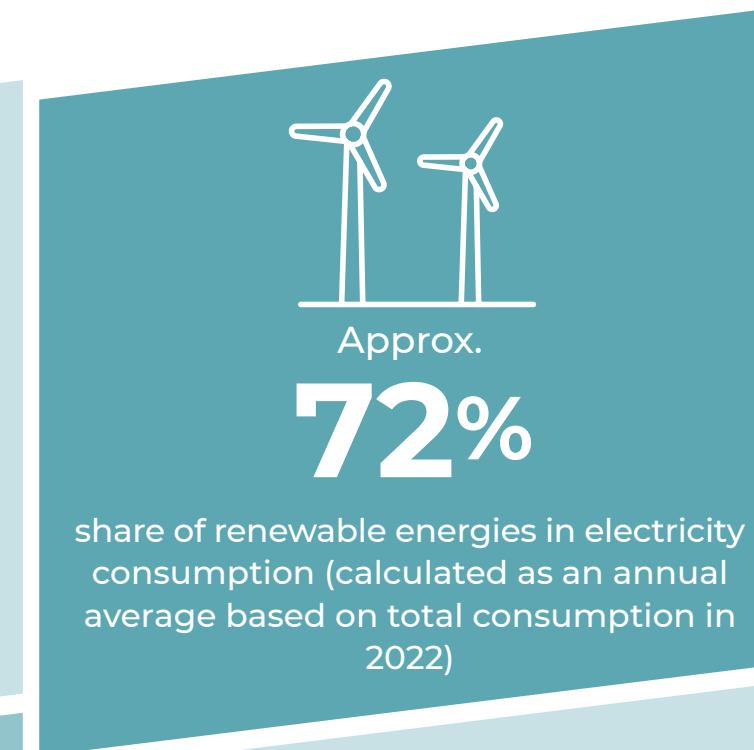
Context



Finances



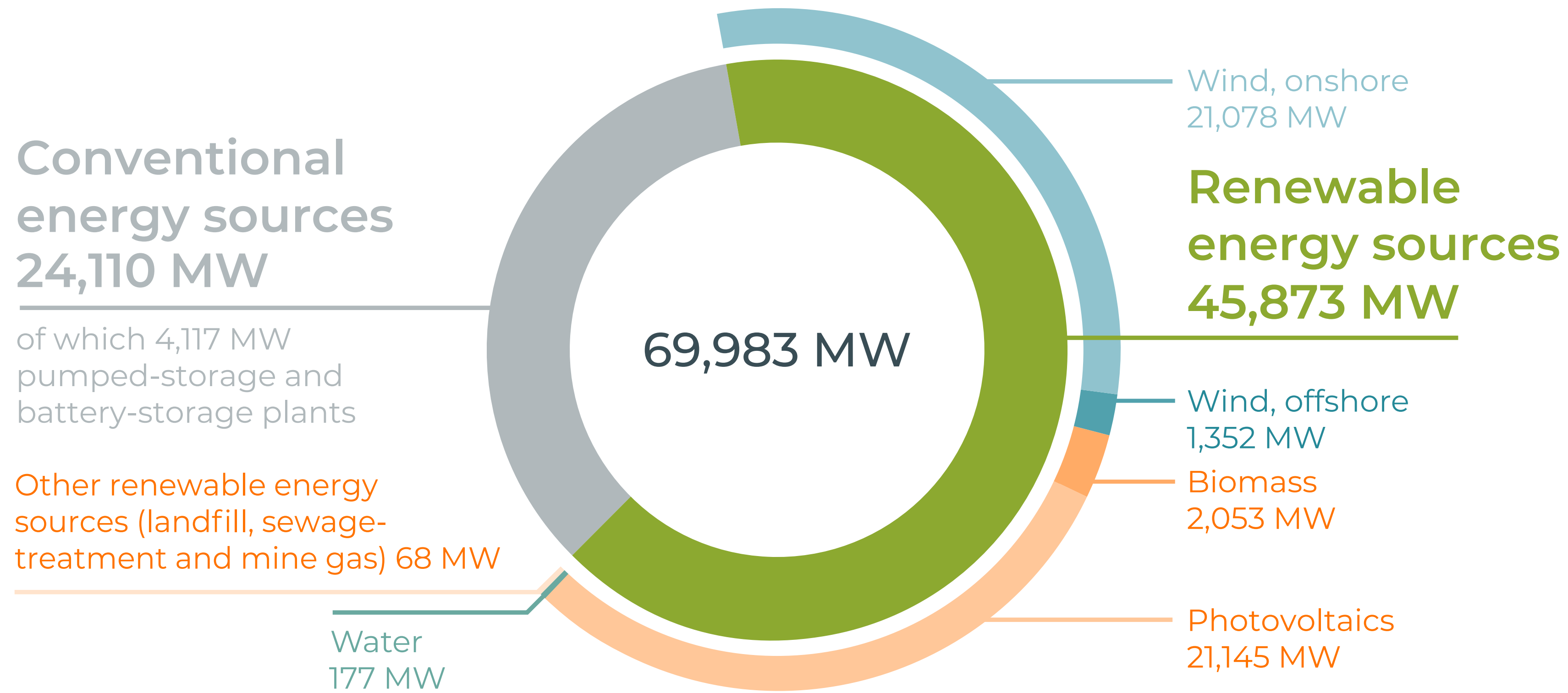
Environment



Society



Installed capacity in the 50Hertz grid area

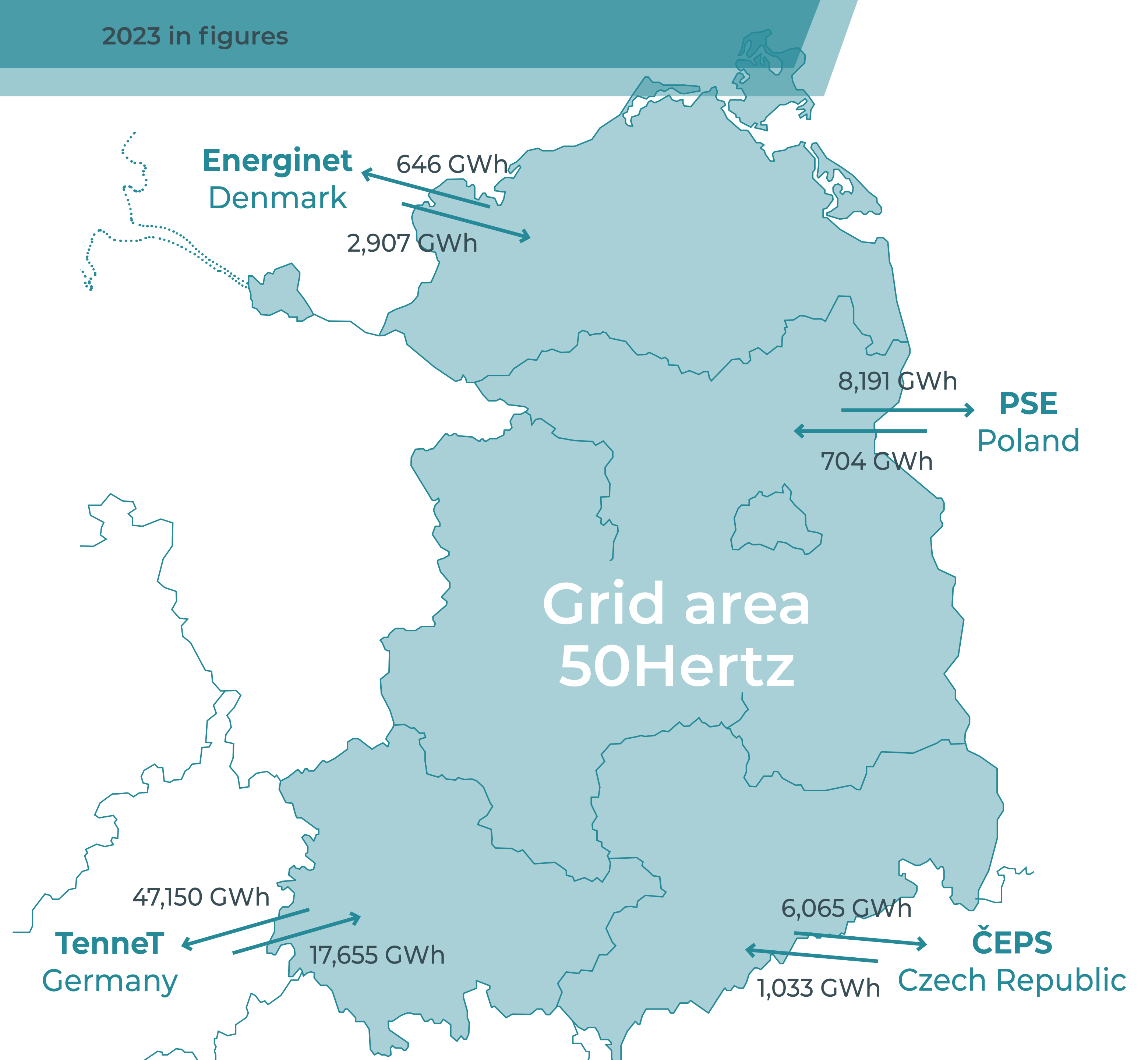


