

OFFSHORE RENEWABLES WIND, WAVE AND TIDAL ENERGY

DHI Project References



<i>Project</i>	<i>Client</i>	<i>Year</i>
Westermost Rough Offshore Wind Farm, UK. Metocean study in relation to design, installation and O&M.	Westermost Rough Ltd, UK	2011
Walney II Offshore Wind Farm, UK. Assessment of weather windows and downtime estimates.	DONG Energy A/S, Denmark	2011
Development of a high-resolution 3D hydrodynamic model for EMEC's tidal site at Fall of Warness, UK.	The European Marine Energy Centre (EMEC) Ltd, UK	2011-2012
Bernstein & Citrin Offshore Wind Farms, Germany. Metocean Data and Analyses.	BARD Engineering, Germany.	2011
Innogy Nordsee 1, 2 & 3 Offshore Wind Farms, Germany. Metocean Analyses.	Enova Energieanlagen GmbH / RWE Innogy	2011
Albatros 1 Offshore Wind Farm, Germany. Simulation of Sediment Spill during Installation of GBF.	Strabag Offshore Wind GmbH, Germany	2011
Sandbank 24 Offshore Wind Farm, Germany. Metocean data for detailed design.	Sandbank Power Power GmbH	2011
Borkum Riffgrund Offshore Wind Farm, Germany. Metocean analyses.	DONG Energy A/S, Denmark	2011
Inner Sound Tidal Array, Pentland Firth, United Kingdom. Wave conditions for detailed design.	MeyGen, United Kingdom	2011
Inner Sound Tidal Array, Pentland Firth, United Kingdom. Environmental impact assessment and coastal processes modelling.	XODUS Group for MeyGen, United Kingdom	2011
Inner Sound Tidal Array, Pentland Firth, United Kingdom. FEED engineering design including resource calculation and optimisation against CFD results.	MeyGen, United Kingdom	2011
Baltic Eagle Offshore Wind Farm, Germany. Provision of metocean data.	Windreich AG, Germany	2011
Arcadis Ost 1 Offshore Wind Farm, Germany. Provision of hindcast data for metocean analyses.	COWI A/S, Denmark	2011
Humber Gateway Offshore Wind Farm, UK. Provision of hindcast data for metocean data analysis.	E.ON UK Renewables via Rambøll	2011

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Baltic II Offshore Wind Farm, Kriegers Flak, Germany. Assessment of scour and scour protection for sub-station platform.	Technologiekontor Bremerhaven GmbH, Germany	2011
Offshore Wind Farms at Kriegers Flak, Denmark. Review of the state of knowledge concerning the project site, with relevance to the development of wind farms and the combined grid solution.	Energinet.dk, Denmark via Rambøll	2011
Anholt Offshore Wind Farm, UK. Monitoring of metocean data and analyses.	DONG Energy A/S, Denmark	2011
DanTysk Offshore Wind Farm, Germany. Morphological modelling and analysis study.	Vattenfall Europe Windkraft GmbH, Germany	2011
Sandbank 24 Offshore Wind Farm, Germany. Morphological modelling and analysis study.	Sandbank Power GmbH, Germany	2011
Frederikshavn Offshore Wind Farm, Denmark. Metocean data for site assessment.	DONG Energy A/S, Denmark	2011
Wikinger Offshore Wind Farm, Germany. Metocean data and analysis.	Iberdrola Renovables, Germany	2010-11
Borkum Riffgrund Offshore Wind Farm, Germany. Metocean analysis and specialist support for design of substation.	ISC Consulting Engineers A/S, Denmark	2011
Gunfleet Sands 3 Offshore Wind Farm, UK. Metocean data and analyses for substation.	ISC Consulting Engineers A/S, Denmark	2011
West of Duddon Sands Offshore Wind Farm, UK. Metocean data and analyses for substation.	ISC Consulting Engineers A/S, Denmark	2011
Kårehamn Offshore Wind Farm, Sweden. Calculation of extreme wave loads on GBF-type foundations.	Grontmij on behalf of E.ON, Sweden,	2011
Anholt Offshore Wind Farm, Denmark. Post-construction monitoring of bird migration.	DONG Energy A/S, Denmark	2011-
Anholt Offshore Wind Farm, Denmark. Metocean specialist support to construction contractor.	MT Højgaard A/S, Denmark	2011-
Resource planning for tidal power generation, Indonesia.	Atlantis Resources Corporation, Singapore	2011
Nemo, Nautilus & Jules Verne Offshore Wind Farms, Germany. Metocean data and analyses.	NE Wind AG, Germany	2010
Innogy Nordsee 1 Offshore Wind Farm, Germany. Simulation of sediment spill during installation.	Enova Energiesysteme, Germany	2010
GWS Offshore NL1, EP Offshore NL1 & BARD Offshore NL1. Metocean data and analyses.	BARD Engineering, Germany	2010
Resource planning and array optimization for tidal generator deployment in Pentland Firth, UK.	MeyGen / Atlantis Resources Corporation, Singapore	2010
Kårehamn Offshore Wind Farm, Sweden. Metocean design and operational conditions.	E.ON, Sweden through Grontmij Carl Bro A/S, Denmark	2010

