Renewable Energy Hamburg

A Dedicated Industry Network
Inauguration of the new storage facility using hot stones made by Siemens Gamesa Renewable Energy in the Hamburg harbour in June 2019
Renewable Energy – Made in Hamburg

Renewable energy technologies from Hamburg have proven successful in Germany, Europe and the world. As a cluster organisation, Renewable Energy Hamburg aims to increase the visibility of Hamburg as a location for innovative energy solutions (p. 4–5). Today, onshore and offshore wind energy solutions from Hamburg are a leading export worldwide (p. 6–7). On our doorstep, the large-scale “Northern German Energy Transition 4.0” project serves as an example of successful extensive system integration and sector coupling solutions in Northern Germany (p. 8–9).

In Hamburg, we extend a warm welcome to visitors interested in our approach to the challenges of energy transition (p. 12). Renewable Energy Hamburg is currently involved in Northern Connections, an EU-funded project on sustainable infrastructure development in the North Sea region (p. 13). We have also formed a close partnership with the Energy Agency of the Japanese Prefecture of Fuku-shima to provide mutual support during the energy transition process (p. 11).

Renewable Energy Hamburg serves as your pivotal regional and international access point to a wide range of products and expertise from our network and region. With and for our members, we aim to promote the expansion of renewable energy and are therefore looking forward to cooperating with you!

Jan Rispens
Managing Director of Renewable Energy Hamburg
THE CLUSTER

A Dedicated Renewable Energy Network

Wind energy plants have recently been installed in the Hamburg harbour area
INTERRODUCTION

THE CLUSTER
A Dedicated Renewable Energy Network

Renewable Energy Hamburg is a cluster organisation with about 180 members from various segments of the renewable energy sector in Hamburg and Northern Germany. As a quadruple helix cluster, Renewable Energy Hamburg links partners from the industry, sciences, politics and civil society such as utility companies, manufacturers, service providers and universities. By facilitating regional, national and international networking, hosting high-quality conferences, and partnering in collaborative projects, the cluster serves as the ideal common voice for renewable energies in the Metropolitan Region of Hamburg and beyond.

Just as renewable energy technologies are essential for a sustainable and green future, Hamburg is a central hub of the energy transition in Germany. With about 25,000 employees, an excellent research environment and headquarters of several global leaders in the wind energy sector, Hamburg is a centre of expertise for all kinds of renewable energies.

> https://www.erneuerbare-energien-hamburg.de/en
OFFSHORE AND ONSHORE

Hamburg – The Capital of Wind Energy

Renewable Energy Hamburg cluster at the industrial exhibition WindEnergy Hamburg 2018
In Germany, wind energy is the backbone of the energy transition. Currently, 53,000 GW of installed power onshore and almost 7,000 GW of installed power in offshore wind energy account for more than 20 percent of the German electricity production. By 2030 the installed offshore wind power is to be expanded to a total of 15,000 MW, which could deliver up to 12 percent of Germany’s electricity demand.

Hamburg is home to leading companies in the wind energy industry. It is also where utility companies develop their wind park projects and a variety of manufacturers, service providers and research institutions is located. Being home to the industry’s entire value chain, Hamburg and Northern Germany are considered a vital international hub for the wind energy sector. Renewable Energy Hamburg focuses on supporting the development of the local onshore and offshore wind energy industry.

Since Hamburg offers a high concentration of wind energy expertise and extensive experience in implementing international projects, Renewable Energy Hamburg has been a popular facilitator for companies from all over the world. In addition to neighbouring European markets in Denmark, the Netherlands, France or Poland, its global focus markets are Brazil, Japan, the United States and Taiwan.
THERMAL ENERGY, GREEN MOBILITY, ENERGY STORAGE AND SECTOR COUPLING

Strategic Focuses of Renewable Energy Hamburg

Heat storage facility Karoline in Hamburg
To expand the use of renewable energies, the electricity, mobility and thermal energy sectors must share energy. In recent years, while the energy transition has plotted a highly successful course in the electricity sector, considerable potential remains unexploited in other energy sectors. From an early stage, Renewable Energy Hamburg has recognised the need to place an additional strategic focus on thermal energy, storage and mobility. Therefore, the cluster participates in pioneering projects like NEW 4.0 (“Northern German Energy Transition 4.0”).

NEW 4.0
> Energy Transition in Northern Germany

NEW 4.0 is a unique innovation alliance of enterprises, associations, scientists and politicians in Hamburg and Schleswig-Holstein. More than 100 projects and 65 partners in the region possess all the expertise and problem-solving potential necessary to significantly advance the energy transition in the North.

