

Wind Turbine Orders Monitoring

Q2 2024 statistics



Scope

This report summarises wind turbine orders that were placed between 1 April 2024 and 30 June 2024.

WindEurope tracks announced wind turbine orders on the basis of publicly available information on commercial transactions and future deals, categorising them into firm orders and conditional orders.

Orders of Enercon turbines are not included because they are not publicly available.

For details of the methodology for estimating undisclosed orders see the Methodology slide at the end of the deck.

Analysis contained in this report relates to firm and disclosed orders only unless stated otherwise.

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Content

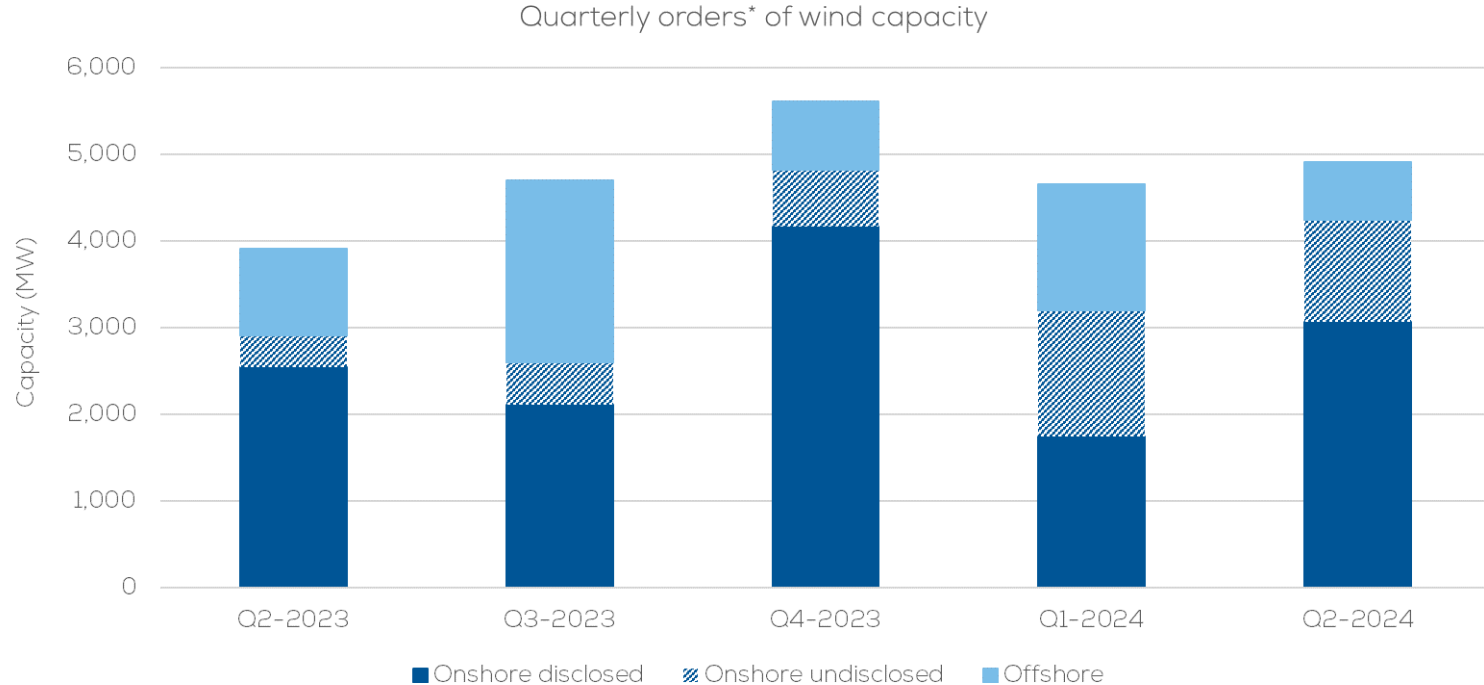
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Q2 2024 HIGHLIGHTS

- There were orders for a total of 4.9 GW (of which 1.2 GW undisclosed) across 13 countries. There was one order for offshore wind turbines in Germany (660 MW).
- The total ordered capacity was up 5% on Q1 2024 and 25% year-on-year.
- Germany led ordered capacity with 1.3 GW, followed by Spain (937 MW) and Lithuania (283 MW).
- Vestas received 48% of all the disclosed ordered capacity, followed by Nordex (30%), GE (21%), and Goldwind (1%).
- All but two of the disclosed orders in Q2 2024 reported the inclusion of an Operation & Maintenance (O&M) contract.
- We tracked firm orders for 86 wind farms in Q2 2024.

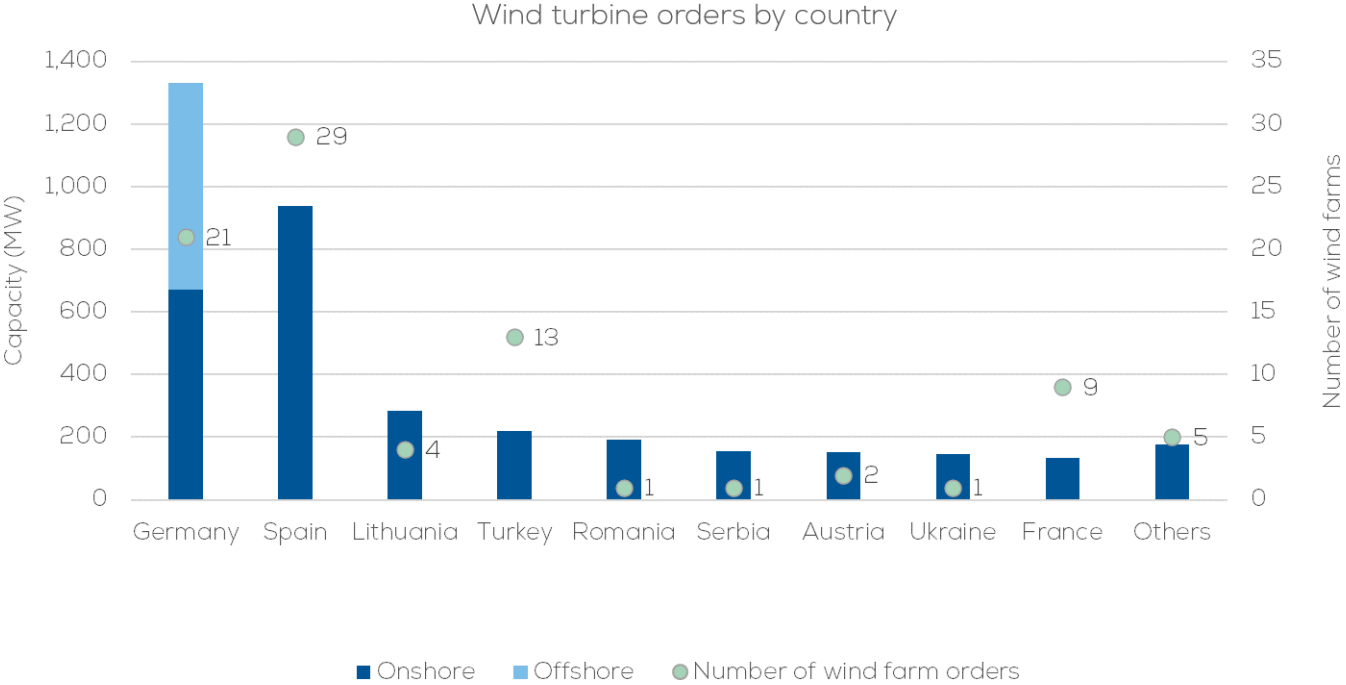
With 4.9 GW of orders, Q2 2024 was 5% up on the previous quarter and 25% up year-on-year.

Onshore + Offshore



Germany led ordered capacity with 1.3 GW, followed by Spain (937 MW) and Lithuania (283 MW).

