Building Infrastructure for Marine Biodiversity: Learnings from U.S. and EU Deployments

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What Theme Are You Submitting for?: Environmental and Ecosystem Considerations
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ECOncrete nature-inclusive solutions - Marine Mattresses for cable protection and scour protection, Novel Scour Protection solution - are validated to create habitat for biodiversity. The eco-engineered solutions are proven to meet ecological objectives while providing the required infrastructure stabilization.

Case Studies & Learnings

This presentation will showcase case studies of eco-engineered solutions deployed in the U.S. and EU:

- At **Vineyard Wind 1, cable protection mattresses** were installed to stabilize submarine power cables while supporting biodiversity in ecologically sensitive areas, in compliance with federal permitting requirements.
- Our innovative **eco-engineered Scour Protection** solution was deployed offshore Long Island, NY, to assess stability and ecological performance compared to standard materials (in collaboration with Stony Brook University and funded by NYSERDA).
- For the European TSO Red Eléctrica, **tailored cable protection and stabilization** was developed for a rock trench in a protected area, safeguarding a high-voltage interconnector and restoring reef rock habitats.

We will present ecological performance through monitoring protocols and post-deployment biological results, and highlight hydrodynamic stability findings from physical model testing conducted with academic and third parties. By delivering built-in ecological functionality, these solutions meet regulatory environmental mitigation requirements and reduce the need for compensatory offsets.

ECOncrete solutions are manufactured and installed by local supply chains—using regional materials, standard methods, and local labor—ensuring seamless integration into Canada’s OSW development while supporting national economic and workforce goals. ECOncrete offers a replicable, scalable, and regulation-ready approach to advancing Canada’s offshore wind industry in line with evolving environmental and procurement standards.