

Press Release

from Light:Guard GmbH



Dresden, 17. September 2026

Light:Guard Successfully Tests an Aircraft Detection Lighting System (ADLS) in Denmark

Light:Guard GmbH has implemented a pilot project for an Aircraft Detection Lighting System (ADLS) at the Sønder Bork wind farm in Denmark. Over a period of six months, the light:guard system reliably detected aircraft and documented how often obstruction lighting could have been switched off under the applicable Danish framework. The analysis shows a theoretical lights-off period of 97.4%, with system availability reaching 98.7%.

ADLS reduces the flashing of wind turbines to a minimum. To do this, the system monitors the airspace around a wind farm. When an aircraft approaches, the system deactivates the suppression of the obstruction lighting, and the red light flashes as usual.

In Denmark, the legislation permitting Aircraft Detection Lighting Systems on wind turbines is still at the draft stage. The project was therefore operated exclusively in reporting mode. The lighting on the five turbines remained switched on, while the switching-off process was simulated virtually.

For this purpose, Light:Guard installed a Light:Guard Receiver (LGR), which detects transponder signals from aircraft. While receivers are typically installed at heights of 80 to 175 metres above ground level at German wind farms, the receiver at Sønder Bork could only be installed at ground level. The antenna was mounted on the outside of the substation at a height of approximately five metres.

This makes it the lowest known receiver installation for ADLS at a wind farm anywhere in the world. Among other requirements, the Danish regulations call for aircraft to be detected from an altitude of 300 feet, or approximately 91 metres, above ground level. The pilot project therefore also tested whether a receiver installed at such a low height could detect aircraft at the required minimum altitude. This has now been successfully demonstrated.

"This is not the first—and certainly not the last—pilot project that I have supported and even installed personally. What made this installation particularly unusual was the receiver's proximity to the ground," explains Heiko Nöldeke, Light:Guard hardware specialist. *"That makes me all the happier that the system is running so smoothly and reliably detecting aircraft."*

Normally, a Light Control Unit (LCU) is installed in each wind farm in addition to the receiver to control the wind farm's obstruction lighting. Since the lighting could not yet legally be suppressed by the ADLS, Light:Guard developed a virtual Light Control Unit for the pilot project.

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The virtual LCU processed the recorded data for reporting purposes. This made it possible to determine how often the system was available and how long the flashing could theoretically have been suppressed.

The Light:Guard receiver was installed on March 4, 2026. On March 9, 2026, Light:Guard commissioned the system. Since then, it has been recording transponder signals from aircraft in the vicinity of the wind farm.

For the analysis, data from six months—from March to September 2026—was evaluated. During this period, the light:guard system achieved availability of 98.7%. The average theoretical lights-off period was 97.4%. The proportion of theoretical lights-on periods caused by detections and errors was minimal.

Month	Lights off	Lights on (detection)	Lights on (error)	System availability
March	97,50%	2,50%	0,00%	100,00%
April	92,50%	1,10%	6,50%	93,50%
May	99,00%	0,90%	0,10%	99,90%
June	98,70%	1,30%	0,00%	100,00%
July	99,70%	0,30%	0,00%	100,00%
August	98,30%	1,70%	0,00%	100,00%
September	99,50%	0,50%	0,00%	100,00%
Average	97,40%	1,30%	1,30%	98,70%

Table 1: Summary of lighting times (Sønder Bork wind farm, March to September 2026)

Sales Agent René Aamand has not only followed the legislative process in Denmark for three years, but also supported the Sønder Bork project: *“This case study demonstrates that the light:guard system operates reliably even under these special conditions: in a new regulatory environment, with an unusually low receiver installation and according to the detection requirements planned for Denmark. We now hope that the law will be passed soon so that the nights in Denmark can become dark as well.”*

The case study therefore provides a robust data point for the planned introduction of Aircraft Detection Lighting Systems in Denmark. This is no longer far away: the Danish authorities are working on the final draft of the legislation, which is scheduled to be passed by the end of the year.

Light:Guard is ready: *“As soon as the law permits ADLS in Denmark, we will switch off the lights at the turbines in the Sønder Bork wind farm, together with another wind farm. We hope to be the first in Denmark,”* says Felix von Hammerstein, Head of Business Development at Light:Guard.

The complete data is available online at: <https://light-guard.com/en/news/case-study-adls-at-wind-farm-sonder-bork-in-denmark/>.

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About Light:Guard

Light:Guard is a full-service provider for Aircraft Detection Lighting Systems (ADLS), covering the entire process—from obtaining approval and installation to technical support throughout the complete service life of the system.

The proprietary light:guard system operates using both multilateration and signal-strength analysis. With experience in the field of ADLS since 2008, Light:Guard works with renowned wind turbine manufacturers such as GE, Nordex and Vestas. With some manufacturers, the light:guard system can even be installed before the wind farm is commissioned.

Light:Guard has already switched off the lights at more than 3,500 wind turbines in Germany and is also active in other countries.

In addition, Light:Guard now offers an external shutdown system, for example for mowing-related shutdowns—also available in combination with the ADLS.

Publication and reprint are free of charge. Light:Guard would appreciate receiving a copy.