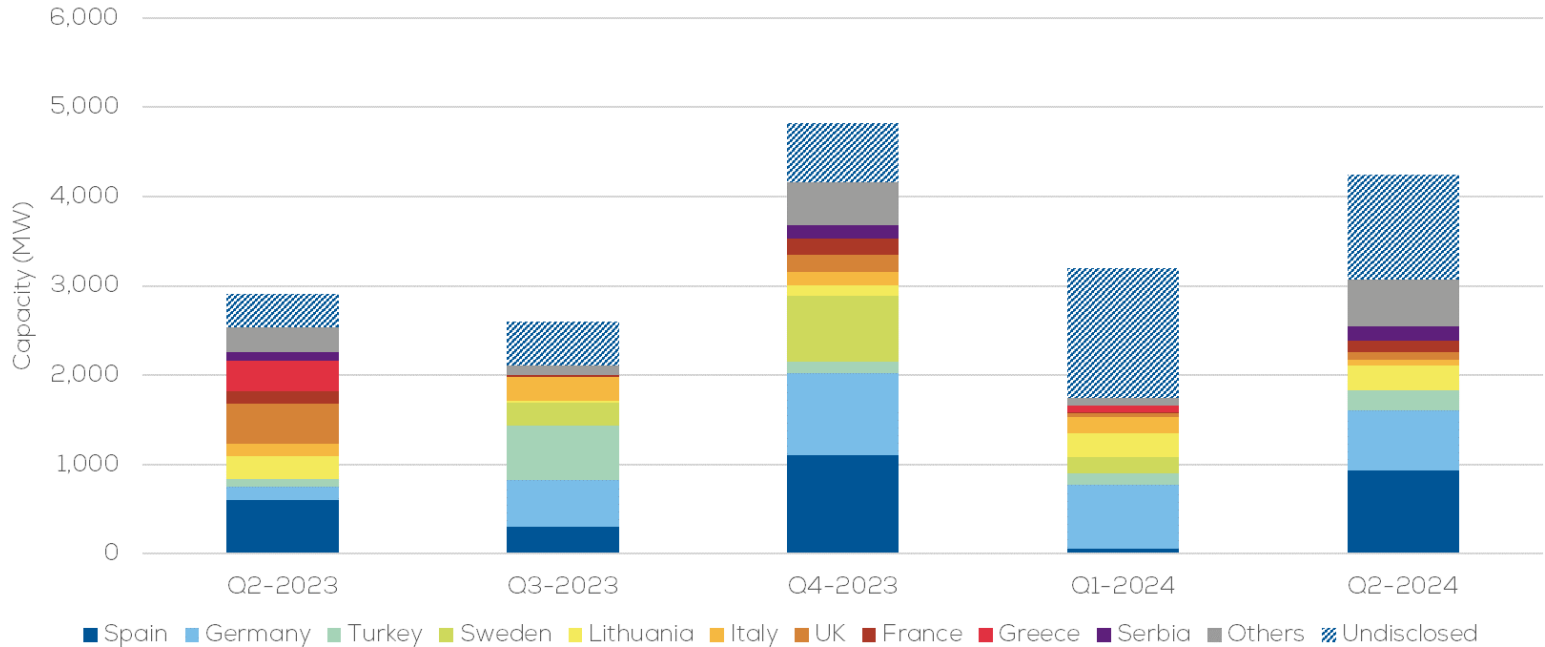
Onshore + Offshore



Onshore orders were 33% up on Q1 2024 orders and 26% above the average of the previous four quarters.

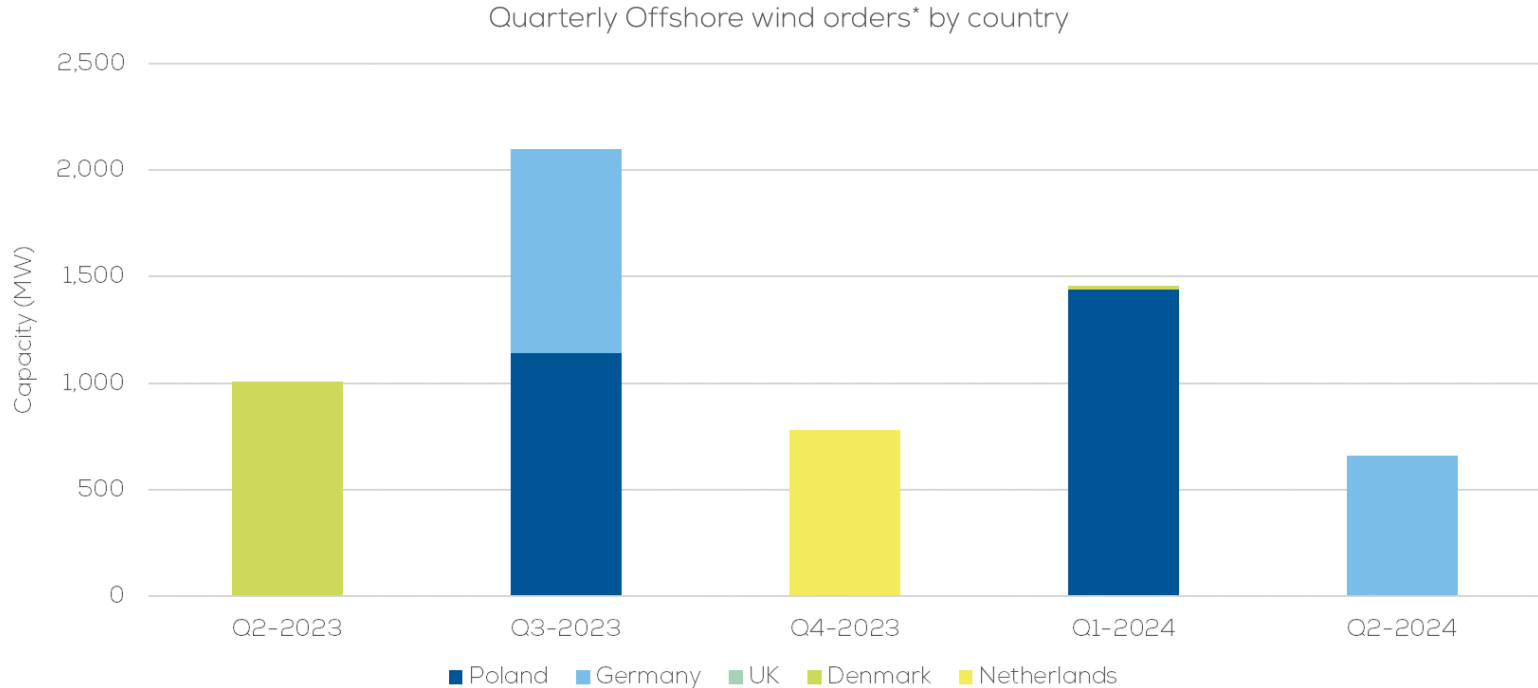
Onshore

Quarterly onshore wind orders* by country



There was one firm order for offshore wind turbines, for the Nordseecluster A wind farm in Germany (660 MW).

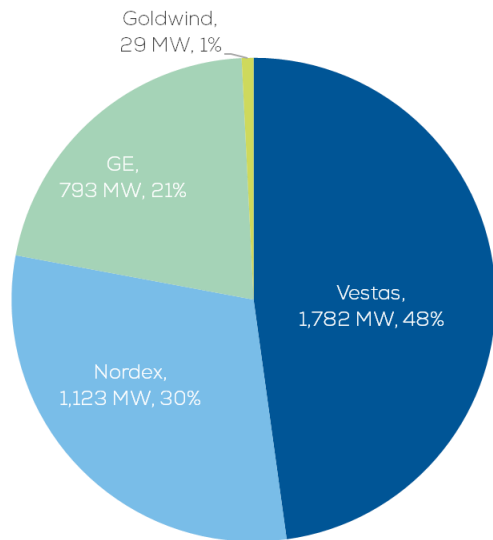
Offshore



Vestas had the highest share of disclosed ordered capacity, followed by Nordex, GE and Goldwind.