50Hertz generates a positive export balance*

We are a major exporter of electricity in Germany and in Europe. Within the 50Hertz grid area, a continually increasing volume of electricity comes from renewable sources. By contrast, the population is relatively small and hence energy demand lower.

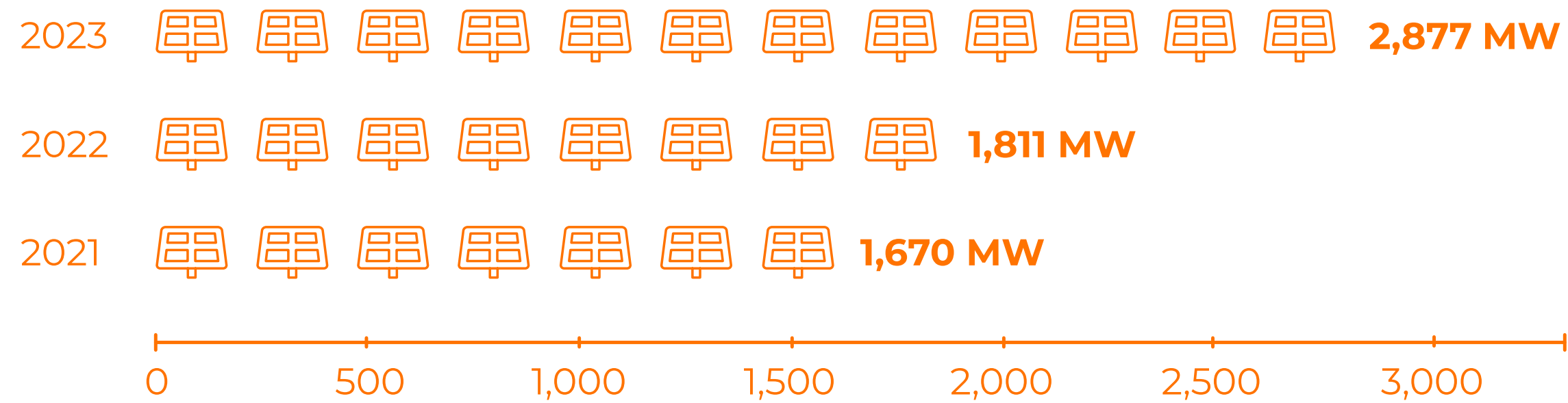
We transport the resulting surplus via the extra high-voltage grid to metropolitan areas in the south and west of Germany and to our European neighbours.

