

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



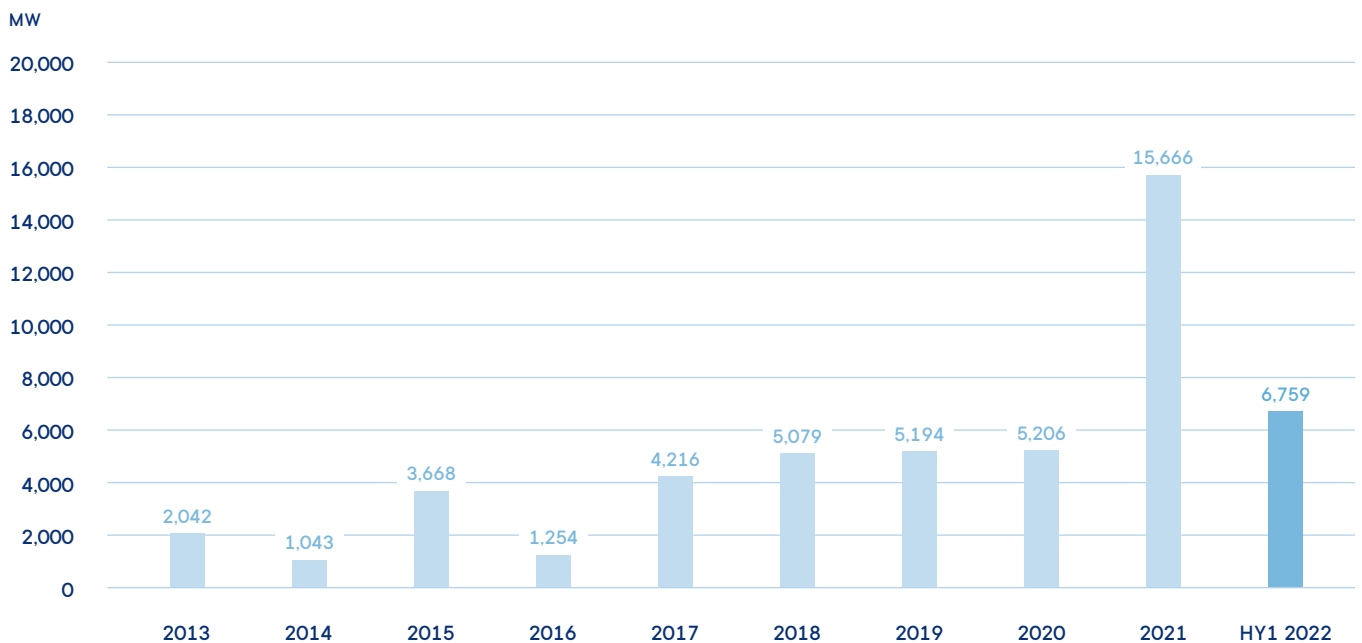
Core activities

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 operation¹ 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

