

# Global Offshore Wind Report

HY1 2022



September 2022

## Top 5 facts about WFO

### WFO: 100% Offshore Wind



**Non-profit**  
organisation  
founded in 2018



**Initiatives**  
Floating Offshore Wind Committee  
Offshore Dispute Resolution Committee



**90 + global**  
member  
organisations



**Global setup**  
with offices in  
Hamburg, New York,  
Tokyo, and Taipei



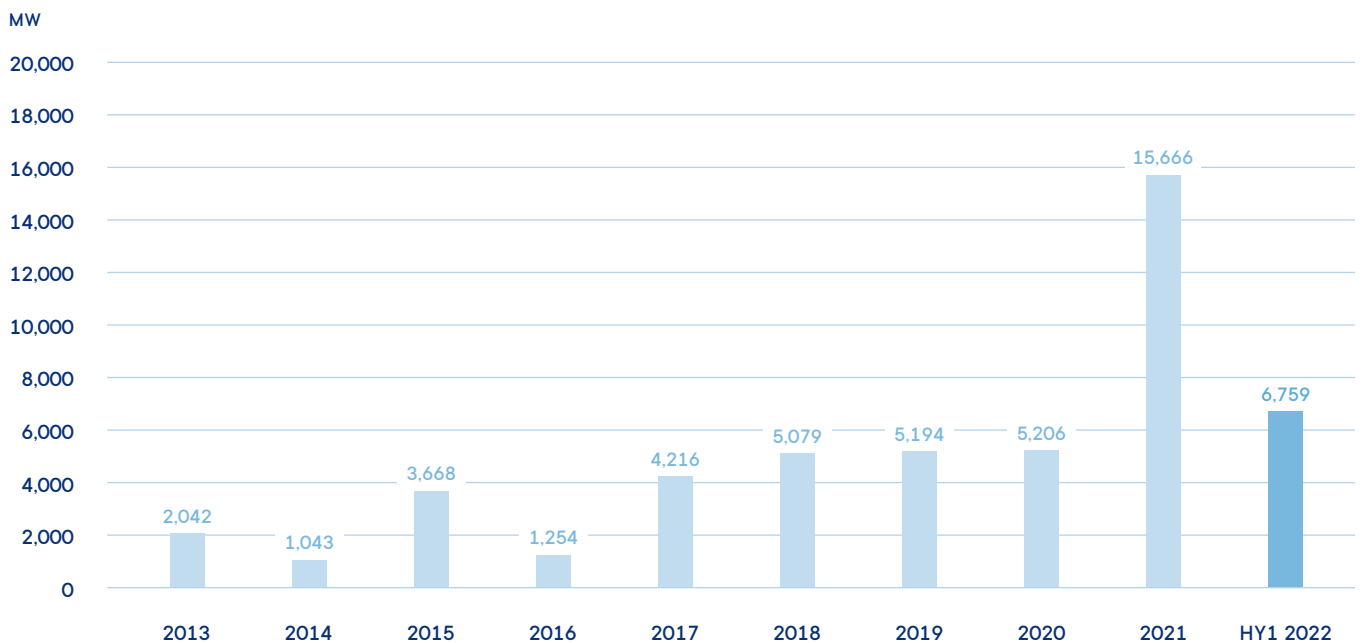
**Core activities**

1. Information
2. Events
3. Government Advisory

**World Forum Offshore Wind (WFO)** is the world's only organisation 100% dedicated to fostering the global growth of offshore wind energy. WFO's international members represent the complete offshore wind value chain including utilities, manufacturers, service firms and non-profit organisations.