Onshore + Offshore

Wind turbine orders by OEM

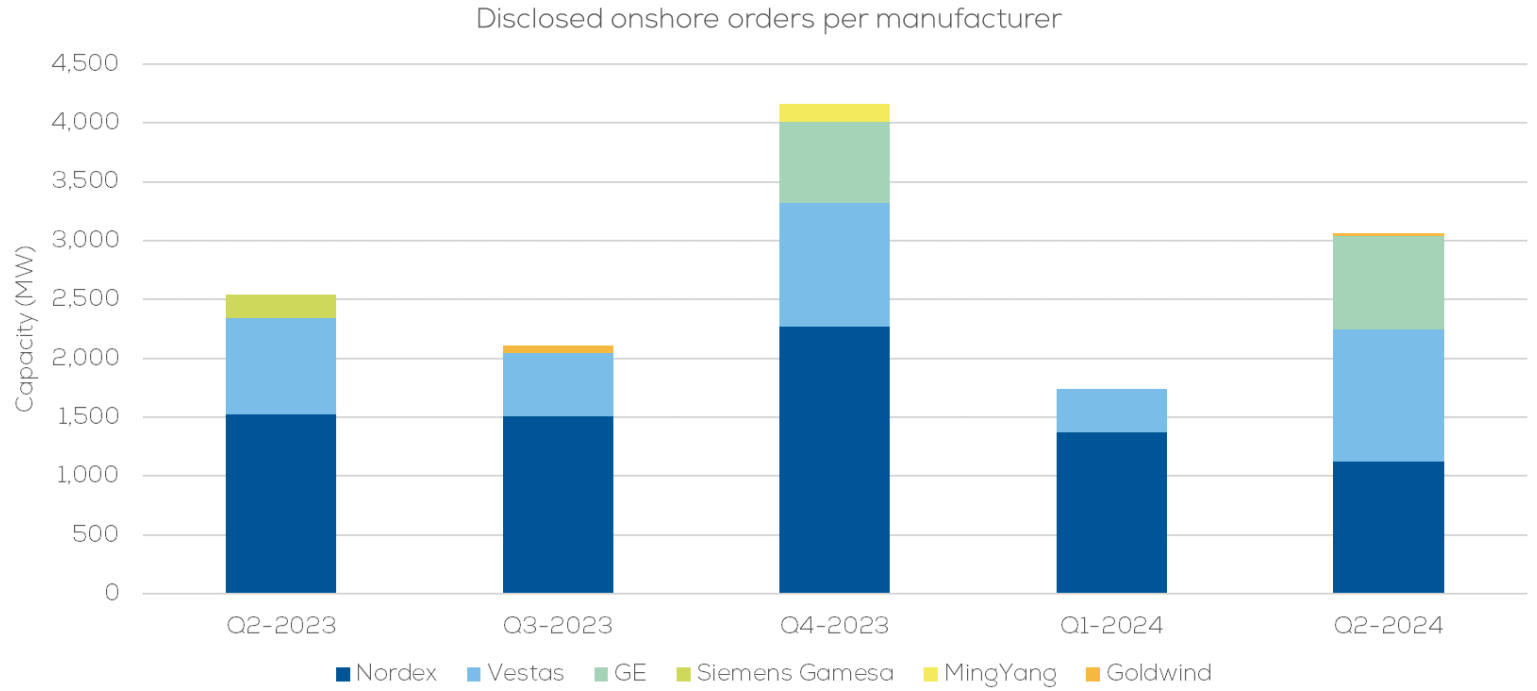


Top 5 ordered turbines

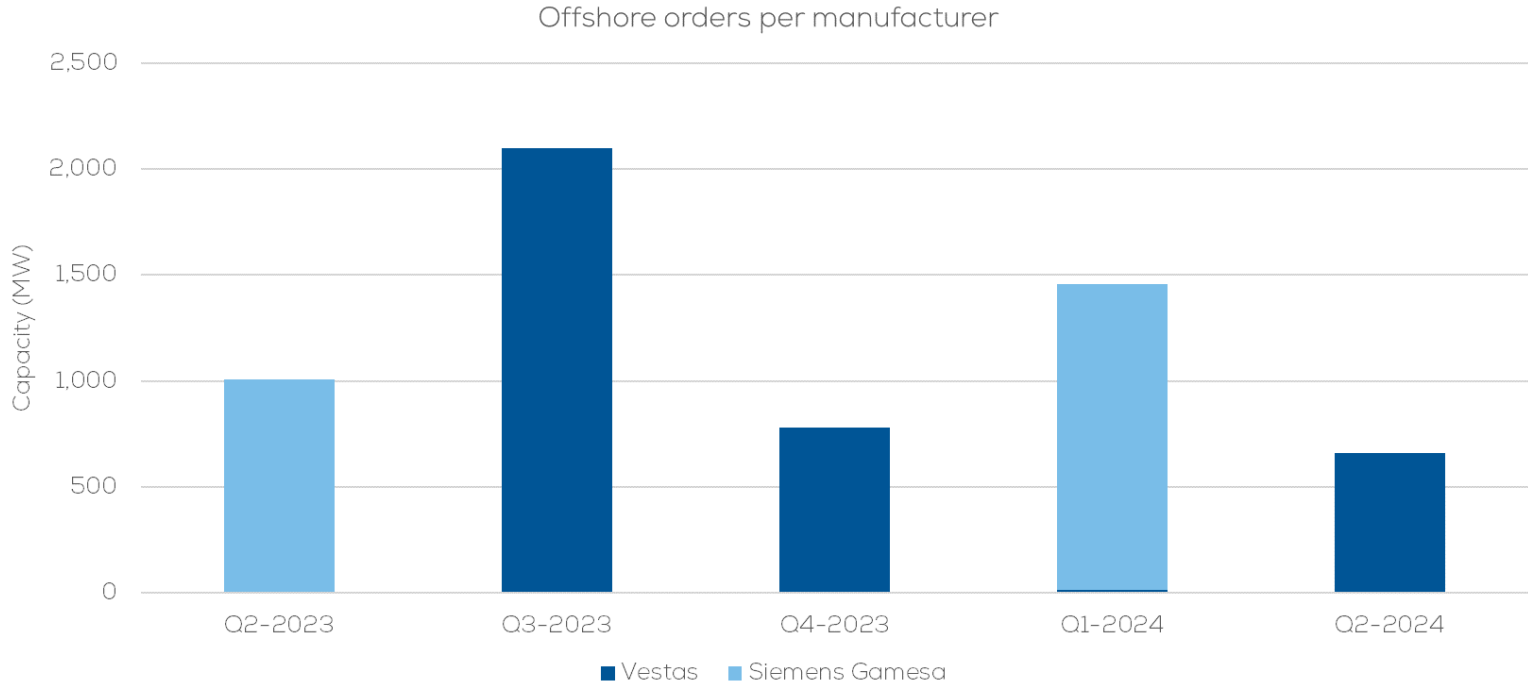
Turbine model	Ordered capacity	Number of turbines	Power rating configuration	
GE 6.1-158	793 MW	130	6.1 MW	130 (100%)
V162-6.2 MW	763 MW	122	6.2 MW	89 (73%)
			6.4 MW	33 (27%)
V236-15.0 MW	660 MW	44	15 MW	44 (100%)
N163/6.X	383 MW	55	6.8 MW	16 (29%)
			7 MW	39 (71%)
N163/5.X	295 MW	50	5.7 MW	1 (2%)
			5.9 MW	49 (98%)

In Q2 2024 four OEMs disclosed onshore orders totaling 3.1 GW, 76% more than in the previous quarter.

Onshore



In Q2 2024 one OEMs disclosed a firm order for offshore wind turbines totaling 660 MW, 55% less than the previous quarter.



The top five disclosed buyers accounted for 50% of the disclosed ordered capacity for Q2 2024.

