

Energy site Lower Elbe region.

Due to the existing energy extensive companies, the Lower Elbe economic region is both a major energy consumer as well as a key energy producer.

The energy sector as a whole and, the renewable energies in particular during the last few years, are driving projects for the region. The ideal landscape setting with characteristic high wind potential for the region, as well as the Elbe location and its direct connection to the North Sea are both immense benefits for the complex logistics of the on- and offshore wind farms.

There are few other regions that offer such a concentration of expertise. Companies located here include wind-turbine manufacturers, project developers for biogas and solar plants, energy providers and numerous technical and other services providers. The numerous colleges, universities and private research institutions in Hamburg and its surroundings make this an outstanding and well-positioned research environment. Additionally, there are private research institutions, such as the CFK Valley in Stade or the Fraunhofer Institute in Itzehoe.

The ports in Brunsbüttel, Cuxhaven and Stade offer those companies outstanding locations in that region. During the past few years, offshore bases were built in Brunsbüttel and Cuxhaven that provide the infrastructure needed by these wind energy providers to transport large components. The development over the course of the past few years shows that this location is becoming increasingly attractive for renewable energies. Brunsbüttel, for example, is home of one of the world's largest wind energy farms. In addition, the region has gained numerous manufacturers, vendors and service providers. This development is also reflected in the employment figures; about 1.4% of the work force is employed by renewable energies. The renewable energy sector will continue to be an important growth engine in coming years.

Along with wind energy, low-emission LNG marine fuel (liquefied natural gas) and the hydrogen energy economy are also significant factors. LNG ships are loaded at the Brunsbüttel port. The Lower Elbe region further offers a wealth of potential for realizing a future-oriented hydrogen energy economy. The region can draw on a knowledge base with great potential based upon an established (fossil) hydrogen energy economy with high a production and consumption volume and its existing infrastructure. The Lower Elbe region presents itself as a sustained model region featuring many projects geared towards the use of "green" hydrogen, such as in the wind/hydrogen business. Here, the plan is to transform excess power from wind energy into hydrogen using of electrolysis, and to make it available for industry or transportation. The major challenges are presently the serious cost disadvantage of "green" hydrogen.

The successful continued development of the Lower Elbe energy location holds promising opportunities. Both established as well as growth sectors and companies will be able to benefit from the excellent site conditions. One of the starting points for better exploiting the synergies arising from Hamburg's advantages as a business location and the attractiveness of its surroundings is a more intensive inter-regional approach to business, administration and science.