

CONSTRUCTION

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CLEAN LINE ENERGY TO PROVIDE LOW-COST RENEWABLE ENERGY TO TALLAHASSEE



Clean Line Energy recently announced an agreement with Tallahassee, Florida, that states the city's intention to purchase up to 50 MW of low-cost wind power from the Oklahoma Panhandle region. The clean energy would be delivered to Tallahassee customers via the Plains &

Eastern Clean Line. The Plains & Eastern Clean Line — America's largest clean energy infrastructure project — will deliver 4,000 MW of low-cost wind power from the Oklahoma Panhandle region to utilities and customers in Florida, Tennessee, Arkansas, and other markets in the

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Mid-South and Southeast. For many decades, Tallahassee's municipal electric utility has provided low-cost, clean, and reliable power to approximately 118,000 residential and commercial customers.

"We commend Tallahassee for taking a leadership position and agreeing to provide their customers with access to some of the lowest-cost wind energy in the country," said Michael Skelly, president of Clean Line. "This is another important step for the Plains & Eastern Clean Line, and we look forward to helping Tallahassee to deliver on their commitment to increase their clean energy usage while keeping costs low."

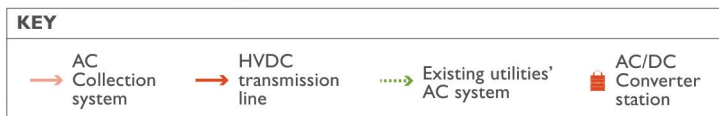
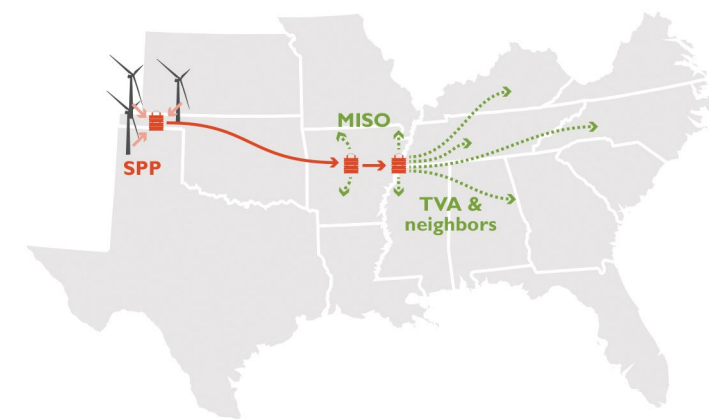
The Plains & Eastern Clean Line represents a \$2 billion investment in infrastructure that will provide low-cost renewable energy to the Mid-South and Southeast regions of the United States, areas that are currently lacking access to affordable renewable energy. The Plains & Eastern Clean Line will help unlock approximately \$7 billion in investments in new wind farms that could not otherwise be built due to the limitations of the existing electric grid. The infrastructure project will create and support thousands of jobs in manufacturing, construction, and operations while meeting the increase in demand for additional electric transmission capacity to deliver renewable energy.

"This type of agreement allows cities the ability to access world-class wind resources and deliver big savings to consumers," said Andrew Gohn, Eastern state policy director for the American Wind Energy Association (AWEA). "Building new transmission is essential to bring the lowest-cost wind in the country to places where the majority of American families live and businesses operate. The Plains & Eastern Clean Line will deliver clean, reliable, low-cost electricity for all those who plug things in for years to come."

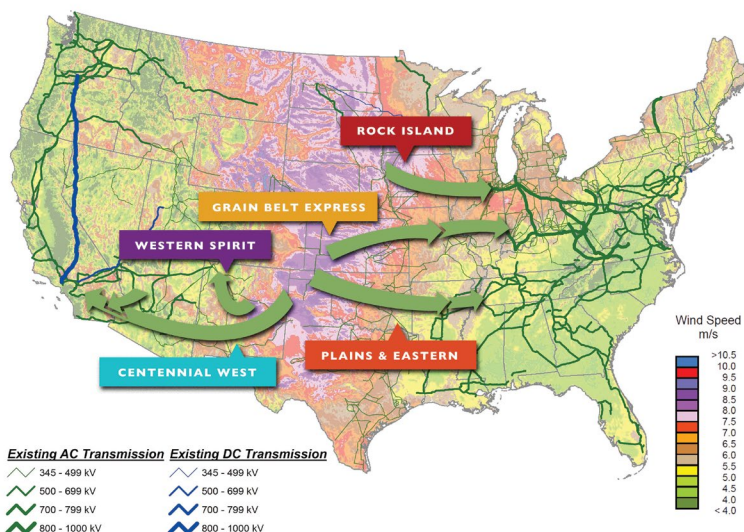
Construction of the Plains & Eastern Clean Line is estimated to begin in 2017 and will require approximately two to three years to complete. The Plains & Eastern Clean Line is expected to begin delivering electricity as early as 2019 and will provide clean power to more than 1 million American homes. ↴

— Source: Clean Line Energy Partners

For more information, go to www.cleanlineenergy.com.



This map is intended for illustration purposes only and does not represent a proposed route.