* The amounts shown refer to physical electricity flows, not to commercial exports.

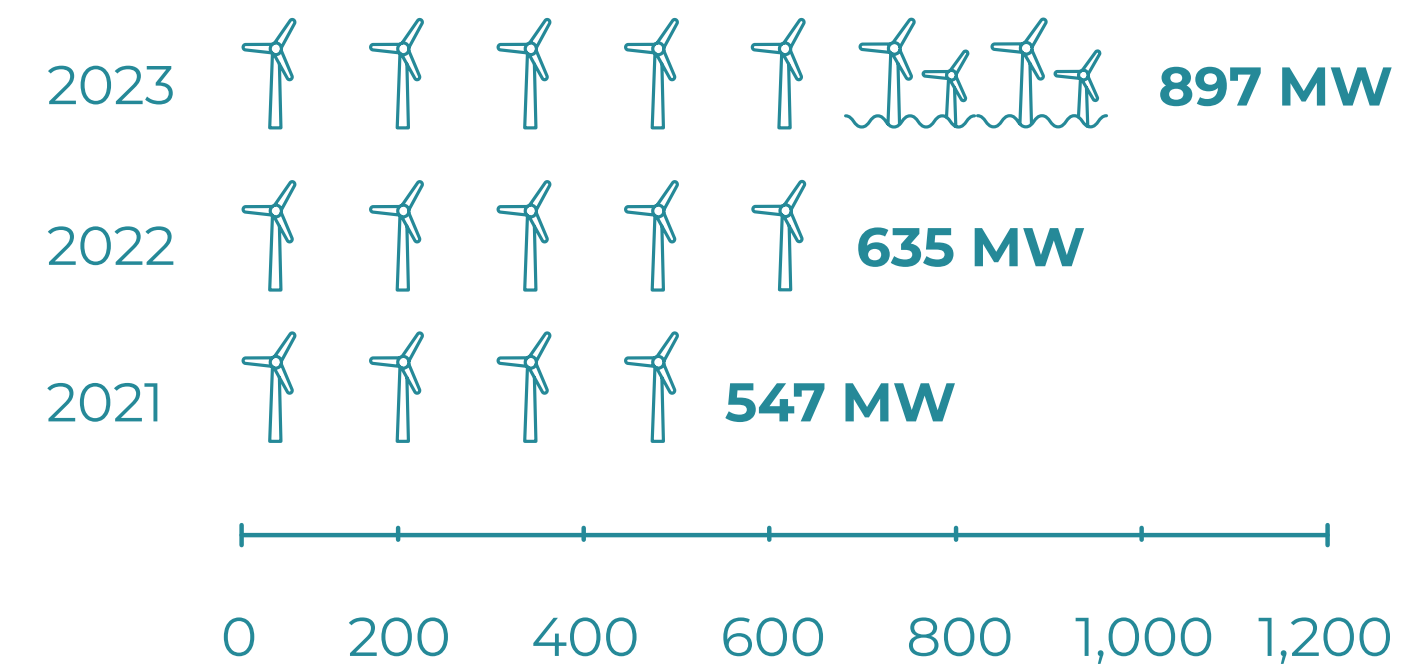


Annual expansion of renewable energies in the 50Hertz grid area

Expansion of **photovoltaics** (per year in MW)



Expansion of **onshore and offshore wind power** (per year in MW)



Grid

50Hertz grid map

Switching stations (most with links to distribution system operators)

- 380 kV
- 220 kV
- Transformation 380/220 kV
- Transformation 380/150 kV
- Other companies
- 110 Operating voltage in kV

