Our aim: your success!

Berlin and Brandenburg promote the energy technology industry with an economic policy developed across state borders within the framework of the joint innovation strategy. Cluster management is carried out by the Brandenburg Economic Development Corporation (WFBB) and Berlin Partner for Business and Technology.

Our aim is to provide comprehensive support to companies in setting up or developing their businesses in the region.

- Location search. We find the right property for your company needs.
- Financing. We advise you on the use of public funding programs and establish contact with investors.
- Cooperation in networks. In our networks, we offer you the opportunity to exchange and joint projects.
- Technology transfer. We bring business and science partners together to improve products and processes.
- Joint projects. We initiate and coordinate joint R&D projects.
- Recruiting. We support you in the search for specialists and executives as well as personnel development.
- Business development. We help you to grow with your business and market strategies.
- Industry and location information. In our publications and online platforms, we provide an overview of all companies and institutions in the region.
- Protection of intellectual property. We advise inventors and scientists in patent matters.
- Partnerships. We assist with approval and visa issues in connection with your investment.
- R&D services. We offer you new opportunities within the framework of the Enterprise Europe Network and represent the Berlin's economy in Brussels.
- Foreign trade promotion. We organize information and joint stands at international trade fairs as well as delegations on trips abroad.

www.energieotechnik-bb.de

Energy Technology in the Capital Region Berlin-Brandenburg

10 Strengths of the Capital Region

- R&D life lab of the energy transition
- Outstanding research landscape
- Global players in the areas of energy engineering
- Numerous incubators, labs, and innovation centers
- Possibility to political decision-makers and associations
- Attractive commercial and industrial sites in all locations
- Possibility to the growth markets in Central and Eastern Europe
- Highly qualified specialists and executives
- Good funding opportunities
- High quality of life

www.energieotechnik-bb.de

Our aim: your success!

Berlin and Brandenburg promote the energy technology industry with an economic policy developed across state borders within the framework of the joint innovation strategy. Cluster management is carried out by the Brandenburg Economic Development Corporation (WFBB) and Berlin Partner for Business and Technology.

Our aim is to provide comprehensive support to companies in setting up or developing their businesses in the region.

- Location search. We find the right property for your company needs.
- Financing. We advise you on the use of public funding programs and establish contact with investors.
- Cooperation in networks. In our networks, we offer you the opportunity to exchange and joint projects.
- Technology transfer. We bring business and science partners together to improve products and processes.
- Joint projects. We initiate and coordinate joint R&D projects.
- Recruiting and qualification. We support you in the search for specialists and executives as well as personnel development.
- Business development. We help you to grow with your business and market strategies.
- Industry and location information. In our publications and online platforms, we provide an overview of all companies and institutions in the region.
- Protection of intellectual property. We advise inventors and scientists in patent matters.
- Partnerships. We assist with approval and visa issues in connection with your investment.
- R&D services. We offer you new opportunities within the framework of the Enterprise Europe Network and represent the Berlin's economy in Brussels.
- Foreign trade promotion. We organize information and joint stands at international trade fairs as well as delegations on trips abroad.

www.energieotechnik-bb.de

Energy Technology in the Capital Region Berlin-Brandenburg
In terms of wind brandenburg is the third largest State in the country with an installed capacity of 6.400 MW. Here, however, not only wind turbine manufacturers develop electric energy systems and components, in particular rotor blades, towers, and their interior fittings are also being developed, produced, and supplied by renowned companies. Rotor blades have been manufactured for Vestas wind turbines in the megawatt range at the Lauchhammer site in southern Brandenburg for more than 15 years.

Bioenergy also plays an important role in its application as well as in research and development. A large number of companies and research facilities are working together on solutions in the field of agroforestry systems and algae research as well as in life and food science. Brandenburg is also one of the leading biofuel producers in Germany.

Grids and storage systems
A critical success factor for the energy transition in the grid (integration of renewables with the help of storage), smart grids, storage solutions, load management, and sector coupling. A list of innovations are from the region in September 2014, Germany’s first commercial battery power plant, which was developed by the Berlin company Younicos, went into operation. The fully automated system is capable of storing 2 MWh and charging or discharging electricity, even if the majority is renewables. The safeguarding of this smart grid infrastructure and the research network SMART Capital Region of BTU.

Berlin-Brandenburg is at the center of a large-scale project within the funding program “Smart Energy Showcases – WindNODE”. The project WindNODE is aimed at advancing the use of micro (up to 250 kW) and small gas turbines (up to 1.5 MW) in innovative, e.g., in kind and direct heating networks, larger residential complexes, but also industrial applications. Due to the high efficiencies, there is great potential for the use of turbo fuel cells (micro gas turbines combined with high-temperature fuel cells) in the industrial sector.

