Unmatched in the U.S.: Siemens Gamesa SG 14-222 DD offshore wind turbines to power 2.6-GW Dominion Energy project

- Installations of SG 14-222 Direct Drive offshore wind turbines at 2.6-GW Dominion Energy project expected to be completed by end of 2026
- SG 14-222 DD offshore wind turbine features nameplate capacity of 14 MW; can reach 15 MW with Power Boost
- With this announcement, the total conditional order backlog for the new SG 14-222 DD amounts to 2,940 MW, following an additional conditional order announced today in Taiwan

Siemens Gamesa Renewable Energy will conditionally supply SG 14-222 Direct Drive offshore wind turbines to the massive 2,640-MW Dominion Energy Coastal Virginia Offshore Wind (CVOW) commercial project. This project will be home to Siemens Gamesa’s latest offshore turbine variant having the capability to produce up to 15 MW with a 222-meter rotor. The exact quantity of turbines to be deployed is subject to final project site conditions. All turbine installations are expected to be completed by 2026. The agreement is subject to certain conditions including Dominion Energy’s final investment decision, governmental permitting, and other required approvals.

Once online, the project is expected to provide enough clean energy to power 650,000 homes at rated wind speed, avoiding 3.7 million tons per year of carbon emissions compared to fossil fuel-based power generation.

Siemens Gamesa was named as the preferred turbine supplier for the CVOW commercial project in January 2020. Dominion Energy’s CVOW commercial project will be a crucial building block to help the Commonwealth of Virginia meet its clean energy goals established by the Virginia Clean Economy Act, which sets Virginia on the path to 100% clean energy by 2045. Siemens Gamesa continues to work with local stakeholders to investigate a potential blade manufacturing facility for these turbines on the East Coast, potentially the first facility custom-built to manufacture components for the SG 14-222. Decisions on sourcing and supply chain to serve the U.S. market are expected to be made within the next year.
“Dominion Energy’s selection of the SG 14-222 DD offshore wind turbine for deployment is an important next step for the sizable project, the U.S. offshore wind industry, and the global offshore wind industry. In these turbulent times, where the winds of change are stronger than ever, and we’re thrilled to join forces to create even more renewable energy for generations to come,” says Andreas Nauen, CEO of the Siemens Gamesa Offshore Business Unit.

“It’s only fitting that the U.S.’s largest offshore wind project will feature the largest installation announced to date of Siemens Gamesa’s largest offshore wind turbine. We are proud to partner with Dominion Energy on such a significant project,” says Steve Dayney, Head of Offshore North America at Siemens Gamesa Renewable Energy. “The offshore industry is emerging in the U.S. and with this agreement and this new product, we are positioned to significantly advance the growth of the industry and provide clean energy for many generations to come.”

The turbine’s 222-meter diameter rotor, just shy of the length of the USS Wisconsin, one of the largest battleships built by the U.S. Navy and currently residing in Virginia, uses the new Siemens Gamesa B108 blades. Nearly 50 feet taller than the Statue of Liberty, each 108-meter long IntegralBlade is cast in one piece using patented Siemens Gamesa blade technologies. At 39,000 m², the turbine’s swept area is equivalent to approximately seven NFL football fields. It allows the SG 14-222 DD to provide an increase of more than 25% in Annual Energy Production compared to the SG 11.0-200 DD offshore wind turbine, rated at 11 MW with a 200-meter rotor. Furthermore, the new offshore turbine features a comparatively low nacelle weight at 500 metric tons. This enables Siemens Gamesa to safely utilize an optimized tower and foundation substructure compared to a heavier nacelle, reducing costs per turbine by minimizing sourced materials and transportation expenses.

“Siemens Gamesa is a global leader in offshore wind technology and these new state-of-the-art wind turbines will help us provide the clean, affordable energy our customers expect and support the Commonwealth’s commitment to clean energy generation, firmly placing Virginia as a leader in offshore wind,” said Mark D. Mitchell, Dominion Energy Vice President of Generation Construction.

Dominion Energy’s commercial offshore wind project expands on knowledge gained though the two-turbine, 12-MW CVOW pilot project which will be installed within a research lease area adjacent to site of the 2,640-MW commercial project. It is the first offshore wind project to be built in U.S. Federal waters and will utilize Siemens Gamesa’s 6-MW SWT-6.0-154 wind turbines. The pilot project is set to be online later this year.

About Siemens Gamesa Renewable Energy
Siemens Gamesa is a global leader in the wind power industry, with a strong presence in all facets of the business: offshore, onshore and services. The company’s advanced digital capabilities enable it to offer one of the broadest product portfolios in the sector as well as industry-leading service solutions, helping to make clean energy more affordable and reliable. With more than 103 GW installed worldwide, Siemens Gamesa manufactures, installs and maintains wind turbines, both onshore and offshore. The company’s orders backlog stands at €28.6 billion. The company is headquartered in Spain and listed on the Spanish stock exchange (trading on the Ibex-35 index).

As of May 2020, Siemens Gamesa has installed more than 3,500 offshore wind turbines globally, with a combined capacity of more than 15 GW. The company’s experiences reach back as far as 1991, when it established the world’s first offshore wind power plant. Through a strong focus on safety and innovation, SGRE constantly strives to reduce the Levelized Cost of Energy from offshore wind power.

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