Energy Grids and Storage Systems
in the Capital Region Berlin-Brandenburg
Energy transition pioneer

Berlin-Brandenburg is a pioneer of the German “Energiewende”. Here in the capital region, a quickly growing supply of renewable energy in Brandenburg is encountering the high demand of Berlin, a major city. The challenge is to match supply and demand along the individual dimensions of generation, energy grids, energy storage and consumption – in an intelligent manner.

The companies in the capital region have special advantages in the areas of:

- Construction and operation of energy grids with a high share or renewable energy
- Transformation and storage of energy in the form of electricity, gas and heat for needs-compatible supply and grid stabilization
- Information and communication systems for future energy supply structures
- System security for complex energy grids
- Flexible power plants, innovative gas turbines and innovative products for maintenance, repair and overhaul (MRO)

Many significant innovations have come from the region. In September 2014, Europe’s first commercial battery power station started up. It was developed by Younicos, a company from Berlin. The fully automated station with 5 megawatts of lithium-ion storage stabilizes short-term fluctuations in line frequency with standby energy. Additional battery storage projects are operating in Solar Park Alt Daber and the small village of Feldheim in Brandenburg, which has been energy self-sufficient since 2010. ENERTRAG in Prenzlau operates the first hybrid power plant in the world, which generates hydrogen in addition to electricity and heat. In 2013 E.ON established a power-to-gas pilot plant in Falkenhagen.

Ideal location for development and testing

The synergies in the region function across state borders, creating an attractive environment for development and testing for local companies and grid operators as well as for players outside the region. There is a very large supply of renewable energy in the regional transmission and distribution network. All of the energy-relevant network lines of business (electricity, gas and district heat-
At BTU Cottbus, we work on very extensive projects in partnership with industry in order to find new solutions for integrating renewable energy and electromobility into the grid. We also do basic research, for example on high voltage direct current and vacuum switches.

Prof. Dr.-Ing. Harald Schwarz
Chair of Power Distribution and High-Voltage Engineering
BTU Cottbus – Senftenberg

The specific combination of Brandenburg, a region with a high level of wind energy conversion, and Berlin, which has a high population density, offers outstanding potential for integrating renewable energy. Smart grid technology can be used to control grid stability, storage systems and flexible loads, and managing cross-medial grids for electricity and heat.

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Close cooperation between science and business

In GridLab, jointly established by 50 Hertz Transmission and BTU Cottbus – Senftenberg, the region has a unique research and training infrastructure at its service. BTU is also operating a hydrogen and storage research center in partnership with ENER-TRAG and TOTAL Deutschland. The center has a test system in which hydrogen is generated using pressure electrolysis of up to 60 bar and the optimal adaptation to the electricity infeed from wind power stations. Innovation Centre Energy at TU Berlin interconnects the expert knowledge in the energy field and provides a centralized platform for communication and collaboration with partners in industry and external researchers. Hochschule für Technik und Wirtschaft (HTW) Berlin has a special focus on the intelligent link-up between photovoltaic systems and battery and heat storage systems. The Berlin-Brandenburg Energy Technology Cluster management plays a key role in initiating R&D partnerships and joint showcase projects.
Our aim: your success!

Berlin and Brandenburg support the focal area Energy Grids and Storage Systems with an economic policy developed across state borders in the Energy technology cluster. The cluster is managed under the aegis of the Brandenburg Economic Development Board (ZAB) and Berlin Partner for Business and Technology.

Our aim is to provide comprehensive support to companies and scientific institutions interested in inward investment or further development in the capital region.

We are ready to assist you with:

- Finding a site
- Funding and financing
- Finding contacts and cooperation partners
- Technology transfer
- Cooperating in networks
- Recruiting personnel
- Developing international markets

Reach out and contact us!
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