

## Press release

### Research into the effects of black rotor blades on bird protection is in full swing

- To operate wind farms in harmony with the ecosystem, research is underway to show whether painting a wind turbine blade black helps birds to fly more safely between the turbines.
- Seven of RWE's existing wind turbines in Eemshaven (Westereems wind farm) will get black blades.
- In addition to the effect on birds, the effect on the landscape and the effect on aviation safety as well as the technical effect on the blades are to be examined.

Essen, 29 September 2022

**Katja Wünschel, Chief Executive Officer (CEO) Onshore Wind and Solar Europe & Australia, RWE Renewables:** “As a major player in the global energy market, we are aware of the responsibility that comes with our role. For RWE, this means that we take socially relevant issues into account in our business decisions, that we also consider the consequences of our actions outside our formal area of responsibility, and that we view our business activities not only from a business perspective, but also from an ecological, social and ethical standpoint. Strict environmental legislation and licensing requirements set the framework for our operational activities in the regions where we operate. Some of our activities go beyond the obligations set out in laws and permits and this study is a good example of that.”

RWE is part of the Dutch “Black Blade” study. Seven of RWE's wind turbines in Eemshaven are each getting one black blade and two white ones. One of the aims of this study is to find out whether painting a wind turbine blade black helps birds to fly more safely between the turbines. The study is based on the assumption that the black rotor blade provides increased contrast and thus increased visibility of the rotors. This would make it easier for the birds to detect the wind turbines and avoid them. The effect on the birds will be monitored for two years. The Dutch Black Blade Study goes beyond the results of the previous study in Norway: In addition to the effect on local birds, the study examines flight safety, the effect of the black painted blades on the landscape, and the painted blades themselves. This study fits perfectly with RWE's sustainability strategy of innovations for operating its sites in harmony with the ecosystem.

# RWE

RWE and the Province of Groningen started the research in 2021, in collaboration with the Dutch government (Ministries of EZK and RWS, Provinces of Flevoland, Gelderland, Overijssel, Limburg, South Holland and North Brabant), the nature sector (bird protection) and private parties in the wind sector (Vattenfall, Eneco Energy, Pure Energy, Statkraft Energy and Groningen.nl Energy). The research will continue until 2024.

## **Effect of black blades on birds**

The ecological part of the research started in September 2021 with a baseline measurement. Researchers from two independent research bureaus checked how many birds flew into fourteen wind turbines each week. RWE's wind farm in Eemshaven lends itself well to this research, due to the high number of birds in this area. It is a crossing point for migratory birds in spring and autumn, and the area has a wide range of bird species. Seabirds such as gulls and terns fly here, as well as land birds such as blackbirds and starlings, and birds of prey such as buzzards and kestrels. An important question in this research is therefore the efficacy of the black painted blades for different types of birds.

## **Technical effect of black paint on wind turbine blades**

The painting of the blades started in August and was regularly halted due to weather conditions. Painting the blades is an intensive and time-consuming process. First, the turbine has to be shut down, the suspension bridge installation (in which the painters stand) has to be installed, and then the blades have to be sanded, degreased and painted twice. The painting process takes about three to four days per turbine.

Once the paint is on, it is necessary to find out what effect this has on the blade material. Black paint attracts heat, causing the temperature of the blade to rise and possibly overheat on hot, sunny days. With thermometers installed inside the blades and additional inspections, the impact on the material will be monitored. The impact on preventive maintenance and performance of the turbines will also be checked.

In addition to the technical effect, the study also looks at the impact on the landscape. The question here is how people view a turbine when one of its blades is colored black. Pilots who regularly fly over the area are also being consulted about their experiences in the context of aviation safety.

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**Images of the black blades for media purposes** (image rights: RWE) are available in the [media library](#).

#### **Forerunner study: Norwegian research on Smøla**

An earlier study on the Norwegian island of Smøla formed the basis for the Dutch Black Blade study. The Norwegian study showed that the white-tailed eagle in particular flies less often into a wind turbine when one of the blades is painted black. The white blades of a wind turbine are often perceived by the white eagle as a hazy disc that it can fly through safely. Painting one blade black creates a break in the pattern, making it less likely that the blades will merge into one image. As a result, the white-tailed eagle flies around the wind turbine more often than it flies through it. The question now is whether this also works in the Netherlands, with other bird species and in a different landscape. More knowledge is also required about the practical and financial feasibility of the black blades as a bird protection measure. These questions are part of the current Dutch Black Blade Study.

#### **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 €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 is responsibly phasing out nuclear energy and coal. Government-mandated phaseout roadmaps have been defined for both of these energy sources. 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.

#### **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.*

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