* New construction largely along existing route

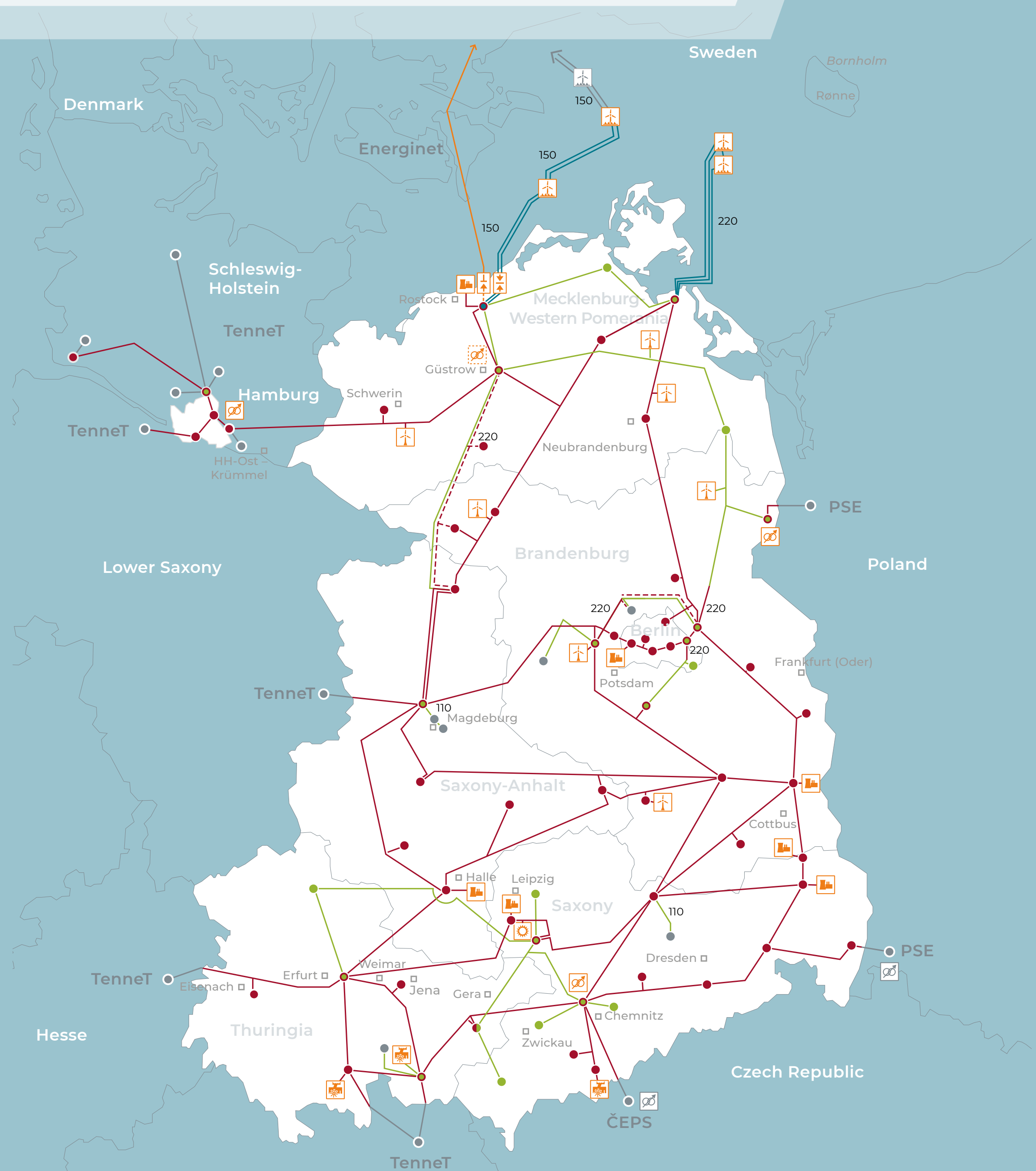
Line	380 kV	—
Line in approval stage/ under construction*	380 kV	- - -
Line	220 kV	—
HVDC/direct-current connection	400 kV	—
Other companies	380/220 kV	—
HDVC/back-to-back converter	380/150 kV	⇄
HVDC/converter	400 kV	⇨
Offshore grid connection	150/220 kV	—

Grid users:

Our customers are regional distribution system operators and power stations, pumped storage plants, wind farms and large industrial facilities that are connected to the transmission system.

