

CONSTRUCTION

Gould Services takes over Total Wind Benelux

Gould Services recently reached an agreement to take over the activities of Total Wind Benelux. The agreement applies retroactively from May 1, 2018.

Total Wind Benelux has an ongoing contract with General Electrics Renewable Energy for the pre-assembly of 66 Haliade 150-6MW turbines that are part of the Merkur Offshore Wind Farm. Total Wind Benelux also is supplying technical support and maintenance to Dutch wind farms onshore to both end users and turbine manufacturers. Total Wind Benelux has built a track record with projects such as Walney OWF extension (Ørsted), Blightbank OWF (MHI Vestas) and various onshore wind farms.

The organization has about 85 people in operation managed from the head office in Middelburg. Gould Services can be divided into three core activities: Windpark Services, Offshore Service Base, and Logistics.

“It was an exciting time during the takeover, but thanks to the support of the customers of Total Wind Benelux and the business partners of Gould Services, we were able to make this great restart with Total Wind Benelux,” said Managing Director Mattheo Rozemond. “This means maintaining employment for the employees, enabling the continuation of projects that have been initiated and increasing Gould Services’ strength in our three core activities. Confident in our team, we look forward to future collaborations with key players in the renewable business.”

MORE INFO www.foundgould.com.

INNOVATION

Antaira introduces compact industrial POE+ media converter

Antaira Technologies recently expanded its industrial networking infrastructure family with the introduction of the IMP-C100-XX series.

Antaira Technologies’ IMP-C100-



The Antaira IMP-C100-XX series. (Courtesy: Antaira Technologies)

XX series is a compact industrial Ethernet-to-fiber PoE+ media converter featuring a 10/100TX Ethernet port and a fixed fiber interface which supports ST or SC connectors depending on the model. This series is compliant with 802.3at standards that are backwards compatible with 802.3af. There are multi-mode and single-mode models to support applications with a variety of fiber distances and types. It is designed to fulfill industrial applications that require fiber optic distance extension while



The pre-assembly of 66 Haliade 150-6MW turbines is part of the Merkur Offshore Wind Farm contract. (Courtesy: Gould Services)

using minimal space.

The IMP-C100-XX series has a built-in “Link Fault Pass Through” (LFP) and “Far End Fault” (FEF) function with 48~55VDC redundant power inputs with reverse polarity and overload current protection. This product series supports DIN-Rail as well as wall mountable orientations and provides operating temperature range models in standard (STD) from -10°C to 70°C and extended operating temperature (EOT) from -40°C to 80°C.

MORE INFO www.antaira.com

INNOVATION

Clobotics closes additional \$11 million in Series A funding

Clobotics, a global leader in intelligent computer vision solutions for the wind power and retail industries, recently announced it has closed an additional \$11 million in funding in a continuation of its Series A round of financing. Venture capital raised in this round now totals \$21 million. New investors include Nantian Infotech VC and Wangsu Company, joining previous investments from KTB Network, GGV Capital, and Capital Development Investment Fund Management Co., Ltd. With the new capital, Clobotics will continue to expand its business in North America to further penetrate the wind-power and retail industries. The company will also invest in ongoing product development and continue to build its growing team of experts in computer vision, artificial intelligence (AI), and machine learning.

Founded by former Microsoft executives, Clobotics’ solutions combine hardware, software, and emerging technologies such as computer vision, AI, machine learning, and data analytics to help companies in the wind-energy and retail sectors automate operational processes that have traditionally required time-intensive,

manual labor. With unprecedented access to real-time data and analytics, Clobotics’ customers make intelligent decisions that improve business processes and significantly increase revenue. This new funding commitment builds on the rapid momentum Clobotics has established over the past 21 months, during which time it has landed dozens of international customers and hired nearly 100 em-

ployees in its Seattle and Shanghai headquarters and offices throughout Asia.

“Clobotics’ ability to commercialize AI by integrating it with computer vision and industrial deployments to solve operational challenges in wind power and retail is unprecedented for a startup,” said Chengyan Liu, president and chairman of the board of Wangsu Company. “With innovative

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technology, a leadership team of experienced technology executives and rapid customer growth, Clobotics has already demonstrated a strong track record in a relatively short amount of time. Our investment in Clobotics demonstrates our belief in the company's potential to drive future digital transformation within the wind and retail industries."

