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Opinion Piece

How Will Offshore Wind's Surge Transform Vessel Utilisation and PPE Strategies?

Unlocking Opportunities in Vessel Utilisation and PPE Management Amidst Exponential Growth

Exponential Growth

The offshore wind market is experiencing rapid growth due to the global push for clean energy and ambitious energy targets, such as the European Union's 42.5% renewable energy consumption goal by 2030 (European Commission, 2022). In 2023, 54 countries added new wind power installations, with Africa and the Middle East achieving a remarkable 182% growth. With governments worldwide aiming to reduce carbon emissions and move away from fossil fuels, offshore wind energy plays a crucial role in this energy transition.

Despite the installation of 18.3 GW of new wind capacity in Europe, more progress is needed to meet the 2030 climate goals. Offshore wind accounts for 79% of this growth, particularly in countries like Germany and the Netherlands (Wind Europe, 2024). Globally, a record 117 GW of new wind energy was installed in 2023, setting the stage for an expanded infrastructure in offshore wind farms (Joyce Lee, 2024).

> **GWEC's rolling ten year outlook to 2033 shows that, with the right frameworks in place, the world can be on course to deploy 410 GW by 2033**

The Role of Crew Transfer Vessels (CTVs) and Commissioning Service Operation Vessels (C)SOVs

The growth of offshore wind is increasing the demand for essential vessels like Crew Transfer Vessels (CTVs), Commissioning Service Operation Vessels (C)SOVs, and Wind Installation Vessels (WIVs). These vessels are crucial for transporting engineers, technicians, and workers to offshore wind farms for installation, commissioning, and maintenance. By January 2023, there were 393 CTVs, and the goal is to grow this fleet by 82% by 2032, with 40 CTVs already under construction for the European market. (Snyder, 2023)

(C)SOVs offer several advantages for offshore wind operations:

Improved Access to Offshore Wind Farms

(C)SOVs are specifically designed for safe access in challenging weather, thanks to dynamic positioning systems. This ensures efficient transfers of crew and equipment next to wind turbines, even in rough seas.

Increased Efficiency in Maintenance and Operations

These vessels serve as offshore bases, allowing technicians to be deployed quickly to turbines, reducing downtime and ensuring continuous operations.

Onboard Accommodation and Facilities

Equipped with living quarters and amenities, (C)SOVs allow technicians to stay at sea for extended periods, enhancing productivity and reducing fatigue.

Cost Efficiency

By staying offshore, (C)SOVs eliminate the need for daily shore trips, reducing weather-related delays and costs.

Reduced Weather Downtime

Having (C)SOVs stationed near wind farms enables technicians to respond faster to maintenance needs, minimizing downtime caused by weather.

Support for Installation and Commissioning

During turbine installation, (C)SOVs provide technicians with proximity to the worksite, enhancing logistical support and reducing setup time.

Environmental Impact

Many (C)SOVs use hybrid propulsion systems, reducing fuel consumption and emissions, while acting as centralized hubs to limit trips between shore and offshore sites.

Long-Term Flexibility

These vessels can be adapted for various operational phases, from maintenance to decommissioning, offering flexibility throughout the wind farm's lifecycle.

Logistical Support

(C)SOVs carry essential tools, spare parts, and equipment, ensuring immediate response to repair needs without waiting for shore deliveries.

Job Creation and the Impact on PPE Demand

The rapid expansion of the offshore wind industry is expected to generate a significant number of jobs, particularly in roles related to the operation of CTVs, (C)SOV and offshore installations. By 2030, the wind energy workforce in Europe is projected to burgeon to an impressive 510,000 individuals, a significant jump from the current 300,000 (Bulski, 2024).

The number of new wind technicians is expected to increase by 48,800 on average per year until 2027.

These jobs will cover a broad spectrum, including technicians, maritime crews, health and safety officers, and maintenance workers. This growth is only just a small percentage of the global capacity opportunities, especially with the likes of Brazil, China and the USA continuously ramping up.

Consequently, the number of wind technicians that will require industry training will increase 17% from 489,600 in 2022 to 574,200 in 2027. More than 80% of these technicians will be required in 10 countries: Australia, Brazil, China, Colombia, Egypt, India, Japan, Kenya, South Korea and USA (Global Wind Organisation, 2023).

Technicians working on /accessing a (C)SOV Commissioning Service Operation Vessel), as well as those conducting operations at offshore wind farms, are required to wear Personal Protective Equipment (PPE) in various scenarios to ensure their safety. Offshore wind work is conducted in highly hazardous environments, often in unpredictable weather conditions.

