



# Vattenfall - one of the leading European energy companies

For more than 100 years, Vattenfall has been driving the electrification of industry, is supplying households with energy and modernizing people's way of life through innovation and collaboration. Vattenfall is working to provide the fossil freedom that drives society forward. We are committed to a future in which we enable everyone to live, move and produce things fossil free. Our goal is net zero emissions in our entire value chain by 2040 at the latest. Vattenfall employs around 20,000 people, has about 14 million customers and operates mainly in Sweden, Germany, the Netherlands, Denmark and the United Kingdom. Vattenfall is entirely owned by the Swedish state.



# Vattenfall in Germany

The high demand for fossil-free production and energy services in Germany offers Vattenfall a wide range of growth opportunities. The investment prospects are attractive: Germany is the fastest growing market for renewable energy in Europe. German electricity demand is expected to increase by 40 percent until 2030 and could even double by 2045.

## **Offshore Wind**

- Offshore wind power is one of Vattenfall's core competences and makes an important contribution to a world without fossil fuels.
- It is characterized by a constant generation profile across different times of the day and year.
- The Nordlicht-cluster with a total of 1.6 gigawatts is being built in the German North Sea without state subsidies and is scheduled to go into operation from 2027/28.

#### Hydropower

- In Germany, Vattenfall operates a total of 11 hydropower plants with an installed capacity of around 2,800 megawatts, mainly pumped storage power plants and smaller run-of-river power plants.
- In a more and more flexible energy system, pumped storage power plants are becoming increasingly important for grid and price stability. This is also due to their high efficiency of around 80 percent.
- A potential new facility is planned for the south of Thüringen

#### **Energy Trading & Power Partnerships**

- In energy trading, Vattenfall optimizes the portfolio of its own and external plants, procures energy for end customers and reacts to price fluctuations on the wholesale market.
- Vattenfall is clearly on course for growth in electricity partnerships with industry. In addition to the high demand for electricity from onshore and offshore or solar generation, storage products such as hydrogen or large-scale batteries are also becoming interesting for corporate PPAs.
- In line with the high demand for power partnerships the project pipeline for future power purchase agreements is also very well filled.

#### **E-Mobility**

- The electric charging infrastructure is a key factor for the transport transition. Vattenfall is investing half a billion euros in the expansion of the charging infrastructure in Germany.
- The focus is on the expansion of charging stations in cooperation with location partners such as supermarkets, parking garages and hotels. We are also investing in charging stations in public spaces.
- Vattenfall is active here along the entire value chain: starting with the installation of the charging stations followed by operation and maintenance through to the sale of electricity through our e-charging tariffs.

Vattenfall wants to continue to play a key role in shaping the energy transition in Germany - and plans to invest several billion euros in the German market by 2028. In Germany, around 3,700 employees in Hamburg, Berlin and other federal states are working for fossil freedom.

### Solar & Batteries

- Solar & Batteries is Vattenfall's fastest growing business area in Germany.
- Vattenfall intends to build solar parks with a capacity of 500 megawatts and large-scale batteries with a capacity of 300 megawatts every year.
- Future solar and battery projects will be developed exclusively in combination at one location.
- One focus is on Agri-PV; the combination of agriculture and solar for better land use.

### **Onshore Wind**

- Vattenfall is a long-term thinking, stable and competent partner for onshore wind projects.
- Onshore projects can be developed as a systematic overall concept and supplemented by related technologies such as solar, large-scale batteries and e-mobility.
- The onshore project pipeline in Germany comprises
  1.5 gigawatts and consists of around 30 projects in Rheinland-Pfalz, Baden-Württemberg, Niedersachsen and Schleswig-Holstein.

#### **Flexible Storage**

- Germany will need more system flexibility in the future. Vattenfall wants to provide this on the production side with the help of pumped storage power plants, large batteries and, in the future, hydrogen production and storage.
- Vattenfall is developing algorithms to provide flexibility in the event of volatile electricity precisely when and where it brings the greatest benefit to the electricity market.
- Al-supported system control thus leads to lower balancing energy costs in the electricity grid and, via detours to lower grid charges that every electricity customer has to pay.

#### **Customer Solutions**

- Vattenfall is the basic supplier in its home markets of Berlin and Hamburg and supplies more than 5 million customers with electricity and gas.
- The energy transition at home offers great potential this is reflected in the complete offer around heat pumps, PV systems and wallboxes. The entire process is coordinated here: from individual on-site advice to the technical installation of the systems and the right tariff.
- Vattenfall cooperates with around 150 tradesmen throughout Germany and specifically integrates individual installation companies into the Group in order to bring the energy transition to the people.

