Learning from the Experts Webinar Series

Emergency Response Planning for Offshore Wind

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February 15, 2023

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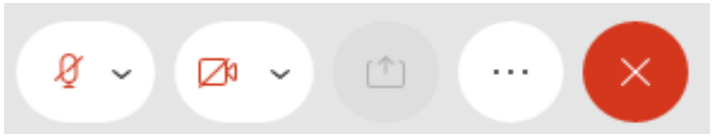

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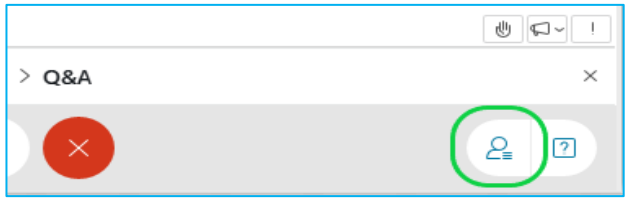

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Learning from the Experts

This webinar series is hosted by NYSERDA's offshore wind team and features experts in offshore wind technologies, development practices, and related research.

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Offshore Wind:

Emergency Response Planning

NYSERDA Offshore Wind Webinars

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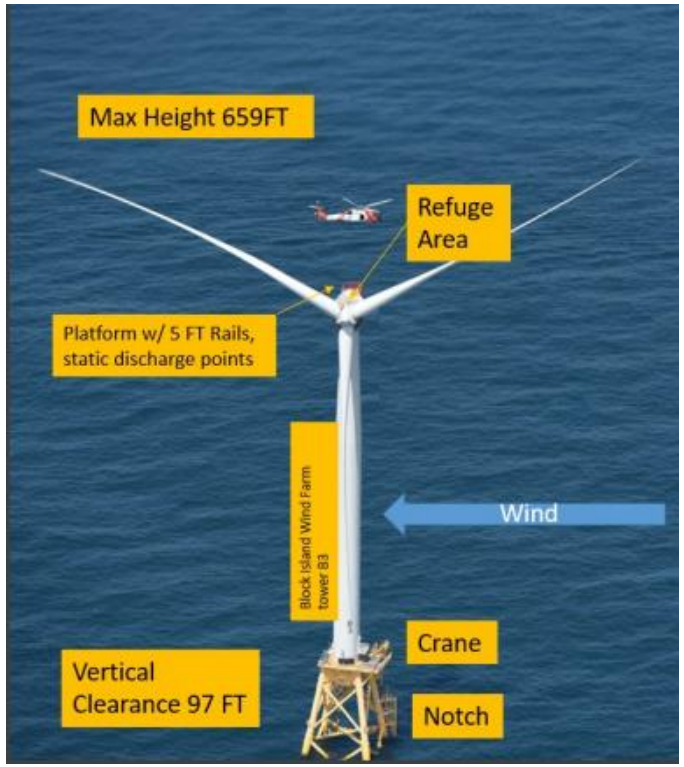
Agenda

- Case Study 1
- Regulations
- Safety Management Systems (SMS)
- Emergency Response Plans (ERP)
- Oil Spill Response Plans (OSRP)
- Planning Considerations
- Case Study 2
- Way ahead

Case Study 1
BIWF & CVOW SAREX



Regulatory Environment

- Current authority for Safety Management Systems and Emergency Response Plans
- Construction and Operations Plans – Terms and Conditions
- New Regulations

COP Terms and Conditions –

South Fork and Vineyard Wind

Section 2.16.

3.1.5. Emergency Response Plan. Prior to construction of the Project, the Lessee must submit an Emergency Response Plan to address non-routine events for review and concurrence by DOI and the Coast Guard. Annually, the Lessee must submit any revisions of the plan for review and concurrence by the Coast Guard. The Lessee must submit to DOI revisions to the Emergency Response Plan accepted by the Coast Guard. The Emergency Response Plan must demonstrate that the control center will be adequately staffed to execute the standard operating procedures, communicate with the Coast Guard, and monitor the Project. The Emergency Response Plan must address the following, which the Lessee may modify with concurrence from the Coast Guard:

3.1.5.1. Standard Operating Procedures. Methods for (1) establishing and testing WTG rotor shutdown and braking; (2) lighting control; (3) notifying the Coast Guard of mariners in distress or potential/actual search and rescue incidents; (4) notifying the Coast Guard of any events or incidents that may impact maritime safety or security; and (5) providing the Coast Guard with environmental data, imagery, communications, and other information pertinent to search and rescue or marine pollution response.