Onshore + Offshore

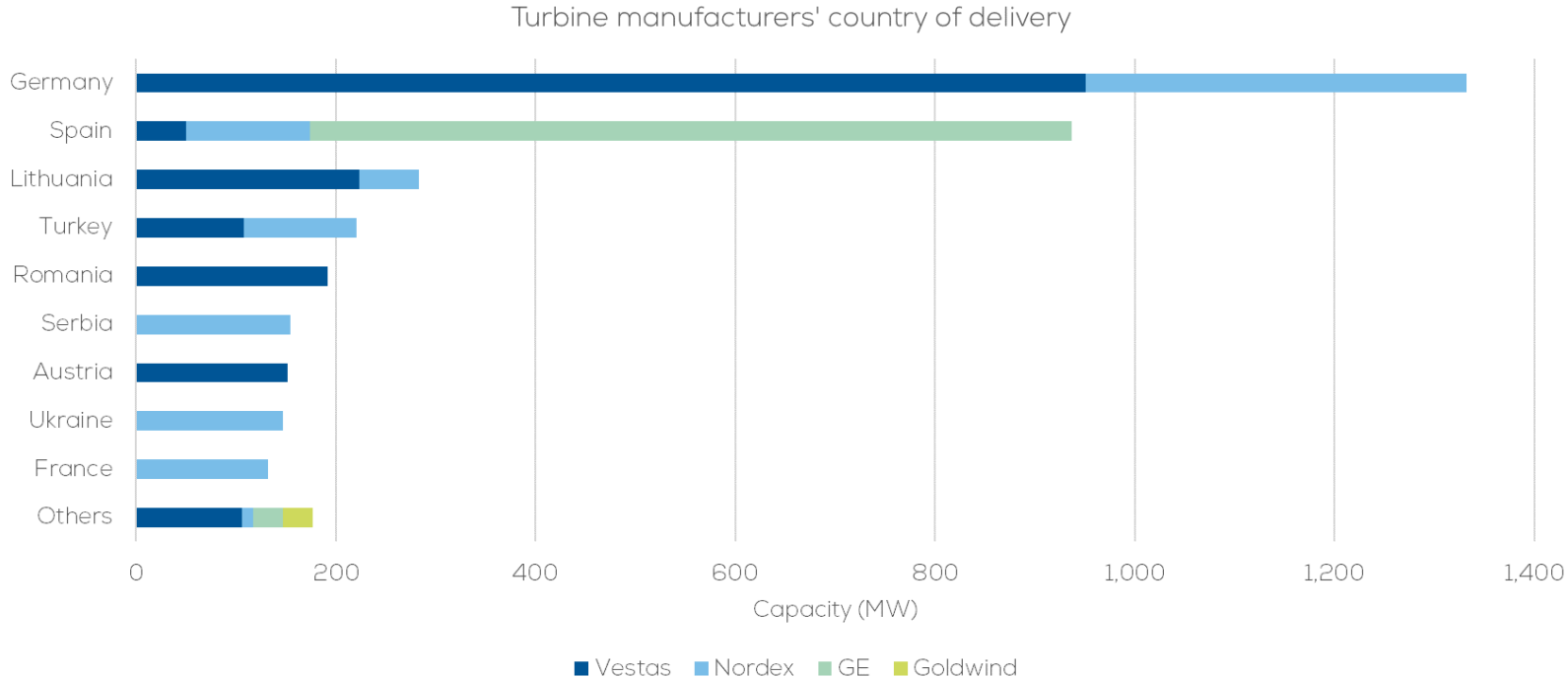
Top 5 buyers of disclosed orders

Buyer	Ordered Capacity
CIP	763 MW
RWE, Northland Power	660 MW
First Look Solutions, Rezolv Energy, Low Carbon	192 MW
Utilitas Wind, Latvenergo	124 MW
SAB WindTeam	114 MW

■ Offshore ■ Onshore

Nordex and Vestas each disclosed orders in eight countries, GE in two, and Goldwind in one.

Onshore + Offshore



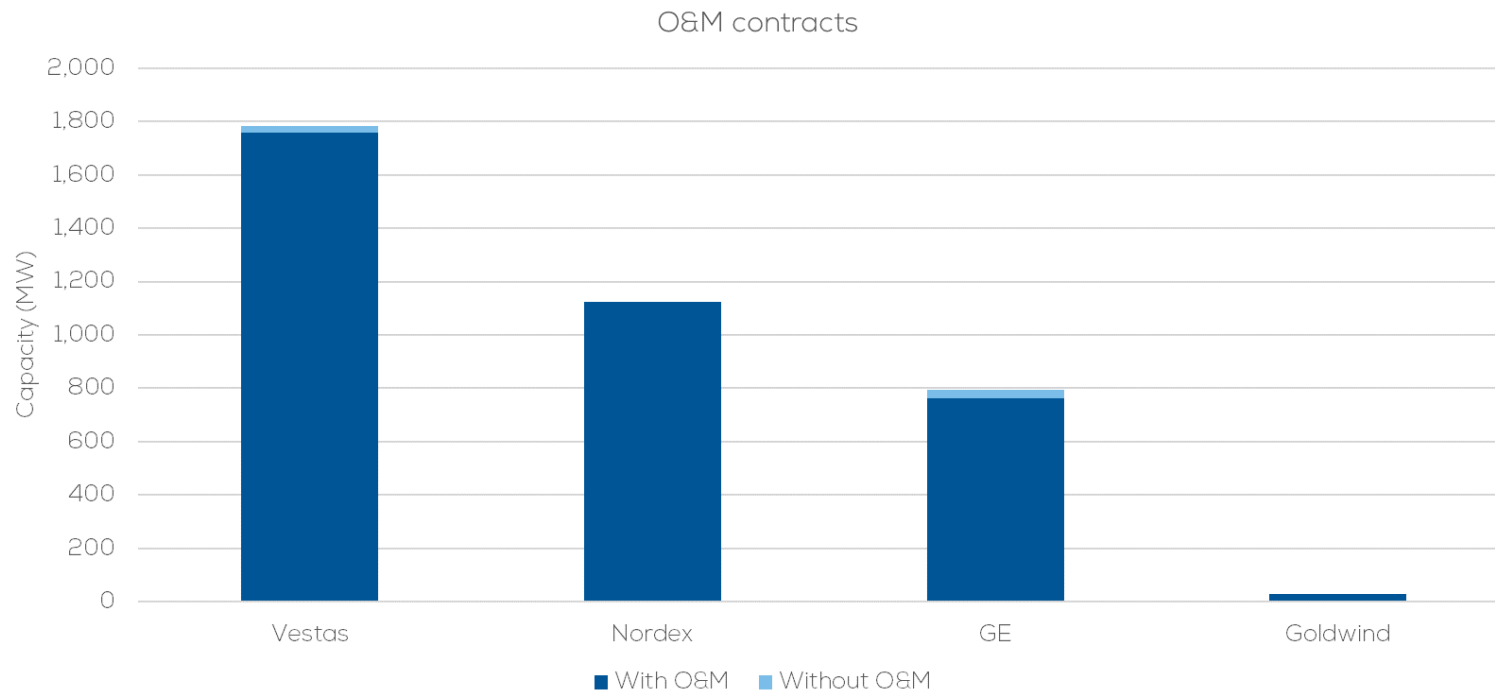
80% of ordered onshore wind turbines had a power rating above 5 MW; all offshore turbines ordered were 15 MW.

Onshore + Offshore

	2 to 4 MW	4 to 5 MW	5 to 6 MW	6 to 7 MW	7 to 8 MW	10 to 16 MW
Germany	6 turbines	11 turbines	32 turbines	52 turbines	12 turbines	44 turbines
Spain			21 turbines	133 turbines		
Lithuania			3 turbines	36 turbines	6 turbines	
Turkey		27 turbines	6 turbines		9 turbines	
Romania				30 turbines		
Serbia					22 turbines	
Austria				25 turbines		
Ukraine			25 turbines			
France	30 turbines	5 turbines				
UK		18 turbines				
Italy		7 turbines		5 turbines		
Finland				4 turbines		
Belgium	3 turbines					
Total	39 turbines	68 turbines	87 turbines	285 turbines	49 turbines	44 turbines

All but two disclosed orders (3.7 GW) reported the inclusion of an Operation & Maintenance (O&M) contract.