¹ 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

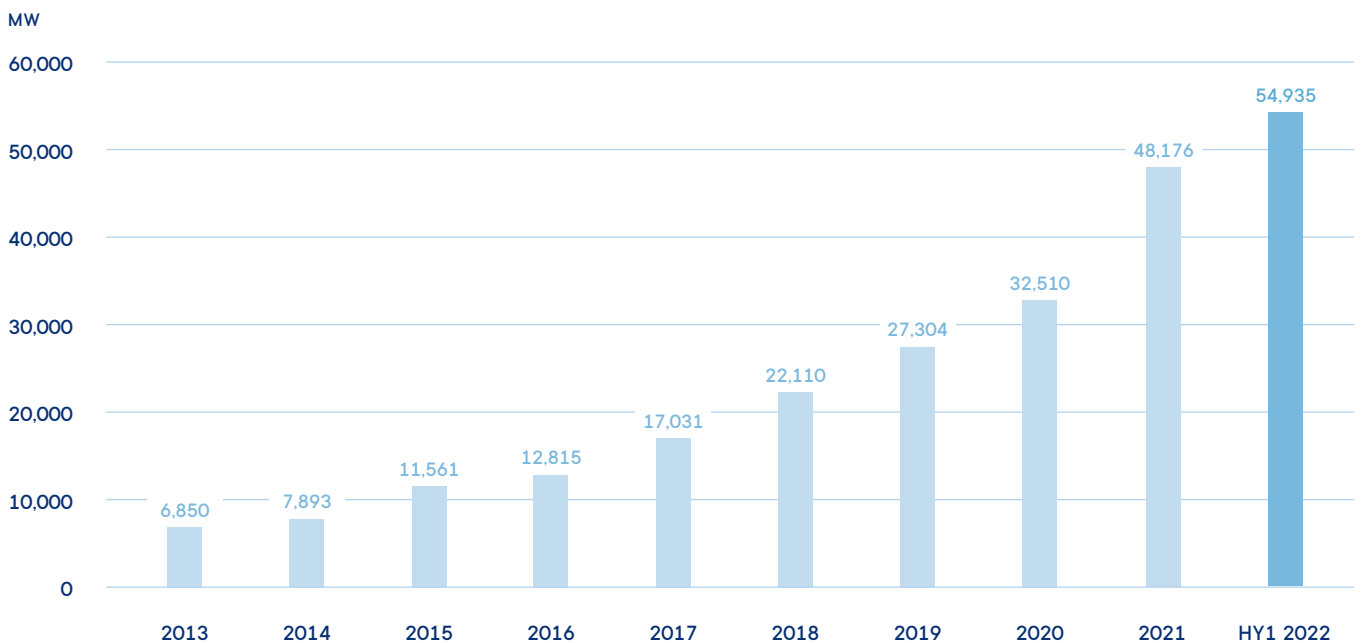
Total	6,759
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Global growth

Offshore wind capacity reaches nearly 55 GW

Global offshore wind capacity in operation² – 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 farms³ are currently in operation of which 134 are located in Asia, 112 are located in Europe and 2 in the USA

² In operation: all turbines installed and first power

³ Wind farm: project consisting of at least two offshore wind turbines



54.9 GW

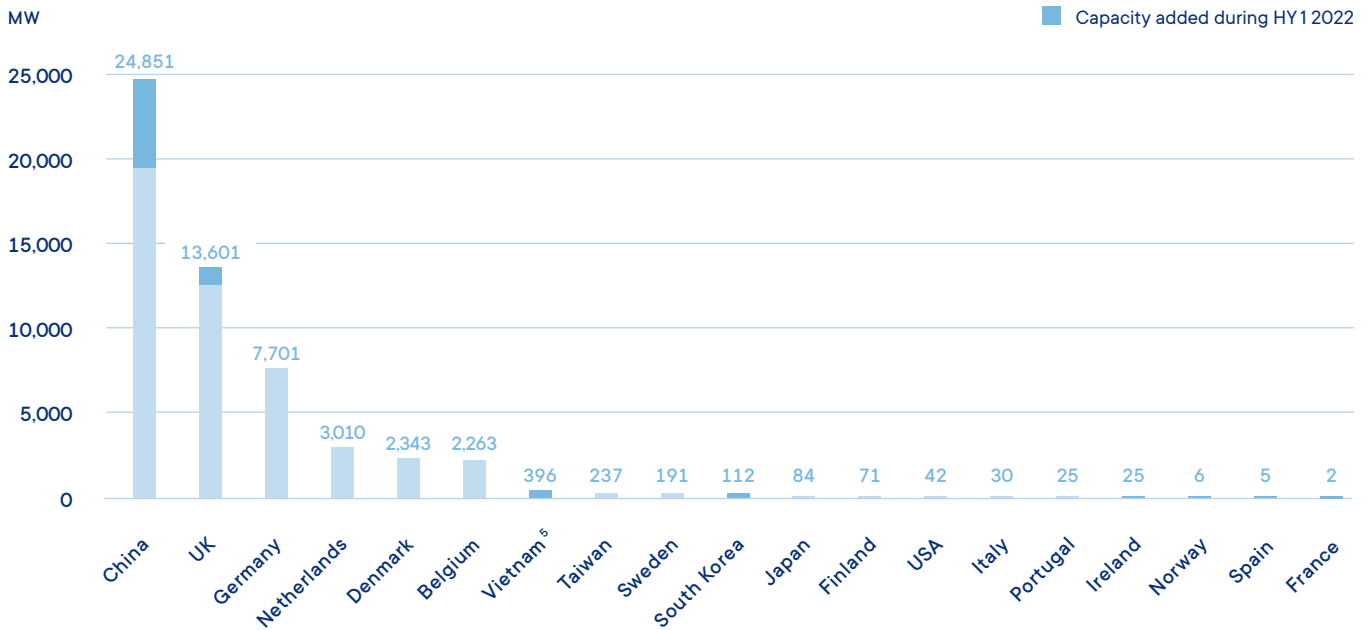
Global offshore wind capacity in operation