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Horns Rev 2 Offshore Wind Farm, Denmark. Post-construction monitoring of bird migration.	DONG Energy A/S, Denmark	2010
London Array Offshore Wind Farm, UK. Operational metocean forecast and monitoring for installation and construction.	London Array Limited, UK	2010-
Crestwing Wave Energy Converter, Denmark. Tank model tests for response and performance optimisation of floating converter.	Waveenergyfyn, Denmark	2010
Walney Offshore Wind Farms, UK. Monitoring of metocean data.	DONG Energy A/S, Denmark	2010-
Site selection and resource planning for tidal power generation in Gujarat, India.	Atlantis Resources Corporation, Singapore	2010
Amrumbank West Offshore Wind Park, Germany. Morphological study and assessment of scour for various design concepts.	Amrumbank West GmbH, Germany	2010
Arkona-Becken Südost Offshore Wind Farm, Germany. Hydrography and metocean data.	AWE Arkona-Windpark-Entwicklungs GmbH, Germany	2010
Support on WEC development include physical model test, field campaigns, modelling WEC impact on the environment, wave and wave power analysis, etc.	Various WEC developers in Europe	2010
GlobalTech I Offshore Wind Farm, Germany. Simulation of sediment spill during installation.	Wetfeet Offshore Wind Energy GmbH, Germany	2009-2010
Site selection and modelling services for the deployment of a test turbine at EMEC tidal test site, UK.	Atlantis Resources Corporation, Singapore	2009-2010
Thanet Offshore Wind Farm, UK. Operational metocean forecast.	Vattenfall via StormGeo, Norway	2009-2010
Anholt Offshore Wind Farm, Denmark. <ul style="list-style-type: none"> ▪ Baseline investigations and environmental impact assessment (EIA) of hydrography, water quality, sediment dispersal and coastal morphology ▪ Metocean data, design data ▪ Monitoring of metocean data ▪ Baseline investigations and EIA of benthic communities ▪ Baseline investigations and EIA of bird migration and wintering birds ▪ Baseline investigations and EIA of marine mammals ▪ Modelling of benthic habitats and assessment of marine NATURA 2000 areas ▪ Input to assessment of impacts from construction of sub-station and cable trace. 	Energinet.dk, Denmark via Rambøll	2009-2010
Braefoot Bay, UK. Operational metocean forecast.	StormGeo, Norway	2009
Resource planning for tidal power generation, Northern Australia.	Atlantis Resources Corporation, Singapore	2009
Offshore Wind Farms, Italy. Meteo-marine data and EIA.	Four Wind S.r.l., Italy	2009

