



Learning from the Experts Webinar Series

# Emergency Response Planning for Offshore Wind



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HSSEQ Director  
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Head of Americas  
G+

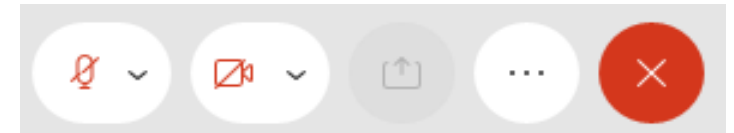
September 7, 2022


# Meeting Procedures

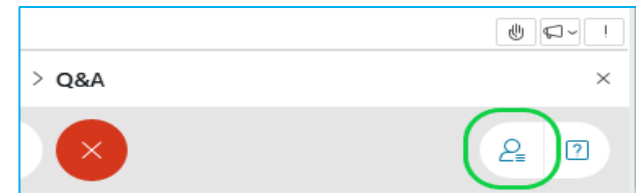
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## Participation for Members of the Public:

- > Members of the public will be muted upon entry.
- > Questions and comments may be submitted in writing through the Q&A feature at any time during the event.
- > If technical problems arise, please contact [michael.armbruster@nyserda.ny.gov](mailto:michael.armbruster@nyserda.ny.gov)



**You'll see  when your microphone is muted**



# 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.

**DISCLAIMER:**

The views and opinions expressed in this presentation are those of the presenter and do not represent the views or opinions of NYSERDA or New York State.




# Working with you to create a safer offshore wind industry.



**Bea Hildenbrand – G+ Head of the Americas**  
Learning from the Experts, a webinar series

September 07, 2022

[www.gplusoffshorewind.com](http://www.gplusoffshorewind.com)

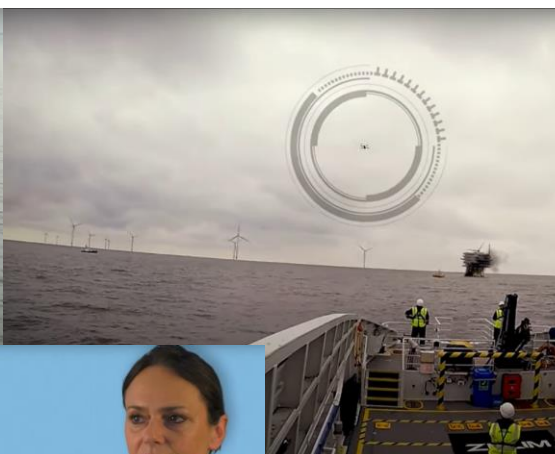
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# TRIEX UK

