

User name: PowerChina Zhongnan Engineering Corporation Limited

Project name: Shandong Energy Group Bozhong Offshore Wind Farm Site A project

Location: Dongying, Shandong, China

Background:

- The Bozhong Offshore Wind Farm is the first grid-parity offshore wind farm project in the Shandong region.
- The project pioneers the intersection of submarine cables and oil and gas pipelines.
- Upon completion, the facility will provide 1.698 billion kilowatt-hours of clean electricity to the grid annually, reducing carbon emissions by 1.26 million tons.

Challenges:

- The project site presented complex hydrological and geological site conditions.
- Cost-efficient design solutions were required.
- Multiple stakeholders had to coordinate to meet the tight deadline.

Solution:

- ProjectWise established a collaborative data environment to coordinate all contributions from different project disciplines.
- Bentley applications automated the design and supported intelligent workflows and delivery.

Outcomes:

- Bentley technology improved infrastructure delivery and performance of the project by reducing modeling time by 30%, shortening the construction period by 20%, and saving 10% in costs.

Quote: "Digital BIM design with MicroStation enabled the Bozhong Offshore Wind Farm Project of Shandong Energy Group to achieve grid connection successfully. As a result, the project was approved, constructed and grid-connected in the same year it was planned - the fastest ever in the whole world, creating a miracle in the history of offshore wind farm construction." – *Wenjie Mi, Director of Digital Engineering, PowerChina Zhongnan Engineering*

Image caption/courtesy 1: PowerChina created a digital twin by using Bentley's Open applications. *Image courtesy of PowerChina Zhongnan Engineering.*

Image caption/courtesy 2: The collaborative data environment coordinated all contributions from different project disciplines. *Image courtesy of PowerChina Zhongnan Engineering.*

Image caption/courtesy 3: The digital twin will be used throughout the lifecycle of the project. *Image courtesy of PowerChina Zhongnan Engineering.*

For more information, please contact Bentley PR at PR@news.bentley.com.

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