Top markets

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

Global offshore wind capacity in operation⁴ – 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

⁴ In operation: all turbines installed and first power

⁵ Excluding intertidal projects



5.1 GW

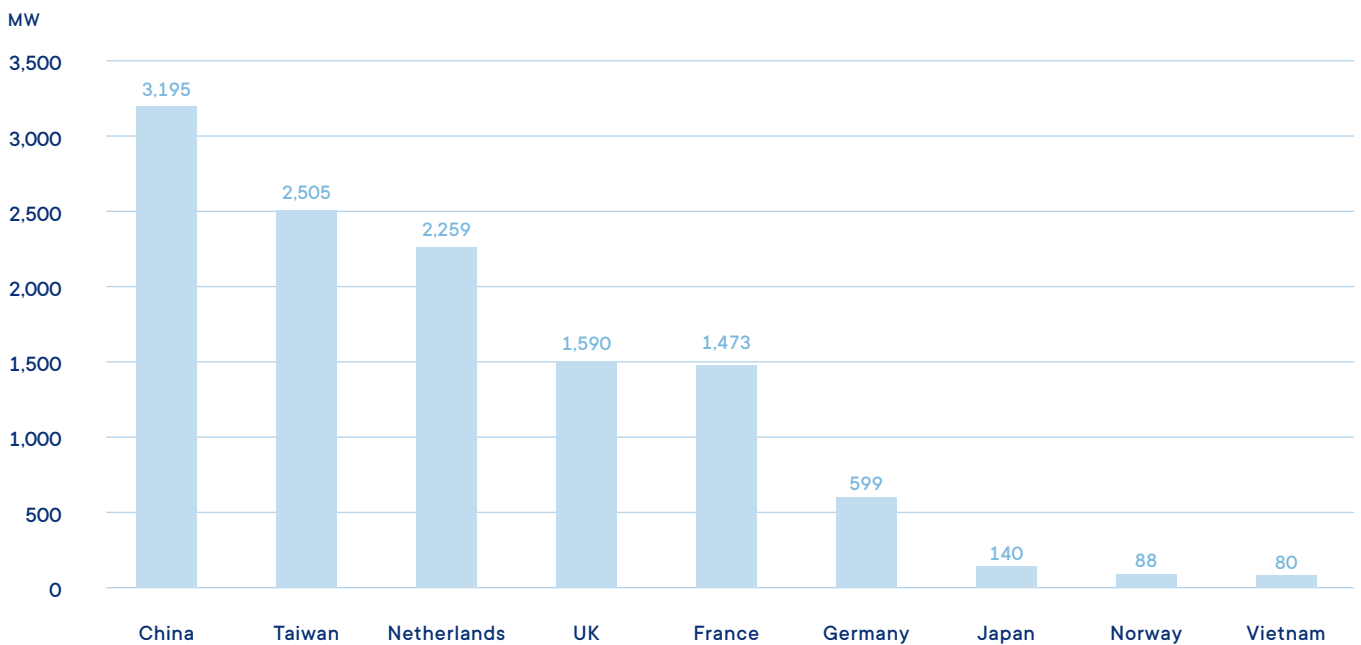
Offshore wind capacity added in China

Construction

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

Global offshore wind capacity under construction⁶ 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

⁶ Under construction: first offshore wind foundation installed



11.9 GW

Global offshore wind capacity under construction

In detail: offshore wind farms under construction⁷

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
Total		11930,7				

⁷ Under construction: first offshore wind foundation installed

**JOIN
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