

The future of Ocean Energy

Bluewater

Bluewater Energy Services B.V designs and delivers, leases and operates FPSO and SPM systems. Peter Burger is Vice President Technology, Bluewater Energy Services.

What is your view on developments in the offshore energy market?

Peter: "We believe that offshore production of oil and gas will continue for decades to come so innovation to neutralise the impact to the environment will be needed. Sustainability will drive the offshore

"Mix of renewable energy and fossil sources is needed"

industry to contribute noticeably to the energy transition, whilst global energy demand will (return and) keep rising on the horizon. A mix of renewable energy and fossil sources is needed in the next 30 years with gas as the transition fuel. Having said that, global LNG production volumes may well reach record-breaking proportions in the next decades and this requires new sustainable infrastructure for overseas transportation. This may also become the stepping-stone for the next step: transport of hydrogen."

Can you give some examples of innovation?

Peter: "Recently Bluewater's FPSO Aoka Mizu was upgraded for deployment West of Shetlands. Sophisticated monitoring sensors



and cameras were added as part of our digital twin programme, which also involves the turret and hull. The knowledge gained from this project provides operational benefits and stimulates developments in artificial intelligence.

Bluewater leads a consortium that is developing a floating Tension Leg Platform as a foundation for offshore wind turbines. This development is the most attractive economically and technically feasible in harsh environments, with water depths from say 60 metres onwards and enables the use of turbines of 12 MW and beyond.

In response to the growth of LNG, Bluewater provides novel, LNG offshore (off) loading terminals as an alternative to jetties and costly breakwaters. The LNG Cryogenic Loading Tower is based on Bluewater's remotely operated and field-proven Advanced Loading Towers that operate in ice-covered Arctic waters.

These are just a few examples next to ongoing evolutions, like the redundant bearing system forming part of the Turret

Mooring System of an FPSO, now being fully replaceable in the field without disconnecting, nor requiring prolonged heading control until repair."

What is Bluewater's view on the energy transition and role of FPSOs?

Peter: "It is our belief and commitment that offshore production of oil and gas will continue for decades to come. Redeployment of available FPSOs means reuse of resources with a proven, safe performance, complemented with newbuilds to respond to the growth market of FPSOs.

Novel solutions will further reduce emissions and waste, while renewables become increasingly important, one of the more important ones being 'floating' wind. Digitalisation will contribute to operational excellence and feeds real-life data to analysts and engineers. We are also taking an interest in the generation of hydrogen offshore and the import of green HVDC power into a turret-moored FPSO." □

www.bluewater.com