TRIENNIAL RENEWABLES EXERCISE



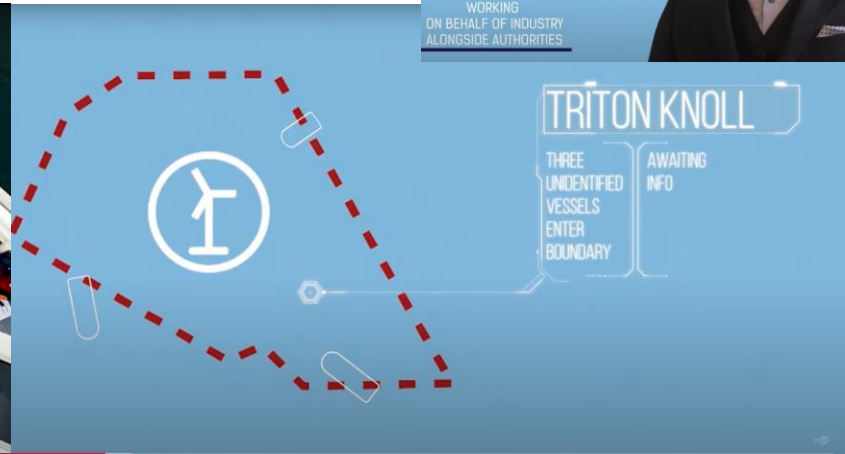
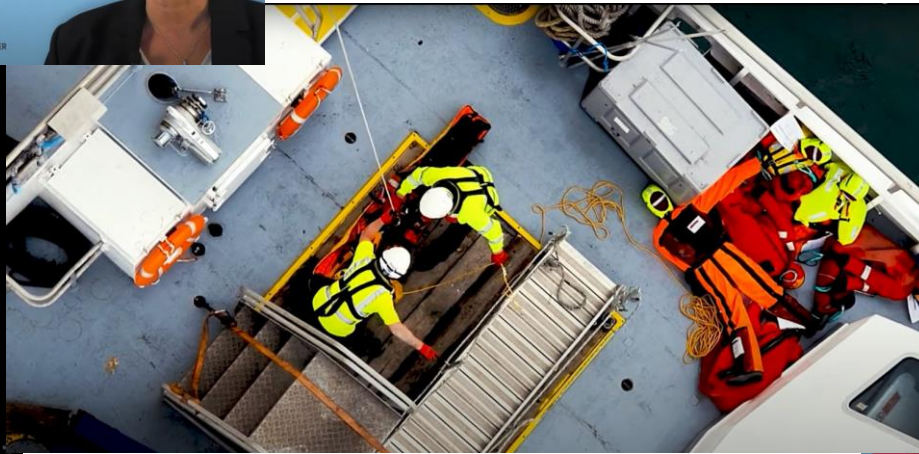
AI ENABLED CASUALTY DETECTION SYSTEMS AUTONOMOUSLY DETECT AND TRACK MULTIPLE PEOPLE IN THE WATER IN REAL TIME



# EX SANCHO

AN EXERCISE IN COLLABORATION

IN ASSOCIATION WITH  
VATTENFALL  
AND  
G+ THE GLOBAL OFFSHORE WIND HEALTH AND SAFETY ORGANISATION



# Why G+?



## A single clear objective

*G+ is helping to create a safer and healthier global offshore wind industry. From the day-to-day health and safety of front-line workers through to ongoing strategic planning and safe operations.*

*Our data led approach helps workers get home safe and well every day.*

# Why G+?



## Collaboration and community

*Our member relationships are central to what we do. Collaboration within our community and shared data contributes to more frontline offshore wind (OSW) workers getting home safely.*

## Getting the right people in the room

*We engage with global stakeholders including developers, regulators, policy makers, grid providers, and contractors to foster a climate of cooperation and mutual understanding.*



# Who are the members of G+?



## Members



## Associate Members





# Why G+?



## Unlocking the power of data

*G+ member data is analysed and shared through four main programmes:*

- ***incident data reporting,***
- ***good practice guidelines,***
- ***safe by design,***
- ***learning from incidents.***

*These programmes give members a holistic view of health and safety performance and measurable proof of improvements and performance.*

# What does G+ produce?



## Incident data reports

- Understanding of offshore wind industry risk profile
- Evidence base to inform interventions
- Accurate assessment of industry H&S performance
- Tool for comparison of H&S performance against other comparable industries



## Good practice guidelines

- Recommendations for procedures, controls, ways of working at offshore wind farms
- Minimum standard expected for meeting industry H&S expectations
- G+ members self check compliance against GPG content
- Referenced in site and company corporate documents



## Safe by Design programme

- Examine the current design controls relating to the topic, discuss where current design has potentially failed, and identify potential opportunities for improvement
- Outputs published and used as a reference by the industry
- Act as a catalyst for further discussion and research within the industry



## Sharing incident learnings

- Incident learnings to be shared through Toolbox
- Toolbox is an EI web-based app
- Is accessible to all, anywhere, any place, any time

<https://toolbox.energyinst.org/>

In partnership with



# G+ H&S incident statistics



Anonymised data reports are produced annually for public distribution

- Published through the Energy Institute
- Reports available at <https://www.gplusoffshorewind.com/>

