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|---|---|---|
| **Project Name (4):**<br><br>Q7 Offshore Wind Park<br>(now Princess Amalia Wind Park) | | **Country:**<br><br>The Netherlands |
| **Project Location Within Country:**<br><br>North Sea 25 km west of Ijmuiden. | | **Professional Staff Provided:**<br><br>**No. of Staff:** 7 |
| **Name of Client:**<br><br>ENECO BV | | **No. of Person-Months:**<br><br>90 |
| **Start Date:**<br><br>2006-06-01 | **Completion Date:**<br><br>2008-05-30 | **Approx. Value of Services:** |
| **Name of Associated Firm:**<br><br>Wind and Water ApS | | **No. of Person-Months of Professional Staff Provided by Associated Firms:**:<br><br>24 |
| **Senior Staff Involved and Functions Performed:**<br><br>The Engineer according to FIDIC Yellow Book<br>Commercial Manager<br>Coordination Project Manager<br>Marine Coordinators<br>Quality Controllers<br>Contract Administrator | | |

**Detailed Narrative Description of Project & Services:**

The Offshore Windpark Q7 is a joint project of Econcern, Energy Investment Holding and utility ENECO Energie, who constructed the Q7 Offshore Wind Farm some 23 km west of Ijmuiden, Holland. Today Offshore Windpark Q7 is 100% owned by ENECO Energie.

Q7 Offshore Wind Park was renamed Princess Amalia at beginning of operation and is the first offshore wind farm financed on the basis of non recourse project finance. The debt was provided by Dexia, Rabobank and BNP Paribas as Mandated Lead Arrangers Eksport Kredit Fonden, the Danish state owned export credit company.

The wind farm comprise of 60 Wind Turbine Generators with a total rated power of 120 MW (60 @ 2 MW), 60 WTG Foundations of the Monopile type, 60 Inter Turbine Seacables, 1 Offshore High Voltage Substation (OHVS), 1 Monopile Foundation for the OHVS, 1 Export Seacable, 1 Export Onshore Cable.

**Technical Data:**

- Start Construction: July 2006
- Finish Construction: March 2008
- 60 Vestas V80 Wind Turbine Generators of 2 MW each

| **Project Name (4):** | **Country:** |
|---|---|
| Q7 Offshore Wind Park<br>(now Princess Amalia Wind Park) | The Netherlands |

- Water Depth: 19 – 24 m
- Distance to shore: 23 km
- Distance between WTG: 550 m
- Surface area: 14 $km^2$
- Annual Power Production: 435 GWh
- Tidal range: 2 m
- Soil conditions: Sand
- WTG Foundation Types: Monopiles weighing 320 MT and Transition Pieces weighing 115 MT with external J-tubes including scour protection
- Offshore High Voltage Substation (OHVS): Space frame module weighing 800 MT equipped with one 140 MVA transformer (22kV/150kV) and other M&E equipment
- OHVS Foundation: Monopile with special Transition Piece with four supports and external J-tubes
- Installation of Monopiles: Driving using hydraulic driven hammer

**Services provided:**

1. Management of the Project during the Construction Phase
2. Mobilisation of the Project Management Organisation, which in addition to EPC Management, had resources from the two owner organisations as well as from third parties resulted in a team of 40 persons as peak number.
3. Established the Project Quality Management System, Project Health & Safety System, Project Control System, Project Risk Management System as well as Project Document Management System.
4. Responsible as the **Engineer** in accordance with the provisions as defined in the **FIDIC Yellow Book** to manage on behalf of the Employer the two Contractors responsible for the construction of the Wind Farm:
   - Vestas Offshore A/S: Design, Certify, Supply, Fabricate, Transport, Install and Commission of 60 units of 2 MW machines of the V80 type.
   - Van Oord Dredging & Marine Contractors bv: Design, Supply, Fabricate, Transport, Install and Commission of 60 WTG Foundations, 1 OHVS Foundation, 1 OHVS Module, 1 Offshore Export Seacable, 60 Inter Turbine Seacables.
5. Management of Marine Warranty Surveyor and Project Design Certification Authority.
6. Operation of Claim Management Activities.
7. Established the Marine Coordination Procedure, setup and operated the Marine Coordination Function.
8. Commercial Management and Claim Management.
9. Internal Coordination Project Management.
10. Quality Control of steel fabrication and surface protection.
11. Project Administration hereunder Time System Management, Travel Administration, Invoicing and Payment Management etc.