

DIRECTION

THE FUTURE OF WIND



PDE Offshore Corporation has upgraded its underwater acoustic positioning system onboard MV Geo Energy to Sonardyne's Ranger 2 USBL system. (Courtesy: Sonardyne)

PDE Offshore Corporation upgrades underwater acoustic positioning system

PDE Offshore Corporation, a Taiwanese offshore geophysical and geotechnical investigation company, has upgraded its underwater acoustic positioning system onboard MV Geo Energy to Sonardyne's Ranger 2 USBL system. This will further enhance its capability in the exploration of offshore renewable energy (ORE) in Taiwan.

Its new geotechnical vessel Geo Power, also equipped with Ranger 2 USBL system, is now under conversion work and will join the fleet in mid-2024. It will provide both seabed and downhole cone penetration testing services.

PDE Offshore has been conducting geotechnical and soil investigation in the shallow waters of the Taiwanese Strait since 2017 as the country looks to replace its coal-based energy with cleaner, sustainable alternatives such as offshore wind farms.

Working with most of the world's leading ORE developers, PDE Offshore wants to increase its capability. This required a trusted and proven USBL positioning system for its Geo technical vessel to work in greater water depths and challenging water conditions as their operations expanded.

Having already successfully used Sonardyne's Mini Ranger 2 for several years, investing in the full Ranger 2 system was a logical choice to provide the reliable dynamic positioning references essential for their operations, while also giving the capability for operating in greater depths and more challenging conditions.

Incorporating more than 30 years of USBL knowledge, Sonardyne's Ranger 2 system is anything but standard. It can be used to track anything, in any depth, from any vessel.

It can track a subsea asset, position or communicate with an underwater vehicle, dynamically position your vessel – or do all of this simultaneously. It can be used for both survey and construction phases of ORE and supports complex tracking scenarios such as

structures and vehicles with multiple transponders and multiple remote offsets.

“We have been working with Sonardyne since 2017 using their Mini Ranger 2 system,” said Huang Hsin-chih, PDE Offshore president. “The system is proven, reliable, and our engineers are familiar with its operation. It was a simple and logical choice to go ahead and upgrade to the Ranger 2 system to improve our capability to take on greater projects in the region.”

“Taiwan's ambitions of becoming a green island means it is fast becoming

MyeongRyang Offshore Wind project, a venture led by Pacifico Energy Korea (PEK), subsidiary of American renewable energy developer Pacifico Energy.

The MyeongRyang Offshore Wind project is the first phase of a larger 3.2-GW offshore wind complex off the coast of Jindo-gun, Jeollanam-do, in South Korea. The MyeongRyang Offshore Wind project involves the construction of a fixed offshore wind farm with an installed generation capacity of approximately 420 MW. Set to commence construction in 2028, the wind farm is poised to play a pivotal role in



K2M will provide pre-construction analysis and technical support on the first 420-MW phase of the offshore wind complex in South Korea. (Courtesy: K2 Management)

ing a leading player offshore wind in Asia Pacific,” said Dan Tan, Sonardyne in Singapore regional sales manager. “We're pleased to be a part this energy transition through PDE Offshore's continued confidence and investment in our products. We look forward to supporting them in their future operations.”

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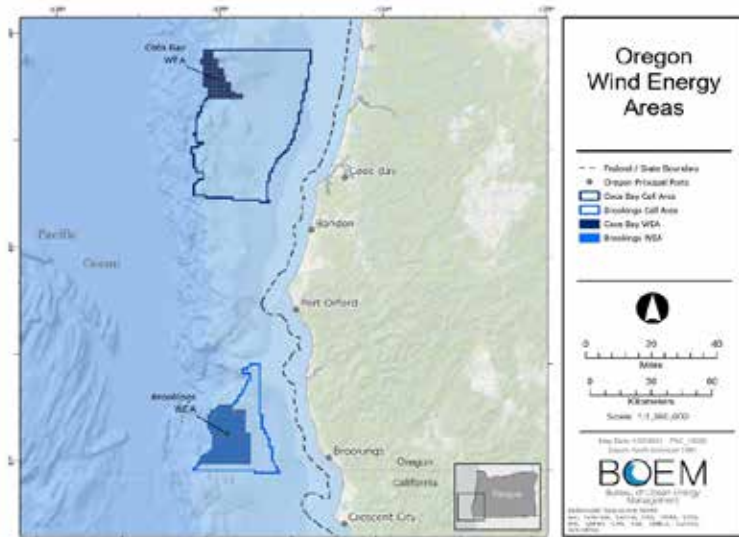
Pacifico Energy Korea appoints K2M as owner's engineer

K2 Management (K2M), an energy transition project management and engineering consultancy, has been selected as the Owner's Engineer for the

South Korea's target of installing 14.3 GW of offshore wind by 2030.

K2 Management's role as Owner's Engineer for the MyeongRyang Offshore Wind project encompasses support in overall project management. This includes conducting wind analysis, met-ocean studies, conceptual designs, and preparing and selecting contractors for site investigation. K2M will continue to offer technical support throughout the site investigation process, as well as assistance in obtaining permits. Work began in December 2023, and K2M is expected to be actively involved until 2025.

“South Korea continues to build a strong offshore wind market, and the recent auctions last year are a positive reflection of the nation's goals,” said Jake Jung, K2's country director for



The two Oregon WEAs total about 195,012 acres. (Courtesy: BOEM)

South Korea. “We are incredibly proud to be able to contribute to that growth by supporting PEK in the first phase of their major 3.2-GW wind complex, a project that will play a crucial role in helping the country decarbonize. By leveraging our international consultants, local expertise and collaborating closely with PEK’s team, we are well-positioned to ensure the successful development of this project.”