Turbomachinery and power plant engineering
The capital region offers a globally unique concentration of important players in the field of turbomachinery and power plant technology. It has the highest density of turbomachinery and power plant manufacturers in all of Europe with a long tradition. The first steam turbines were already manufactured at the beginning of the second half of the 19th century.

In nine work packages (demonstrators) and 50 individual projects, innovative applications are tested at all levels of the energy system. The focus is on power customers and small generators. They are provided with tools and information that help them to actively stabilize the system and thus help to shape the energy transition.

The capital region is home to scientific expertise and experience in the area of energy efficiency as well as in the fields of climate protection. Prices, efficiency technologies are developed and tested in a variety of projects. Important factors in this respect include lighting technology, visualisation of consumption, lightweight construction, air-conditioning technology, technologies for the efficient distribution and storage of heat and cold as well as building services engineering.

As a growing city, Berlin offers ideal opportunities to develop new technologies, new business models, especially in the building sector. The capital region is a particularly suitable location for testing approaches to increasing efficiency at system level. It is about designing the individual components in an energy efficient building (electricity, gas, heat, transport), to be more robust and efficient, as well as making them more intelligent and interoperable. The use of smart grid storage as well as power-to-gas and power-to-heat technologies plays a significant role. Berlin and Brandenburg have a very large gas and district heating network ideally suited to storage, transport, and store renewable surplus energy from the power grid.

Leading in science and research
In Berlin and Brandenburg, around 30 scientific institutions are working on energy-related topics, in particular on the Technische Universität Berlin (including photosensors, wind energy, grids, storage), the Stralsund University of Technology Cottbus-Senftenberg (power plant engineering, biomass, power networks), as well as the universities of applied sciences in Berlin, Wildau, Brandenburg an der Havel, and Eberswalde (awarded as “Germany’s greenest university”).

The most important non-university research institutes include the Max-Planck-Institut für Brook 1994 – 2025: 20% 2025

In nine work packages (demonstrators) and 50 individual projects, innovative applications are tested at all levels of the energy system. The focus is on power customers and small generators. They are provided with tools and information that help them to actively stabilize the system and thus help to shape the energy transition.
A Region Full of Energy

The capital region is full of energy. In Berlin and Branden- burg, some 6,300 companies with over 53,000 employees generate revenue of over 28 billion euros. Numerous research facilities, universities, and institutions of higher education provide first-class research and teaching in all areas of energy technology.

In terms of wind energy, Brandenburg is the third largest State in the country with an installed capacity of 6,640 MW. Here, however, not only wind turbines deliver electricity. Systems and components, in particular rotor blades, towers, and their interior fittings are also being developed, produced, and supplied by renowned companies. Rotor blades have been manufactured for Vestas wind turbines in the megawatt range at the Lauchhammer site in southeastern Brandenburg for more than 10 years.

Bioenergy also plays an important role in its application as well as in research and development. A large number of companies and research facilities are working together on solutions in the field of agroforestry systems and algae research as well as biogas and biofuels. Brandenburg is also one of the largest biogas producers in Germany.

Energy grids and storage systems

A critical success factor for the energy transition is the grid. Integration of renewables with the help of (micro) smart grids, storage solutions, load management, and sector coupling - all of these innovations are from the region in September 2014, EUREF-Campus in Berlin, Germany’s first commercial battery power plant, which went into operation.

The installed capacity of renewables in Berlin-Brandenburg in 2025 will be more than double the peak load. Source: GridLab

Energy efficiency

With the increased decentralization of production electricity for the household, as well as their consistently high efficiency, the use of micro (up to 250 kW) and small gas turbines (up to 1.5 MW) is increasing, e.g., in kind and district heating networks, larger residential complexes, but also industrial processes. Due to this high efficiency, there is great potential for the use of turbo fuel cells (micro gas turbines combined with high-temperature fuel cells) in the industrial sector.

Turbomachinery and power plant engineering

The capital region offers a globally unique concentration of important players in the field of turbomachinery and power plant technology. It has the highest density of turbo machinery manufacturers in all of Europe with a long tradition. The first steam turbines were already manufactured at the beginning of the second half of the 19th century.

Five major companies – Siemens, GE Power Systems, MAN Diesel & Turbo, MTU Maintenance, and Rolls-Royce – form a complete value added chain from research and development, production, through to design, planning, installation, as well as MRO (maintenance, repair, and overhaul). The turbines produced are among the world leaders in terms of performance and efficiency.