TRANSMISSION UPGRADES DELIVER SUBSTANTIAL VALUE TO SOUTHWEST POWER POOL MEMBERS

The construction of electric transmission upgrades in the Southwest Power Pool (SPP) from 2012 to 2014 resulted in more than \$240 million in fuel cost savings for utilities during the first year of operation of the company's wholesale energy market, according to a new study from the regional power grid operator.

The study analyzed the value provided by 348 transmission upgrades that involved almost \$3.4 billion of capital investment.

Previous studies by SPP projected the expected future value of transmission construction based on the latest available forecast data. This study used historical operating data obtained during the first year of operation of SPP's integrated marketplace to document transmission value already realized.

In addition to fuel cost savings, the study quantified other benefits associated with the transmission expansion upgrades, including reliability and resource adequacy benefits, generation capacity cost savings, reduced transmission losses, increased wheeling revenues, and public policy benefits associated with more optimal wind development facilitated by the transmission upgrades. The net present value of all quantified benefits is expected to exceed \$16.6 billion over a 40-year period, resulting in a benefit-cost ratio of at least 3.5. This means the investments are expected to produce more than \$3.50 in overall benefits for every \$1 in transmission-related costs.

"Transmission does more than just keep the lights on," said Nick Brown, president and CEO of SPP. "It's an enabling resource that paves the way for numerous benefits to our stakeholders and their customers. A modernized transmission system increases reliability, reduces costs by providing access to a wholesale energy market and effectively integrates wind and other renewable energy to the grid."

In a letter accompanying the study, Johannes Pfeifenberger, Judy Chang, and Onur Aydin of the Brattle Group said that compared to transmission planning studies, it provides a more accurate estimate of the total benefits that a more robust and flexible transmission infrastructure provides to power marketers, market participants and, ultimately, retail electric customers. Additionally, the group said that "the estimated present value of the production cost savings in the SPP study likely is understated" due to several factors, including the fact that many of the major transmission projects evaluated were not yet in service during most of the period analyzed. ↴

— Source: Southwest Power Pool

For more information, go to www.spp.org.



ITC Holdings Corp.

DONG ENERGY TO BUILD NEW RECORD-SIZED OFFSHORE WIND FARM

With a capacity of 1.2 GW, the Hornsea Project One offshore wind farm in the U.K. will be the world's first offshore wind farm to exceed 1,000 MW in capacity on completion and, by a large margin, become the world's largest offshore wind farm, making it able to meet the electricity needs of well over 1 million homes.

"We are excited about building this huge wind farm and pushing the boundaries of the offshore wind industry," said Henrik Poulsen, CEO of Dong Energy. "Hornsea together with Race Bank, Westermost Rough, and Lincs will make up a giant production area off the British east coast, supporting our efforts to deliver green and independent energy to society."

Hornsea was granted a final investment decision enabling contract (contract for difference) by the U.K. government in April 2014 and will receive a fixed tariff for the first 15 years of production. The wind farm is expected to be fully commissioned in 2020.

FINAL STAGE TOWARD DELIVERING ON THE STRATEGIC TARGET

Hornsea will be the final stage toward Dong Energy delivering on its strategic target of installing 6.5 GW of offshore wind by 2020.

"Reaching our strategic target is important as volume is required to reduce the cost of a new technology," Poulsen said. "It is vital in order to make all players in the value chain advance up the learning curve. As such, Hornsea will be another major step in our ongoing efforts to significantly reduce the cost of electricity for offshore wind."

Hornsea will surpass Walney Extension, which had a final investment decision in October 2015, as the

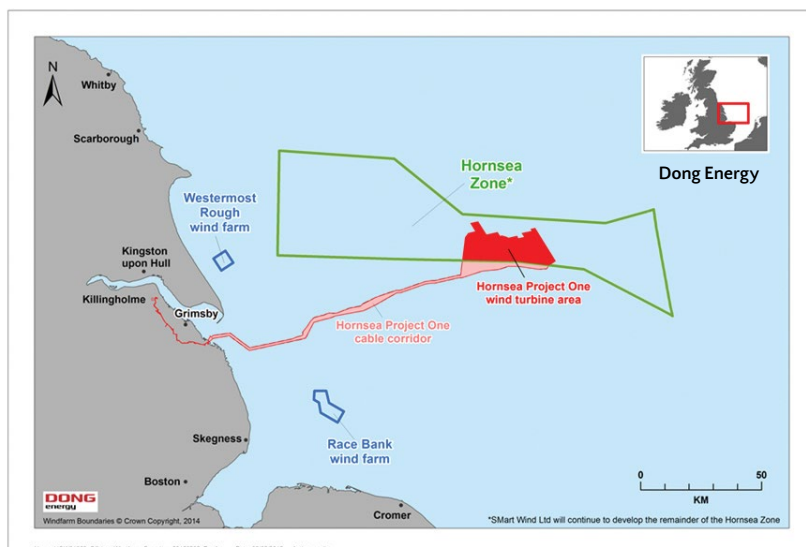
world's largest offshore wind farm. Walney Extension will have a capacity of 660 MW, meaning that Hornsea will be almost double its size.

