

## Case Study – Supply, Installation and Decommissioning

- ❖ Location: Wester Ross
- ❖ Turbine: Vestas V47 500kW
- ❖ Client: Coigach CIC



*A very challenging site with fantastic scenery and huge potential for generation!*

In early 2017, Realise Energy Services supplied and installed a Vestas V47 500kW wind turbine on behalf of the local community of Achiltibuie in Wester Ross. A community scheme such as this is a valuable benefit to local communities and provides a long-term revenue which can be used to invest in local services and infrastructure for the benefit of the whole community. Realise Energy Services have worked on a number of community projects and were delighted to be involved in this one.



Due to the location of the project and the difficulties in accessing the site, Realise were contracted to supply and install a refurbished Vestas V47 500kW turbine on a 50m tower. This scale of turbine could be delivered to site by lorries which could navigate the narrow roads into Achiltibuie.



The turbine was fully refurbished in Denmark by Vestas themselves, the original manufacturer, at their dedicated

refurbishment facility and supplied with a manufacturer's warranty and a wraparound service and maintenance contract provided by Realise Energy Services. The benefits of a refurbished turbine are not only practical but also economic since the lower cost of a refurbished turbine means an improved income stream for the community.

Due to the location of the site, the logistics of delivering a turbine of this size were complex, as a result a dry run was conducted with the assistance of Realise's appointed haulage contractor with mock structures to simulate the dimensions of the largest turbine component – the bottom tower section. The dry run highlighted several areas that needed modification to allow the vehicles through and, working closely with the community who provided huge support, we temporarily removed some walls and street furniture to allow the lorries to pass with ease.

The limited access also had an impact on the size and model of cranes that could be used on site. Due to the narrow roads, a normal 500 tonne mobile crane could not reach the site so Realise Energy Services contracted a crawler crane which could be delivered in parts on standard HGVs and constructed at site by a smaller mobile crane.

Once the cranes were ready, the turbine itself could be delivered to site from its holding area ready for construction and commissioning.

Working alongside civil and electrical balance of plant contractors and despite snow, wind, rain and some sunshine, the turbine was installed and commissioned on schedule.



Since commissioning, the turbine has continued to run smoothly, producing over 1.8 million kWh in 2018. The income received from the turbine has allowed the community to finance a variety of local projects to ensure public services and infrastructure is maintained to the highest standards in the area.

With regular servicing under the Premium contract option with Realise Energy Services and site-specific optimisation to suit this high wind speed site, this turbine regularly achieves over 99% availability each month.

**To find out more contact us on:**

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