# Global offshore wind growth continues and is largely driven by Asian markets

## Annually added offshore wind capacity



- A total of **6.8 GW** of global offshore wind capacity was added during HY1 2022, mainly driven by strong growth in China
- Globally, **33** new offshore wind farms went into operation<sup>1</sup> in China (25), Vietnam (5), UK (1), South Korea (1) and Italy (1)
- The average size of a newly added offshore wind farm during HY1 2022 was **205 MW** compared to 261 MW during HY1 2021

<sup>1</sup> In operation: all turbines installed and first power



# 6.8 GW

Globally added offshore wind capacity in HY1 2022

## In detail: Global offshore wind farms put into operation in HY1 2022

No	Wind Farm	MW	Units	MW/Unit	Turbine	Location
1	CSSC Fuyao demo (floating)	6	1	6.2	–	CN
2	Yeonggwang Baeksu	8	1	8	DS205-8MW	SK
3	Taranto	30	10	3	MySE 3.0-135	IT
4	Pingtang Strait Gongtie Bridge Lighting Project	34	5	6.7	GW154-6.7MW	CN
5	Pudong New District Donghai Bridge Project	46	7	6.5	W6.5F-185	CN
6	Tra Vinh V1-1	48	12	4	GW155-4.5 MW	VT
7	Tra Vinh V1-2	48	12	4	GW155-4.5 MW	VT
8	Tra Vinh V1-3	48	12	4	GW155-4.5 MW	VT
9	Jiangjiasha	50	15	3.3	GW 155-3.3MW	CN
10	Tan Thuan	75	18	4.2	SG 5.0-145	VT
11	Hiep Thanh	78	18	4.3	SG 5.0-145	VT
12	Zhuhai Guishan Hai Demonstration 2	83	12	7	DEW-D7000-186, MySE6.45-180	CN
13	CSIC Jiangsu Rudong H3-2	100	20	5	H151-5MW	CN
14	Huadian Yuhuan 1 South	146	20	7	DEW-D7000-186	CN
15	Huadian Yuhuan 1 North	154	22	7	DEW-D7000-186	CN
16	Fujian Pingtan Datang Changjiangao	185	37	5	MySE5.0-133	CN
17	Rudong H15	200	40	5	H171-5.0MW	CN
18	Changle Area C 1	200	20	10	DEW-D10000-185	CN
19	Longyuan Putian Nanri Island I 1	204	51	4	SWT-4.0-130	CN
20	Xinliao	206	32	6.45	MySE6.45-180	CN
21	Dafeng H5	206	32	6.45	GW184-6.45MW	CN
22	CGN Pingtan Island	240	60	4	SWT-4.0-130, MySE5.5-155	CN
23	Guodian Xiangshan 1 1	254	41	6.2	H171-6.2MWCN	CN
24	Fuqing Xinghua Bay 2	288	46	6.7	GW154-6.7MW, DEW-G5000-140	CN
25	Mingyang Yangjiang Shapa	300	46	6.45	MySE6.45-180	CN
26	Zhanjiang Xuwen-South	300	47	6.45	GW171-6.45MW	CN
27	Yuedian Yangjiang Shapa	300	47	6.45	MySE6.45-180	CN
28	Zhejiang Jiaxing 2	300	50	6	SWT-6.0-154	CN
29	Rudong H5	300	75	4	SWT-4.0-146	CN
30	Dafeng H6	300	47	6.45	GW184-6.45MW	CN
31	Longyuan Jiangsu Dafeng H4	302	47	6.45	GW184-6.45MW	CN
32	SPIC Rudong H7	400	100	4	SWT-4.0-146	CN
33	Hornsea 2	1320	165	8.4	SG 8.0-167 DD	UK

