

Current situation – Offshore Wind Energy in Germany



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Windfarm
BARD Offshore 1

Offshore-Windfarm Riffgat in the North Sea

As of June 2014, four offshore wind farms totaling about 620 megawatts are in operation: alpha ventus, BARD Offshore 1, and Riffgat in

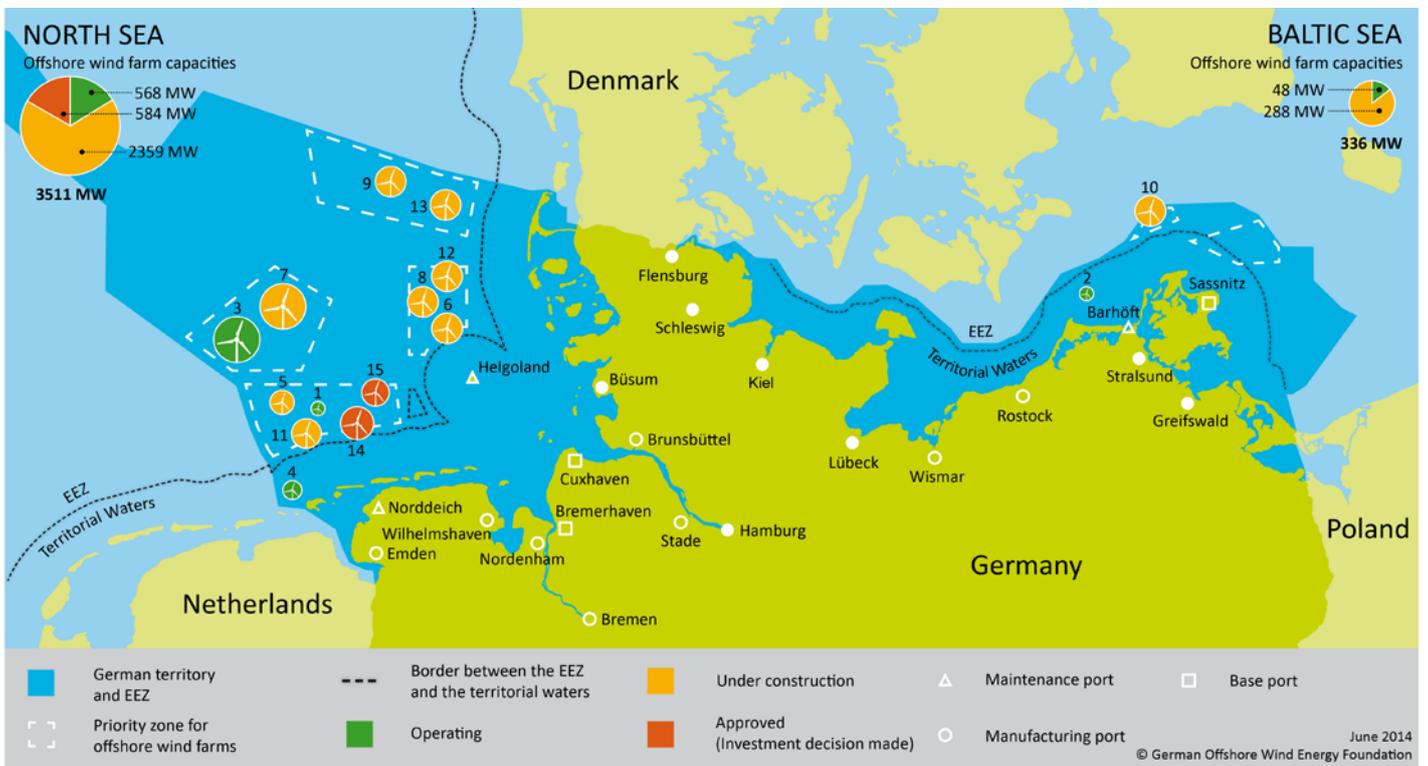
the North Sea and Baltic 1 in the Baltic Sea. Together, they provide clean power to approximately 710,000 households.