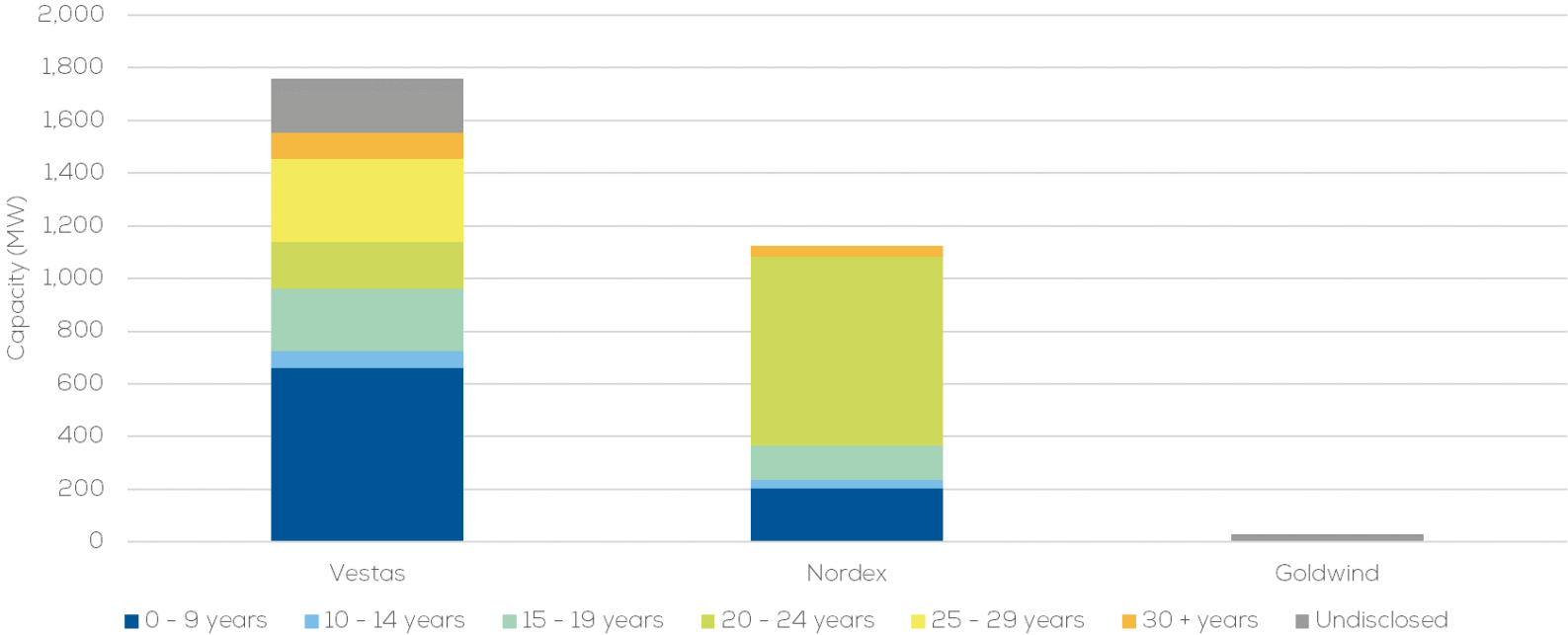
Onshore + Offshore



1.4 GW of disclosed ordered capacity featured an O&M service agreement of at least 20 years.

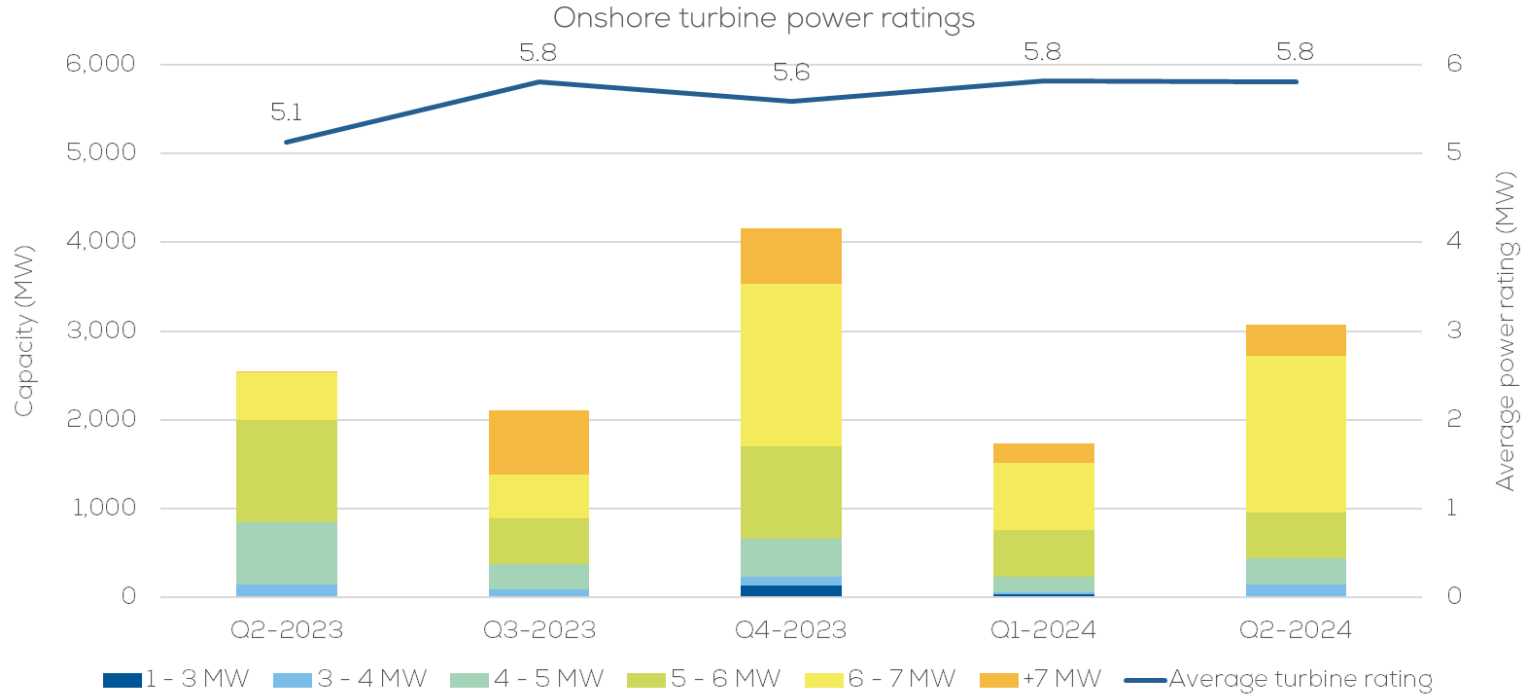
Onshore + Offshore

Length of O&M contracts



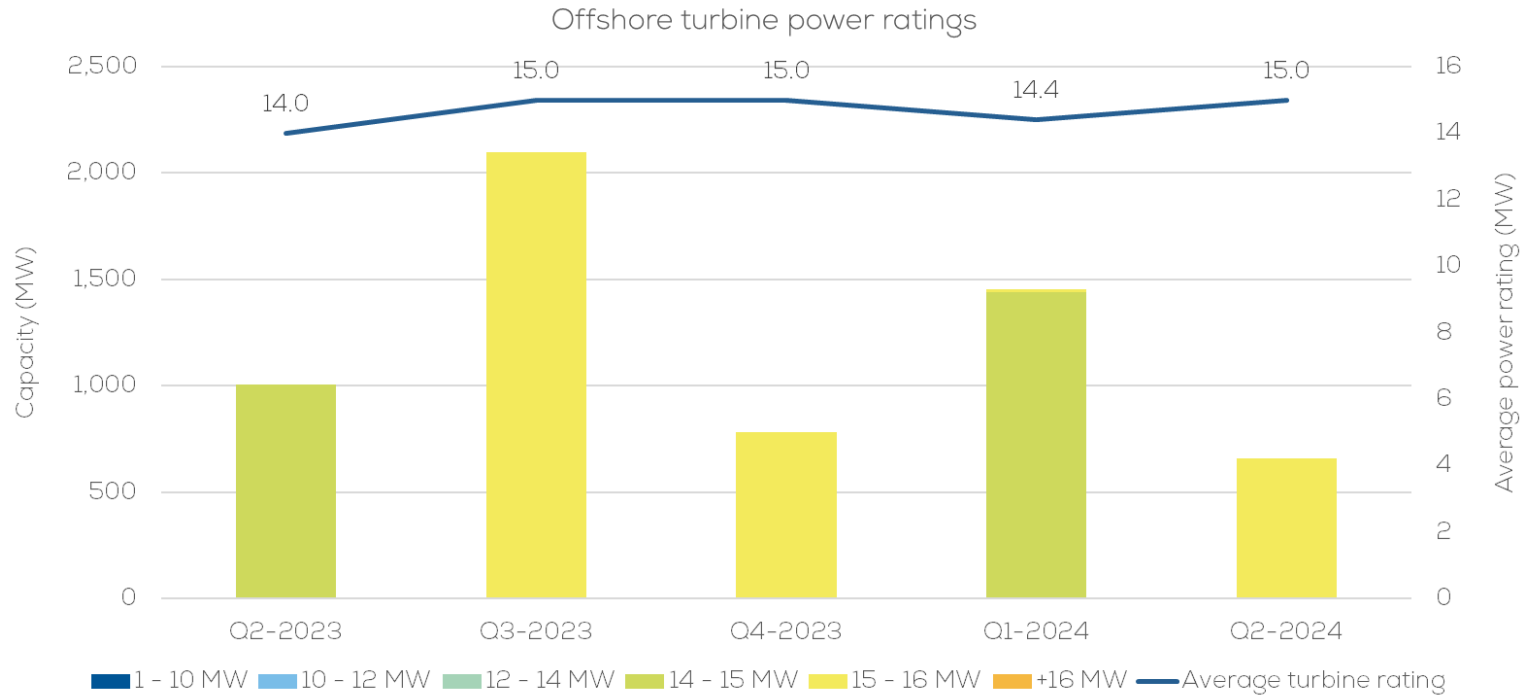
The average onshore turbine size ordered in Q2 2024 was 5.8 MW, the same as in Q1 2024.