## 2021 highlights

### 2021 Key facts and figures

#### Key facts

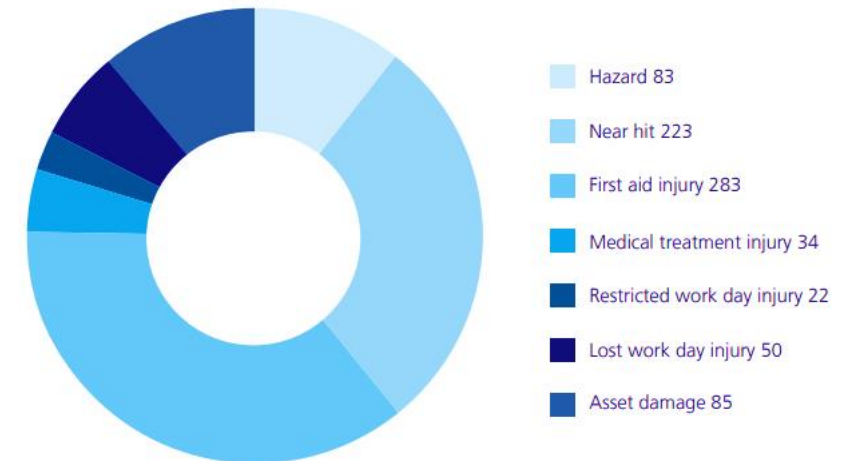
780	reported incidents and injuries <sup>1</sup>
0	<b>fatalities</b>
50	total <b>lost work day</b> injuries
62	incidents resulting in an <b>emergency response or medical evacuation</b>
434	incidents occurred on <b>operational</b> sites <sup>3</sup>
301	incidents occurred on <b>construction</b> sites <sup>5</sup>
44	incidents occurred on <b>development</b> sites <sup>7</sup>

#### Top three work process

98	incidents during <b>lifting operations</b> <sup>2</sup>
74	incidents during <b>manual handling</b>
55	incidents during <b>access/egress</b>

#### Incident areas

289	incidents occurred in a <b>turbine</b> <sup>4</sup>
274	incidents occurred on <b>vessels</b> <sup>6</sup>
150	incidents occurred <b>onshore</b> <sup>8</sup>



2021 incident consequence summary



# G+ H&S incident statistics



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	2015	2016	2017	2018	2019	2020	2021
Hours (millions)	21.2	21.7	26.8	25.4	22.4	25.3	32.3
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
ER or Medical Evacuation	(14)	(10)	(23)	(28)	(29)	(12)	(49)
Total	126	120	157	118	123	95	106

# G+ H&S incident statistics



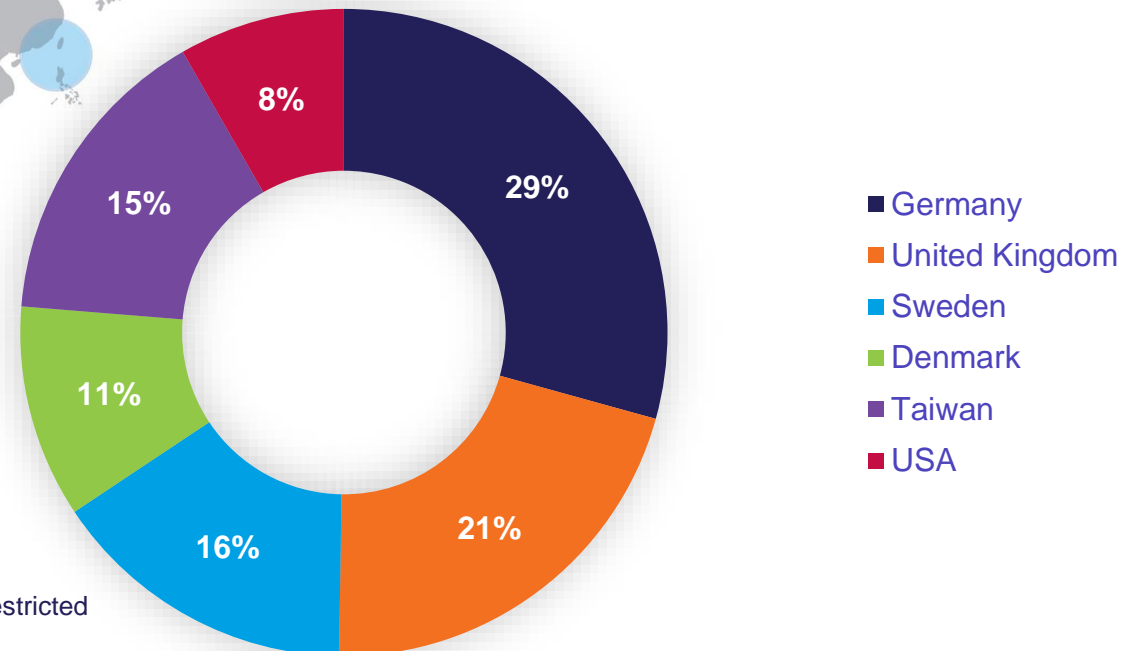
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● represents areas where G+ members have development, project or operation sites present

