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luftpost

Newsletter Deutsche Windtechnik

DEUTSCHE WINDTECHNIK

Exchange of knowledgement | Cluster management | Successful migration to DSL

ONSHORE AND OFFSHORE SERVICES: *It is important to standardise workflows and further improve controlling.*

WHAT CAN ONSHORE LEARN FROM OFFSHORE?

TWO-WAY COMMUNICATION CAN BENEFIT THE ENTIRE WIND INDUSTRY

The use of wind energy on land has a much longer history than it does at sea. The first German offshore wind farm was connected to the grid in 2010. By that time, the onshore wind energy industry already had almost three decades of experience. For this reason, expertise was often transferred from the onshore sector to offshore, in particular in the area of system technology. But a closer look shows that the exchange of information and experience runs both ways. The introduction of the tendering process for onshore wind energy is currently energising this two-way discourse.

Given the market players, wind farm sizes and cost pressures, the offshore industry is already familiar with the tendering process and finds itself in a new phase. It also benefits from a slightly higher level of industrialisation. By itself, this does not necessarily constitute an advantage, but it does mean that principles such as standardisation, automation and harmonisation can be utilised to save costs. Deutsche Windtechnik's experience in both the onshore and offshore sectors indicates that there are areas worth transforming and optimising.

ONSHORE CAMPAIGN MANAGEMENT

There are significant differences between offshore and onshore wind energy, particularly during the operational phase. Offshore wind farms are inherently harder to reach,

> *"Grouping tasks is also necessary in the onshore industry"*

so logistics strategies play a key role. Even though these strategies can only be partially adapted to the onshore sector, the basic idea of permanent monitoring of work packages and efficient bundling of work is also vital onshore.

Larger onshore wind farms in particular could benefit from the synergies created by campaign management. This applies, for

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LATEST NEWS

NEW ORDER FROM E.ON FOR AMRUMBANK WEST

Deutsche Windtechnik carried out its first offshore job for E.ON at the end of 2016 at Amrumbank West: maintenance work on the fire extinguishing system at the offshore substation. The large-scale maintenance campaign, including diesel generators, service cranes and safety-relevant components, will be carried out in summer 2017.

CERTIFIED SERVICE FOR V112 IN DENMARK

Deutsche Windtechnik began offering services that are certified by DNV GL in Denmark at the end of 2016. The country-specific certification criteria allows various turbines manufactured by Siemens/AN Bonus, NEG Micon/Nordtank/WW and Vestas, including the new V112 turbine, to be serviced.

SWEDEN: SERVICE ESTABLISHED

The municipal utility Varberg Energi commissioned Deutsche Windtechnik AB with the maintenance of 30 wind turbines from Vestas (23xV90) and Gamesa (7xG90) as well as an option of 12 additional turbines. The agreements cover the complete turbine service (incl. the rotor blades and LC replacement).

EDITORIAL

Dear friends of wind energy,

There are many similarities between onshore and offshore wind energy, but there are also fundamental differences. What can one learn from the other in order to advance wind energy as a whole?

Deutsche Windtechnik has first-hand experience with the advantages resulting from this type of exchange. We began in the area of onshore maintenance, and we have also been active in the offshore sector since 2006. This year, we started servicing turbines at Germany's first offshore wind farm alpha ventus. Information initially only flowed in one direction, but the exchange of knowledge now works both ways.

Onshore feed-in quotas pursuant to the German Renewable Energy Act 2017 will be tendered for the first time in May of this year. This change will force all market participants to adapt. In this issue, we introduce our new strategy for cost-effective maintenance of offshore as well as onshore installations: the cluster concept.

We hope you enjoy reading!

Holger Hämel, *CEO Deutsche Windtechnik X-Service*

INTERVIEW

COORDINATING SERVICE DEPLOYMENTS ACROSS MULTIPLE WIND FARMS

DEUTSCHE WINDTECHNIK'S SUBSEA CLUSTER MANAGEMENT

Inspections and servicing are important for offshore wind farms, but they are also very expensive, especially if they need to be performed underwater. However, there is significant potential for optimisation. Jens Landwehr, Managing Director of Deutsche Windtechnik Offshore und Consulting GmbH, talks about the new cluster management approach, which is designed to span multiple wind farms.