Onshore



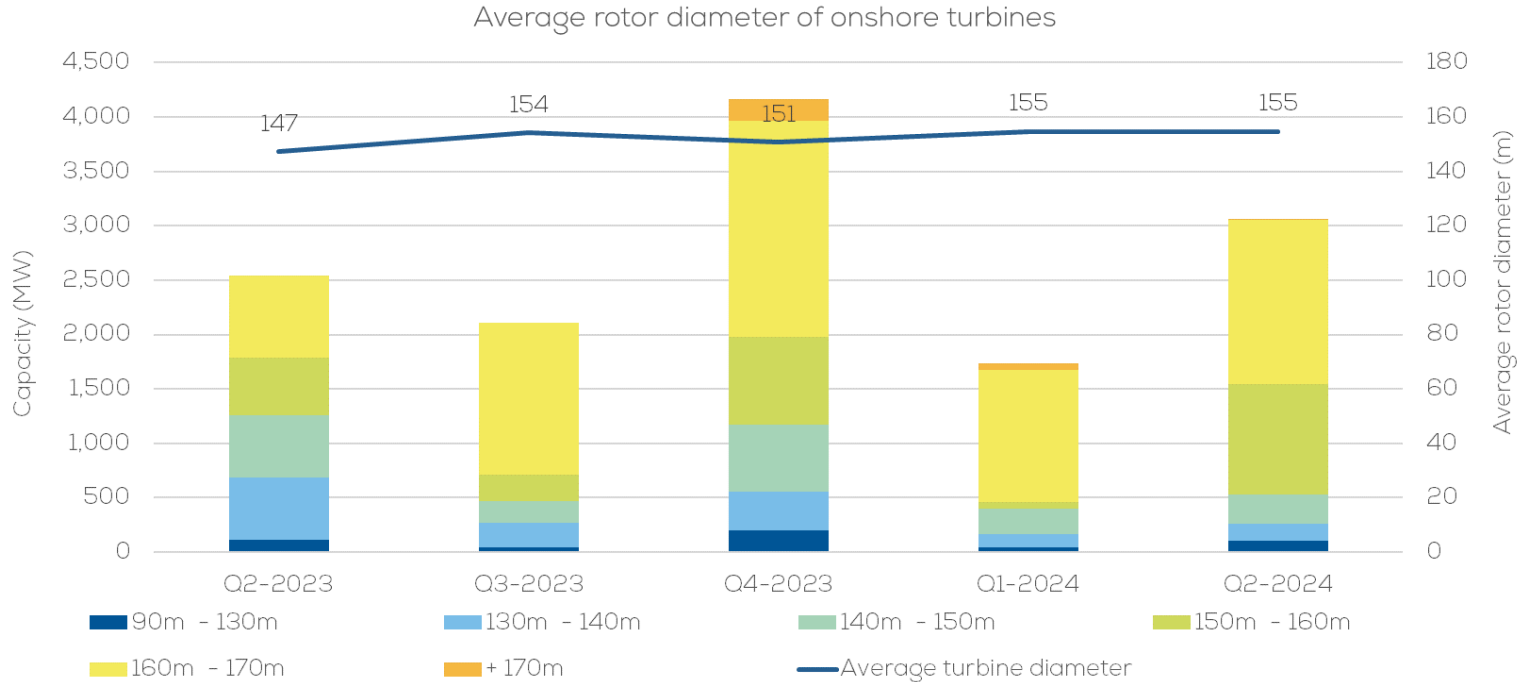
The average offshore turbine size ordered in Q2 2024 was 15 MW, up from 14.4 MW in Q1 2024.

Offshore



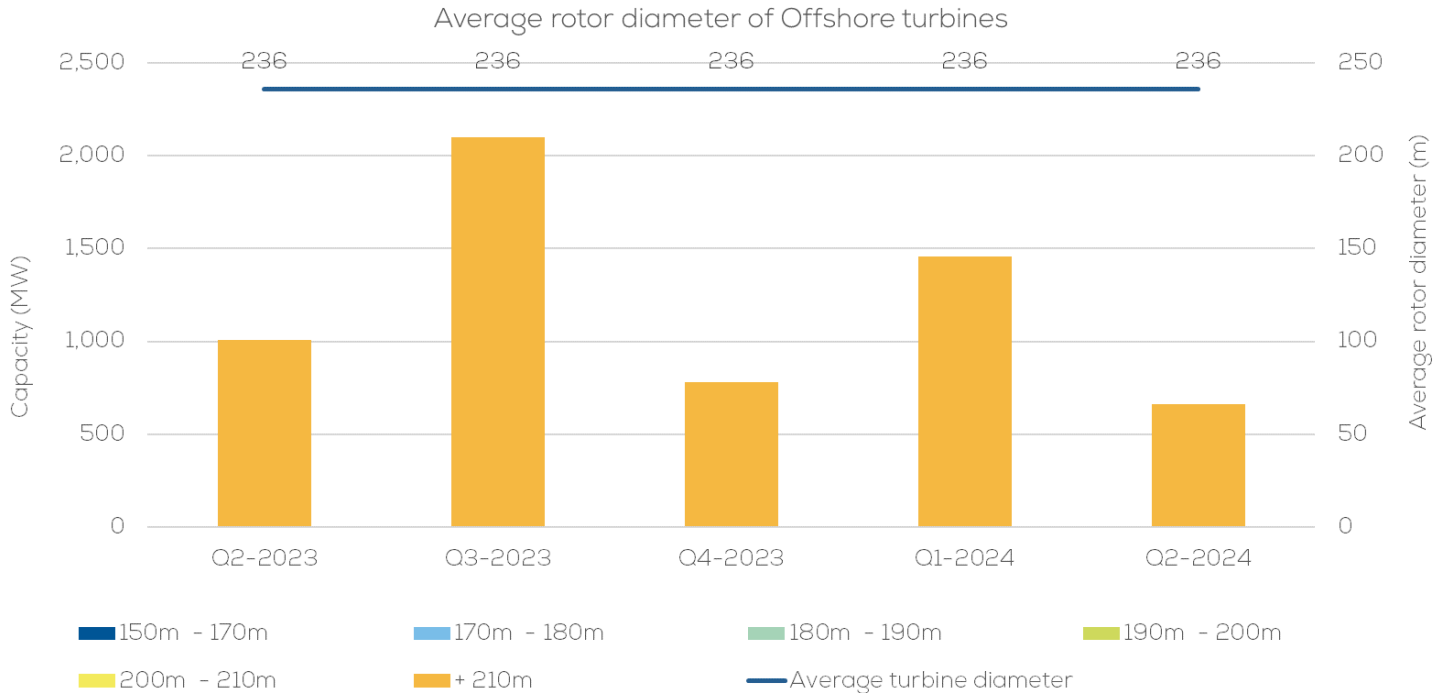
The average rotor diameter of onshore turbine orders in Q2 2024 was 155 metres, the same as in Q1 2024.