NEW 4.0 pursues a dual strategy: increasing power exports to other regions while increasing the energy self-consumption ratio. It focuses in particular on increasing the flexibility of power consumption in completely new dimensions and adapting consumption to generation. This means converting surplus renewably generated power into other energy forms, such as heat or hydrogen for example. Sector coupling will make a more flexible and resilient renewables-based energy system possible.

> https://new4-0.erneuerbare-energien-hamburg.de/en/about-new-4-0.html
Renewable Energy Hamburg
A Dedicated Industry Network

COLLABORATIONS, COOPERATIONS AND DELEGATIONS

Renewable Energy Hamburg on the International Stage

Japanese delegation from Fukushima visiting Wind2Gas project in Brunsbüttel
INTERNATIONAL ACTIVITIES

COLLABORATIONS, COOPERATIONS AND DELEGATIONS
Renewable Energy Hamburg on the International Stage

Besides its regional work on wind energy, thermal energy or sector coupling, Renewable Energy Hamburg is also very active on the international stage. The cluster organisation welcomes delegations to Hamburg, establishes international cooperations and takes cross-border projects to the next level.

Cooperation with Fukushima Energy Agency
> Ambitious Renewable Energy Plans in Fukushima

The Prefecture of Fukushima in Japan is focusing on becoming fully self-sufficient with renewable energies. In 2018, Renewable Energy Hamburg signed a memorandum of understanding with the Fukushima Energy Agency. Besides installing a growing number of wind parks, the region of Fukushima plays a crucial role in the Japanese strategy to develop a hydrogen economy. Since the establishment of hydrogen infrastructure is also one of Hamburg’s priorities, the cooperation with the Energy Agency Fukushima is particularly important.

Cooperation with New Energy Coalition
> Reciprocal Support on Hydrogen and Wind Energy

Renewable Energy Hamburg recently teamed up with New Energy Coalition, a knowledge and network organisation from Groningen, Netherlands to support each other’s initiatives on offshore wind energy and gaseous energy carriers such as hydrogen.
Delegations and Workshops

> Hamburg – Popular Port of Call for International Visitors

Its high density of renewable energy expertise makes Hamburg a popular destination for foreign visitors. To promote the expansion of renewable energies around the world, Renewable Energy Hamburg would be delighted to be your first point of contact on the German energy market, too.

During workshops, arranged meetings or field trips, our international visitors have an opportunity to learn about the German renewables market and to experience pioneering energy projects. In return, Renewable Energy Hamburg regularly accompanies political delegations from Hamburg during their international visits. So far, Renewable Energy Hamburg has hosted more than one hundred delegation visits and workshops over the past few years. They have resulted in reciprocal relationships, from which both parties have benefitted greatly, with Japan, South Korea, China and India, or Canada, the United States, Brazil and Argentina as well as many European countries.
EU-Interreg Project “Northern Connections”
> Transnational Sustainable Innovation Promotion in the North Sea Region

With a total of 21 partners, such as clusters, city and regional administrations or research institutions from Belgium, Denmark, Germany, the Netherlands, Norway, Sweden and the United Kingdom, the Northern Connections Project supports innovations by small and medium-sized enterprises in sustainable energy infrastructure projects. In Germany, Renewable Energy Hamburg, the federal states of Hamburg and Schleswig-Holstein as well as HafenCity University are involved in the EU-project, which is scheduled to run until the end of 2020 with 5.3 million euros in funding.

> https://northsearegion.eu/northern-connections
WHAT IS NEXT?

Building the Energy Supply System of the Future

Inauguration of the onshore wind farm Curslack in the East of Hamburg with Hamburg’s first mayor Dr. Peter Tschentscher (3rd from the right)
OUTLOOK

WHAT IS NEXT?

Building the Energy Supply System of the Future

Due to the strong concentration of wind energy expertise in Hamburg, many of Renewable Energy Hamburg’s international activities relate to the wind sector. In the future, we intend to continue our successful work by strengthening existing cooperations and building new relationships.

Given our vision of a carbon-neutral society, we must also focus on sector coupling in general. Accordingly, our projects not only involve the generation of renewable energy but also system integration and storage. For example, wind energy could be used as source of energy for hydrogen production. In a ground-breaking project by Aurubis and Enercity, exothermic energy from copper production processes is used to provide heat. We urgently need solutions that go beyond a single technology and link different concepts to form a diverse and sustainable energy system.

As a result, Renewable Energy Hamburg is committed to broadening its international portfolio to include other energy sectors, as well as sector coupling. We hope that pioneering solutions from Hamburg might inspire other projects around the world. In return, we help promote ground-breaking concepts from our international partners. We will continue to build the energy supply system of the future together with our members and global partners!