

2021 / Case Study

Wind Farm Exclusion Zone Marked by Sealite Aids to Navigation

Virginia Beach, Virginia, USA



*"We Believe Technology
Improves Navigation."*

“Great service and a really durable product allowed us to deliver an excellent marking solution both on-time and budget for our customer, Dominion Energy.”

Gary Bradford

President,
Cape Henry Launch Services

Product Overview

Application: Offshore Wind Farm

Date: March 2020

Products:

- SL-B1750 Buoy
- SL-B700 Float Collar Buoy
- SL-75 Marine Lantern
3-5NM Self-Contained Solar LED
- SL-60 Marine Lantern
2-3NM Self-Contained Solar LED

Wind Farm Exclusion Zone Marked by Sealite Aids to Navigation

Industries

Offshore Wind Energy,
Marine Construction

Location

Hampton Roads, Virginia
USA

Founded In

1996



Background

Dominion Energy, a large USA energy supplier with 7 million customers across 16 states, recently completed a 12-MW, two turbine, offshore wind energy project. The Coastal Virginia Offshore Wind (CVOW) pilot project is located 27 miles offshore and provides enough safe, clean, reliable, and affordable energy to power up to 3,000 homes. It is the first offshore wind energy project in federal waters, and only the second offshore wind project in the United States.

Challenge

The construction-zone perimeter and cable-laying areas had to be marked with private Aids to Navigation (PATONs/AtoNs). These would help ensure safe operation of nearby service and passenger vessels, allowing construction to proceed safely on schedule. Both the buoys and lanterns had to be made in the USA, and deployed on a strict deadline. Dominion Energy, through its offshore contractor Orsted, contracted with Cape Henry Launch Services to deliver the marking solution.

Solution

Sealite supplied Cape Henry Launch Services, with two different buoys for the CVOW pilot project: SL-B1750 Poseidon and SL-B700 buoys. Also supplied was Sealite's 3-5NM solar, self-contained SL-75 marine lanterns.

Sealite buoys feature large float sections for optimal visibility and stability for coastal and offshore deployment locations. Internal, stainless tie bars connect lift and mooring points for added strength and durability. And since all Sealite buoys are made from lightweight, environmentally friendly polyethylene, they are lightweight and easy to deploy.

The SL-75 solar, self-contained 3-5NM marine lanterns were used to increase buoy visibility at night and in foul weather. The Bluetooth enabled lantern provides remote programming of flash characteristics and intensity from a distance of up to 164 ft/50m. This convenient feature reduces the need to climb the buoy for maintenance, increasing crew safety.

Cape Henry Launch Services used the SL-60 Solar Marine Lanterns on the SL-B700 buoys. With a range of 2-3NM, the SL-60 is ideal for shorter range applications, like the coastal punch-out site where transmission lines meet the water.

Cape Henry Launch Services trained staff and fleet of vessels oversaw the deployment of the private ATONs. Like all Sealite products, the SL-B1750 and SL-B700 buoys fully comply with US Coast Guard regulations and follow International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) standards.



Outcome

The CVOW wind energy pilot project is now fully operational. It is the first wind energy lease that is owned and operated by an electric utility company.

The permitting and subsea work done by Dominion Energy for the CVOW pilot project will help inform their future development efforts for a larger, 2.6 GW, 188-turbine project on an adjacent lease site. The future project is expected to be online in 2026. When completed, it will be the largest offshore wind project in North America. It is expected to create an estimated 1,100 jobs, bring \$210 million in annual economic impact once operational, and power up to 660,000 homes.

With a superior rotational molding manufacturing process and the use of premium materials such as UV resistant polyethylene and closed-cell polyurethane foam filling, the Sealite buoys will be repeatedly used by Cape Henry Launch Services to mark future wind energy and marine construction projects, providing an excellent return on investment.



Contact Us!

Sealite's solutions are easy-to-install and scalable. We have a solution for every budget.



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