

# CONSTRUCTION

BOP/EPC • Project Status • Siting • Equipment • Project Due Diligence • Services

## Arkona offshore wind farm concludes second construction phase

Construction of the Arkona offshore wind farm in the German Baltic Sea is progressing at a fast pace. After the foundations, the 60 connecting pieces are now also prematurely installed. The so-called “Transition Pieces,” each weighing 400 metric tons, were taken from the port of Mukran on Rügen into the construction site and placed on the foundations and bolted together. The project has thus also successfully completed the second major construction phase on the high seas.

Preparations for the next steps are also in full swing. At the French shipyard STX France, the transformer station, which will be operated jointly by the project partners, E.ON and Statoil and the transmission grid operator 50Hertz, will be transported by sea from the French Atlantic Ocean to the Baltic Sea in spring. Once this platform has been installed, the turbines are connected to the substation. The 75 kilometers of submarine cables required for this have already been delivered from the Nexans plant in Hanover to the base port of Mukran Port in Sassnitz. At the same time, production of the 6-MW turbines has begun at the Siemens plants.

The Arkona project is 35 kilome-



The Arkona project will have a capacity of 385 MW. (Courtesy: E.ON)

ters northeast of the island of Rügen. The wind farm will have a capacity of 385 MW and will be able to supply up to 400,000 households with renewable energy from 2019 onwards.

Compared to conventionally generated electricity, Arkona saves up to 1.2 million metric tons of CO<sub>2</sub> per year. It will install 60 6-MW class turbines from Siemens. The plants

are based on Monopfahl foundations at water depths of 23 to 37 meters. The investment amounts to 1.2 billion euros. Arkona is a joint venture between E.ON and the Norwegian energy company Statoil. ↴

Source: E.ON

For more information, go to [www.eon.com](http://www.eon.com)

## Mammoet updates crane fleet with 10 Demag® all terrain cranes

Mammoet's purpose is to help its clients improve construction efficiency and optimize the uptime of its plants and installations, which is why the company has placed an order for 10 Demag® all terrain cranes including an AC 500-8 crane, three Terex® MAC 25-4 pick & carry cranes, and a Demag CC 3800-1 crawler crane.

The cranes will be added to Mammoet's crane fleet, unparalleled in size, variety and capacities, and help the

company continue to provide industry leading productivity and performance for its broad range of customers.

Committed to having the latest equipment advances, Mammoet's new fleet of Demag all terrain cranes feature innovations such as the Demag IC-1 Plus control system and a single engine concept with an intelligent motor management system. The IC-1 Plus control system provides real time calculation of the lifting capacities.



The Demag CC 3800-1 crawler crane. (Courtesy: Terex Corporation)

This allows the crane to perform jobs usually reserved for larger machines. The single engine with start-and-stop function reduces idle times and total engine hours, which contributes to the reduction of fuel costs and helps preserve the crane’s residual value.

The popular Terex Mac 25-4 pick & carry crane has a 25-metric-ton lift capacity and a maximum boom length of 18.4 meters. Mammoet’s three units include intuitive controls with a large LCD and cruise control, making them simple to operate, easy to rig, and fast to transport

from one job to the next.

Mammoet’s powerful Demag CC 3800-1 lattice boom crawler crane is the industry’s preferred choice for constructing wind turbines. The 650-metric-ton capacity crane features an ergonomic cab and includes fall protection as standard equipment. ↴

*Source: Terex Corporation*

For more information, go to [www.terex.com](http://www.terex.com)

## BOEM increases flexibility for future wind projects

In support of the Administration’s America First Energy Plan, the Bureau of Ocean Energy Management (BOEM) recently announced the availability of draft guidelines for the use of a “Design Envelope” approach in construction and operations plans (COPs) for offshore wind energy facilities in the United States.

“The Outer Continental Shelf’s offshore wind poten-

tial is a tremendous asset and part of the Administration’s America First Energy Plan to make it easier for industry to do business here.” said Secretary Ryan Zinke. “And now, more than ever, we must use every tool at our disposal to ensure an energy-secure future — one that promotes jobs and is affordable, competitive, and safe. Offshore wind will play a big role in this future.”

In order to take advantage of the rapid pace of technological development within the offshore wind industry, offshore wind developers have asked BOEM to adopt this practice, which is standard in some European countries for permitting offshore wind energy projects. This would afford developers a degree of flexibility and allow them to make certain project-design decisions — such as which turbines to use — at the more commercially advantageous time later in the project-development process.

Last August, the Administration announced Executive Order 13807 to streamline the review and permitting of infrastructure projects. The design envelope approach would allow BOEM to analyze the environmental impacts of the proposed project in a manner that could reduce or eliminate the need for subsequent environmental and technical reviews without sacrificing appropriate environmental safeguards.

“The offshore wind industry is moving at a phenomenal pace, and I’m proud to announce that this Administration is working with industry and stakeholders to make the renewable energy development process quicker, cheaper, and more competitive with the rest of the world,” said Counselor for Energy Policy Vincent DeVito.

It is important to note that when describing a proposed wind facility, the use of a design envelope is not mandatory. Design envelopes are intended to be an optional tool for prospective developers.

BOEM welcomes input from industry and other interested stakeholders before finalizing this guidance. ↴

*Source: BOEM*

For more information, go to [www.boem.gov](http://www.boem.gov)

## Allete purchases turbines from GE

Allete Clean Energy recently announced a 40-MW purchase of wind turbines from GE Renewable Energy. The turbines qualify for 80 percent of the Production Tax Credit (PTC) and would create more than 400 MW of additional qualified wind projects through 2021. This latest purchase will bring Allete Clean Energy’s total wind project opportunity to approximately 1,500 MW.

The safe harbor turbines are part of Allete Clean Energy’s multifaceted growth strategy that includes building and operating new wind projects based on long-term power purchase agreements, and build, own, and transfer projects.

Additionally and separate of these safe harbor turbines, the company is in the midst of refurbishing some of its existing wind sites. With refurbishment efforts already underway in Minnesota and Iowa, and an expansion wind project with Montana-Dakota Utilities (MDU) in North Dakota, 2018 will be an active construction year for Allete Clean Energy.

“Adding to our PTC qualified inventory will ensure Allete Clean Energy’s continued growth and demonstrates the robust pipeline of project opportunities we are pursuing that will utilize this qualified capacity,” said Al Rudeck, president of Allete Clean Energy. “In working with our customers in the industry to accelerate the development of clean energy, we are finding the GE brand, reputation, and breadth of offerings will bring significant value as we advance several new and exciting projects.”

GE is one of the world’s leading wind-turbine suppliers, with more than 35,000 turbines across the globe. The turbines will be manufactured in the U.S.

“We are delighted to work with Allete Clean Energy on this project,” said Pete McCabe, president and CEO of GE’s Onshore Wind business. “Allete shares our unwavering commitment to renewable energy, and together we will help to deliver affordable, sustainable power to communities across the U.S.”

“The purchase of these PTC turbines will enhance our positioning to capitalize on the rapid growth of renewable energy evident throughout our country,” said Allete Chairman, President and CEO Al Hodnik. “We are confident in Allete Clean Energy’s performance as an earnings engine as we answer the nation’s call to transform its energy and water landscape.” ↴

*Source: Allete Clean Energy*

For more information, go to [www.allete.com](http://www.allete.com)

“ Adding to our PTC qualified inventory will ensure Allete Clean Energy’s continued growth. ”