



Siemens Gamesa will supply two wind farms with a combined capacity of 250 MW. (Courtesy: Siemens Gamesa)

► CONSTRUCTION

Siemens Gamesa to install two projects in South Africa

Siemens Gamesa Renewable Energy will supply two wind farms in South Africa, including 109 units of onshore wind turbines. The SWT-2.3-108 turbine will each feature a rated capacity of 2.3 MW and a 108 meters diameter rotor.

While the 140-MW Kangnas wind farm project is near Springbok in the Northern Cape, another 110 MW Perdekraal East wind farm is situated 80 kilometers northeast of Ceres in the Western Cape. A 10-year full-service agreement will secure the perfor-

mance of the wind farms, which will together supply enough clean electricity for approximately 214,000 South African homes.

A consortium led by Mainstream Renewable Power was awarded the contracts for the wind farms by the Department of Energy in South Africa as part of the Renewable Energy Independent Power Producers Procurement Program (REIPPPP). While Siemens Gamesa will start the supply of the wind turbines in early 2019, the wind farm's completion is planned for 2020.

"This is the next big milestone for Siemens Gamesa in South Africa and with adding these two wind farms, Siemens Gamesa will have installed more than 850 MW of wind capacity in the country," said Janek Winand, managing director of Siemens Gamesa South Africa. "We are proud to offer

services with a localized team based in Johannesburg with long-lasting experience and determined to generate value for South Africa by creating jobs, supporting local manufacturing, and driving development projects within local communities."

Present in South Africa since 2014, the accumulated base installed by Siemens Gamesa accounts today for 324 MW of rated capacity, and two wind projects totaling 280 MW under construction.

Owner of the wind farms is the Mainstream Renewable Power consortium. Mainstream is an independent global developer of renewable energy based in Dublin, Ireland, with offices in seven countries with one of their largest in Cape Town, South Africa. Siemens Gamesa has already delivered several projects to Mainstream in the

past with a total of 498 MW. The first 138 MW were supplied for the Jeffreys Bay wind farm in 2014, another 80 MW for Noupoort wind farm in 2016, and in 2017 a total of 280 MW were commissioned for Loeriesfontein and Khobab wind farms counting 140 MW each. Siemens Gamesa secured full service agreements of 10 years for Nouport, Khobab, and Loriesfontein and five years for Jeffreys Bay.

“We are very proud to have won further projects, part of the ambitious renewable energy program of South Africa in line with the national commitment to transition to a low carbon economy,” said Enrique Pedrosa, CEO Onshore for South Europe and Africa at Siemens Gamesa Renewable Energy. “We are strongly committed to continuously support the country on its path to provide more and more Africans with clean energy and will do everything to contribute to its so-

cio-economic and environmentally sustainable growth.”

MORE INFO

www.siemensgamesa.com

▮ **CONSTRUCTION**

Siemens Gamesa to supply 92 of its newest turbine models

Siemens Gamesa, Spain's leading wind turbine OEM, continues to fortify its strong position in the market with new orders for the supply of 289 MW to five different customers: Viesgo, Grupo Jorge, Comunidad General de Riegos del Alto Aragón, and two important energy companies. All of these projects fall under the scope of the renewable capacity allocated in recent auctions.

In all, the company will install 92 turbines at 10 wind farms being developed in Guadalajara, Lugo, Malaga, Zaragoza, Huesca, La Coruña, and Cadiz. Delivery of the new turbines will begin in October, depending on each project. The company will also operate and maintain all of these new facilities.

Most of the turbines correspond to two of Siemens Gamesa's most cutting-edge and sought-after models: the SG 3.4-132 (58 units) and the SG 2.6-114 (28 units). The six remaining turbines will be the SG 2.1-114.

More specifically, the company will supply Grupo Jorge with 23 of its SG 3.4-132 turbines (82 MW) for the Coscojar II and El Aguila II wind farms in the Zaragoza towns of Pedrola and Plasencia de Jalón, which it will service for 10 years.

Elsewhere, it will provide Viesgo with seven of its SG 3.4-132 turbines

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Siemens Gamesa will install 92 turbines at 10 wind farms. (Courtesy: Siemens Gamesa)

(24 MW) for the El Marquesado wind farm in Puerto Real (Cadiz), a facility it will operate and maintain for 15 years.

Under the terms of the agreement with the Comunidad General de Riegos del Alto Aragón, a public irrigation scheme, Siemens Gamesa will build the El Balsón wind farm under an EPC arrangement, fitting it with nine SG 3.4-132 turbines for total capacity of 31 MW. This wind farm is being developed in Gurrea de Gállego (Huesca).

