



Renewable Energy

in the Capital Region Berlin-Brandenburg



Production at aleo solar in Prenzlau



Optimization of wind turbines in the wind tunnel at TU Berlin

Companies

Solar power

AkoTec
aleo solar
Algatec Solarwerke
Astronergy
GeoClimaDesign
GMB Glasmanufaktur
Brandenburg
ib vogt
InvenSor
Jonas & Redmann
KBB Kollektorbau
Milk the Sun
Mounting Systems
mp tec
OneShore Energy
Parabel
PI Photovoltaik-Institut Berlin
PUK-Solar
RSF Solar
Silicor Materials
skytron energy

Bioenergy

Alensys Engineering
Algenol Biofuels Germany
Biopract
CTA Anlagenbau
Danpower
Forster Heiztechnik
GICON Bioenergie
HF Biotec Berlin
IGV Biotech
maxbiogas
PCK Raffinerie
Pronova Analysentechnik
Steros
SunCoal Industries
VERBIO Biofuel &
Technology

Wind power

AMBAU Windservice
Ammonit Measurement
Energiequelle
EnerKite
ENERTRAG
Key Wind Energy

Berlin-Brandenburg is a pioneering region in the energy transition! The German Renewable Energies Agency awarded Brandenburg the LEITSTERN prize three times in a row, in 2008, 2010 and 2012, for being the best German state in comparison to the other federal states for the use of solar and wind energy, biomass, geothermal and hydroelectric power.

Renewable energies are already playing a prominent role here. Berlin needs a lot of energy. Brandenburg can produce a lot of energy. Together, technologies and implementation concepts are being developed and tested. The consortium WindNODE, which was initiated by the Berlin-Brandenburg Energy Technology Cluster and in which all the East German states are involved, will demonstrate in the »Smart Energy Showcase« how production and consumption can be permanently optimally brought into alignment. This is only possible through a comprehensive smart grid, in which all system participants communicate with each other via an »Internet of Energy«.



»The infrastructure in the capital region for research and development in the field of solar energy generation (in the form of electricity and hydrogen) is unique. It ranges from fundamental research in the new EMIL laboratory at the BESSY II synchrotron to application-oriented

technology development at PVcomB. With regional, national and international partners from industry and science, we are working intensively on the global energy transition.«

Prof. Dr. Rutger Schlatmann
Director PVcomB
Helmholtz-Zentrum Berlin



»The regional Feldheim 'regulating power station' ensures future prospects. Technically: via the significant contribution of the 10 MW battery storage system to stabilizing the grid. Regionally: by creating added value in a rural part of Brandenburg. Systemically: as a further, practical

building block for the implementation of the energy transition.«

René Just
Head of Domestic Projects and Innovations
Energiequelle GmbH

Bioenergy

The production of energy from biomass using a variety of technologies is an important pillar of the energy transition which, unlike wind and solar energy, can be very well planned and regulated. The big challenge is to use the existing resources and facilities more effectively. Many companies and research institutes are working together to find solutions in the areas of agroforestry systems and algae research as well as biogas, biofuels and biochar.

The Leibniz Institute for Agricultural Engineering Potsdam-Bornim (ATB) is conducting research with a focus on the energetic use of biomass. By providing practical application laboratories for business partners, ATB is promoting the development of agricultural innovations into market-ready products.

Solar energy

Brandenburg is a leading location for the production of solar energy. Nine of the ten largest solar power plants in Germany are located here. The largest solar park in Germany with an installed capacity of 145 MW was developed on the site of the airfield Neuhardenberg in



Danpower biomethane cogeneration plant on the site of the wind turbine blades producer Vestas Blades

- The region is an energy transition pioneer
- A leader in the development and management of energy grids
- Large share of renewable energy
- Leading international expertise in solar research
- Extensive research landscape for the energetic use of biomass
- Development and integration of energy storage technologies to stabilize the grid
- Pilot projects with hybrid power plants and power to gas / H₂
- Creative, startup-friendly climate

2012. After a global consolidation phase, the capital region is once again one of the places that major solar cell manufacturers and developers are focusing on. In addition to manufacturers such as aleo solar and Astronergy, more and more start-ups with innovative solar products for end users are being created.

At the Competence Centre Thin-Film and Nanotechnology for Photovoltaics Berlin (PV-comB), thin-film photovoltaic technologies and products are developed in cooperation with the industry. The technology and knowledge transfer occurs in research projects with industrial partners as well as by training highly skilled professionals.

Wind energy

With an installed capacity of about 5,500 MW, Brandenburg is the second leading wind power state in Germany (as of 2014). But it doesn't end with wind turbines – development and manufacturing also take place here. Renowned manufacturers and suppliers manufacture nacelles, rotor blades and towers, for instance. At the Lauchhammer site in southern Brandenburg, rotor blades for Vestas megawatt wind turbines have been manufactured since May 2,002. Moreover, companies and research



»We took over the manufacturing facilities for solar modules in Frankfurt (Oder) in January 2014. After only 20 months, manufacturing is already at 100% capacity. Now we are making investments to increase capacity. The support from the state of Brandenburg and the city of Frankfurt (Oder) is truly exemplary.«

Thomas Volz
CEO
Astronergy Solarmodule GmbH



»Renewable energies have evolved from a niche product to a dominant energy source – especially in our balancing zone. Innovations and a smart grid are required so renewable electricity can be integrated safely and efficiently. We will demonstrate both with WindNODE.«

Boris Schucht
CEO
50Hertz Transmission GmbH

institutes in the region are also involved with innovative technologies such as high-altitude wind technology, in addition to research on rotor blades and base foundations. The aim of the high-altitude wind technology is to harness the power of stronger, more stable winds at altitudes up to 500 m, especially in inland areas, thus improving efficiency significantly.

Integrating renewables into the energy supply system

The capital region is a great place to test methods for the stable supply of energy with a large share of renewable energy. At the core of this is the digital networking of market participants. Technology companies, energy producers and consumers, grid operators and scientific institutes are working on the necessary concepts and putting them into practice. Power to gas, power to heat and storage batteries, in particular, are playing an important role. In Prenzlau, ENERTRAG is operating the world's first hybrid power plant that generates »wind-gas« in addition to electricity and heat.

Reuther STC
SENVION
TEMBRA
TRADYNA
Venpower
Vestas Blades
WINDnovation Engineering Solutions
Zahnradwerk Pritzwalk

Research

BAM Federal Institute for Materials Research and Testing
Beuth University of Applied Sciences Berlin
Brandenburg University of Applied Sciences
Brandenburg University of Technology Cottbus – Senftenberg
Competence Centre Thin-Film and Nanotechnology for Photovoltaics Berlin (PVcomB)
Eberswalde University for Sustainable Development
Fraunhofer FOKUS
Helmholtz-Zentrum Berlin für Materialien und Energie
HTW Berlin
Leibniz Centre for Agricultural Landscape Research
Leibniz Institute for Agricultural Engineering Potsdam-Bornim
Max Planck Institute of Colloids and Interfaces
Reiner Lemoine Institute
Research Institute Bioactive Polymer Systems
TH Wildau
TU Berlin

Associations and networks

Berlin-Brandenburg Energy Network (BEN)
Berliner NetzwerkE
Brandenburgische Energie Technologie Initiative (ETI)
CEBra – Centrum für Energietechnologie Brandenburg
Innovative Energiesysteme Berlin-Brandenburg

Our aim: your success!

Berlin and Brandenburg support renewable energies 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
- Technology transfer
- Finding contacts and cooperation partners
- Cooperating in networks
- Recruiting personnel
- Developing international markets

Reach out and contact us!

www.energy-bb.com

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