Onshore



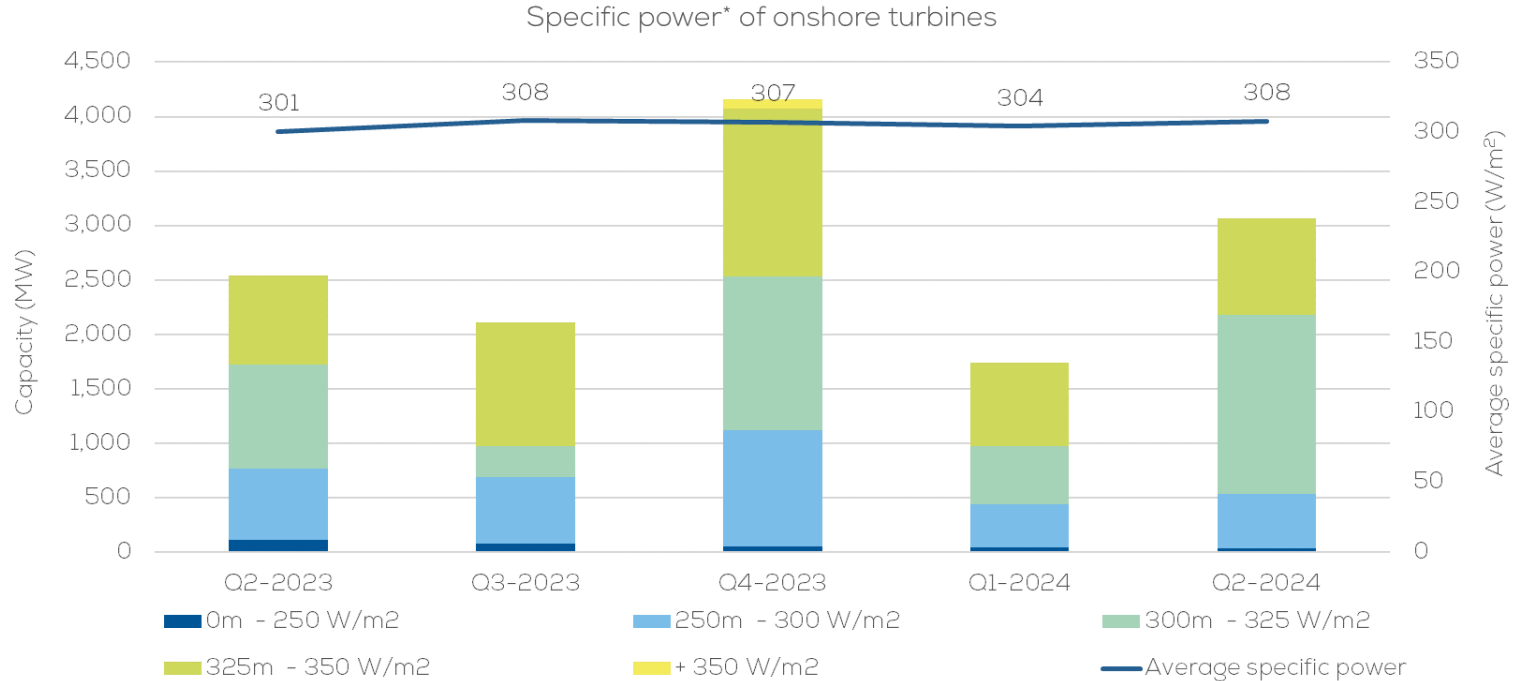
All offshore wind turbines ordered in Q2 2024 had a diameter of 236 meters, the same as in the previous four quarters.

Offshore

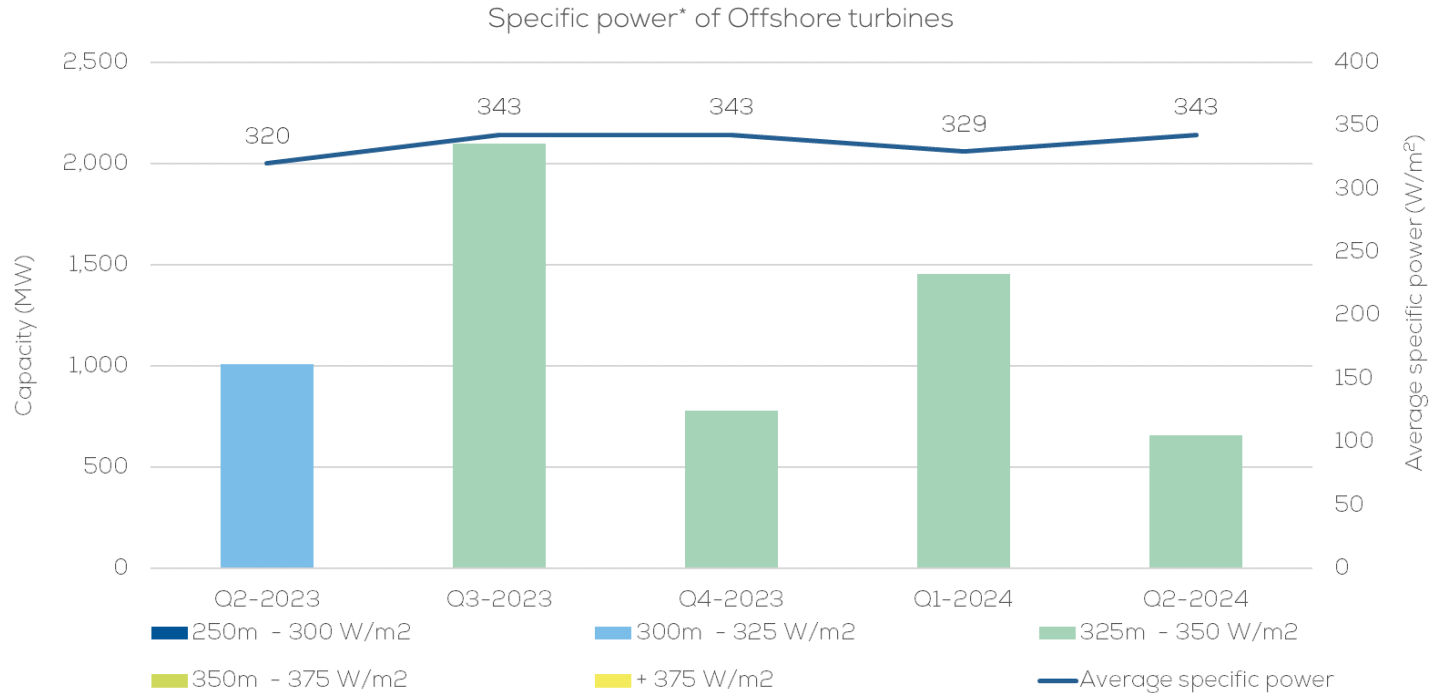


The average specific power of onshore turbines ordered in Q2 2024 was 308 W/m², 1% higher than in Q1 2024.