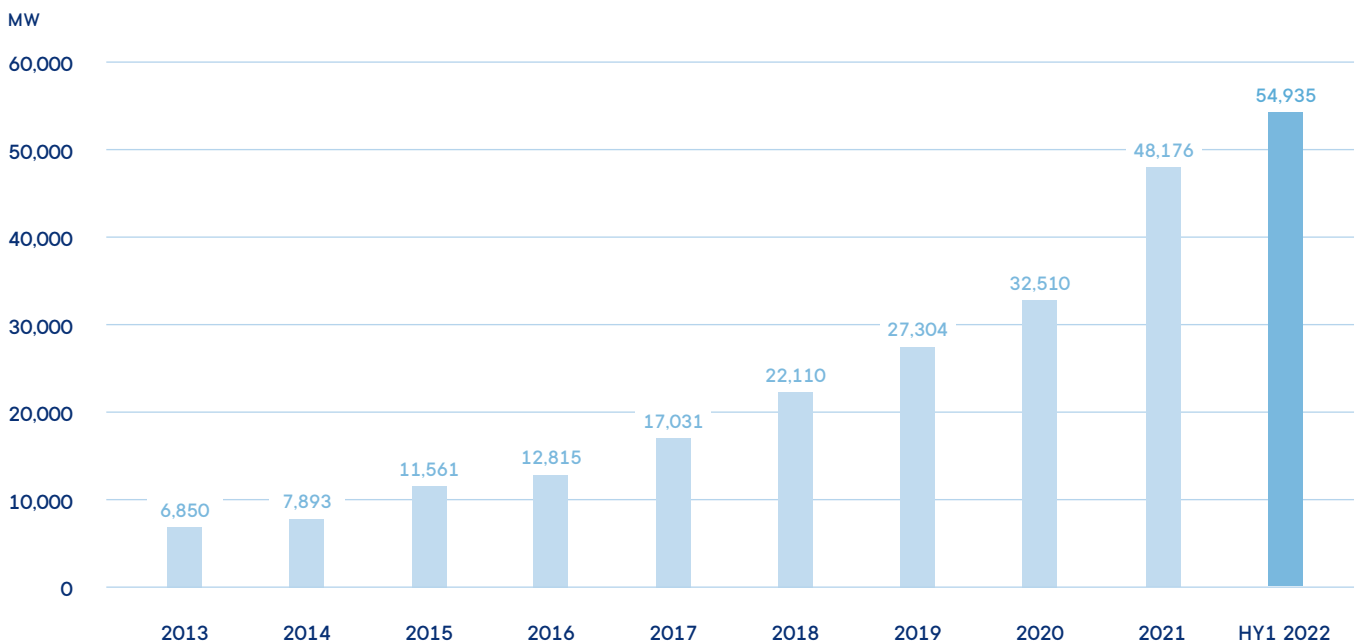
<b>Total</b>	<b>6,759</b>
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# Global growth

## Offshore wind capacity reaches nearly 55 GW

### Global offshore wind capacity in operation<sup>2</sup> – cumulative

IN  
OPERATION



- Globally, installed offshore wind capacity reached **54.9 GW** by the end of HY1 2022, 45% of which (24.9 GW) is now installed in China
- Worldwide, **33** new offshore wind farms were put into operation during HY1 2022 in China, Vietnam, the UK and South Korea
- Worldwide, **248** offshore wind farms<sup>3</sup> are currently in operation of which 134 are located in Asia, 112 are located in Europe and 2 in the USA

<sup>2</sup> In operation: all turbines installed and first power

<sup>3</sup> Wind farm: project consisting of at least two offshore wind turbines