Smart Energy Showcase – WindNODE

Berlin-Brandenburg is at the center of a large-scale project within the funding program ‘Smart Energy Showcases – Digital Agenda for the Energy Transition’. However, not only science and research centres are working on energy-related topics, in particular energy efficiency technologies are developed and tested in a variety of projects. Important factors in this respect include lighting technology, visualization of consumption, lightweight construction, air-conditioning technology, technologies for the efficient distribution and storage of heat and cold as well as building services engineering.

As a growing city, Berlin offers ideal opportunities to develop and test the latest IT technologies and services and new business models, especially in the building sector.

The capital region is a particularly suitable location for testing approaches to increasing efficiency at system level. It is about designing the individual critical infrastructures (electricity, gas, heat, transport, IT) to be more robust and efficient, as well as making them increasingly intelligent and interoperable. The use of power and heat storage as well as power-to-gas and power-to-hydrogen technologies plays a significant role. Berlin and Brandenburg have a very large and district heating network ideally suited to utilize, transport, and store renewable surplus energy from the power grid.

Leading in science and research

In Berlin and Brandenburg, around 30 scientific institutions are working on energy-related topics, in particular the Technische Universität Berlin (including photosynthesis, wind energy grids, storage), the Brandenburg University of Technology Cottbus-Senftenberg (power plant engineering, biomass, power networks), as well as the universities of applied sciences in Berlin, Wildau, Brandenburg an der Havel, and Eberswalde (accredited as “Germany’s greennest university”).

The most important non-university research institutes include the Helmholtz-Zentrum-Berlin, the Leibniz-Institute for High Performance Microelectronics (HiWIP), the Fraunhofer-Institute for Production Systems and Design Technology (IPK), as well as the DFG German Research Centre for Geosciences.

Renewable energy

In regard to the number of inhabitants, Berlin and Brandenburg, with an installed capacity of more than 1.3 kilowatts per capita, is the country’s leader in solar power generation. Germany’s three largest solar farms are also here: the Solarfabrik solar farm with 145 MW, and the Große Dölln solar farm with 128 MW. Berlin is an important solar research location. The infrastructure for research and development in the field of solar energy generation (in the form of electricity and hydrogen) is unique in the capital region. A region Full of energy

In nine work packages (demonstrators) and 30 individual projects, innovative applications are tested at all levels of the energy system and combined to form an overall model. In addition to a powerful IT platform, the system includes flexible energy users such as cold storage units, heat, electric vehicles, or smart home applications. The focus is on power quality and small generators. They are connected with tools and information that help them to actively stabilize the system and thus help to shape the energy transition.

In the new EMIL laboratory at the Bessy II synchrotron in the capital region, it is unique in the capital region. It ranges from basic research to applied research and development in the field of solar energy generation (in the form of electricity and hydrogen). The full automated system for photovoltaics research as well as biogas and biofuels. Brandenburg is also one of the largest biogas producers in Germany.

The capital region offers a globally unique concentration of important players in the field of turbomachinery and power plant technology. It has the highest density of turbo machinery manufacturers in all of Europe with a long tradition. The first steam turbines were already manufactured at the beginning of the second half of the 19th century.

Five major companies – Siemens, GE Power Systems, MAN Diesel & Turbo, MTU Maintenance, and Rolls-Royce – form a complete value added chain from research and development, production, through to design, planning, installation, as well as MRO (maintenance, repair, and overhaul). The turbines produced are among the world leaders in terms of performance and efficiency.

Smart Energy Showcase – WindNODE

Berlin-Brandenburg is at the center of a large-scale project within the funding program ‘Smart Energy Showcases – Digital Agenda for the Energy Transition’. However, not only science and research centres are working on energy-related topics, in particular energy efficiency technologies are developed and tested in a variety of projects. Important factors in this respect include lighting technology, visualization of consumption, lightweight construction, air-conditioning technology, technologies for the efficient distribution and storage of heat and cold as well as building services engineering.

As a growing city, Berlin offers ideal opportunities to develop and test the latest IT technologies and services and new business models, especially in the building sector.

The capital region is a particularly suitable location for testing approaches to increasing efficiency at system level. It is about designing the individual critical infrastructures (electricity, gas, heat, transport, IT) to be more robust and efficient, as well as making them increasingly intelligent and interoperable. The use of power and heat storage as well as power-to-gas and power-to-hydrogen technologies plays a significant role. Berlin and Brandenburg have a very large and district heating network ideally suited to utilize, transport, and store renewable surplus energy from the power grid.

