

Press release

Wind power without long wait: Ruhr University, JBO and RWE research construction of wind turbines on recultivated land

- **Areas in former opencast mine to be developed for wind power much earlier than previously**
- **Research project funded with over 680,000 euros from the Federal Ministry for Economic Affairs and Climate Protection**

Essen, 9 May 2023

Is it possible to build wind farms on former opencast mining sites sooner than has been the case up to now? Are freshly recultivated areas already stable enough? Ruhr University Bochum, engineering office Jörss-Blunck-Ordemann (JBO) and RWE are investigating this in a joint research project. Soils that are still young usually need to settle for several years before they can be cultivated. Modern wind turbines weigh up to 6,500 tonnes. Therefore, recultivated areas are usually only built on after up to 15 years.

On the initiative of RWE, the experts will now be investigating an operating area at the Inden opencast mine for three years. There, they want to select the most complex possible subsoil for the research project. Then the field test is due to begin with gravel and sand to be piled up on a circular area with the radius of a wind turbine. The earth masses weigh as much as a wind turbine including its foundation. Measuring devices in the soil will subsequently record any geomechanical changes. Computer calculations based on data from the field tests and accompanying geotechnical laboratory investigations will be carried out. They will not just model the settlement of the subsoil under the dead weight of the wind turbine, but also the effect of wind loads on the ground around such a turbine.

Christian Vogt, responsible for developing wind farms at RWE: “Together, we want to push ahead with the expansion of wind power and also use more difficult locations for this purpose. We are thus very pleased that the Federal Ministry for Economic Affairs and Climate Protection is supporting our project, thereby helping to examine to what extent and under what conditions the use of freshly recultivated areas is possible. In the Rhenish mining area alone, we want to build 500 megawatts of additional renewables capacities by 2030 to advance the energy transition.”

Torsten Wichtmann, Professor of Soil Mechanics, Foundation Engineering and Environmental Geotechnics at Ruhr University Bochum: “We are confident that we can reliably assess the suitability of sites on freshly recultivated areas using computer simulations, which we want to confirm using the test fill in Inden.

This innovative project combines our many years of expertise on wind turbine foundations and soil mechanics issues in the recultivation of former opencast mines.”

With the “Innovations for the energy turnaround” project group, the Federal Ministry for Economic Affairs and Climate Protection promotes research and development projects on wind energy that also deal with the development of sites that are difficult to access. The research project in the Inden opencast mine is being supported with 683.345 euros.* The Ruhr University Bochum is to receive a large part of the money. It is the first project to systematically investigate the suitability of freshly filled-in opencast mining areas.

*Funding code: [O3EE3085A-C](#)

For further enquiries:

Sinje Vogelsang
Media Relations
RWE Renewables Europe &
Australia GmbH
T +49 201 5179 5941
E sinje.vogelsang@rwe.com

RUB
University communication Ruhr-
University Bochum
T +49 234 32 22830
E hochschulkommunikation@ruhr-uni-bochum.de

Viviane Kespelher
Media Relations
Jörss – Blunck – Ordemann GmbH
T +49 40 429292 35
E kespelher@j-b-o.de

Pictures for media use of RWE onshore wind farms are available at the [RWE Media Centre](#).
(Credit: RWE)

RWE

RWE is leading the way to a green energy world. With an extensive investment and growth strategy, the company will expand its powerful, green generation capacity to 50 gigawatts internationally by 2030. RWE is investing more than €50 billion gross for this purpose in this decade. The portfolio is based on offshore and onshore wind, solar, hydrogen, batteries, biomass, and gas. RWE Supply & Trading provides tailored energy solutions for large customers. RWE has locations in the attractive markets of Europe, North America, and the Asia-Pacific region. The company wants to phase out coal by 2030. RWE employs around 19,000 people worldwide and has a clear target: to get to net zero by 2040. On its way there, the company has set itself ambitious targets for all activities that cause greenhouse gas emissions. The Science Based Targets initiative has confirmed that these emission reduction targets are in line with the Paris Agreement. Very much in the spirit of the company's purpose: Our energy for a sustainable life.

Ruhr-Universität Bochum

With 21 faculties, 43,000 students and more than 5,700 staff, Ruhr-Universität Bochum (RUB) is one of the ten largest universities in Germany. As a reform-oriented campus university, it uniquely combines the entire range of major academic fields in one place. Interdisciplinary collaboration and networking characterise research at the RUB. In nine research departments, our scientists work together on interdisciplinary research foci: Solvation Science, IT Security, Neuroscience, Materials Research Department, Centre for Religious Studies, Protein Research Department, Plasmas with complex interactions, Subsurface Modelling and Engineering as well as Closed Carbon Cycle Economy. In this, they overcome the boundaries between the subjects and strengthen the exchange – also beyond RUB, within the University Alliance Ruhr and between universities in Germany and abroad.

JBO

JBO is a civil engineering company headquartered in Hamburg with a 60-year history. JBO is an owner-managed medium-sized company with 76 employees. In 2014, the development of the offshore structures for the utilisation of offshore wind energy business area began. The core area of steel construction was systematically expanded to include adjacent engineering fields such as geotechnics and load calculation in order to fully satisfy the planning object and a holistic design from a single source. With a focus on Germany, JBO is now active worldwide and is also involved in research and standardisation. For further information, please see the JBO homepage at www.j-b-o.de

Forward-looking statements

This press release contains forward-looking statements. These statements reflect the current views, expectations and assumptions of management, and are based on information currently available to management. Forward-looking statements do not guarantee the occurrence of future results and developments and are subject to known and unknown risks and uncertainties. Actual future results and developments may deviate materially from the expectations and assumptions expressed in this document due to various factors. These factors primarily include changes in the general economic and competitive environment.

Furthermore, developments on financial markets and changes in currency exchange rates as well as changes in national and international laws, in particular in respect of fiscal regulation, and other factors influence the company's future results and developments. Neither the company nor any of its affiliates undertakes to update the statements contained in this press release.

Data Protection

The personal data processed in connection with the press releases will be processed in compliance with the legal data protection requirements. If you are not interested in continuing to receive the press release, please inform us at Datenschutz-kommunikation@rwe.com. Your data will then be deleted and you will not receive any further press releases from us in this regard. If you have any questions about our data protection policy or the exercise of your rights under the GDPR, please contact datenschutz@rwe.com.