Percentage of ERME recordable injuries reported 2015 - 2021



**Recordable injuries:** fatalities + lost workday injuries + restricted workday injuries + medical treatment injuries

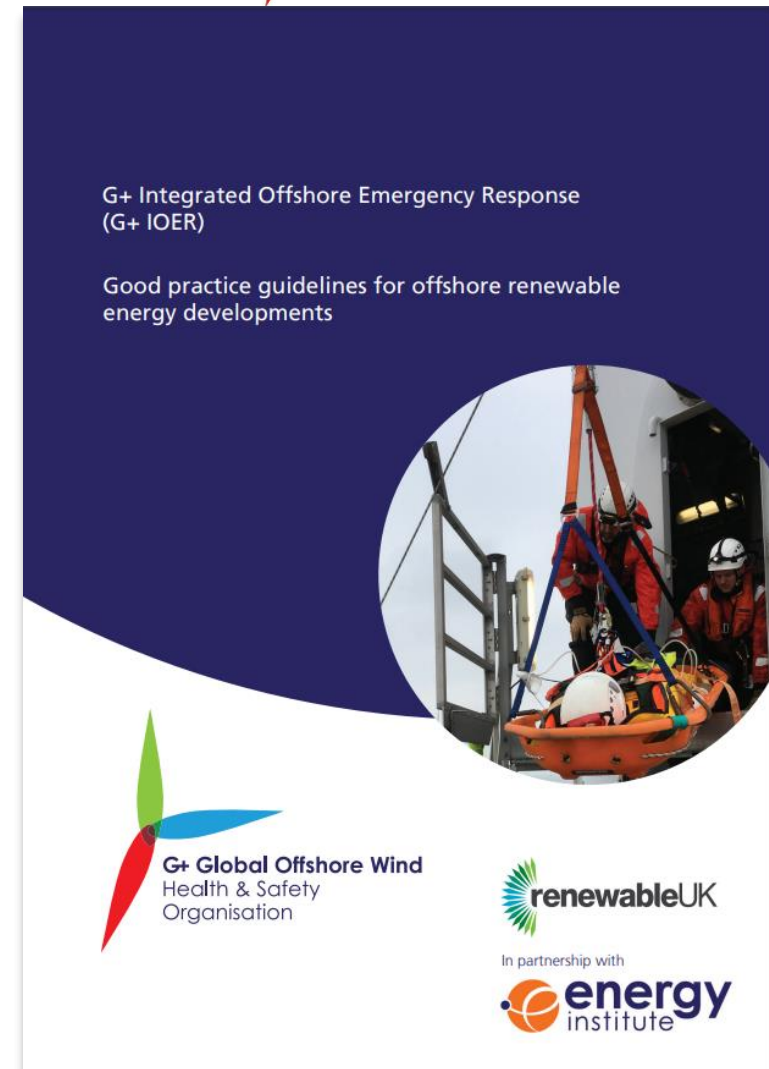
# G+ Industry good practice guidance

In 2019, G+ published its **Good practice guidance on integrated offshore emergency response (IOER)**.

G+ is in the process of revising this document to review the global guidance and develop appendices for APAC and the US.

This will supplement the existing guidance by providing information on region/country-specific frameworks for emergency response.