- Conventional power station ☰
- Pumped storage plant ☰
- Phase-shifting transformers ⊗
- Onshore wind farm/Offshore wind farm ☎ ☎
- Photovoltaic (PV) ☀

You can also find the grid map online for a better view.



Our transmission system

We operate an extra high-voltage electricity transmission system. In the east of Germany and in Hamburg, we are responsible for the reliable transmission of electricity over long distances, the connection of offshore wind farms, and for distributing electricity via substations. In 2023, the total length of 50Hertz's transmission system was over 10,600 kilometres.

50Hertz offshore circuit lengths in 2023 (total values):

220 kV AC sea cables	385 km
150 kV AC sea cables	290 km

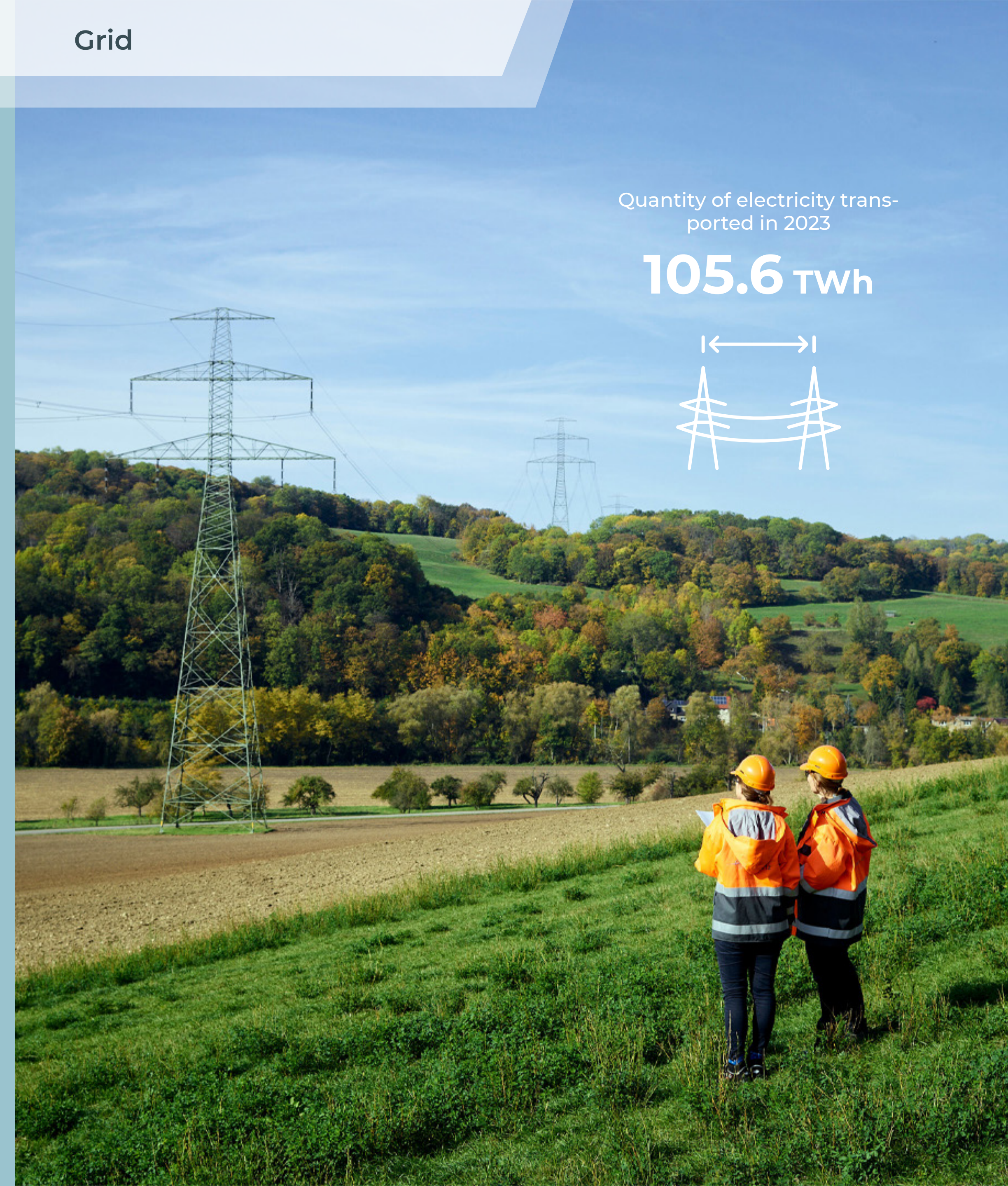
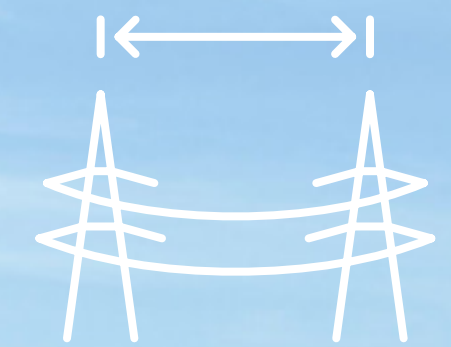
50Hertz onshore circuit lengths in 2023 (total values):