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DanTysk Offshore Wind Farm, Germany. Variability of extreme wave heights.	Vattenfall Europe Windkraft GmbH, Germany	2009
Innogy Nordsee 1 Offshore Wind Farm, Germany. Metocean data.	Enova / RWE Innogy, Germany	2009
Veja Mate & Deutsche Bucht Offshore Wind Farms, Germany. Hydrography and metocean data.	BARD Engineering, Germany	2009
MEG I Offshore Wind Farm, Germany. Hydrography and metocean data.	Prokon Nord, Germany	2009
Dafeng Offshore Wind Farm, China. Metocean data and EIA.	East China Investigation and Design Institute, China	2009
Sprogø Offshore Wind Farm, Denmark. Monitoring of waves.	Sund & Bælt A/S, Denmark	2009
Thornton Bank Offshore Wind Farm, Belgium. Calculation of wave forces on GBF foundations.	C-Power and IMDC, Belgium	2009
Borkum Riffgrund Offshore Wind Farm, Germany. Metocean data and design basis.	DONG Energy A/S, Denmark	2009
Corbu/Media offshore wind farm, Romania. Pre-feasibility study, metocean conditions.	Energie Verde, Romania	2009
Horizont Offshore Wind Farms, Germany. Metocean data.	Mainstream Renewable Power, Germany	2009
SeaStorm I & II and SeaWind III & IV Offshore Wind Farms, Germany. Metocean data.	Nordsee Windpower, Germany	2009
Operational Parameters for two Offshore Wind Farms, Germany.	Multibrid GmbH, Germany	2009
Riffgat Offshore Wind Farm, Germany. Metocean data.	Enova, Germany	2009
Borkum West II Offshore Wind Farm, Germany. Metocean design data.	Trianel, Germany	2009
Kriegers Flak Offshore Wind Farm, Germany. Metocean design data.	Grontmij Carl Bro A/S, Denmark	2009
GAIA I, II, III & IV Offshore Wind Farms, Germany. Metocean design data.	Northern Energy, Germany	2008-2009
Global Tech I, II & III Offshore Wind Farms, Germany. Metocean design data.	Nordsee Windpower, Germany	2008-2009
Robin Rigg Offshore Wind Farm, UK. Scour analysis, physical model tests, field measurements and operational metocean forecast service.	MT Højgaard, Denmark	2008-2009
Sandbank 24 Offshore Wind Farm, Germany. Metocean data.	Hochtief AG, Germany	2008
Rødsand 2 Offshore Wind Farm, Denmark. Monitoring of waves.	E.ON, Sweden	2008-2010
Modelling of wave load and motions for a wave energy converter.	Floating Power Plant A/S, Denmark	2008-2010

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Resource planning for tidal power generation in Singapore and Asia Pacific.	Atlantis Resources Corporation, Singapore	2008
EIA for tidal power generation, Singapore.	Atlantis Resources Corporation, Singapore	2008
Baltic I Offshore Wind Farm, Germany. Assessment of scour and scour protection.	Offshore Ostsee Wind AG, Germany	2008
Robin Rigg Offshore Wind Farm, UK. Offline current and waves monitoring.	MT Højgaard, Denmark	2008
Robin Rigg Offshore Wind Farm, UK. Offline current and waves monitoring.	A2SEA, Denmark	2008
Gunfleet Offshore Wind Farm, UK. Waves monitoring.	DONG Energy A/S, Denmark	2008-
Thornton Bank Offshore Wind Farm, Belgium. Calculation of wave forces on GBS foundations.	IMDC, Belgium	2008
Thornton Offshore Wind Farm, Belgium. Model tests on installation of GBS foundations.	Dredging International, Belgium	2008
Tidal flow and wave modelling, Orkney Islands, UK. Model set-up, analysis and technology transfer.	European Marine Energy Centre (EMEC) Ltd, UK	2008
Rødsand 2 Offshore Wind Farm, Denmark. <ul style="list-style-type: none"> ▪ Loads on gravity based wind turbine foundations and monopoles ▪ Monitoring of bird migration. 	E.ON, Sweden	2008
Horns Rev 2 Offshore Wind Farm, Denmark. <ul style="list-style-type: none"> ▪ Monitoring of bird migration. ▪ Monitoring of resting birds ▪ Development of food supply model for Common Scoters. 	DONG Energy A/S, Denmark	2008
Sprogø Offshore Wind Farm, Denmark. <ul style="list-style-type: none"> ▪ Fish and fishery ▪ Hydrographic conditions and water quality ▪ Coastal morphology ▪ Macro vegetation and bottom fauna. 	Sund & Bælt A/S, Denmark	2008
DanTysk Offshore Wind Farm, Germany. <ul style="list-style-type: none"> ▪ Metocean Operational Forecast ▪ Metocean Design Data. 	Vattenfall Europe New Energy, Germany	2008
Baltic I Offshore Wind Farm, Germany. Assessment of scour and scour protection.	Offshore Ostsee Wind AG, Germany	2008
London Array Offshore Wind Farm, UK. Study of wave kinematics using CFD.	London Array Ltd, UK	2007
Nördlicher Grund Offshore Wind Farm, Germany. Wave data.	Renegys, Germany	2007
Borkum Riffgrund West Offshore Wind Farm, Germany.	Energiekontor AG, Germany	2007