Workers need to be outfitted with Survival Technology that ensures their safety in the harsh marine environment, including lifejackets, work and survival suits, helmets, harnesses, and specialised equipment. The increasing scale of the industry presents an escalating demand for not just standard PPE, but high-grade, certified equipment that adheres to stringent safety regulations.

The Resource Drain of PPE Management

However, managing PPE for an ever-growing workforce presents logistical challenges. Companies must ensure compliance with safety standards, track equipment lifecycle, and maintain regular servicing to avoid wear and tear. The average PPE package costs €3,300 per crew member, and managing this across large-scale operations requires sophisticated solutions. Non-compliance could lead to safety risks, operational delays, and financial penalties.

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The Need for a Survival Technology Partner

The industry's rapid expansion highlights the need for a reliable Survival Technology partner to provide scalable PPE solutions. Companies must streamline their procurement and management processes to keep up with the industry's demands, and having a partner capable of delivering high-quality, compliant PPE is crucial. Survitec HeliPPE, for example, offers tailored PPE packages for Crew transfers, ensuring compliance with European and American safety standards.

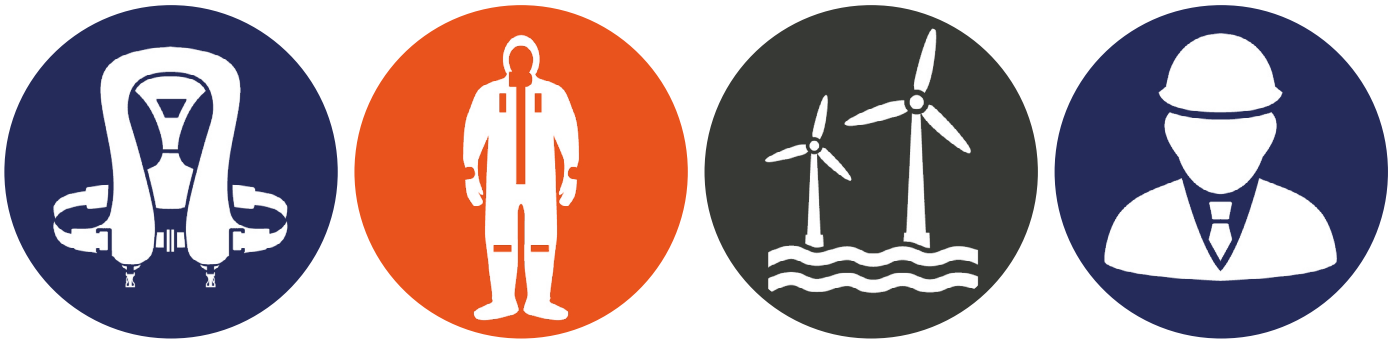
With more frequent transfers, the need for adaptable PPE solutions increases, and a trusted partner can ensure timely delivery, asset management, and compliance. Their solutions are designed to handle the complexities of scaling PPE management as the offshore wind industry grows.

Survitec HeliPPE: Meeting the Industry's Growing Demands

Survitec HeliPPE recognises the unique challenges posed by the rapid growth of the offshore wind market, particularly regarding the safety and protection of workers in transit. As a leader in survival technology and personal protective equipment, we are focused on meeting these growing demands by providing tailored solutions that match the speed of the industry's expansion.

With a range of comprehensive PPE packages specifically designed for Crew transfers, Survitec HeliPPE ensures that all safety solutions are readily available, fully compliant, and efficiently serviced to keep pace with industry demands. Whether it is sourcing the latest in protective gear, ensuring compliance with European safety standards and American ANSI standards, or providing servicing and asset management solutions, we have developed an array of service packages to meet the full spectrum of offshore PPE requirements.

By offering these scalable solutions, we are positioning ourselves as a vital partner to the offshore wind industry, helping to ensure that safety remains a top priority as the sector continues to grow. In a market where timing, compliance, and worker safety are critical, you need to stand out as a partner that can deliver both the technology and the expertise required to meet the sector's future needs.



Our Summary

The offshore wind market's expansion offers significant opportunities for job creation and meeting clean energy targets. However, this growth brings operational challenges, particularly in PPE management. PPE is essential for technicians working on CTV, (C)SOVs and offshore wind farms to mitigate the risks associated with various operations, including personnel transfers, equipment handling, and working in harsh marine environments. The types of PPE required will vary depending on the specific task and the environment, but safety helmets, life jackets, fall-arrest harnesses, and anti-slip footwear are among the most commonly required items across all access methods.

(C)SOVs and other support vessels are key to ensuring efficient, safe, and cost-effective operations. With a trusted partner like Survitec HeliPPE, companies can meet the industry's growing demands while ensuring worker safety and regulatory compliance.

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