

## MEDIA INFORMATION

# Using Industry 4.0 know-how, North German region is going 100% renewable: Test run for the energy transition

**As of 1 December 2016, an energy system of the future will be developed in Northern Germany as part of the large-scale project NEW 4.0. From 2035, around 4.5 million residents in the federal states of Hamburg and Schleswig-Holstein will be provided with power by renewable energy sources alone. Applying Industry 4.0 systems, the project will demonstrate how imbalances in production and consumption can be offset based on renewable energies.**

Hamburg (Germany), 30 September 2016. Northern Germany is playing an important role in Germany's energy transition: Schleswig-Holstein as an energy supplier with an ever increasing number of onshore and offshore wind farms, and the city state of Hamburg as a location for industry and large power consumers. As part of the NEW 4.0 project, the states of Hamburg and Schleswig-Holstein have been merged into one consistent energy region. The overall objective is to serve as a showcase for Germany and to demonstrate within a European context that the energy transition is indeed feasible: NEW 4.0 will showcase how a region with 4.5 million residents can be supplied with regenerative energy as early as 2035 using 100% safe, affordable, eco-friendly and socially acceptable energy sources that can lead to a reduction in CO2 emissions by 50 to 70%.

Prof. Werner Beba, project coordinator of NEW 4.0., explains: *“This is the first time that the interplay of different technological approaches, the targeted integration into the energy market and the application of the regulatory framework will be tested in an orchestrated manner as part of this large-scale practical trial, and this is what makes NEW 4.0. both unique and challenging. The findings of this project will contribute to making the necessary transformation of the entire energy system a success.”*

NEW 4.0 is an unparalleled project initiative that unites stakeholders from industry, science and politics. “NEW” stands for *Norddeutsche Energiewende* (North German energy transition), and “4.0” signifies the threshold of the fourth industrial revolution, i.e. the digitisation of industry, which will play a key role also with regard to the energy transition as intelligent system networks are developed.

To this end, about 60 regional and transregional partners have formed an “innovation alliance” that aims to overcome the challenges of the energy transition based on integrated technological expertise. The project is supported by the state governments of Hamburg and Schleswig-Holstein as well as by the Federal Ministry for Economic Affairs (BMWi). Around EUR 90 million will be invested by the project partners within the next four years, and the BMWI is supporting this showcase project ([SINTEG](#) – Smart Energy Showcase) to the tune of EUR 44 million. The overall strategy, some 100 individual projects as well as 30 demonstrators have been developed over the course of the project's three-year preparation phase.

Along this development path towards the energy system of the future, 70% of the region is to be supplied with safe, reliable renewable electricity as early as 2025. What is more, NEW 4.0 aims to support the process further based on its sector coupling concept. As part of the

project, renewables will be gradually used for heat supply and industrial processes that previously ran on fossil fuels such as gas. Schleswig-Holstein and Hamburg are thus using the current power shift as the starting point for accomplishing the energy transition in the medium term.

First and foremost, this large-scale project aims to demonstrate how the full integration of renewable energies can be accomplished even in a region characterised by pronounced, growing imbalances between production and consumption. This will require the comprehensive synchronisation of (fluctuating) production and consumption. To achieve this, the project will use an innovative approach for integrating and orchestrating all of the stakeholders and components of the production, transport, distribution, storage and consumption stages by means of intelligent network technologies. At the same time, the market-oriented system integration will be tested in the context of advanced market rules and regulatory conditions.

Stakeholders from all industries and along the energy sector's entire value chain have joined forces for the NEW 4.0 project. Participating companies will be able to tap new market and export opportunities with product innovations and solutions developed in the context of the project and to boost their competitiveness within a highly innovative growth market. Based on this project, the states of Schleswig-Holstein and Hamburg aim to strengthen their regional economies and to create new industrial value chains, which will contribute to securing and creating jobs in the region. And, finally, the project will enable Hamburg and Schleswig-Holstein to sharpen their profile as a leading innovation location for the energy sector in particular.

Further information on NEW 4.0 (in English):

<https://www.haw-hamburg.de/english/research/energy-sustainability/cc4e/new-40.html>

Project PDF: [www.new4-0.de/?wpdmdl=412](http://www.new4-0.de/?wpdmdl=412)

### **Hamburg - The Wind Energy Capital:**

The Hamburg Metropolitan Region is already one of the main centres for renewable energy in Europe. Among industry experts and beyond, Hamburg is considered as the international wind energy capital. Today, 2/3 of the global know-how in wind energy is located in the Metropolitan Region of Hamburg or the neighbouring region encompassing Schleswig-Holstein and Jutland, Denmark. Around 25,000 people work for nearly 1,500 renewable energy companies. The most important contribution to this has been made by wind energy. Many of the wind industry's global players, such as DONG Energy, Nordex, Senvion, Siemens and Vestas, have established headquarters in Hamburg.

Since 2014 the city is hosting WindEnergy Hamburg, the new leading international trade fair for the wind energy industry. WindEnergy Hamburg is taking place from 27 to 30 September 2016 at the Hamburg Messe fair site. Roughly 1,400 exhibitors from 34 nations are showcasing product novelties and services for the onshore and offshore wind sector. The world's leading trade fair for onshore and offshore wind energy mirrors all segments of the global market and its value chain. It is a key meeting place for decision-makers from the global energy sector. For the first time the conference WindEurope Summit run by WindEurope, the European wind industry association, is held side-by-side with the expo. In 2017 HUSUM Wind will be held from 12 to 15 September in the state of Schleswig-Holstein, the German North Sea region which pioneered wind energy.

Further information on Hamburg: [www.mediarelations.hamburg.de](http://www.mediarelations.hamburg.de)

Hamburg pictures (for editorial use): [www.mediarelations.hamburg.de](http://www.mediarelations.hamburg.de)

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