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Metocean design data.		
Rødsand 2, Denmark. Statistical evaluation of bird impacts.	DONG Energy, Denmark	2007
Cirrus, Irish Sea. Impact assessment on marine mammals.	Cirrus Wind Farm	2007
Operational metocean forecast for marine operations, Burbo Wind Farm, Irish Sea.	Elsam Engineering/DONG Energy A/S	2006-2009
Horns Rev 2, Denmark. Monitoring of currents and waves ADCP.	DONG Energy, Denmark	2006-2008
Lillgrund, Sweden. Monitoring of currents and waves.	Vattenfall, Sweden	2006-2007
Amrumbank West Offshore Wind Farm, Germany. Metocean design data.	Essent Wind, Germany	2006-2007
Nordsee Ost Offshore Wind Farm, Germany. Metocean design data.	e.on energy projects, Germany	2006-2007
Alpha Ventus. Metocean design data.	Deutsche Offshore Testfeld und Infrastruktur (DOTI), Germany	2006-2007
Wave run-up on foundations.	R&D project (PSO)	2006-2007
Rødsand 2, Denmark. <ul style="list-style-type: none"> ▪ Impact assessment on coastal dynamics ▪ Impact assessment on water quality ▪ Impact assessment on fish ▪ Impact assessment on marine mammals ▪ Metocean design data. 	DONG Energy	2006-2007
Burbo. Monitoring of currents and waves ADCP.	DONG Energy	2006-
Horns Rev 2, Denmark. Monitoring of waves Waverider.	DONG Energy	2006-
CFD simulation of wave loads on foundation units.	IMDC, Belgium	2006
Offshore wind power - research bottlenecks.	R&D project (Danish Ministry for Science, Technology and Development)	2005-2008
Horns Rev 2, Denmark. <ul style="list-style-type: none"> ▪ Metocean design data ▪ Impact assessment on benthic communities ▪ Impact assessment on fish ▪ Impact assessment on marine mammals. 	Energi E2, Denmark	2005-2006
Wave run-up model tests.	Elsam A/S, Denmark	2005
Stora Middelgrund Offshore Wind Farm, Sweden. Preliminary design data.	Universal Offshore, Sweden	2005
Model testing of wave and current load on foundation for wind turbines, and scour testing. Lynn & Inner Dowsing, UK.	COWI-IMS	2005
Operational wave, current, and water level forecast service for Kentish Flats Offshore Wind Farm, UK.	Via Vejr2 to Client	2004-2005