“The MyeongRyang Offshore Wind project is a significant development that demonstrates the vast potential of offshore wind power in South Korea,” said Seoung-Ho Choe, representative director/CEO of PEK. “This marks our inaugural venture into offshore wind in the country, and one of the largest offshore wind projects in Korea, and we’re excited to initiate the first phase of this project. Drawing upon K2 Management’s expertise and extensive experience in global offshore wind projects, we are confident in ensuring its success.”

MORE INFO www.k2management.com

BOEM designates two wind-energy areas in Oregon

In support of the Biden-Harris admin-

istration’s goals for deploying 30 GW of offshore wind energy capacity by 2030 and 15 GW of floating offshore wind energy capacity by 2035, the Bureau of Ocean Energy Management has announced the designation of two final Wind Energy Areas (WEAs) offshore Oregon. The WEAs were developed following extensive engagement and feedback from the state, Tribes, local residents, ocean users, federal government partners, and other members of the public. The final WEAs are based on reducing potential conflicts of ocean users, particularly on commercial fishing.

The two WEAs total about 195,012 acres, and they avoid 98 percent of the areas recommended for exclusion due to their importance as commercial fishing grounds. The Coos Bay WEA is 61,204 acres and is 32 miles from shore. The Brookings WEA is 133,808 acres and is about 18 miles from shore.

“BOEM values its close coordination with the State of Oregon as we continue to work together to maintain a robust and transparent offshore wind planning process,” said BOEM Director Elizabeth Klein. “We will continue to work closely with Tribal governments, federal and state government agencies, ocean users, coastal communities and all interested stakeholders as we move

forward with our environmental review.”

BOEM’s Federal Register notice will initiate a 30-day public comment period. Another public comment period would occur if BOEM decides to move forward with a lease sale in either of the WEAs.

In addition to engaging with the State, Tribes, coastal communities and ocean users, BOEM partnered with the National Oceanic and Atmospheric Administration’s National Centers for Coastal Ocean Science (NCCOS) to assess opportunities for wind-energy development and reduce or avoid impacts on other important ocean uses in Oregon. The agencies developed a comprehensive, ecosystem-based ocean planning model that leverages the best available data on natural resources, ocean industries such as fisheries and energy production, and areas of national security activities to identify areas with high wind-energy resource potential and fewer potential impacts to other ocean users and sensitive environmental resources. This approach provided valuable insights about the seascape and its uses and facilitated greater transparency and positive coordination with government partners and ocean stakeholders through direct engagement and incorporation of their feedback into the NCCOS model.

Since the start of the Biden administration, the Department of the Interior has approved the nation’s first six commercial-scale offshore wind energy projects. BOEM has held four offshore wind lease auctions, which have brought in almost \$5.5 billion in high bids, including a sale offshore New York and New Jersey and the first sales offshore the Pacific and Gulf of Mexico coasts. BOEM is exploring opportunities for offshore wind energy development in the U.S., including in the Gulf of Maine and the U.S. Central Atlantic coast. The Department also continues to take steps to evolve its approach to offshore wind to drive towards union-built projects and a domestic-based supply chain.

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"The latest revision of DNV-ST-N001 further reinforces its position as the de-facto standard used to safely undertake marine operations all over the world," said Lucy Craig, DNV's director of growth, innovation and digitalization, energy systems. (Courtesy: DNV)

DNV revises marine operations standard

DNV, the independent energy expert and assurance provider, has published a substantial revision to DNV-ST-N001, for the design and planning of marine operations for the transport, installation, and removal of offshore wind farms, subsea cables, and oil and gas assets.

The major changes reflect the changing nature of the offshore industry in line with its support of the energy transition, ensuring that the standard remains relevant and supports the development of cost-effective marine operations during a fast-evolving energy transition. DNV estimates that offshore wind will rise globally from 8 percent of total wind production in 2020 to 34 percent in 2050, totaling almost 2,000 GW.

Through continuous engagement with industry, DNV-ST-N001 has been regularly updated and enhanced since it was created in 2016. This revision follows an external hearing exercise, during which more than 400 comments from the industry were received, of which more than 350 were technical in nature. The standard first came

about after DNV and Noble Denton legacy standards from the 1970s and '80s were combined into one substantial and comprehensive document.

The standard can be applied to all marine operations and all key engineering requirements relevant to load-out, construction afloat, voyages, and installation, as well as the loads that should be addressed in the design of these marine operations. It also lays out the requirements from the perspective of the marine warranty surveyor, who reviews the marine operations.

"Following a high level of engagement from the industry, the latest revision of DNV-ST-N001 further reinforces its position as the de-facto standard used to safely undertake marine operations all over the world providing the needed assurance in the implementation of the energy transition," said Lucy Craig, DNV's director of growth, innovation and digitalization, energy systems. "Since the standard was first established, it has been vital that it has

remained at the forefront of changes to the industry, and these updates will ensure that our customers continue to receive the highest possible standard of assurance."

Industry engagement drove DNV to update a body of work that spans almost 800 pages, with collaboration spanning across the organization's global network of marine operations and marine warranty survey experts, working in DNV's Noble Denton marine services area.

"It was particularly encouraging to note the number of industry comments stemming from developers and contractors engaged in offshore wind-farm construction activities, which demonstrates the importance of the standard to the industry and also influenced updates to numerous areas of the standard," said Ankor Raithatha, DNV's global service area leader for Noble Denton. ↵

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