380 kV AC overhead lines	7,535 km
220 kV AC overhead lines	2,375 km
380 kV AC cables	55 km
400 kV DC cables (HVDC)	15 km
220 kV AC cables	3 km

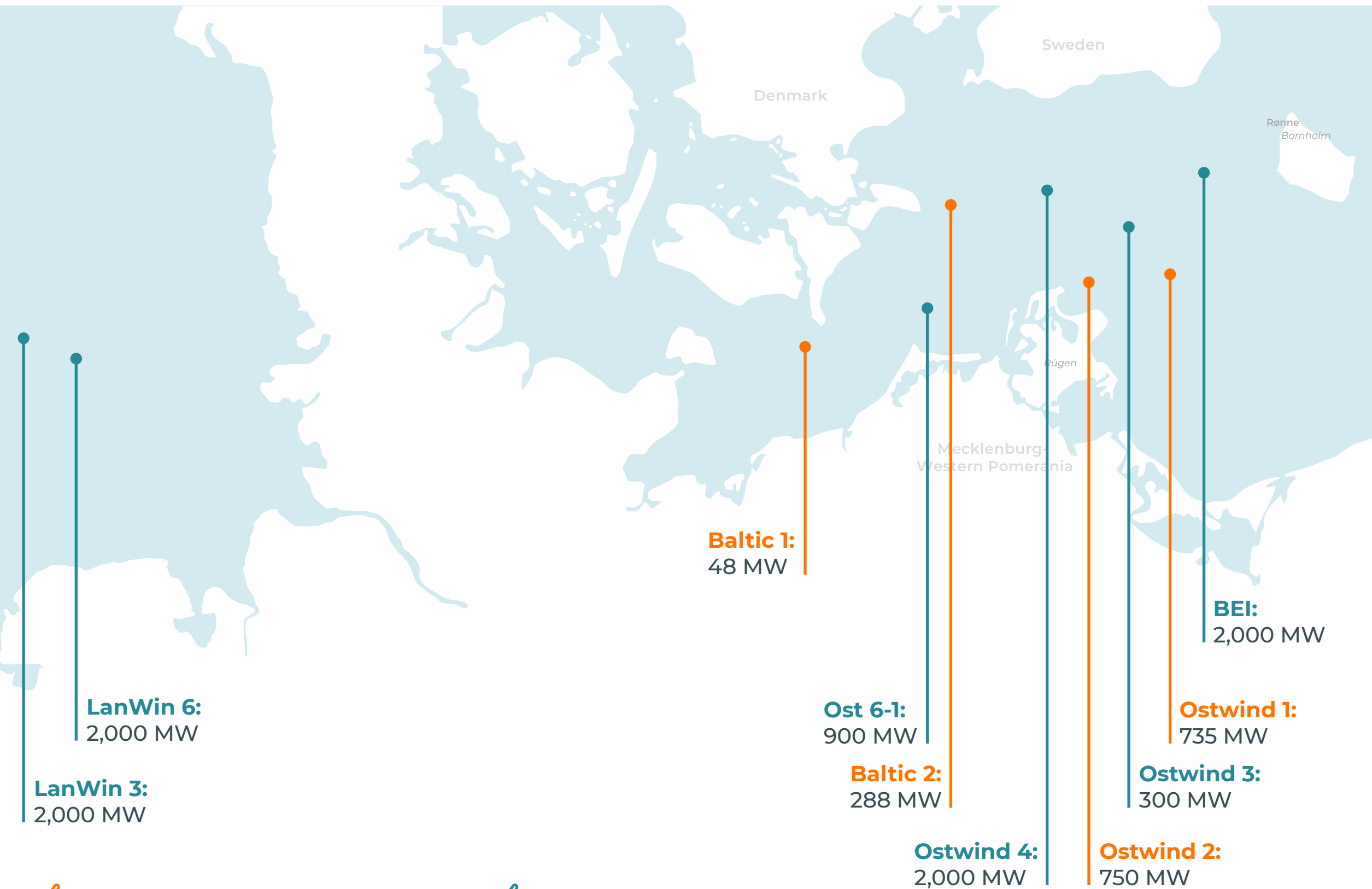


Quantity of electricity transported in 2023

105.6 TWh



Our offshore wind energy



 Offshore grid connections operational (over **1.8 GW**)

 Offshore grid connections planned or under construction (over **9 GW**)



50Hertz listens

For the energy transition to succeed, we need to develop the extra-high voltage grids. In the regions where existing capacity is being increased or new substations and lines are being built, there is a real need to inform and involve local residents. 50Hertz engages in this dialogue openly and transparently: we involve the public at an early stage, thereby improving projects and laying the foundation for the widest possible acceptance of our proposals.

You can find further information at:

csr.50hertz.com



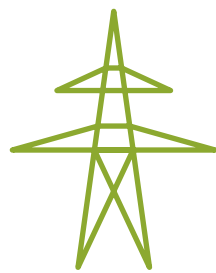
Would you like to get in touch? You'll find all our key contacts here.



Nature conservation is important to us