JENS LANDWEHR
sees significant potential in cluster-based service

Mr Landwehr, what is Deutsche Windtechnik's strategy to make the planning and delivery of offshore service operations more cost-effective in the long term?
Deutsche Windtechnik is combining the wind farms that it manages in the Dutch North Sea, Lower Saxony Wadden Sea and the German Bight all the way up to Heligoland into three regional clusters, and will be coordinating all future service deployments in these regions with one another. This creates synergies and reduces costs.

What are the concrete advantages of the cluster concept?
For example, equipment and logistics for underwater inspections are expensive and the amount of time that ROVs and divers can operate is limited. This highlights the need for efficient processes. Service teams and engineers can work more efficiently when their jobs are synchronised as often as possible. When a ship, special equipment or a service team is already deployed in a certain area of the sea, it makes sense to utilise them to the fullest extent possible. The experience we gather at wind farms located in close proximity enables us to respond with foresight. The more we think in terms of how to integrate work across multiple projects, the more cost-effective our work becomes. All service deployments are documented using a standardised reporting system.

> *"We see potential savings of 20 to 30 per cent"*

How much money can the client save?
Logistic costs account for approximately 70 per cent of the costs for standard maintenance, and we see potential savings of 20 to 30 per cent in this area alone. Our customers will also benefit from these cost savings. "Our goal is to find the right balance between standardised, cluster-wide service and optimal adaptation to individual customer requirements."

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example, to inspections, repairs and the cost-effective replacement of components. If individual wind farms are not large enough, then the option of grouping several wind farms in a specific region into a cluster should be considered.

MORE TRANSPARENCY THROUGH STANDARDISATION

Generally speaking, the trend in the offshore sector is to try to distribute the workload across fewer shoulders and to secure the operating phase using only two to four suppliers. The idea is to utilise the reduction in the number of interfaces that this produces to achieve a standardisation of workflows. This also applies to designations for data and documents as well as other fundamental aspects of work, such as scheduling and materials management.

Another important point is that the transparency of the operational and performance data that comes with standardisation allows more objective controlling and even better evaluation of performance. The onshore market is still lagging far behind in this respect. But these are precisely the factors that give the operator the freedom to shape its operating and maintenance concept individually. The operator decides the extent to which tasks such as operational management, maintenance, logistics and materials management are delegated to one or more service providers or taken care of by the operator's own personnel. There is often significant potential for optimisation here. In the long term, changes will need to be implemented in this area. Why not benefit from the experience of offshore companies?

TECHNOLOGY

DWT IP-BOX REPLACES CONVENTIONAL MODEMS

GERMAN TELEKOM IS TRANSITIONING TO INTERNET TECHNOLOGY

The evaluation of operational data is essential for the operation of a wind turbine. The transition from analogue to digital communication means that the existing wind turbine control technology has to be connected to IP-based communication systems.

This is facilitated by the DWT IP-Box, which can be integrated in all common turbine types. This may initially seem complicated, but in practice it can prove to be a real opportunity. For example, individual connection costs are replaced by a fixed monthly charge for DSL, which often leads to cost savings. Furthermore, real-time communication provides a significant advantage because e-mail alerts and connections via the DWT IP-Box can be connected in parallel. Of course, the data connections are protected by a VPN tunnel, so all parties can have confidence in the security of this process. Now is the time for wind farm operators to act and make sure they are not left behind.