In the wind-power industry, Clobotics is the only company to provide an end-to-end solution combining autonomous drone hardware with built-in computer vision, artificial intelligence, and data analytics software for automated wind-turbine inspections. Using Clobotics Smart Wind solution, autonomous drones take high resolution photos to identify damaged or weakened components as small as one millimeter by three millimeters. Clobotics' AI engine parses its massive real-world dataset that includes fully-functional and minutely-damaged turbines and shares real-time telemetry to its customer cloud portal, completing an inspection in minutes rather than days.

In the retail sector, Clobotics' Smart Retail solution recognizes assortments, displays, and SKUs to generate insightful reports in real time. Consumer package goods (CPG) brands and brick-and-mortar retailers quickly improve profitability and sales execution with a fraction of the workforce and time that traditional methods require. One of North America's largest bottlers for a leading global soft drink brand is using Clobotics' solution to help increase sales in more than 10,000 retail store locations in the U.S., after successful deployments throughout Asia.

"In less than two years since our founding, Clobotics has attracted top global brands as customers by pioneering new processes that combine artificial intelligence and computer vision with our own smart hardware capabilities and expertise in the wind and retail industries," said George Yan, chief executive officer of Clobotics. "Our investors have a reputation for spotting and investing in

successful international technology companies, and we are pleased they recognize this potential in Clobotics."

With dual headquarters in the U.S. and China, Clobotics solutions are fueled by an international research and development team of rare engineering power. The international team benefits from a staff in which a quarter hold a Doctorate degree and from world-renowned experts in artificial intelligence, machine learning, and computer vision that serve as technical advisers. As a direct result of this expertise, Clobotics has filed more than 30 patents to-date.

MORE INFO www.clobotics.com

INNOVATION

Kinewell Energy launches licensed version of its software

Kinewell Energy recently launched a licensed version of its inter-array layout optimization software KLOC.

The KLOC software was initially released as a consultancy tool for Kinewell Energy in 2015 after two years of research and development. Using KLOC, Kinewell Energy has since delivered numerous high profile projects adding significant value to clients. In a case study of the Gwynt-y-mor offshore windfarm, the software was able to realize savings of £2.2 million, or 3 percent of the installed cable cost. The KLOC software was highly commended at the IET Innovation Awards in 2016.

"We have developed our world leading inter-array cable layout optimization solution into a licensed product following requests from clients," said Kinewell Energy Managing Director Andrew Jenkins. "This enables clients to harness the power of the KLOC software in-house. We are thankful to the recently launched £30 million National Innovation Centre for Data (NICD) hosted at Newcastle University for their support during this development."

The KLOC software rapidly designs an economically optimized inter-array cable layout design for an offshore wind farm based on the locational and cost data it is presented with. The software appropriately prioritizes the optimization of capital cost against operational costs such as electrical distribution losses and unavailability losses due to cable faults.



The KLOC software rapidly designs an economically optimized inter-array cable layout design for an offshore wind farm based on the locational and cost data it is presented with. (Courtesy: Kinewell)

In addition to the value generated through a single run of the KLOC optimization engine, further value can be achieved by using the multi-run functionality that is only possible due to the software's incredible speed. A multi-run can determine cost sensitivities using automated incremental changes to input data on each run. For example, KLOC can model numerous alternative substation lo-

cations around the development area, developing an optimized inter-array layout at each location. In this way, the locations of the substations themselves can be optimized.

Similarly, any input data can be varied and thus KLOC can determine the cost sensitivities of using different turbine types, different sets of cable types, operating voltage, the cost of capital, and different installation methodologies in each area of the development site, amongst others.

“Prior to the availability of the KLOC software, such optimized inter-array cost sensitivity analysis was not possible due to the prohibitive time and cost of undertaking such a calculation,” Andrews said.

Although the KLOC software has been developed around offshore wind, it has numerous other applications. It can be used to optimize the inter-array layout of connecting any number of nodes with a central location.

This means that it is immediately transferable to large onshore wind, large solar, wave, and tidal energy projects. Additionally, it could also be used for array cables that supply (rather than receive) energy to those nodes, such as the electrical pump demand in oil and gas projects.

Furthermore, it could be used to optimize the pipelines that link those oil and gas wells to a central processing facility of the product.

MORE INFO www.kinewell.co.uk

INNOVATION

More complex turbine technology will challenge O&M teams

Larger and more efficient turbine technologies will be the key driver in reducing the wind industry’s leveled cost of energy (LCOE) and ensuring it remains competitive with other energy sources. This is according to some 81 percent of the

asset and operations managers who attended ONYX InSight’s European Wind Turbine Technical Symposium June 19-20.

