

ELECTRICAL DESIGN SOLUTIONS

VATTENFALL'S
OFFSHORE WIND
FARM FOUNDATIONS



OVERVIEW

CREADIS provided complete electrical design solutions for 113 offshore wind farm foundations for the energy company, Vattenfall. The offshore wind farms are located in Denmark and consist of Vesterhav Nord and Vesterhav Syd in the North Sea, and Kriegers Flak in the Baltic Sea.

The three offshore wind farms will be among the largest farms in Denmark and will have the capacity to deliver sustainable electricity to approximately 980,000 Danish households. CREADIS also provided Vattenfall with information and calculations for the tender materials when Vattenfall submitted and subsequently won the project.

BUSINESS CHALLENGE

Multidisciplinary Support: Vattenfall needed support for both electrical and mechanical requirements for the project.

Design Reliability: Design concept needed to prevent short-circuiting, overvoltage issues, and provide safe installation procedures.

Compliance & Regulation: All electrical design schematics needed to comply with industry standards and regulations.

THE CREADIS SOLUTION

CREADIS delivered electrical panel design, specifications, cable lists, complete electrical schematics, wiring diagrams and illumination analysis, to ensure compliance with applicable standards and regulations. CREADIS also provided lightning reports for LPZ-zones, specifications for overvoltage protection, short-circuit calculations, cable routing, cable cross section drawings as well as earthing and bonding design. In addition, the mechanical department was responsible for the design of mounting brackets, 3D design of electrical panels as well as installation layouts for plug connections, and layout drawings of the electrical equipment installed in the foundations.

- We have experienced a very successful collaboration with CREADIS. We did not feel we worked with an external partner on this task and this was largely due to the close cooperation between Vattenfall's Electrical Design Manager and the CREADIS project organization, who performed the tasks, says Nilas Mandrup Hansen, Civil Design Manager at Vattenfall.



ELECTRICAL PACKAGE DESIGN SOLUTIONS