Onshore

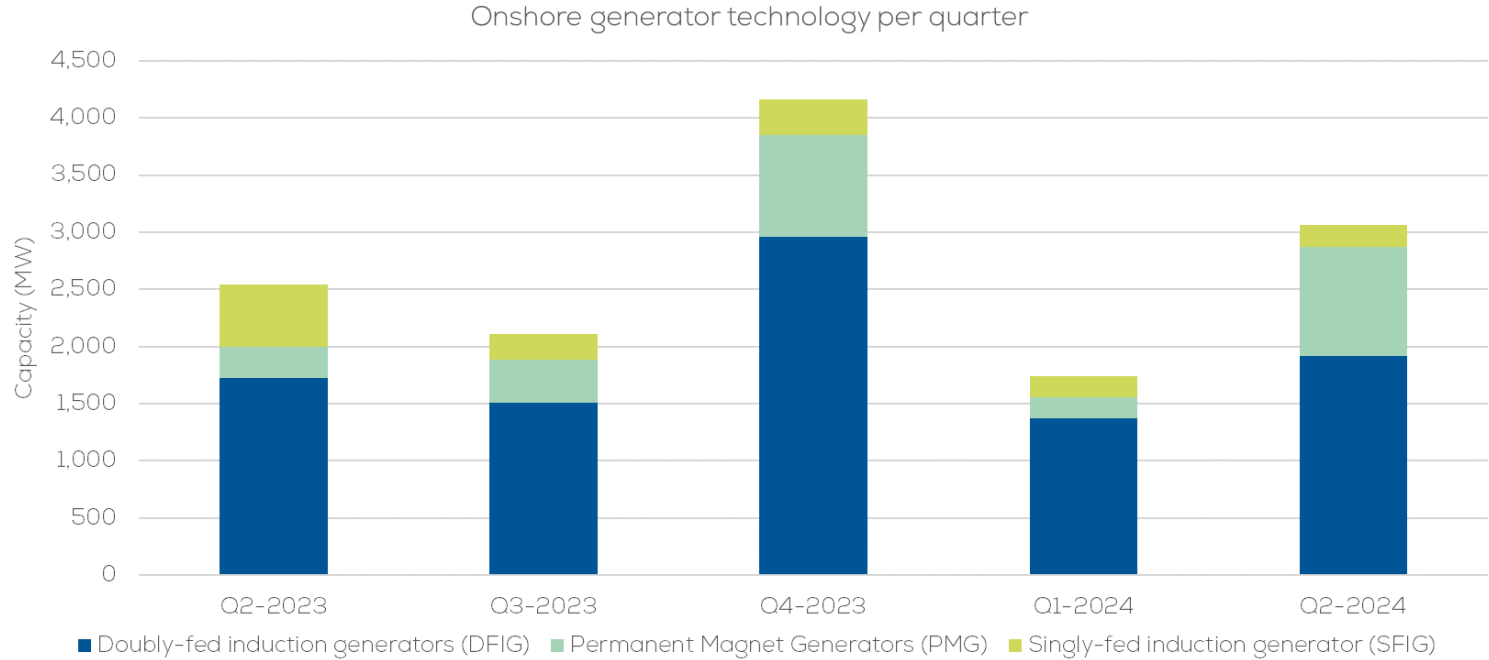


The average specific power of offshore turbines ordered in Q2 2024 was 343 W/m², 4% higher than in Q1 2024.



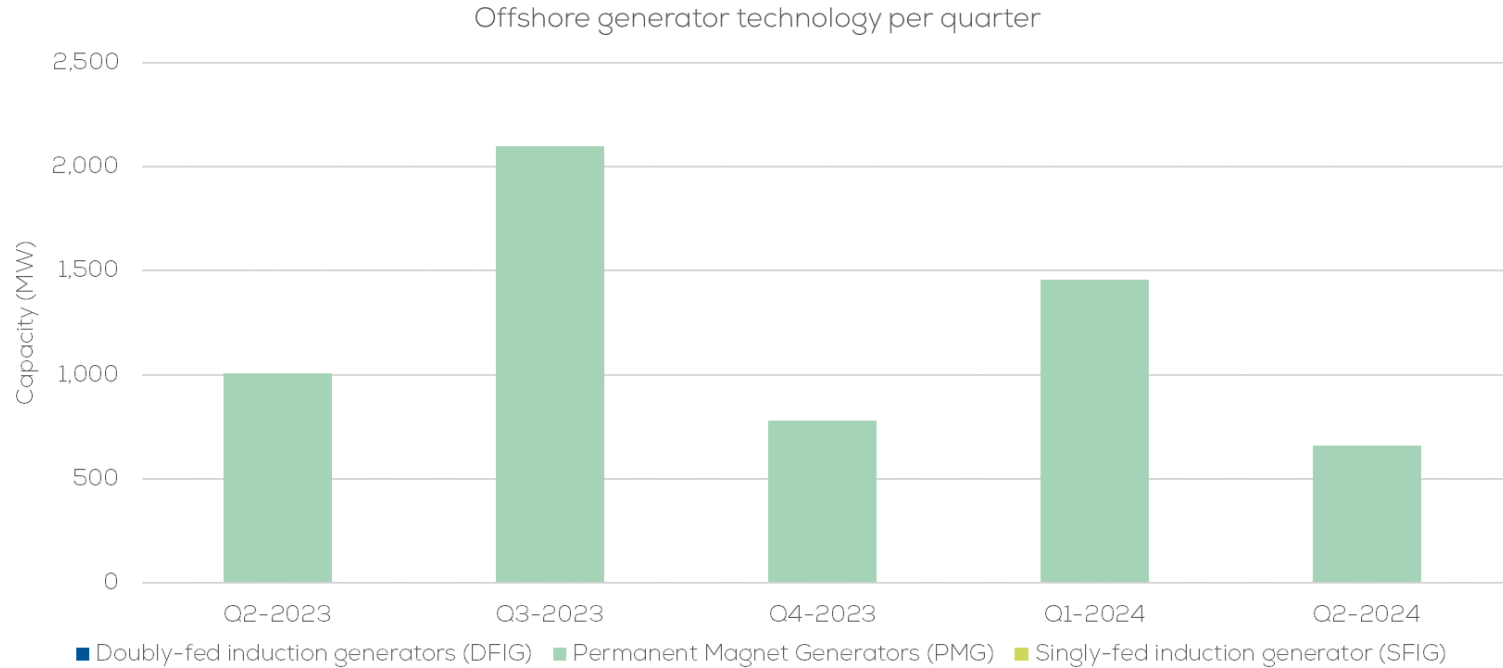
62% of disclosed onshore ordered capacity in Q2 2024 was for doubly-fed induction generators, 31% for permanent magnet generators.

Onshore



All offshore ordered capacity in Q2 2024 was for permanent magnet generators, the same as in the previous four quarters.

Offshore



ANNEX - SPECIFIC POWER:

The relation between generator capacity and rotor area can be referred to as specific power (W/m^2). Lower specific powers can lead to greater capacity factors for the same wind conditions. Thus, the evolution of specific power is a factor worth monitoring.

Methodology

WindEurope counts wind turbine orders on the basis of publicly available deals and distinguishes between firm orders and conditional orders. From Q2 2022, undisclosed orders are estimated by deducting firm orders from the total capacity reaching a Final Investment Decision (FID) for the quarter. In Q4 2023 undisclosed orders were updated impacting past estimates.

All types of orders are tracked but analysis per country and company is carried out on firm orders alone, unless specified. We do not track Enercon's orders because they are not publicly available. Furthermore, we do not track small-scale turbines (i.e., those smaller than 1 MW).

Orders are tracked by relying, among others, on:

- offshorewind.biz
- rechargenews.com
- renewablesnow.com
- renews.biz
- windpowermonthly.com
- cleanenergypipeline.com

Results are then cross-checked with companies' officially released information on their websites:

- GE www.ge.com/renewableenergy
- Goldwind www.goldwind.com/en/
- MingYang Smart Energy www.myse.com.cn/en/
- Nordex Acciona www.nordex-online.com/en
- Siemens Gamesa Renewable Energy www.siemensgamesa.com/en-int
- Suzlon Wind Energy A/S www.suzlon.com/
- Vestas www.vestas.com/
- Windey Energy www.windeyenergy.com/en