



Vestas InteliLight[®]

Active Aviation Light Management

Benefits of Vestas InteliLight[®]:

- Proven system based on over 10 years of operational experience.
 - Efficient solution tailored to wind park application.
 - Aviation lights activate only when needed, avoiding unnecessary, continuous lighting.
 - Aviation lights remain off 98 % of the time depending on aircraft activity.
 - Available across turbine brands and multibrand parks.
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Vestas InteliLight[®] delivers reliable activation of the aviation lights when needed, while avoiding unnecessary continuous lighting. It is a proven end-to-end solution, designed by Vestas and optimised specifically for wind power plant application. The result is an effective and safe solution available across turbine brands and multibrand parks, compliant with highly restrictive requirements, such as those of DFS/BMVI in Germany.

Proven Solution

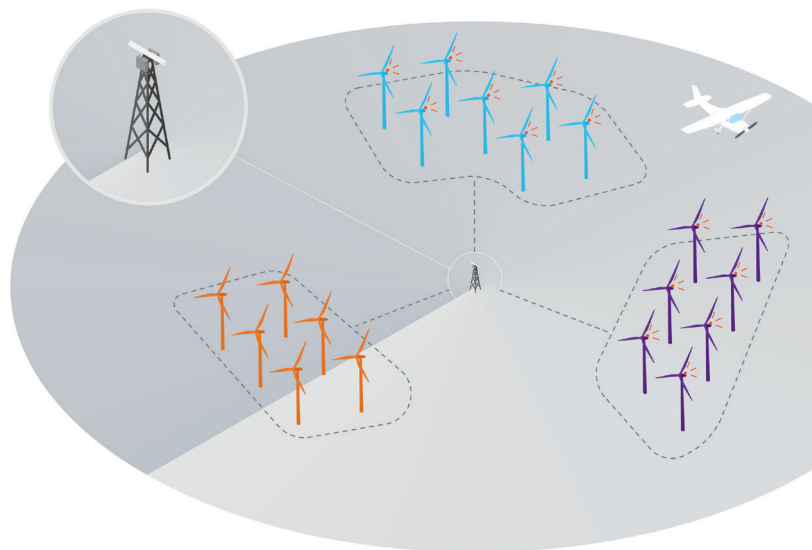
For Vestas InteliLight[®], the priority of the system design and function is reliable performance. The first system was installed in 2007 and has been continuously optimised based on more than 10 years of operational experience. Today, more than 1 GW* of turbines operate with Vestas InteliLight[®]. The system works autonomously on-site, while continuous remote monitoring verifies system integrity. A secondary power backup and fail-safe mode ensure operational readiness.

System Integration

Vestas InteliLight[®] is directly connected with the turbine aviation lights through the Vestas communication network, enabling prompt and reliable reaction when needed. For non-Vestas turbines, the turn-key system is directly connected to the turbine aviation lights, working independently of the windpark control system.

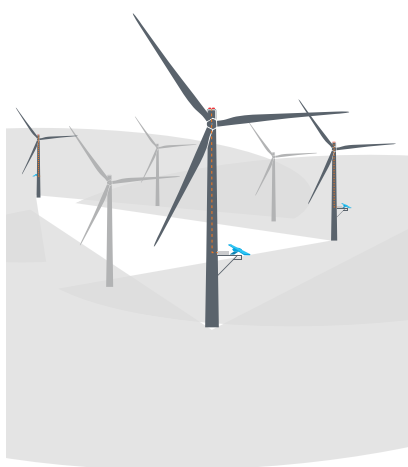
*Based on installed capacity by the end of September 2019.

Wind. It means the world to us.™



Aviation lights activate when needed:

One Vestas IntelliLight® radar may cover several wind parks*, yet the system only activates lights in the relevant parks. In this case, aviation lights are activated in the blue and purple wind parks, but remain off in the orange wind park.



Availability of Vestas IntelliLight®:

Vestas IntelliLight® installed on the turbine tower is authority-approved for use in the following countries*:

- Germany (Certified by DFS/BMVI)
- United States (Certified by Federal Aviation Administration)

Other countries can be requested but certification from aviation authority is required

* Configuration is country and site dependent, subject to regulation and site conditions.

** Availability on request, depending on turbine type.

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Siting

In the case of Vestas wind park planning, the Vestas IntelliLight® application is considered in the regular Vestas turbine siting process. For existing Vestas, non-Vestas and multibrand wind park application, a coverage assessment is prepared by dedicated IntelliLight® personnel. Specialised siting tools using topographical 3D maps are applied to ensure safe and efficient radar terrain coverage and aviation safety.

Installation

The compact Vestas IntelliLight® hardware is installed on the side of the turbine tower or on a stand-alone mast. Vestas ensures valid type certification and aids in the site preparation and permit application to authorities, including initial application as well as verification and as-built documentation.

Operation

Vestas IntelliLight® is a complete end-to-end solution, from aircraft detection to controlled activation of aviation light and surveillance hereof. The system continuously and autonomously scans the wind park's surrounding area. Each radar has an instrumented range up to 36 kilometers. If an approaching aircraft is detected, its distance, speed, and heading are tracked and an automatic assessment is made on whether or not to activate the aviation lights. Optionally, a secondary audio alarm can be triggered through the VHF aviation channels.

Service

Vestas offers a comprehensive service package that ensures the proper maintenance and operations of the system during the lifetime of your wind power plant. Frequent testing and ongoing reporting by Vestas, coupled with periodic inspection and calibration performed by certified Vestas IntelliLight® technicians, enables you to demonstrate that the system is fully functional at all times.

For more information

Vestas offers market specific alternative solutions for the control of aviation lights, enabling the combination of Vestas turbines with other Aircraft Detection Lightning System technologies to maximise compliance globally. Please contact your local Vestas office for market specific availability and further information.

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