"Our decision to construct this giant wind farm underlines our commitment to the U.K. market," said Brent Cheshire, country chairman for Dong Energy U.K. "Hornsea Project One will support the supply chain and help create local

jobs. To have the world's biggest offshore wind farm located off the Yorkshire coast is significant and highlights the vital role offshore wind will play in the need for new low-carbon energy in the U.K." ↵

— Source: Dong Energy

For more information, go to www.dongenergy.com.



ABS GROUP TO PROVIDE CERTIFICATION AND DESIGN VERIFICATIONS FOR OFFSHORE SCOTLAND WIND FARM

ABS Group Ltd., a leading provider of project certification and quality assurance services for offshore wind assets based in Houston, Texas, has received a contract to provide third-party certification and design verification services to Hexicon AB for the planned Dounreay Tri floating offshore wind farm demonstrator project in Scotland.

The Dounreay Tri Project, expected to be operational in 2018, is being developed by Hexicon and its partners to pilot a novel floating foundation design for offshore wind. When completed, the project will consist of two wind turbines, up to 6 MW each, mounted on Hexicon's platform that will be located offshore northern Scotland.

According to Hexicon, the platforms allow wind turbines to be deployed efficiently in remote areas where winds are stronger and more stable and the platforms are not limited by water depth. Therefore, wind energy parks can be operational out of sight and in areas where the environmental impact is minimal.

"We are excited to have engaged ABS Group in the Dounreay Tri Project," said Marcus Thor, project director at Hexicon. "In a groundbreaking project like this, it is im-



portant to have partners with verification and certification experience working with novel technology developments in addition to vast experience within the offshore industry."

ABS Group's certification scope will cover independent verification of the design basis, detailed design, manufacturing inspections, installation supervision, commissioning supervision, and in-service inspections. Work has commenced with ABS Group providing preliminary planning and advice in support of Hexicon's development process and will continue in subsequent certifi-

cation phases over the duration of the project.

"We are proud to support Hexicon on this innovative design project," said Thomas Adams, vice president of power business development for ABS Group. "Development of these types of new technologies will benefit the offshore wind industry through more cost-effective and adaptable projects." *✍*

— Source: ABS Group

For more information, go to www.abs-group.com.

FIRST RESERVE ACQUIRES MARIAH NORTH WIND POWER PROJECT IN THE TEXAS PANHANDLE

First Reserve, one of the largest global private equity and infrastructure investment firms exclusively focused on energy, recently announced the procurement of the Mariah North Wind project from Mariah Acquisition. Upon completion, Mariah North Wind is expected to generate 230 MW of wind power, serving the high-demand Electric Reliability Council of Texas (ERCOT) market in Parmer County, Texas, with a 13-year, fixed-price hedge for

its power production. The project will also construct and own a 27-mile, 345-kV transmission line to interconnect with the ERCOT competitive renewable energy zones (CREZ) system and is the first phase of an expected 600-MW development. The terms of the transaction were not disclosed.

The acquisition represents a continued expansion of First Reserve's wind power portfolio, which is expected to generate a total of more than 1,100 MW

upon completion of projects in the portfolio under construction. The acquisition also further geographically diversifies the firm's wind power exposure, which now spans several states in the United States, as well as Mexico, Spain, and Hungary.

Mariah Acquisition, an experienced wind development team backed by Arctas Capital Group, a Houston-based renewables boutique, will continue to oversee project development and will partner with affiliate Harvest Energy Services, Inc. to construct and operate the approximately \$350 million facility. The developers will maintain a minority interest in the project during the operating period. In addition, a turnkey engineering, procurement, and construction contract for the balance of the plant has been signed with Mortenson Construction as well as a fixed-price operations and maintenance services and turbine supply agreement with General Electric. Tax equity is being provided by BHE Renewables, Citigroup, and HSBC, with a sale leaseback with Hannon Armstrong for the transmission facilities and rights of way.

"We are pleased to be acquiring this construction-ready project backed by a strong, historically consistent wind resource," said Mark Florian, man-

aging director and head of Infrastructure Funds for First Reserve. "The Mariah North Wind opportunity represents an extension of the model followed by many of First Reserve's energy infrastructure investments, in which we have partnered with what we view to be solid counterparties with contractual structures designed to protect returns on behalf of our Limited Partners."

According to Michael Rucker, Mariah Acquisition's managing director, Mariah North Wind will make a positive economic impact on the Parmer County community generating valuable tax revenue and employment opportunities.

"Mariah Acquisition is proud to bring the project and its transmission line to financial close adding another source of clean power to the ERCOT grid, as the first of future wind and solar phases of the \$1 billion Mariah Renewable Energy Center," Rucker said.

The project is expected to be operational by the end of 2016. ↘

— Source: First Reserve

For more information, go to www.firstreserve.com.

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WoWE 2015 Rudd Mayer Fellows
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Malika Grayson, Heather Sauder, Elena Nansen
(Front) Rachael Fabiny



WoWE Lunch and Q&A with Andrea Jung
Just before WINDPOWER 2015 WoWE partnered
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