



International service for wind turbines is in a transformational phase

Words: Matthias Brandt, Board Director, Deutsche Windtechnik



Matthias Brandt

The global wind energy market has always been subject to constant change, but it has rarely changed as rapidly as it is right now. Political realities are evolving, and they are forcing the market to produce results based on one clear objective: absolute cost reduction.

Increasing cost pressure is forcing market participants to take action

In 2025, the first German offshore wind farms will be connected to the grid without the benefit of any subsidies whatsoever.

In Spain, the remuneration of 4.3 cents for onshore wind is shaking up everything that was considered to be reliable up till now. The last onshore tender also put Germany at 4.45 cents. The continuous acquisitions within the industry are creating new structures. In order to maintain or even increase their competitiveness, the various

market participants need to work together closely. This also applies to the heterogeneous market for maintenance.

The European wind energy markets differ from each other in many respects. Economic conditions and national political frameworks directly affect and control wind energy. In Spain, for example, subsidisation has been withdrawn entirely. This means that the wind energy market conditions here are completely different than in Germany. In turn, the Spanish market with its wide variety of participants offers quite

different opportunities than, for example, the wind energy market in the UK.

Benefiting from the diversity of international experience

I see this diversity as a great opportunity. The market for maintenance has the same specific characteristics as the wind energy sector as a whole. We collect and analyse our experience from national markets and transfer that knowledge to other markets. On the one hand, this enables us to avoid mistakes. On the other, we can use our international experience to develop innovative service strategies and provide answers to questions whose relevance has not yet been completely recognised in the corresponding target markets.

The industry is consolidating

The technology being serviced as well as the market for wind turbine manufacturers, as a whole are both subject to constant change. The leaps in technology that we are seeing have clearly led to faster development. There are challenges as well as opportunities, particularly in the areas of performance and control technology, software, data, documentation, and analysis.

Competition among manufacturers has always been decisively influenced by acquisitions. This tendency has increased sharply over the last ten to fifteen years. Despite all of the takeovers, individual manufacturers still have confidence in their own strategies.

In the current situation regional manufacturers have almost completely disappeared from the market. Most are looking to global competition as a means to succeed. Experts are expecting to see further consolidation over the next few years. The market will probably comprise of four or five large, globally positioned turbine manufacturers.

Table:

Companies are looking to improve their market positions through acquisitions, mergers, strategic alliances or cooperation. Selected examples from the recent past include:

Acquisition by...	Acquisition of...
Vestas	Upwind/Availon
Nordex	Acciona
GE	LM
Siemens	Gamesa
EnBW	Connected Wind Services
Deutsche Windtechnik	SeebaWIND Service
Reetec	OWS
MVV	Juwi, Windwärts
Stadtwerke Hannover	Ventotec



ISPs are breaking up the service monopoly

An ISP is an international independent service provider. The intensity of competition for maintenance contracts for the individual technologies differs widely. While service is still firmly under the control of manufacturers in some European markets, ISPs broke up their monopoly in others a long time ago, and this created more free and diverse service markets.

The consequence was and continues to be a marked decline in costs. In Germany, maintenance costs have been cut by 20 to 30 percent on average over the last seven years. I'm convinced that economic pressure in most global wind energy markets will continue to drive this competitive development forward.

In this context, the counter-trend pursued by some OEMs (Operation Equipment Manufacturers) is also interesting. They link long-term service contracts to the turbine purchase contract.

A high level of vertical integration and reliable service has enabled other manufacturers to keep ISPs out of the maintenance market for wind turbines almost completely for years. They focused on the follow-up business early on. This is currently reflected by high service prices and very little competition.

Looking at the German market, it is particularly clear that smaller project developers and operators, who have less purchasing power, are forced to accommodate the interests of manufacturers.

Long-term service contracts that are linked to purchase contracts, poor documentation, reduced data access and low transparency are some of the current consequences, medium and large project developers and operators have slightly better chances of exerting influence.

Generally speaking, from an economic point of view, operators are opportunistic when it comes to wind turbine types and service. It goes without saying that they will evaluate their opportunities of participating in the value chain themselves.

Larger utilities show most clearly that they want strong competition. They are continuously assessing opportunities to increase their potential for success. In particular, they prefer markets in which alternatives prevail.

