WIND TURBINES

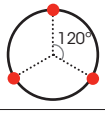
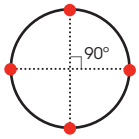
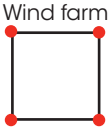
Guidelines for night lighting

A wind turbine captures the wind and converts it into electrical power. Wind turbines are come in a range of vertical and horizontal axis types.

Points to consider when lighting wind turbines (ICAO example):

- Lights should be placed on the nacelle so the lighting is visible from every angle in azimuth
- The height of the wind turbine (maximum height of the tip of the turbine blades at their highest point) determines the number of light levels
- The diameter of the base of the structure determines the number of lights to be installed at the top and at each light level
- If flashing lights are used they should flash in synchronization.

Structure height	Levels & lighting type
< 45m	1 level: • Medium intensity obstruction lights
45m – 105m	2 levels: • Medium intensity obstruction lights
105m – 210m	4 levels: • Medium intensity obstruction lights

Size of turbine/ wind farm	Number of lights per level
Turbine Ø < 6m 	Base diameter < 6m: • 3 obstruction lights • Lights to be placed at 120° intervals around the structure
Turbine Ø > 6m 	Base diameter > 6m: • 4 obstruction lights • Lights to be placed at 90° intervals around the structure
Wind farm 	• The perimeter of the wind farm should be identified • Lights shall be spaced at intervals no greater than 45m • The tallest wind turbines should be identified regardless

Standards and Regulations:

Obstruction light standards and regulations vary depending on your location. Here are some examples:

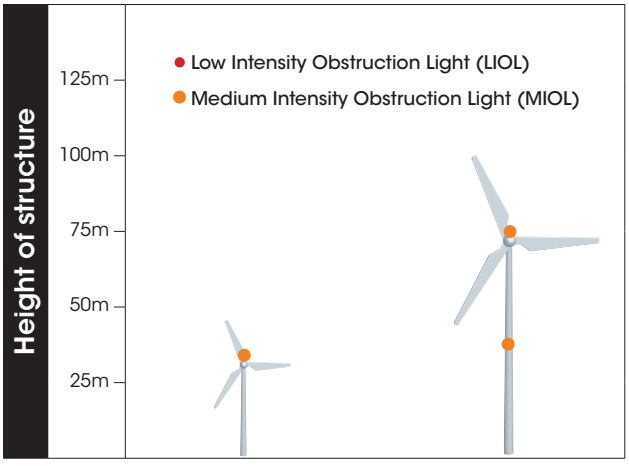
ICAO (International Civil Aviation Authority) is a specialized agency of the United Nations.

FAA (Federal Aviation Administration) is the national aviation authority of the United States.

Transport Canada is Canada's civil aviation authority.

CASA (Civil Aviation Safety Authority) is responsible for the safety of civil aviation in Australia.

The information in this publication is a guide only. Please contact your local authority for rules and regulations particular to your region.



Obstruction light examples	
	• Medium Intensity Obstruction Light • ICAO MIOL Type B, FAA L-864 or CSA CL-810 model • Red, flashing
Note: Avlite has an extensive range of obstruction lighting, contact your Avlite representative for additional models suitable for your application	

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