In addition, it will supply 25 turbines (19 SG 3.4-132 turbines and six SG 2.1-114 turbines) to an energy company for three wind farms in Lugo, Malaga, and Guadalajara, with aggregate capacity of 79 MW. Lastly, it will install another 28 of its SG 2.6-114 turbines for another energy company at three wind farms, two of which are in La Coruña.

These new agreements are incremental to the Spanish order intake of 352 MW announced by the company in recent months.

MORE INFO

www.siemensgamesa.com

CONSTRUCTION

Ørsted orders 165 turbines for Hornsea Two wind power plant

With the official signing of the wind-turbine order with Siemens Gamesa, the developer and operator Ørsted has now kicked off the largest offshore wind project to date. Once commissioned in early 2022, Hornsea Two will provide clean energy for approximately 1.3 million British households. The installation of the 165 large direct drive wind turbines at the project site 89 kilometers off the British east coast is expected to start in 2021.

The record-breaking project with a combined rating of 1,386 MW is not only the largest wind project in Siemens Gamesa's history but also the largest single order in the history of offshore wind energy. So far, this leading position has been defended by

Hornsea One with a capacity of 1,218 MW and which similarly was developed by Ørsted and is currently under construction.

“Ørsted is one of Siemens Gamesa's key partners to transform offshore wind from wind farm level to a clean energy source in real power plant scale,” said Andreas Nauen, Offshore CEO at SGRE. “We are proud and pleased to meet this challenge within the framework of a strong and long-term collaboration with an experienced player like Ørsted.”

“We are delighted to continue our partnership with Siemens Gamesa,” said Duncan Clark, Ørsted's program director for Hornsea Projects One and Two. “We've worked with them on many other U.K. projects, including Race Bank, ... and was the first project to use blades manufactured at the facility in Hull.”

The nacelles for Hornsea Two will be produced at SGRE's factory in Cuxhaven, Germany, while the majority of the blades will be made at the factory in Hull, U.K., where the

pre-assembly work will also be carried out. Towers are expected to be partly sourced from U.K. suppliers. A single 8-MW turbine is capable of generating enough electricity for more than 8,000 average European households. Originally planned for up to 300 turbines, Hornsea Two has been adapted to the progress of the significantly more powerful hardware. With only 165 units at the same total output, the project benefits from significantly improved economic efficiency and simultaneously reduced LCoE.

The new SG 8.0-167 DD is equipped with a rotor 167 meters in diameter. The blades, 81.5 meters long, deliver an 18 percent wider swept area and 20 percent more annual output than its predecessor, the SWT-7.0-154. It features the technology proven in the direct drive platform combined with a larger-scale rotor in order to offer customers higher returns while min-

imizing the associated costs and risks.
MORE INFO
www.siemensgamesa.com

CONSTRUCTION

Lagerwey builds first 100% public wind farm in the Netherlands

Lagerwey has been contracted to build a new wind farm for De Windcentrale, which will be the first 100 percent public-owned wind farm in the Netherlands. The wind farm consists of three L82-2.3MW wind turbines that will generate wind energy for about 8,000 households. The wind turbines will be in the municipality of Staphorst, between Nieuwleusen and Rouveen. Lagerwey will start constructing the foundations at the end of September 2018.

The wind farm will be exclusively owned by the Dutch public once it is completed in May 2019. The windmill will be virtually divided into thousands of pieces, each of which will represent 500 kW/h. People who live in close proximity to the farm can acquire a piece of the windmill at a discounted price, which means they will gain the most benefits. De Windcentrale has already used this formula to great success with existing wind turbines. But this is the first time they are personally overseeing the construction of a whole wind farm.

“We are proud that a Dutch turbine manufacturer has been selected for this local project,” said Daniël Dubbelhuis, sales manager at Lagerwey. “The construction of this 100-percent cooperative wind farm is part of the Lagerwey Lokaal initiative, which aims at maximizing public participation in wind energy, thereby considering local surroundings while also improving employment opportunities in the Netherlands.”

MORE INFO www.lagerwey.com

INNOVATION

Suction bucket concept gets test installation

Universal Foundation continues its partnership with Siemens Gamesa to showcase suction bucket technology with focus on industrializing suction bucket technology. The overall target is to decrease the cost of foundation construction and installation by 40 percent to support continued decreases in the Levelized Cost of Energy.

A consortium including Siemens Gamesa, Universal Foundation, Aalborg University, Fred. Olsen Windcarrier, and Offshoreenergy.dk has been awarded 3.8 million euros by the Energy Technology Development and Demonstration Programme (EUDP) via the Danish Ministry of Energy, Utilities and Climate. The partnership seeks to demonstrate how an industrialized suction bucket concept can slash the installation costs of offshore wind



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