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Scour protection design, model and full scale.	R&D project (PSO)	2004-2005
Numerical simulation of wave run-up on foundations.	Elsam A/S, Denmark	2004 & 2005
Design of foundation units.	R&D project	2004-2005
Irish Sea, UK. Environmental Impact Assessment (EIA) on marine mammals.	DONG & Elsam A/S, Denmark	2004-2005
Rønland Wind Farm, Limfjorden, DK. <ul style="list-style-type: none"> ▪ Investigation of bird collision risks ▪ Monitoring of eelgrass. 	Rønland Wind Farm Developers Group	2004
Kentish Flats Offshore Wind farm, UK. Monitoring of waves.	Tech-wise A/S, Denmark	2004
Adlerground, Germany. Assistance to EIA on birds.	EON, Germany	2004
Current Monitoring for installation vessel.	A2SEA, Denmark	2004
Wind Farm Borkum Riffgrund I, Germany. Wave and current/water level modelling and statistical analysis.	Energi E2, Denmark	2004
Nysted Offshore Wind Farm, Rødsand, DK. Service programme for permanent online wave/current measurements (ADCP).	Energi E2/DONG Energy, Denmark	2004-
Morphological demonstration programme at Rødsand Offshore Wind Farm.	Energi E2, Denmark	2003-2004
Monitoring of epifauna growth on turbines and scour protection at Nysted Offshore Wind Farm.	Energi E2, Denmark	2003
Operational wave, current, and water level forecast service for Scrooby Sands Offshore Wind farm, UK.	Via Vejr2 to Client	2003
Monitoring of marine mammals at Horns Reef Offshore Wind Farm.	Tech-wise A/S, Denmark	2003
North Hoyle Wind Farm. <ul style="list-style-type: none"> ▪ Design and setting up of hydro-graphical monitoring ▪ Monitoring of waves. 	Tech-wise A/S, Denmark	2003
Operational wave, current, and wind forecast service for Nysted Offshore Wind Farm during construction period via www.waterforecast.com .	BONUS A/S	2003
Combined Wind, Wave, and Ice Loading on Foundations.	R&D project (PSO)	2002-2003
Operational wave forecast service for Horns Rev Offshore Wind Farm, Denmark. The wave forecast is a part of DHI's "The Water Forecast" service on www.waterforecast.com .	Tech-wise (Elsam), Denmark and Vestas (via Vejr2), DK/ DONG Energy A/S	2002-
Monitoring of sediment spill, Samsø Offshore Wind Farm, Denmark.	Høj Rederi A/S, Denmark	2002
Nysted Offshore Windmill Power Plant, Denmark. Hydraulic model tests with barge intended to be used for placing of windmill foundations (gravity type).	Per Aarsleff A/S, Denmark	2002

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Wind Power Plant, Lillgrund, Øresund. Representation in the Environmental Court of Sweden.	EUROWIND Ab, Sweden	2002
Wind Power Plant, Rødsand. Scour protection model tests.	Per Aarsleff A/S, Denmark	2002
Monitoring programme set-up on Nysted Offshore Windmill Power Plant, Denmark. Measuring main parameters: Wind speed and direction, wave height and direction, current speed and direction, tides and barometric pressure, temperature and conductivity (salinity).	SEAS Distribution A.m.b.A, Denmark	2002
Underwater Positioning System. Development of three complete underwater positioning systems used by divers for positioning the structures for Offshore Windmill platforms.	SEAS Distribution A.m.b.A, Denmark	2002
Operational Wave Forecast Model.	R&D (PSO)	2001-2002
Wind Power Plant, Rødsand, Denmark. Analysis (Desk Study) of stability of scour protection.	SEAS Distribution A.m.b.A, Denmark	2001
Monitoring programme set-up on Offshore Windmill Power Plant Middelgrunden outside city of Copenhagen. Measuring main parameters: Wave height, current speed and direction.	SEAS Distribution A.m.b.A, Denmark	2001
Wind Power Plant, Rønland, Denmark. Environmental assessment of hydrography and sediment spill.	Vindenergi APS, Denmark	2001
Wind Power Plant, Lillgrund, Øresund. Hydrographic design data and operational data for an Offshore Wind Farm. Second phase. EIA of hydraulic impact and estimation of sediment spill from placing 45 windmill foundations on a shallow area 10km south of the Øresund Link.	EUROWIND Ab, Sweden	2001
Wind Farm at Klasården, Gotland, Sweden. Hydrographic design data and operational data for an Offshore Wind Farm.	NEG Micon UK	2001
Middelgrunden, Øresund, Denmark. Current and waves monitoring on-line.	SEAS Distribution A.m.b.A., Denmark	2001
SKY2000 Wind Farm, Germany. Baseline and EIA of marine mammals using acoustic data loggers.	Gesellschaft für Energie und Oecologie	2000-2002
Baseline investigations of seabirds and marine mammals. Butendiek wind farm project, Germany.	Bioconsult	2000-2001
Marine biological baseline studies and EIA of an offshore wind farm at Rødsand, Denmark.	SEAS Distribution A.m.b.A., Denmark	2000
Marine biological baseline studies and EIA of an offshore wind farm at Omø Stålgunde, Denmark.	SEAS Distribution A.m.b.A., Denmark	2000
Marine biological baseline studies and EIA of an offshore wind farm at Læsø, Denmark.	ELSAMPROJEKT A/S, Tech-wise, Denmark	2000
Hydrographic and environmental monitoring for design and EIA at Horns Rev and Læsø Wind Farms, Denmark.	ELSAMPROJEKT A/S, Tech-wise, Denmark	2000
Wind Farm at Rødsand, Denmark. Hydrographic data (design data) for an offshore wind farm with 72 windmills with a production of 150 MW.	SEAS Distribution A.m.b.A, Denmark	2000