3.1.5.2. Staffing. The number of personnel needed to staff the control center to ensure continuous monitoring of WTG operations and communications and surveillance systems; and establish hours of operation; job qualification requirements; and initial, on-the-job, and refresher training requirements.

3.1.5.3. Communications. Description of the capabilities to be maintained by the control center to communicate with the Coast Guard and mariners within and in the vicinity of the Lease area. Control center communications capability must include, at a minimum, landline and wireless telephone for voice and data. Construction and operations vessel communications capability must include, at a minimum, very high frequency (VHF) marine radio.

Center; and (ii) searching for and locating mariners in distress upon notification of a maritime distress incident.

- The Lessee must test the monitoring systems to ensure functionality on a regular basis as outlined in Lessee's annual inspection plan. The Lessee must submit the results of testing to DOI with the project's annual inspection results.
- The Lessee must contact the Coast Guard immediately if real time monitoring is unavailable for more than 1 hour. The Lessee must put in place alternate plans for monitoring with the agreement of the Coast Guard.
- The Lessee must notify DOI within 24 hours if real time monitoring is/was unavailable for more than 1 hour and any agreed upon alternative monitoring plans in place.

3.1.5.5 Examples of Non-Routine Events: Non-routine events may include, but are not limited to, area oil spills, major storms, marine incidents, mariners taking refuge within and on the facility, and others. The Lessee must consult with the Coast Guard on the events that must be covered within the Emergency Response Plan.

What is considered in an ERP?

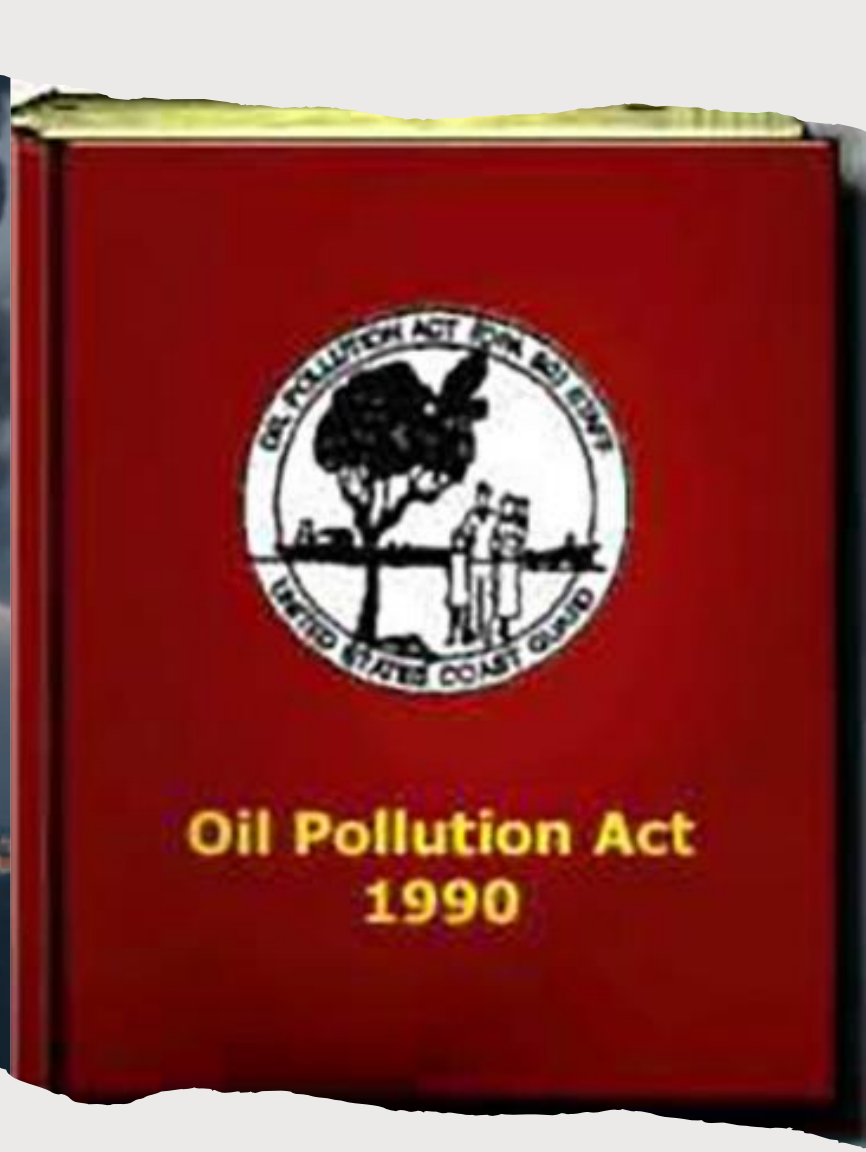
Stretcher casualty on installation
(Applicable to Assets in Construction and Operations)