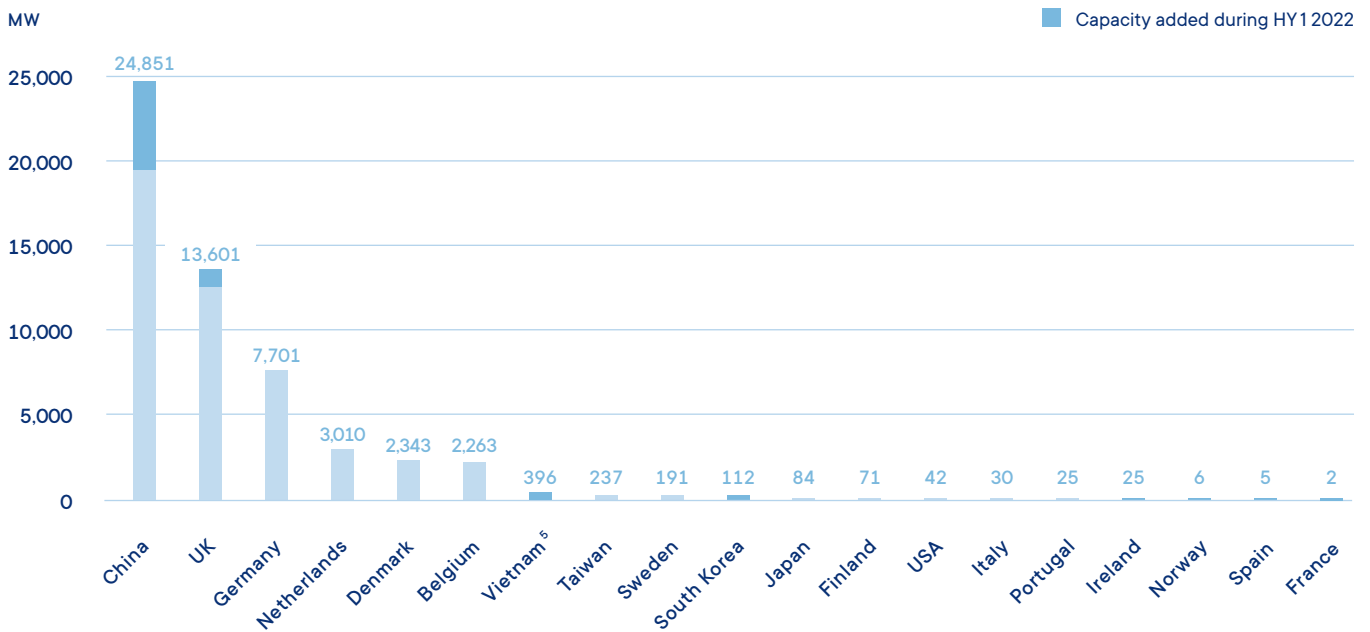
# 54.9 GW

Global offshore wind capacity in operation

# Top markets

## China strengthens its position as the world’s largest offshore wind market

Global offshore wind capacity in operation<sup>4</sup> – by country IN OPERATION



- **China’s** growth continues with 5.1 GW of newly installed capacity during HY1 2022, increasing its total installed capacity to **24.9 GW**
- In the **UK** the 1.3 GW Hornsea 2 project was put into operation which brings the UK’s total installed capacity to **13.6 GW**
- **Germany’s** offshore wind capacity stagnates at **7.7 GW** with no new offshore wind projects put into operation during HY1 2022

<sup>4</sup> In operation: all turbines installed and first power  
<sup>5</sup> Excluding intertidal projects