From the point of view of economic theory, this means they are at least looking for a 'trinity', i.e. they do not want to be bound exclusively to manufacturers, nor do they expect to be solely responsible for maintenance themselves.

They want to benchmark market participants using the 'Make, Buy, Join' principle. In this context, third party service providers are important cooperation partners. They do not have to take responsibility for the design of the turbine and they also do not have the conflict of interest that arises between selling new turbines and providing maintenance for existing ones.

Often they are highly specialised in their disciplines and therefore bring a high level of know-how and innovation to the table. They also ensure the highest level of competition, willingness to cooperate, flexibility and agility in the network of relationships between all parties, and all of these factors are key requirements for success.

Concentration and consolidation is shifting the interaction between market participants

The changes in the international market have caused changes in the positioning of the market participants at many levels. Now Service competition is the norm between manufacturers in what is known as multi-branding. This is always accompanied by the question of whether it is actually competition or not. Important requirements have not yet been met. These have to do with transparency, competence and actual availability.

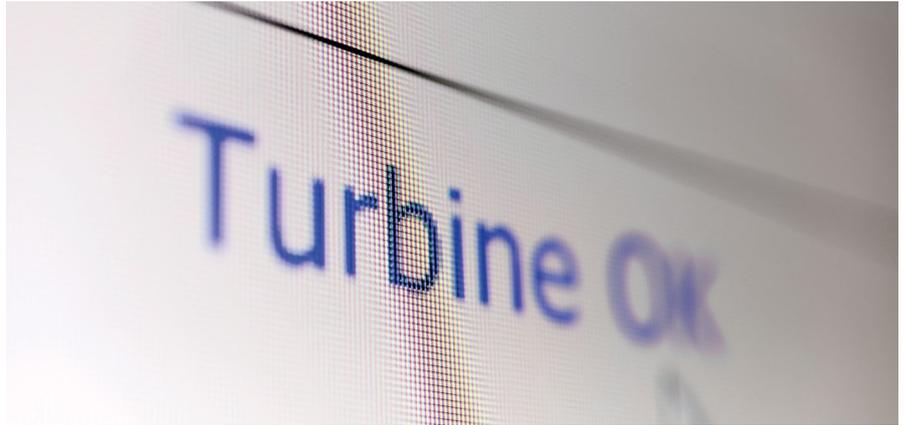
However, numerous operators are also positioning themselves with acquisitions to provide service. Everyone is pursuing their own agenda, of course. While operators are purchasing specific know-how, for example by acquiring independent service providers, manufacturers are reacting to their crumbling sales markets and shifting their focus to the service business. In the meantime, the few real ISPs that are still on the market are being forced to grow in order to meet the demand as well as remain independent on the market.

Protectionism is intended to prevent competition – in the medium term it always does the opposite

As described previously, manufacturers are refocusing on the service business, and as a result, many are taking steps to prevent external persons and providers from accessing their turbines for service activities. The customer does not receive sufficient documentation. Some purchase contracts even include clauses that limit or, completely restrict the use of software products exclusively to the manufacturer.

In some cases, this goes so far that even inspections, for example for the tests required for operation, are not possible if the manufacturer does not grant permission e.g. by handing over access codes or control devices.

The customer is often led to believe that not only does the turbine belong to the



manufacturer, but the data that it produces does as well. This kind of behaviour would be met with flat-out rejection in any other industry. The manufacturer must provide its customers with the necessary knowledge to enable them to meet their obligations as operators and ensure smooth and, above all, safe operation.

In the opinion of many experts, the legality of these actions is very questionable. For example, in some more advanced industrial sectors, such as the automotive industry or conventional power plant operations, a much higher degree of transparency is achieved in order to ensure the unhindered availability of services.

The manufacturer's claim to its intellectual property is understandable. However, we are talking here about the use of physical or

intellectual property to fulfil service obligations to ensure that a wind turbine can be used for its intended purpose: the production of clean energy.

If one looks at case-law for other relatively young economic sectors, in particular the Internet and software area, there can be absolutely no doubt that the market needs to be opened up.

Locking things down using state-of-the-art electronics, software, programming and encryption is not an option. All we are missing our official court verdicts.

Hopefully, the realisation will prevail that fair but tough competition that adheres to the good sportsmanship rules offers significant advantages.

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