50Hertz takes appropriate measures to compensate for unavoidable interference with nature, the environment and habitats. Our goal is for our compensatory measures to have the greatest possible benefit for all of society. We divide our measures into six categories:

planting, forestry, hydraulic engineering, species protection, renaturation and others. We involve the affected communities, nature conservation bodies, interested citizens and non-governmental organisations in planning and implementation from an early stage - because they know the specifics of the natural habitats in their area best. In partnership with each other, we develop suitable projects and put them forward in the course of the planning approval process.



By 2030 **95%**
ecological corridor management



911

compensatory measures were being planned, implemented or maintained within the 50Hertz grid area as at the end of 2023.



Contact and legal notice

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Design

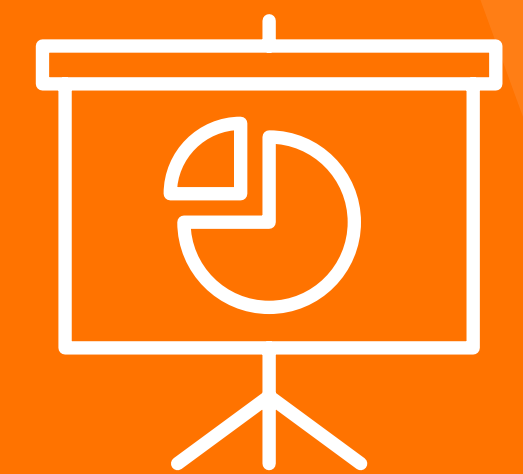
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Image credits

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[50hertz.com](https://www.50hertz.com)