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Læsø Wind Power Plant, Denmark. EIA of hydrography and sediment spill in the construction phase.	ELSAMPROJEKT A/S, Tech-wise, Denmark	2000
Offshore Windmill at Samsø, Denmark. Sediment spill in the construction phase.	Samsø Energiselskab, Denmark	2000
Rødsand, EIA for Offshore Wind Power Farm, Denmark. Evaluation of the effect on hydrography, water quality, and morphology.	SEAS Distribution A.m.b.A, Denmark	2000
Omø Stålgunde, Denmark. EIA for Offshore Wind Power Farm. Evaluation of the effect on hydrography, water quality, and morphology.	SEAS Distribution A.m.b.A, Denmark	2000
Offshore Windmill Foundations at Horns Rev, Denmark. Model test for determination of erosion conditions for round mono pile foundations.	ELSAMPROJEKT A/S, Tech-wise, Denmark	2000
Sediment spill evaluation for the Wind Farm at Rødsand, Denmark.	SEAS Distribution A.m.b.A, Denmark	2000
Arkona Wind Farm project, Germany. Strategic Environmental Assessment of site suitability in relation to marine mammals and seabirds.	OECOS Umweltplanung	2000
Baseline, EIA and monitoring of harbour porpoises using combined acoustic and visual techniques.	Tech-wise A/S, Denmark	1999-???
Læsø Wind Power Plant, Denmark. Waves, current, temperature and conductivity (salinity) monitoring on-line.	ELSAMPROJEKT A/S, Tech-wise, Denmark	1999-2001
Wind Power Plant Rødsand, Denmark. Baseline of seabird distribution.	Danish Environmental Research Institute	1999-2000
Seabird baseline studies at offshore wind farm Omø Stålgunde, Denmark.	Danish Environmental Research Institute	1999-2000
Horns Rev Wind Power Plant, Denmark. EIA of hydrography and Copper emission.	ELSAMPROJEKT A/S, Tech-wise, Denmark	1999
Horns Rev 1 Wind Power Plant, Denmark. Waves monitoring on-line.	ELSAMPROJEKT A/S, Vattenfall, Sweden	1999
Gedser Rev, Denmark. Offshore windmill power plant. Baseline of seabird distribution.	Danish Environmental Research Institute	1999
DanTysk wind farm project, Germany. Strategic Environmental Assessment of site suitability in relation to marine mammals and seabirds.	Gesellschaft für Energie und Oecologie	1999
Amrum Bank wind farm project, Germany. Strategic Environmental Assessment of site suitability in relation to marine mammals and seabirds.	OECOS Umweltplanung, Germany	1999
Wind Power Plant, Lillgrund, Øresund. EIA: Hydraulic impact and sediment spill.	EUROWIND Ab, Sweden	1998
The current conditions have been evaluated for three offshore windmill farm areas: Omø, Rødsand, and Kappel, Denmark.	Energistyrelsen, Denmark	1998

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Cost Optimising of Large-Scale Offshore Wind Farms, Hydraulic Assessment. Gedser Rev, Rødsand & Omø Stålgrunde, Denmark.	Nellemann, Nielsen & Rauschenberger A/S, Denmark	1996
Tunø Knob Wind Farm, Denmark. Hydraulic Investigations.	I/S Midtkraft, Denmark	1995
Tunø Knob Wind Farm, Denmark. Evaluation of hydrographic conditions.	N & R Consult A/S, Denmark	1994