

Rev.: 10
Date: 31-05-2021
Author: JdL



Corrosion Protection System for Offshore wind foundations Impressed Current Cathodic Protection (ICCP)

Project name	Location	Status	Foundation Type	Quantities	ICCP System
Alpha Ventus	North Sea	Running since 2008	Tripod	6	External Protection
Great Gabbard	North Sea	Running since 2010	Monopile	140	External Protection
Borkum West II	North Sea	Running since 2014	Tripod	40	External Protection
Global Tech	North Sea	Running since 2014	Tripod	80	External Protection
Riffgat	North Sea	Running since 2013	Monopile	30	External & Internal Protection
Meerwind	North Sea	Running since 2014	Monopile	80	External Protection
DanTysk	North Sea	Running since 2014	Monopile	80	External Protection
Luchterduinen	North Sea	Running since 2015	Monopile	43	External Protection
Butendiek	North Sea	Running since 2015	Monopile	80	External Protection
Sandbank	North Sea	Running since 2017	Monopile	72	External & Internal Protection
VejaMate	North Sea	Running since 2017	Monopile	67	Internal Protection
Zhongmin I	Chinese Sea	Running since 2015	8 pile construction	10	External Protection
Galloper	North Sea	Running since 2017	Monopile	56	Internal Protection

Corrosion Protection System for Foundations Impressed Current Cathodic Protection (ICCP)

Project name	Location	Status	Foundation Type	Quantities	ICCP System
Arkona Becken	Baltic Sea	Running since 2018	Monopile	60	Internal Protection
Rentel	North Sea	Running since 2018	Monopile	42	Internal Protection
Merkur	North Sea	Running since 2018	Monopile	66	External & Internal Protection
Horns Rev III	North Sea	Running since 2019	Monopile	49	External & Internal Protection
Hohe See	North Sea	Running since 2019	Monopile	71	Internal Protection
Albatros	North Sea	Running since 2019	Monopile	16	Internal Protection
Borkum West II - Phase II	North Sea	Running since 2019	Monopile	32	External & Internal Protection
Deutsche Bucht	North Sea	Commissioning 2019	Monopile	31	External & Internal Protection
Mermaid & Seastar	North Sea	Delivery 2019	Monopile	58	External & Internal Protection
Triton Knoll	North Sea	Delivery 2019	Monopile	90	External & Internal Protection
Borssele III & IV	North Sea	Delivery 2019	Monopile	77	External & Internal Protection
Borssele V	North Sea	Delivery 2020	Monopile	2	External & Internal Protection
Northwester II	North Sea	Delivery 2019	Monopile	23	External & Internal Protection
Yunlin	Taiwanese Strait	Delivery 2019-2020	Monopile	80	External & Internal Protection
Akita Port	Sea of Japan	Delivery 2020	Monopile	13	External & Internal Protection
Noshiro Port	Sea of Japan	Delivery 2020	Monopile	20	External & Internal Protection

**Corrosion Protection System for Foundations
Impressed Current Cathodic Protection (ICCP)**

Project name	Location	Status	Foundation Type	Quantities	ICCP System
Saint Nazaire	Atlantic Ocean	Delivery 2020/2021	Monopile	80	External & Internal Protection
Three Gorges Changle A	Haitan Strate China	Delivery 2020/2021	Jackets grounded	50	External Protection
Kaskasi II	North Sea	Delivery 2021	Monopile	38	External & Internal Protection
Dafeng Longyuan	Chinese Sea	Delivery 2020/2021	Monopile	92	External Protection
Three Gorges H6 + H10	Chinese Sea	Delivery 2020/2021	Monopile	20	External Protection
Three Gorges Changle C	Chinese Sea	Delivery 2020/2020	Jackets Suction B	26	External Protection
Jiangsu Longyuan OWF (MP) H4 H	Chinese Sea	Delivery 2020/2017	Monopile	47	External Protection
China Energy Peninsula 4	Chinese Sea	Delivery 2020/2018	Monopile	87	External & Internal Protection
Baltic Eagle	Baltic Sea	Delivery 2021/2022	Monopile	50	Internal Protection
Hollandse Kust Zuid	North Sea	Delivery 2021/2022	Monopile	140	External Protection
Three Gorges - Sha Ba Bay Windfarm 2nd Phase	Chinese Sea	Delivery 2021/ 2022	Jacket	2	External protection
Walney	Irish Sea	Delivery 2021	Monopile	51	Internal Protection (retrofit)
Total number of foundations:					2197 foundations
Total number of ICCP systems:					3045 systems

**Corrosion Protection System for Offshore Substation foundations
Impressed Current Cathodic Protection (ICCP)**

Substations	Location	Status	Foundation Type	Quantities	ICCP System
Borkum West II	North Sea	Running since 2015	Jacket	1	External Protection
Global Tech	North Sea	Running since 2014	Jacket	1	External Protection
Riffgat	North Sea	Running since 2013	Jacket	1	External Protection
DanTysk	North Sea	Running since 2014	Jacket	1	External Protection
DanTysk OAP	North Sea	Offshore commissioning in 2016	Jacket	1	External Protection
Meerwind	North Sea	Running since 2014	Jacket	1	External Protection
Baltic II	Baltic Sea	Running since 2015	Jacket	1	External Protection
Dolwin Gamma	North Sea	Running since 2016	Jacket	1	External Protection
Northwester II	North Sea	Delivery 2017	Monopile	1	External Protection
Xinghua Bay	China	Delivery 2019	Jacket	1	External Protection
Changle A	Haitan Strate China	Delivery 2020/2021	Jacket	1	External Protection
Kaskasi	North Sea	Delivery 2021	Monopile	1	External/Internal Protection
Total number of substation foundations protected by ICCP:				12 substations	