The guidance provides guidance on Emergency Response Plans. These were tested by Exercise Sancho which was done in association with G+





# G+ current work program



- Management of small service vessels/ vessel vetting standards
- Electrical safety – ArcFlash labelling/ Safe System of Work framework
- Physical and medical requirements for offshore wind workforce
- Lifting operations – case studies on routine low complexity lifts
- Manual handling – video campaign
- Personnel transfer
- Improving safety of steel fabrication



**Working to  
create a safer  
and healthier  
global offshore  
wind industry.**

[www.gplusoffshorewind.com](http://www.gplusoffshorewind.com)

 @gplusglobalofw

 @G+ Global Offshore Wind Health and Safety Organisation

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# OCEAN WINDS

Elena Caja  
HSSEQ Director

NYSERDA - Learning from the Experts, a webinar series  
September 2022



1 Who We Are. Company Objectives

2 Our Projects and New Opportunities

3 HSSEQ Communication

4 Emergency Response in OW

5 WFA Emergency Drill

# WHO WE ARE?

Ocean Winds (OW) is the result of a Joint Venture between two of the biggest worldwide players in Energy:



We are around  
**400 EMPLOYEES**



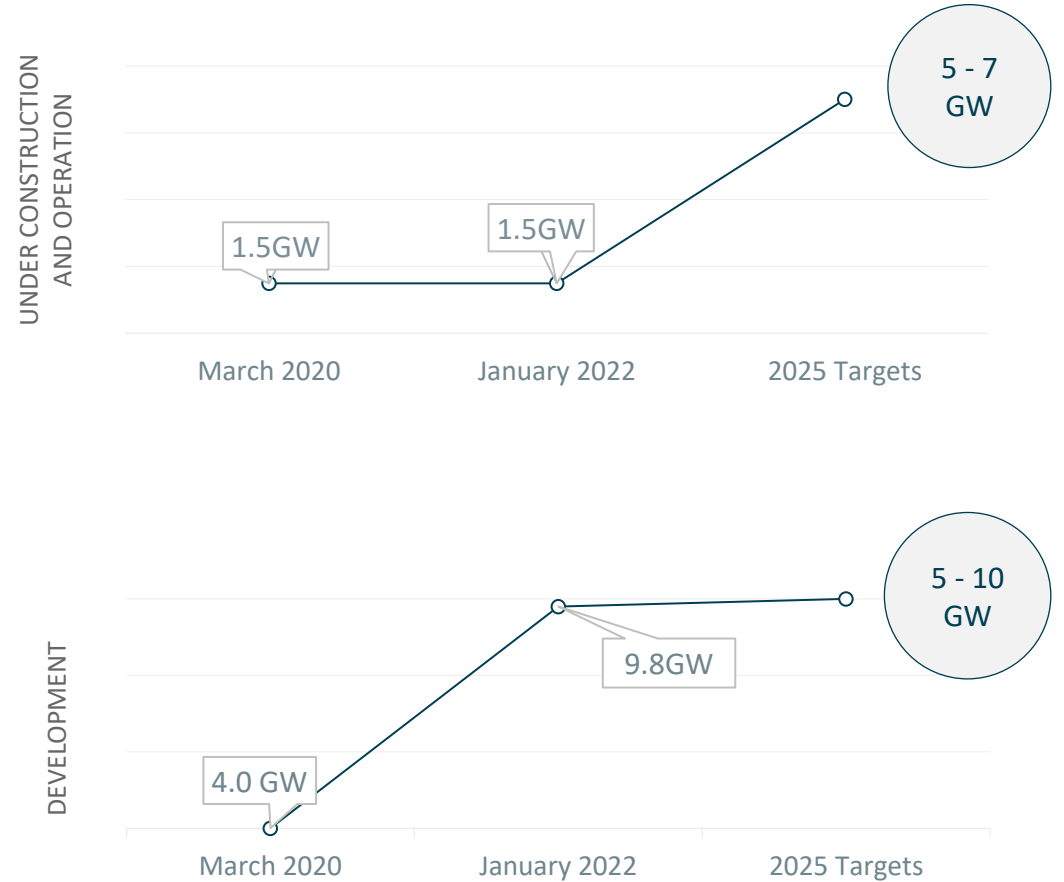
**+20** Nationalities

HQ based in Madrid, Spain with offices in many countries

# COMPANY OBJECTIVES

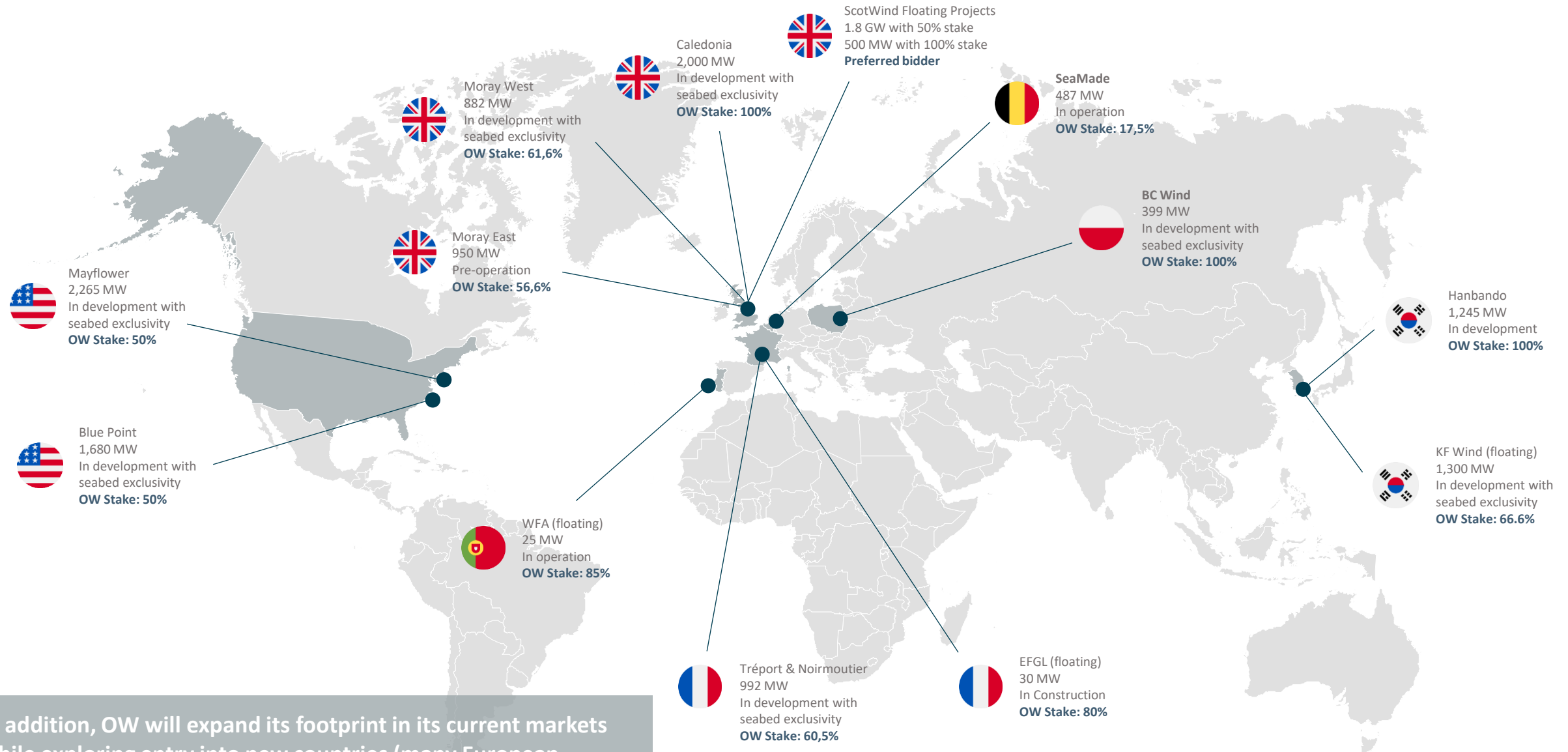


## OW Growth Targets announced



# OUR PROJECTS AND NEW OPORTUNITIES

OW's portfolio consists of 14.5 GW (gross) with 14 projects in 7 geographies



In addition, OW will expand its footprint in its current markets while exploring entry into new countries (many European countries, Brazil and Japan)