01

Person	Action
On Installation	• Administer first aid as necessary • Raise the alarm by calling the crew boat on VHF/UHF, stating: - Nature of injuries - Location - Immediate assistance required • Rescue equipment to be transferred from the crew boat to the wind installation • The crew boat to pick up and transfer extra personnel to assist in first aid and stretcher transport • The injured person to be placed on the stretcher/spine board and brought to the platform • The descender to be fastened to the anchor point • The stretcher to be fastened to the descender • All fastenings on the stretcher and on the descender to be given at thorough check • A tag line to be lowered to the crew boat or lifeboat below
Crew boat	• Call USCG via Radio immediately on VHF Ch. 16, (PAN-PAN) • Pass stretcher and descender onto installation • Liaise with rescue assistance to determine further actions • Inform MHCC / Ørsted Onshore Point of Contact of Incident • Collect personnel from other installations if additional hands are required
Other vessels	• Maintain listening watch on VHF and monitor situation • Provide assistance as requested
MHCC / LERT	• Inform USCG if not all ready informed • Ensure arrangements are in place for reception and treatment of casualty • Hand over personal/medical details to emergency services • Ensure that NoK of the casualty has been informed

Installation contingency

Service	Contact	VHF
US Coast Guard	(RCC Boston) 1 617 223 8555	Ch. 16



Oil Spill Response Plan

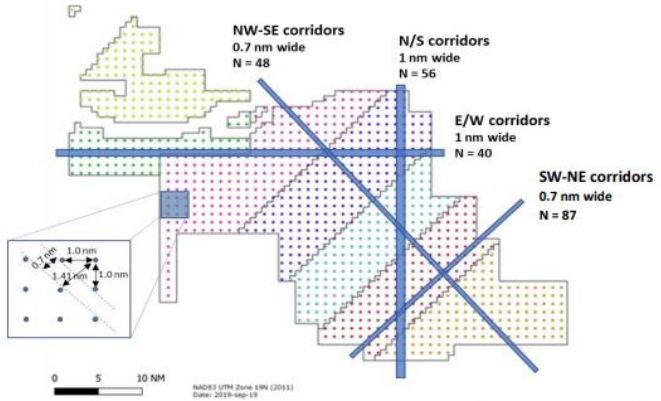


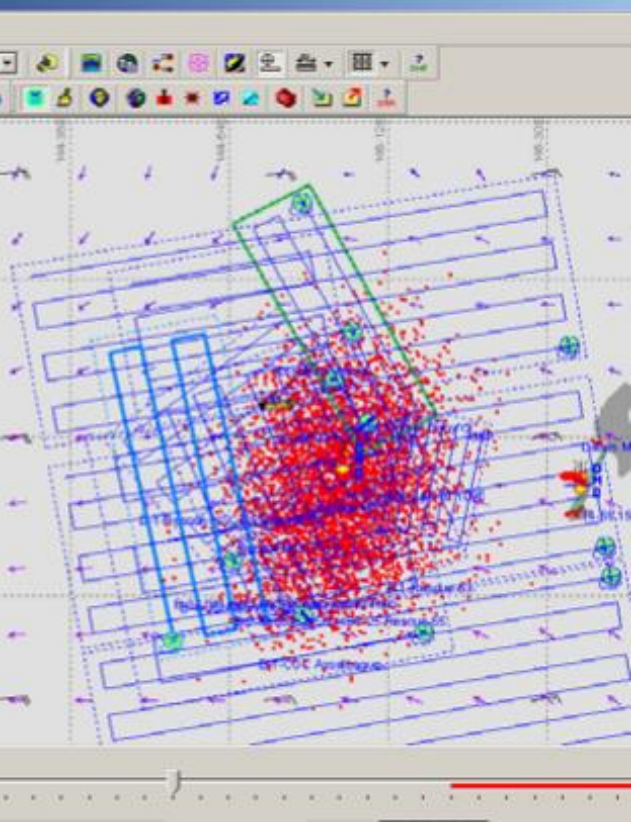
Figure 1: A full 1 X 1 nm E-W, N-S grid creates the equivalent of 231 transit lanes in four different key directions: E-W, NW-SE, N-S and SW-NE.

Other considerations

Emergency Response Planning

Regulated by BSEE

Executed by USCG



Adaptation

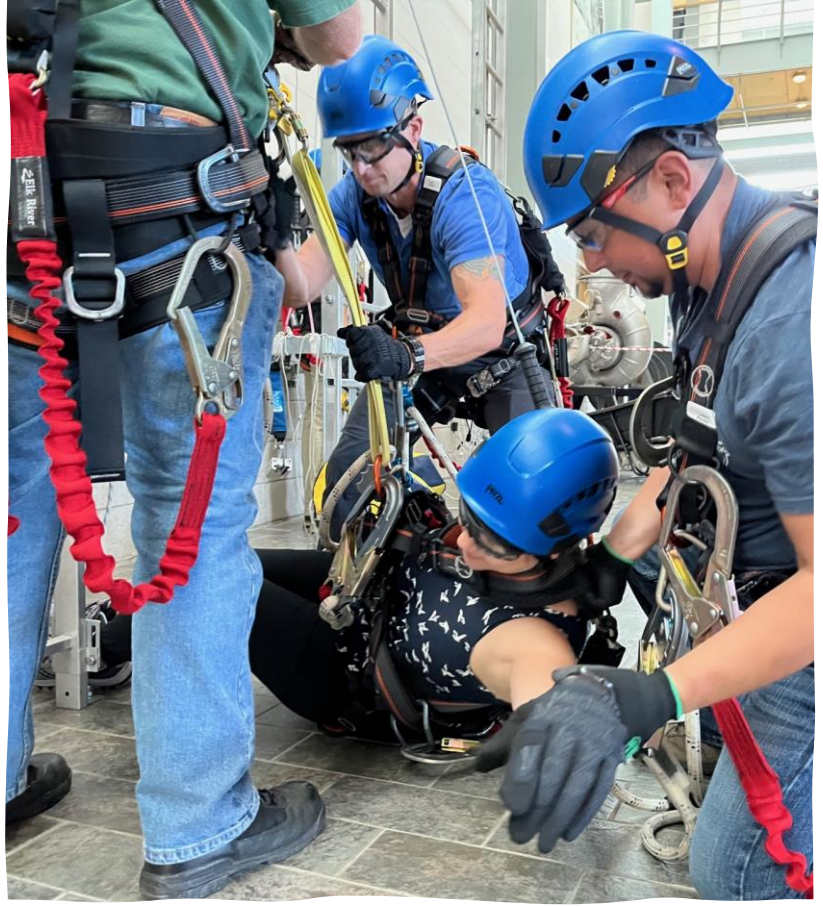
- New environment
- New players
- Risks and Opportunities

How to plan

G+ Global Offshore Wind Health and Safety Organisation 2021 incident data report

Safety statistics for 2021[9]

	2015	2016	2017	2018**	2019	2020	2021
Hours worked*	21,220,000	21,726,000	26,815,000	25,359,000	22,374,000	25,318,000	32,342,000
Fatalities	0	0	0	0	0	0	0
Lost work day injuries	41	43	49	39	62	43	50
Restricted work day injuries	32	35	30	34	23	30	22
Medical treatment injuries	53	42	78	45	38	22	34
Total	126	120	157	118	123	95	106
Total recordable injury rate (TRIR)	5.94	5.52	5.85	4.65	5.50	3.75	3.28
Lost time injury frequency (LTIF)	1.93	1.98	1.83	1.54	2.77	1.70	1.55



