A NATIONAL RESOURCE FOR OFFSHORE TESTING AND INNOVATION

Similar to large-scale national testing facilities created to advance American knowledge and innovation, the Ocean Test Bed would advance knowledge of the continental shelf geologic, oceanic, biologic and atmospheric conditions in an area of active development for U.S. offshore wind energy as well as provide public benchmark datasets for testing American innovations in resource characterization. Leveraging these efforts, an offshore extension of the existing Martha’s Vineyard Coastal Observatory (MVCO) would create a multi-purpose reference station supporting long-term monitoring and research relevant not only to the American offshore wind industry and its effective regulation, but also basic and applied ocean and atmospheric sciences.

Southeastern Massachusetts and the New England Shelf showing the MVCO infrastructure locations relative to the RI/MA Wind Energy Areas (WEA). Figure adapted from MassCEC.

Deployed in 2001, the Martha’s Vineyard infrastructure of the MVCO includes underwater nodes and the Air-Sea Interaction Tower (ASIT) 1.5 miles offshore.

Benchmark example: AUV vs. ship surveys for efficient geophysical data collection

ASIT from the waterline.

MVCO infrastructure and proposed Ocean Test Bed and Reference Station locations near the RI/MA WEAs. As shown, the reference station is ~16 km (10 miles) offshore in 30 m of water.