

Connected Wind Services

Vindkraftsdagarna, 2022



Outlook of the O&M market

A close-up photograph of a white wind turbine blade, showing the hub and the blade's attachment point. The blade is set against a clear, deep blue sky. The lighting is bright, highlighting the smooth, aerodynamic surface of the blade.

Operation & maintenance

- a market in change



Aging fleet

Service agreements

Multibrand

ISP

Aging fleet

- The number of aging turbines is getting larger. In 2020 every second turbine in Skåne was 11 years or older. Aging turbines will most likely lead to more projects over the coming years, however...

-> The challenge will be to have access to spare parts, cranes and skilled workforce



Problem: Blekinges vindkraftverk börjar bli gamla – över hälften behöver bytas ut

*Enligt siffror från Länsstyrelsen Skåne så är 15 procent av alla vindkraftverk mer än 20 år gamla (62 st) och fem procent nedmonterade (20 st). 22 procent är 16-20 år gamla (90 st). Elva procent är 11-15 år gamla (44 st) medan 47 procent är 0-10 år gamla (195 st)

Källa: Skånes Vindkraftsakademi, 2020

Service agreements

- Until now service contracts have had a length of 10 or even 20 years. Today the market offers up to 30 years – a game changer?
- The time extension gives the asset owner an easy way to budget and calculate the cost of O&M, however...

-> With longer service agreement in place, the OEM suppliers will secure their market over time. The risk a customer could face is e.g. less alternatives during the contract time



Multibrand from OEM:s

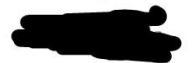
- The last 5-10 years we have seen an increase of multibrand services from the OEM: s
- By offering the customer services of multiple OEM: s turbines, the customer can decrease the number of suppliers

-> To offer the market multibrand services is a response of customer demands, still we believe that ISP: s will be a strong alt to many customers in certain segments



Multibrand Services
Whitepaper

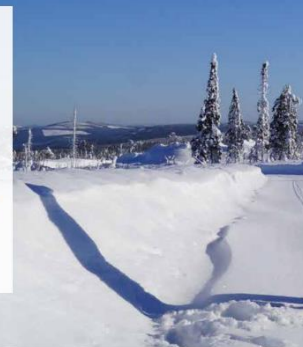
From a major OEM



What is multibrand service?

Multibrand service means the ability of one service provider to maintain wind turbines manufactured by different OEMs (Original Equipment Manufacturers).

If your fleet consists of wind turbines from more than one OEM, a multibrand service provider can serve as one single partner and one single point of contact to help you maintain and repair your fleet and optimise your turbine investment.



ISP

- Independent Service Providers (ISP) are growing in numbers and volume and offer an alt to OEM services. International ISP: s is also increasing.
- The international ISP:s is often more nished e.g. blade repair, drone inspections or by subcontracting workforce to the OEM: s etc.

-> ISP: s as business model have come to stay, however, there is challenges e g in IT-access to turbines, special tools and technical documentation, especially for new turbine models



Conclusions & reflections on the O&M market

- The OEM: is offering longer contracts, multibrand services and special options that is a challenge for other service suppliers to provide.
- The ISP: s is offering flexible contracts, multibrand services and have the ability to develop new services quickly.



-> As stated earlier on, the ISP: s is here to stay, at the same time OEM is expanding their offer. This polarization will most likely lead to more flexible contracts, so called hybrid services

This contracts can be adapted for each customer and is a mix of basic and full-service contracts, added up with specific customer demands.

Connected Wind Services footprint

35

Years of experience

170+

Dedicated employees

50+

Service teams

90+

Off-shore turbines
in O&M management

30+ m€

Turnover (2019)

200+

Up-Tower repair project

1,700+

Number of wind turbines
in service

4

Countries
with local setup



Vision and mission



Vision:

To earn industry leadership by being the most flexible and reliable ISP – providing wind turbine owners and operators with exactly the service package that best suits their individual needs.

Mission:

To help wind turbine owners and operators maximize their yield and protect their assets.

Who are we and what do we do?



Connected Wind Services is one of Europe's leading Independent Service Providers for wind turbines for over 35 years, based on:

- Customer focus
- Our multi-brand knowledge
- Our multi-skill capabilities
- Local presence, global footprint
- Flexible and efficient in O & M approach

Welcome to Connected Wind Services
to discuss **your** needs with an ISP