However, 79 percent of delegates also cited a need for higher-quality data to improve the reliability of their organization’s assets, in addition to discussing the role of asset monitoring, early failure detection and advanced maintenance sched-

uling in increasing the efficiency of turbine fleets.

ONYX InSight, a joint venture between Romax Technology and Castrol, is a leading predictive analytics partner for wind-asset owners and operators worldwide. Through the use of physics-based and data-driven predictive analytics, it allows wind operators better control and reduced costs in their operations.

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Hari Prakash M, CEO of GP Petroleums Limited and Mahmoud Al Theraawi, CEO of MAG Lube. (Courtesy: GP Petroleums Limited)

Evgenia Golyshева, head of Consultancy at ONYX InSight, warned against focusing cost-cutting and efficiencies too tightly on operations budgets if the industry is to get the best from new, larger, but more complex turbine technologies:

“A new generation of larger, more advanced turbines will mean more complex machinery, operating in harsher operating conditions around the world,” she said. “But it’s a mistake to think that all of these new technologies will be more reliable than their predecessors thanks to lessons learned from older designs, or that operating costs will reduce naturally as the industry matures without increased understanding and streamlining of operations and maintenance processes.”

Golyshева was speaking to more than 50 wind asset and operations managers at the symposium at the

University of Nottingham Innovation Park. Discussions focused on the latest trends and challenges in wind-farm operations and lifetime extension, with presentations and a panel discussion highlighting the relationship between optimized practices, understanding the root causes of failures, and asset value.

“The complexity of new, larger turbine designs, combined with an increasingly short design and prototype stage and challenges to the supply chain, means that an optimized approach to operations and maintenance is required to ensure technicians can meet the challenges presented by new failure modes,” Golyshева said.

Attendees at the symposium agreed on the importance of being able to accurately predict when a gearbox component might fail, and of securing longer lead times to allow

for proactive repair or replacement. Equally, more than half of those present said they thought owners and operators were failing to take advantage of the turbine data already available to them, either through lack of access or an inability to integrate the data into their organization.

However, they also pointed to the significant advantages such data provides when used effectively. Eight in 10 said they used data for failure detection and prediction, with a similar number using it to better analyze performance — acknowledging the role turbine life extension has to play in improving long-term financial returns.

“The symposium proved an excellent forum to share the thoughts and experiences of the wind industry’s leading asset and operations managers and get their views on how the operational challenges they face can

best be addressed,” said Bruce Hall, CEO of ONYX InSight. “It’s clear that smarter, data-driven approaches to operational decisions will be crucial to extending asset lifetimes, reducing the LCOE and getting the most from the new turbine technologies that will come online over the next few years.”

ONYX InSight’s next Technical Symposium will be in Denver, Colorado, September 18-19.

MORE INFO onyxinsight.com

▀ **MAINTENANCE**
IPOL Lubricants goes global

GP Petroleum Ltd (GPPL), a leading lubricant maker in India and part of UAE-based GP Global, recently signed an agreement with MAG Lube LLC, a leading manufacturer of lubricants in the Middle East, to manufacture and market IPOL lubricants across the world.

According to the agreement, MAG Lube will pay a royalty to GPPL for the formulation technology and brand. The high quality of IPOL lubricants will be maintained across the world in accordance with the quality standards stipulated by GPPL for IPOL.

“The consolidation of lubricant brands around the world is seen as an opportunity to grow and GP Petroleum with its brand IPOL, is well positioned to fill the space for affordable and high quality products in emerging markets,” said Hari Prakash M, CEO at GP Petroleum Ltd. “We will bridge the gap between customer quality expectations and affordability due to our strength in low cost manufacturing. Our objective behind this step is to utilize the expertise of MAG Lube and their distribution to push the IPOL brand across the world, particularly in the Middle East and Africa.”

“In a short time span, MAG Lube is present in over 50 countries, and we are looking to leverage this presence

to take IPOL global, and in the process create a new global brand,” said Sanjay Singh, COO at Maglube, UAE. “GP Global has ambitions to become a 250,000 MTPA lubricant company by 2021, and this agreement is the first and most vital cog in our efforts to achieve our shareholders vision.”

“We are sure that our expertise and widespread presence in various countries along with GP Petroleum,

veterans in the lubricant sector, will result in a great partnership,” said Mahmoud Al Theraawi, CEO at Maglube LLC. “We are happy to be a catalyst and part of IPOL’s journey towards becoming an international brand.”

The current focus will be in the Middle East, Africa, and Far East markets mainly in the automotive and industrial lubricant space. Specialty products such as neat cutting oils

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