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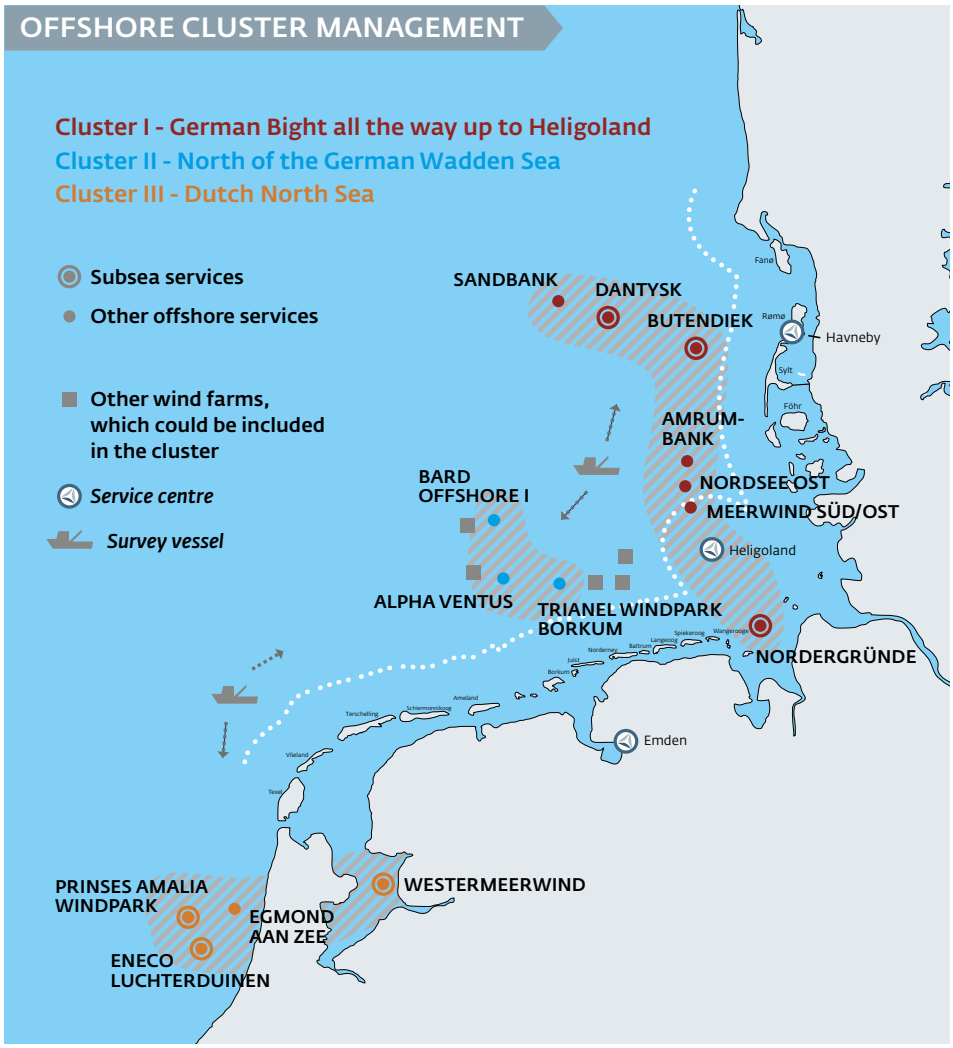
OFFSHORE CLUSTER MANAGEMENT



THE CLUSTER CONCEPT ALLOWS PROJECT-SPECIFIC SUBSEA OPERATIONS *to be coordinated across wind farms in the North Sea. The offshore wind farms where Deutsche Windtechnik already provides service are marked in colour.*

PERSONNEL

TECHNICAL SALES IN SPAIN BEGIN

Under the leadership of Victor Blanco Barrios, Deutsche Windtechnik S.L. is building a technical sales department for the Spanish market.

VICTOR BLANCO BARRIOS
provides expert advice ranging from price quotations through to implementation

Victor, who was born in Salamanca, is a technical expert for Gamesa and Vestas turbines and has been active in the Spanish wind energy market since it got started.

This expertise forms a broad base for his new activities, which range from advising the sales department when it puts price quotations together to helping the customer to resolve problems during turbine operation.

PARTNER

MAINPRIZE DESIGNS CUSTOM MO4

Deutsche Windtechnik and Mainprize Offshore Ltd. have been working together since 2014. The shipbuilding company has had a multi-purpose vessel in service at the DanTysk wind farm since the planning phase. "The ships are well-designed and very versatile. They are larger and offer more options. This makes difficult tasks safer, easier and more cost-effective," said Alexander Huth, Project Manager at Deutsche Windtechnik Offshore und Consulting.

The company, which has been owned by the same family for thirty years, has received further contracts. Managing Director Bob Mainprize is also pleased. "Our procedures are very similar, and this is the key to our successful cooperation: flat hierarchies, fast decision-making processes and mutual trust. We are very happy to have this opportunity!"