Leading in science and research

In Berlin and Brandenburg, around 30 scientific institutions are working on energy-related topics, in particular the Technische Universität Berlin (including photosynthesis, wind energy grids, storage), the Brandenburg University of Technology Cottbus-Senftenberg (power plant engineering, biomass, power networks), as well as the universities of applied sciences in Berlin, Wildau, Brandenburg an der Havel, and Eberswalde (accredited as “Germany’s greennest university”).

The most important non-university research institutes include the Helmholtz-Zentrum-Berlin, the Leibniz-Institute for High Performance Microelectronics (HiWIP), the Fraunhofer-Institute for Production Systems and Design Technology (IPK), as well as the DFG German Research Centre for Geosciences.
The Capital region is full of energy. In Berlin and Brandenburg, some 6,300 companies with over 53,000 employees generate revenue of over 28 billion euros. Numerous research facilities, universities, and institutions of higher education provide first-class research and teaching in all areas of energy technology.

Brandenburg is one of the world’s leading regions in the expansion and system integration of renewable energy. As a capital of digitization, Berlin is giving an important boost to the continuation of the energy transition, which is increasingly based on networking, sector coupling, and new business models.

As a capital of digitization, Berlin is giving an important boost to the continuation of the energy transition, which is increasingly based on networking, sector coupling, and new business models.

Bienergy also plays an important role in its application as well as in research and development. A large number of companies and research facilities are working together on solutions in the field of agroforest systems and algae research as well as bioenergy and biofuels. Brandenburg is also one of the largest bioeconomy producers in Germany.

Energy grids and storage systems
A critical success factor for the energy transition in the grid (integration of renewables with the help of (micro) smart solutions in grids, storage solutions, load management, and sector coupling) is a digital infrastructure that is being set up in Berlin-Brandenburg.

The German capital region is home to extensive expertise in energy technology in a pilot plant in Falkenhagen. The BTU Cottbus-Senftenberg operates a test field for intelligent storage units, as well as charging stations for electric vehicles and storage facilities since 2011. In addition to wind and photovoltaics, system components, a cogeneration unit and two large storage units, as well as charging stations for electric vehicles are components of the networked system. In Brandenburg, BTU Cottbus-Senftenberg operates a test field for intelligent energy systems. The model includes a consumer street with a central control center, a power-to-heat system and an adsorption refrigeration system, as well as electricity and heat grid- and district heating grid-interlinking infrastructure solutions are part of the campus’ Smart Grids and the research network SMART C Capital Region of BTU.

All in all, an energy supply system is being set up in Berlin-Brandenburg with increasingly decentralized, fluctuating power feeders as well as smart control of generators and consumers. The safeguarding of this smart grid infrastructure is pursued through the development and deployment of innovative IT technologies and services, and will increase the resilience of energy grids. Since 2017, the WindNODE consortium has been developing a digital infrastructure for the next stage of the energy transition.

Renewable energy
In regard to the number of inhabitants, Brandenburg, with an installed capacity of more than 1.3 gigawatts per capita, is the frontrunner in solar power generation in Germany. Germany’s three largest solar farms are also here: the Neuruppin solar farm with over 1,800 acres, the Neubrandenburg solar farm with 145 MW, and the Gossen Coldin solar farm with 128 MW.

Berlin is an important solar research location. The infrastructure for research and technology development in the field of energy generation (in the form of electricity and hydrogen) is unique in the capital region. The Energy Campus Berlin in the new EML Institute of the Leibniz RfS to synchronization to application-oriented research development at the Helmholtz-Zentrum Berlin.

In terms of wind power, Brandenburg is the third largest State in the country with an installed capacity of 6,400 MW. Here, however, not only wind turbines deliver electric power, but also power-to-heat systems. Storage solutions stabilize short-term fluctuations of the power load frequency with current power demand. At the end of 2016, 867 wind farms with a combined capacity of over 17 gigawatts were producing electricity.

The wind farm with the highest installed capacity was the Neuruppin wind farm in Brandenburg.

The capital region offers a globally unique concentration of important players in the field of turbine technology and power plant technology. It has the highest density of turbine manufacturers in all of Europe with a long tradition. The first steam turbines were already manufactured at the beginning of the second half of the 19th century.

Five major companies – Siemens, GE Power Systems, MAN Diesel & Turbo, MTU Maintenance, and Rolls-Royce – form a complete value chain from research and development, through production, to design, planning, installation, as well as MRO (maintenance, repair, and overhaul). The turbines produced are among the world leaders in terms of efficiency.

With the increased decentralized production of electricity thanks to the rise in solar photovoltaics, these efficiency technologies are developed and tested in a variety of projects. Important factors in this respect include lightweight construction, advanced materials, and new business models, especially in the building sector.