Emergency Planning Offshore

Orsted

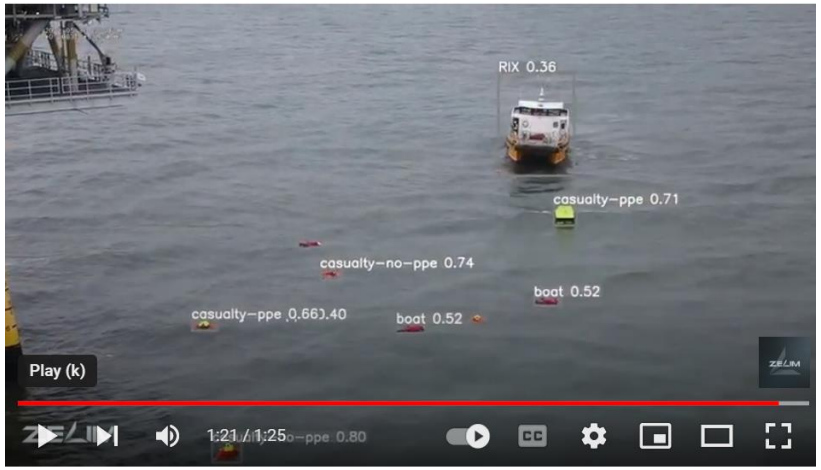
Emergency Response, Inshore

“By failing to prepare, you are preparing to fail.”

- Ben Franklin

Case Study 2

Exercise SANCHO UK MCA



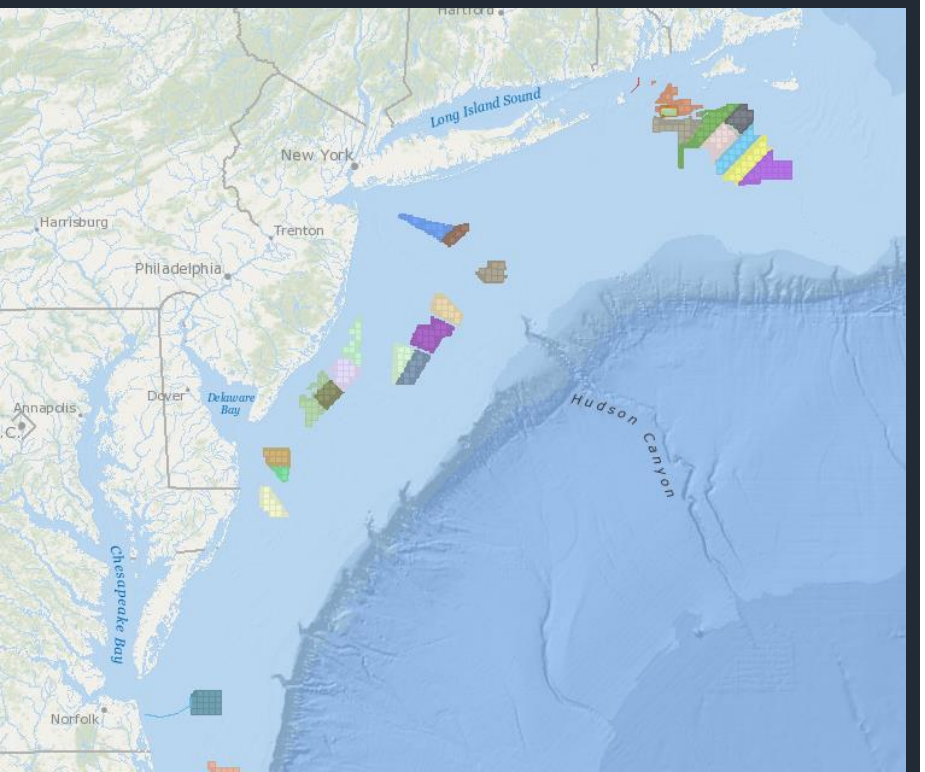
Demonstration of Zelim AI integration using FLIR M364 while supporting UK MCA Exercise Sancho

Good practice 2: the MRCC tasked a windfarm vessel to monitor the protestors at the Triton Knoll site with the instruction to contact MRCC Humber if the situation changed. This action enabled the MRCC to focus on the Race Bank incident as much as possible.