# EMERGENCY PLANNING AND RESPONSE IN OW

## OW Emergency Preparedness and Response

- How to respond to potential accidents and emergency situations with environmental or health and safety consequences
- How to prevent, reduce and control impacts that might be linked to them
- Guidelines for the projects to prepare their plans

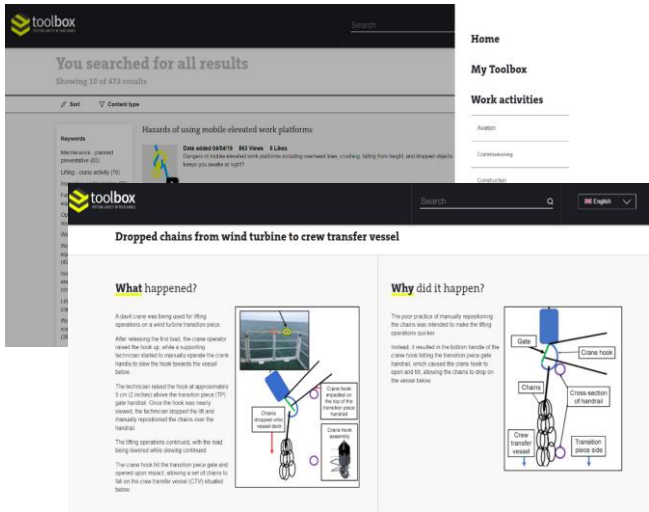


## Project/Sites Emergency Plan

- According to legal, OW and other stakeholders requirements

## Emergency reporting

- Emergency cases and drill reports
- Safety moments, toolbox talks, lessons learnt discussion, campaign inspiration



Title	EMERGENCY PREPAREDNESS AND RESPONSE
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Code	COHSXX-OWC-HSQ-HSE-PRO-00014
Revision	02
Date	May 2022

	Prepared by	Reviewed by	Approved by
Name Title	Celia Rivera Gómez HSSE Manager		Elena Caja Martín HSSEQ Director
Signature			
Date	May 2022		May 2022

Distribution & Confidentiality (please mark with X)

Unclassified	Internal	External	Restricted	Confidential
	X			

# WIND FLOAT ATLANTIC (PORTUGAL) – Emergency Drill. June 2022

Wind Float Atlantic is a 25 MW floating wind farm located at Viana do Castelo, Portugal. This first offshore Emergency Response Training Exercise was conducted last June, 8<sup>th</sup>. This exercise intended to be an emergency exercise but also to involve the Portuguese Coast Guard for the first time and for them to be familiar with WFA floater.

Three scenarios were defined:

- **Rescue from Floater**
- **Man Overboard - CTV**
- **Abandon Vessel - CTV**

The main goal for this drill was to assess external authorities' capabilities and interaction levels with O&M Team, as to assess mainly CTV crew readiness in case of emergency. The involvement of the Coast Guard was very positive, and the exercise was concluded with success.

Nevertheless, some improvements were identified and reported, mainly regarding communications or equipment availability.



# H&S Drill 1: Rescue from Floater

This scenario was aimed to be developed entirely by Coast Guard Rescue Team (CGRT), which would take charge of the situation. As this was the first time they were on site, the drill, as expected, was developed in cooperation with all. O&M teams were able to see them stabilising the injured person (IP) using their stretcher, secure the IP, and develop actions to move the IP from the floater to the CTV.



## H&S Drill 2: Man Overboard

This scenario was developed near shore, on the river. CGRT was on site to monitor actions and on standby in case some assistances were needed. Three O&M technicians were involved in this scenario.

The main goal for this scenario was to assess CTV equipment and CTV Crew capabilities to rescue from water.





## H&S Drill 3: Abandon CTV

This scenario consisted of all team inside CTV and abandon CTV to a life raft.



OW  
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# Coming Next:

September 21, 1:00 p.m.  
ET

## Offshore Wind Flow Modeling

Dr. Gregory S. Poulos,  
ArcVera Renewables

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