The capital region is a particularly suitable location for testing approaches to increasing efficiency at system level. It is about designing the individual critical infrastructures (electricity, gas, heat, transport, IT) to be more robust and efficient, as well as making them increasingly intelligent and interoperable. The use of smart heat storage as well as power-to-heat and power-to-gas technologies plays a significant role. Berlin and Brandenburg have a very large gas and district heating network ideally suited to receive, transport, and store renewable surplus energy from the power grid.

Leading in science and research
In Berlin and Brandenburg, around 30 scientific institutions are working on energy-related topics, in particular the Technische Universität Berlin (including photovoltaics, wind energy, grids, storage, the Brandenburg University of Technology Coburg-Senftenberg (power plant engineering), biomass, power networks), as well as the universities of applied sciences in Berlin, Wildau, Brandenburg an der Havel, and Ethaneo (accredited as “Germany’s green university”).

The most important non-university research institutes include the Helmholtz-Zentrum-Berlin, the Leibniz Institute for High Performance Microelectronics (HIW), the Fraunhofer Institute for Production Systems and Design Technology (IPK), as well as the DFG Research Centre for Geocoesion.

The installed capacity of renewables in Berlin-Brandenburg in 2025 will be more than twice the installed capacity. Source: DIW Berlin.
Our aim: your success!

Berlin and Brandenburg promote the energy technology industry with an economic policy developed across state borders within the framework of the joint innovation strategy. Cluster management is carried out by the Brandenburg Economic Development Corporation (WFBB) and Berlin Partner for Business and Technology.

Our aim is to provide comprehensive support to companies in setting up or developing their businesses in the region.

- Location search. We find the right property for your company needs.
- Financing. We advise you on the use of public funding programs and establish contact with investors.
- Cooperation in networks. In our networks, we offer opportunities for exchange and joint projects.
- Technology transfer. We bring business and science partners together to improve products and processes.
- Joint projects. We initiate and coordinate joint R&D projects.
- Recruiting and qualification. We support you in the search for specialists and executives as well as personnel development.
- Business development. We help you to grow with your business and master new challenges.
- Industry andlocation information. In our publications and internet portals, we provide an overview of companies and institutions in the most important regional growth sectors.
- Protection of intellectual property. We advise inventors and business owners in patent matters.
- Authorities service. We assist with visa and approval issues in connection with your investment.
- EU services. We assist you in successful cooperation within the framework of the Enterprise-Europe Network and represent the Berlin economy in Brussels.
- Foreign trade promotion. We organize information and joint visits at international trade fairs as well as delegations on trips abroad.

www.energietechnik-bb.de

ENERTRAG hybrid power plant in Prenzlau

Zwanzig20-Forum Wärmewende

MinGenTec – Mining & Generation Technology (Made in Germany)

KlimaSchutzPartner Berlin

HWN 500

German Wind Energy Association (BWE)

German Renewable Energy Research Association (FVEE)

CEBra – Centrum für Energietechnologie Brandenburg

Fachverband Biogas

Energiesparagentur bei der Wirtschaftsförderung Land Brandenburg

Deutsche Gesellschaft für Sonnenenergie (DGS) – Deutsche Energie-Agentur (dena), German Energy Agency

Bundesverband Energiespeicher (BVES)

Brandenburgische Energie Technologie Initiative (ETI)

Berliner NetzwerkE

Berlin-Brandenburg Energy Network (BEN)

Berlin Agency for Electromobility (eMO)

Agora Energiewende

10 Strengths of the Capital Region

- Real life laboratory of the energy transition
- Outstanding research landscape
- Global players in the areas of energy engineering
- Numerous incubators, labs, and innovation centers
- Possibility to political decision-makers and associations
- Attractive commercial and industrial sites in all locations
-Possibility to the growth markets in Central and Eastern Europe
- Highly qualified specialists and executives
- Good funding opportunities
- High quality of life
Our aim: your success!

Berlin and Brandenburg promote the energy technology industry with an economic policy developed across state borders within the framework of the joint innovation strategy. Cluster management is carried out by the Brandenburg Economic Development Corporation (WFBB) and Berlin Partner for Business and Technology.

Our aim is to provide comprehensive support to companies in setting up or developing their businesses in the region.

- **Location search.** We find the right property for your specific needs.
- **Financing.** We advise you on the use of public funding and possible support with investors.
- **Industry and location information.** In our publications and internet portals, we provide an overview of companies and institutions in the most important regional growth sectors.
- **Business development.** We help you to grow with your business and master new challenges.
- **Technology transfer.** We bring business and science partners together to improve products and processes.
- **Recruiting and qualification.** We support you in the search for specialists and executives as well as personnel development.

www.energietechnik-bb.de