Observation 2: by not querying the available windfarm assets at the start of the exercise, the MRCC limited their situational awareness making the effective coordination of vessels more challenging.

Observation 5: engaging with on scene vessels during the development of search plans can positively support this process and provide reassurance of the plan's suitability.

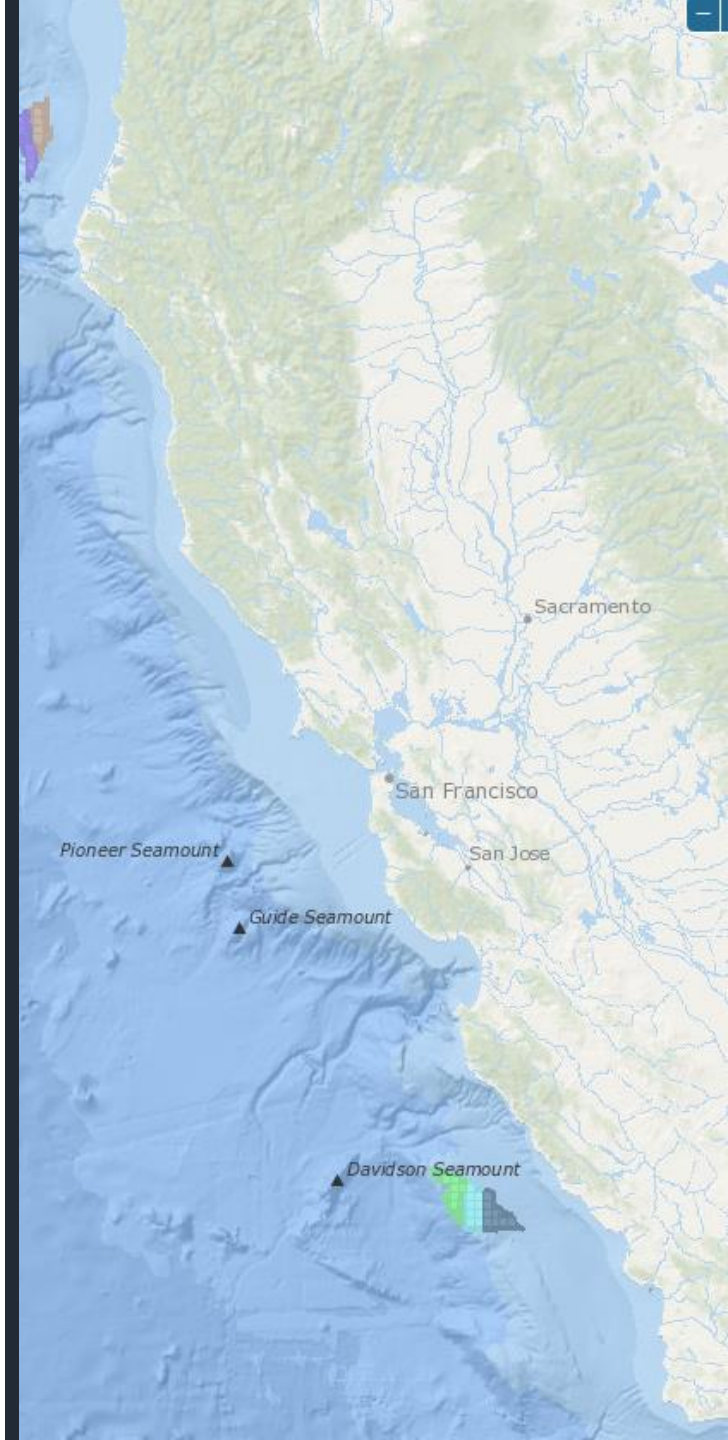
Way ahead



Overarching training strategy

Build capabilities in a learning environment

Collaboration: Offshore SAR task force



Q & A

Coming Soon

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