The next ship is already under construction. The MO4 is designed for the shallow-water port Nordergründe. Its propeller propulsion system gives it more stability in the water, and this enables transfers even in heavy seas. Deutsche Windtechnik has been chartering it for eight years. It will be on display from 6 to 8 June at the Offshore Wind Energy exhibition in London.

mainprizeoffshore.co.uk

SECOND GLANCE

FROM SURFING INSTRUCTOR TO SERVICE TECHNICIAN

Marek Karolewicz (nicknamed Karo) trained as a construction technician, then managed a surfing school in Austria and now works as a service technician at Deutsche Windtechnik X-Service. We didn't want to let this exciting story pass us by, so we interviewed Marek Karolewicz.

Why did you quit your job as a surf instructor and return home?
I wanted to start a family and have always hoped to find work in the wind industry. I applied to Enercon while I was working as a technician for a yacht service company, but without success.

And how did you start working for Deutsche Windtechnik?
A customer helped me to get in touch with Holger Hämel, Managing Director of Deutsche Windtechnik X-Service. I spoke to Holger for the first time at WindEnergy 2014. I was persistent, and shortly thereafter I was given the opportunity to do an internship. So I quit my job in Rostock and commuted between Rostock and Osnabrück for about two months. Following the internship, I was offered a permanent contract and moved to Hanover in March 2015.

What excites you about your job?
The complexity of wind turbines fascinates me every day. I'm also interested in anything that has to do with wind and water. The offshore training for the alpha ventus wind farm was a perfect fit. Our job is anything but monotonous. Tasks include large component replacement, service deployments in France and everything in-between. Working for Deutsche Windtechnik is challenging and promotes personal development. It's fun and very motivating!

MAREK KAROLEWICZ *is living proof that persistence pays off*

OFFSHORE

SERVICE START AT ALPHA VENTUS

Service work for six Senvion 5M turbines at the alpha ventus wind farm was launched at the beginning of the year.
The contract with the operating consortium Deutsche Offshore-Testfeld und Infrastruktur GmbH & Co. KG (DOTI), which consists of EWE, E.ON and Vattenfall, runs for five years. The scope of services includes remote data monitoring, scheduled service, maintenance work on the turbines (depending on expenditure, including possible large component replacement) and the stockpiling of spare parts.

To ensure that troubleshooting and service can be carried out flexibly regardless of the weather, our service team is transferred from one turbine to another using different types of transportation, including a helicopter.

The digital service reporting system gives DOTI access to the service status via the customised RDSPP-based portal. Information such as the status of checklists, maintenance status, system status and information on installed components is provided and evaluated.

ON THE RADAR

2ND ANNUAL WIND POWER BIG DATA AND IOT FORUM
30 – 31 MARCH 2017 | AMSTERDAM
windpowerdata.global-renewableenergy-summit.com

WIND O&M DALLAS
10 – 12 APRIL 2017 | DALLAS
windenergyupdate.com/operations-maintenance-usa

ALL ENERGY EXHIBITION & CONFERENCE
10 – 11 MAY 2017 | GLASGOW
all-energy.co.uk

WINDFORCE CONFERENCE
9 – 11 MAY 2017 | BREMERHAVEN
windforce.info/windforce2017

OFFSHORE WIND ENERGY 2017
6 – 8 JUNE 2017 | LONDON
offshorewind2017.com

SPOTLIGHT

EMERGENCY CALL NETWORK SPANNING MULTIPLE COMPANIES

Even the best precautions cannot entirely prevent unfortunate circumstances from causing a serious accident. What happens then? Employees who have taken part in rescue training understand that a single person who tries to rescue their injured colleagues alone soon runs out of options. And if the injured person is still in the nacelle, then paramedics cannot reach him or her because they lack the necessary training to use the personal protective equipment or the service lift. The first few minutes after an accident, which are often crucial for the survival of the injured person, cannot be put to good use. In an emergency, lives can be saved if there is a trained team of wind turbine service technicians working in the area, who can be called to the scene of the accident. A joint rescue of the injured person gives the emergency doctor faster access to the patient, and this can save crucial time.

Together with other companies, we are launching an initiative to establish an overarching, multi-company emergency call network in the wind energy industry. The goal is to improve the chances of survival and recovery for our own employees as well as for colleagues who work for other market participants if an accident happens. Join the discussion!

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DISCLAIMER

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