Approved Alternatives to Meteorological Mast for Wind-Powered PPMs

EirGrid commissioned Danish weather prediction consultancy Weprog to produce a technical report entitled "Met Mast and Alternatives Study"; it was published in December 2019 and can be found here. A section of the report looked at using alternative technologies in place of a permanent meteorological mast for providing real-time meteorological signals, primarily wind speed and direction, from wind farms in Ireland. The report recommended that organisations could request the use of alternative new measurement technologies. However, these technologies would be required to go through a real-time acceptance test for a minimum of three months during a windy period.

In 2020, EirGrid was approached by Energia which wanted to trial a Light Detection and Ranging (Lidar) technology. This is a remote sensing method that uses light in the form of a continuous wave (CW) laser to measure wind speeds remotely from 10 metres and up to several hundred metres above ground-level and was developed by UK-based ZX Lidars as an alternative to a permanent meteorological mast. The trialling of the Lidar was successful; the ground-based 'ZX 300' wind Lidar from ZX Lidars met the criteria of a 98% data delivery rate and a 5% improvement of the measured wind speed versus the forecasted wind speed in predicting WFPS power output.

Since then, EirGrid has created a list of approved measurement devices as an alternative to a permanent meteorological mast which can be found below. EirGrid is also happy to accept requests to trial alternative measurement devices for inclusion in the approved list.

Please note that all sources of meteorological signals must continue to meet our quality criteria over the wind farm's lifetime.

List of approved measurement devices

Manufacturer	Model(s)
ZX Lidars	ZX300, ZX300e