Three gigawatts of installed offshore capacity by the end of 2015

An additional nine wind farms are currently under construction in the North and Baltic Seas; they will have a combined total of 645 offshore wind turbines with a capacity of about 2.6 gigawatts and will all be operational by the end of 2015. The approximately three gigawatts of total offshore power will supply enough electricity for around 3.4 million households.

In addition, the construction of two more offshore farms amounting to about 600 megawatts is slated to begin in 2015. Approval has also already been granted for more than 20

additional offshore wind farms with a generation capacity of about seven gigawatts. Before the final investment decisions can be made for these projects, however, suitable legal conditions must be ensured for the successful construction and operation of the turbines. Because of their structure and size (300 to 400 megawatts), offshore wind farms tend to have long planning and construction schedules that are comparable to those of large-scale conventional power plants on land.



No.	Offshore wind farm	Licence owner	Installed capacity	Start of construction	Start of operation
Operating					
1	alpha Ventus	Stiftung OFFSHORE-WINDENERGIE	60 MW	08/2007	04/2010
2	EnBW Windpark Baltic 1	EnBW Erneuerbare Energien GmbH	48 MW	07/2009	04/2011
3	BARD Offshore 1	BARD Holding GmbH	400 MW	03/2010	09/2013
4	Riffgat	Offshore-Windpark Riffgat GmbH & Co. KG	108 MW	06/2012	02/2014
			Total operating	616 MW	
Under construction					
5	Trianel Windpark Borkum	Trianel Windpark Borkum GmbH & Co. KG	200 MW *1	09/2011	2014
6	Meerwind Süd/Ost	WindMW GmbH	288 MW	09/2012	2014
7	Global Tech 1	Global Tech I Offshore Wind GmbH	400 MW	09/2012	2014
8	Nordsee Ost	RWE Innogy GmbH	295 MW	12/2012	2014
9	DanTysk	Vattenfall Europe Windkraft GmbH	288 MW	02/2013	2014
10	EnBW Windpark Baltic 2	EnBW Baltic 2 GmbH	288 MW	08/2013	2014
11	Borkum Riffgrund 1	Borkum Riffgrund I Offshore Windpark A/S GmbH & Co. oHG	312 MW	08/2013	2014
12	Amrumbank West	E.ON Kraftwerke GmbH	288 MW	01/2014	2015
13	Butendiek	OWP Butendiek GmbH & Co. KG	288 MW	03/2014	2015
			Total under construction	2647 MW	
Approved (Investment decision made)					
14	Gode Wind 1	Gode Wind I GmbH	332 MW	2015	2016
15	Gode Wind 2	Gode Wind II GmbH	252 MW	2015	2016
			Total approved (Investment decision made)	584 MW	
			Total	3847 MW	
			Other approved offshore wind farms	7021 MW	

*1 first stage of expansion

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Acceleration model extension improves planning and investment security for the offshore industry

With the extension of the acceleration model – although somewhat marred by a slight degression starting in 2018 – the German government has encouraged the offshore wind energy and maritime industries to continue implementing the energy transition. With this model, offshore wind farm operators receive a higher initial

compensation of 19.4 cents/kWh for eight years, after which it drops drastically to 3.5 cents/kWh.

The new government has set its expansion target at 6.5 gigawatts of installed offshore capacity by 2020 based on the current situation. In the long term, however, a more ambitious expansion strategy will be needed for offshore wind. The sector must remain dynamic and continue to develop after 2020 if the energy transition is to be successful. Wind turbines at sea can provide electricity almost every single hour of the year with about as many operating hours as conventional power plants, producing power about 340 days each year; in addition, wind levels and, therefore, power production can be forecast fairly accurately. That means that offshore turbines are much more suited to supplying operating reserve than other fluctuating renewable energy sources and can play a significant role in stabilizing future renewables-based energy supply.

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Up-to-date information on German offshore wind farms in the North and Baltic Seas

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