# 5.1 GW

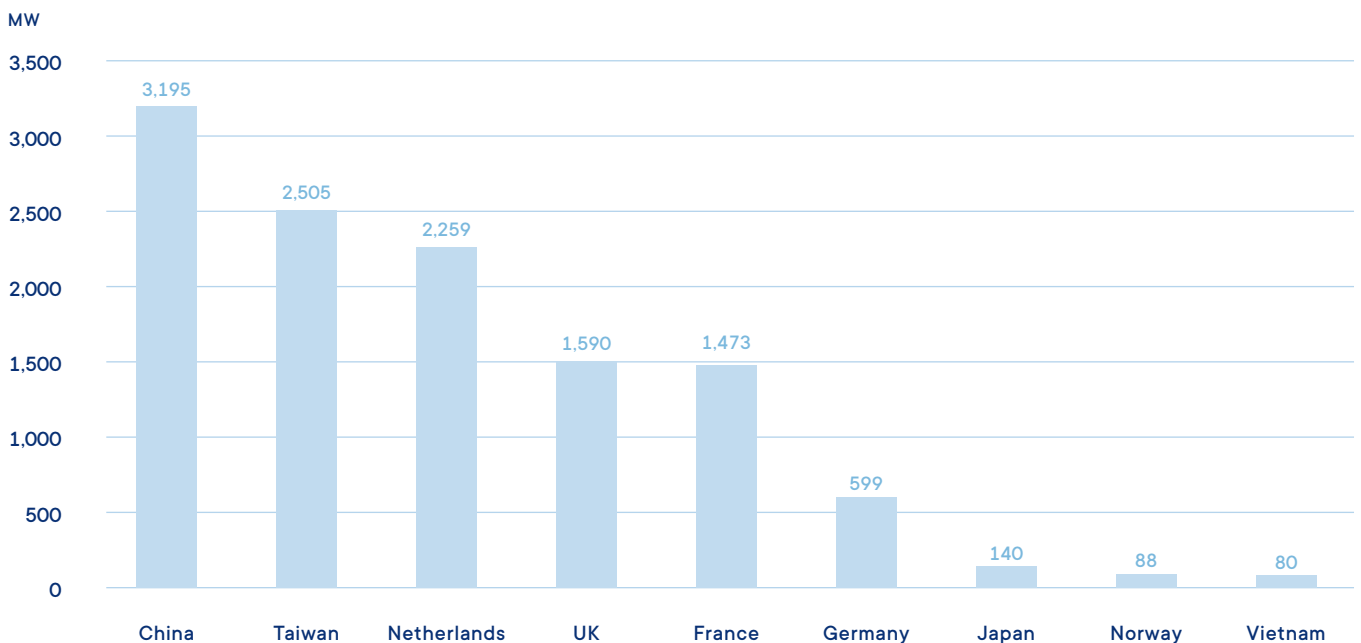
Offshore wind capacity added in China

## Construction

### China and Taiwan grow ahead of the Netherlands, the UK, France and Germany

Global offshore wind capacity under construction<sup>6</sup> until end of HY1 2022

UNDER  
CONSTRUCTION



- **China's** offshore wind sector continues to grow with a total capacity of **3.2 GW** currently under construction in Chinese waters
- **Taiwan** follows already in second place with an offshore wind capacity of **2.5 GW** currently under construction in the Taiwan Strait
- **France** is only narrowly behind the UK with **1.5 GW** of offshore wind capacity currently under construction on France's Atlantic coast

<sup>6</sup> Under construction: first offshore wind foundation installed



# 11.9 GW

Global offshore wind capacity under construction

## In detail: offshore wind farms under construction<sup>7</sup>

No	Wind Farm	MW	Units	MW/Unit	Turbine	Location
1	PivotBuoy PLOCAN (floating)	0.2	1	0.2	Vestas V29	ES
2	DemoSATH (floating)	2	1	2.0	-	ES
3	Akita Port	56	13	4.2	V117 - 4.2 MW	JP
4	Ben Tre	80	19	4.5	GW155-4.5MW	VT
5	Noshiro Port	84	20	4.2	V117 - 4.2 MW	JP
6	Hywind Tampen (floating)	88	11	8.0	SG 8.0-167 DD	NO
7	Rudong H13	150	30	5.0	H171-5.0MW	CN
8	Longyuan Putian Nanri Island I 2	180	45	4.0	SWT-4.0-130	CN
9	CGN Huizhou I2	250	40	6.5	MySE6.45-180	CN
10	Arcadis Ost 1	257	27	9.5	V174-9.5 MW	DE
11	Changle Area A	300	36	10.0	DEW-D10000-185, GW175-8.0MW	CN
12	Changle Area C 2	300	37	10.0	DEW-D10000-185, SG 10.0-193 DD	CN
13	Mingyang Yangjiang Shapa	300	46	6.5	MySE6.45-180	CN
14	Fujian Putian City Flat Bay Three Zone C	308	44	7.0	SWT-7.0-154	CN
15	Kaskasi	342	38	9.0	SG 8.0-167 DD	DE
16	Formosa 2	376	47	8.0	SG 8.0-167 DD	TW
17	CGN Shanwei Jiazi II	403	62	6.5	MySE6.45-180	CN
18	Neart na Gaoithe	450	54	8.4	SG 8.0-167 DD	UK
19	Saint-Nazaire	480	80	6.0	GE Haliade 160-6MW	FR
20	Saint-Brieuc	496	62	8.0	SG 8.0-167 DD	FR
21	Fécamp	497	71	7.0	SWT-7.0-154	FR
22	Guodian Xiangshan 1 2	500	41	12.0	-	CN
23	CGN Shanwei Jiazi I	503	78	6.5	MySE6.45-180	CN
24	Changfang and Xidao	589	62	9.5	V174-9.5 MW	TW
25	Yunlin	640	80	8.0	SG 8.0-167 DD	TW
26	Hollandse Kust Noord	759	69	11.0	SG 11.0-200 DD	NL
27	Greater Changhua 1 & 2a	900	111	8.0	SG 8.0-167 DD	TW
28	Seagreen	1140	114	10.0	V164-10 MW	UK
29	Hollandse Kust Zuid	1500	140	11.0	SG 11.0-200 DD	NL
<b>Total</b>		<b>11930.7</b>				

<sup>7</sup> Under construction: first offshore wind foundation installed



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