
References

TÜV NORD in Wind Energy



TÜV®

TÜV NORD

References

AEP, TDD, Site Assessment & Technical Consultancy

Project	Scope of works	Date
Goheung Offshore Wind Farm	Layout Optimization service & Annual Energy Production Study	2020
Woljeong Onshore Wind Farm	Technical Due Diligence service	2020
Jeonnam Offshore Wind Farm	Layout Optimization service & Annual Energy Production Study	2020
Gimnyeong wind farm	Technical Due Diligence service	2020
Kwangbaek PV plants	Technical Due Diligence service	2020
Yoodang PV plant	ESS simulation service	2020
Yokji Offshore Wind Farm	Layout Optimization service & Annual Energy Production Study	2019
SDA Inspection project	Site assessment for Energy Storage facility	2017
S-OIL RUCP Inspection project	Site assessment for Energy Storage facility	2016
Gimcheon Wind Farm	Wind potential and Annual Energy Production Study	2012
CTC Wind Farm	Annual Energy Production Study	2009
Taeon Wind Farm	Analysis of wind data for offshore	2008
I'REE Wind Farm	Annual Energy Production Study	2008
I'REE Wind Farm	Annual Energy Production Study	2007

References

3rd Party Expert Opinion, Inspection, Certification & Technical Consultancy

Customer	Scope of works	Date
DOTI	Periodical Inspections on 3 offshore turbines incl. rotor blades according to BSH at alpha ventus	2011
transpower	For offshore transformer station BorWin alpha: – Assessment of the environmental compliance concerning leaking hazardous substances	2010
CTC, Korea	Analysis of wind data of offshore wind farm Taeam	2008
ISC Rådgivende Ingeniører	For offshore transformer station Borkum Riffgrund I:	2010
WeserWind	Offshore Product Certification for Horns Rev according to DIN 18800 and DIN EN 13155	2007
Nordex	N90 Offshore Frederikshavn Denmark Type Certification according to DNV	2004
Nordex	Certification of Nearshore wind turbine, site: Breiiting according to DIBt	2005
ENERCON	Component Assessment for Nearshore wind turbine Wilhelmshaven	2003
Multibrid	alpha ventus project: inspection of lifting equipment	2009
FH Kiel	Structural inspections at FINO3 research platform, below and above surface	in progress
renergys	Due Diligence of Multibrid M5000 certification documentation	2007
ENERCON	Summarizing Certificate according to DIBt for Nearshore wind turbine Emden	
Kelemen	Heavyweight Jacket Steel Construction	2012
aerodyn d+m	2-Bladed Downwind 6 / 6.5 MW wind turbine	in progress
Siemens	Baltic I: Inspection of elevators, pressure equipment etc.	in progress
	Borkum Riffgrund I: 2nd and 3rd release for BSH (turbine+tower)	2013-2014
	Gode Wind I+II: 2nd and 3rd release for BSH (tower)	2013-2016
	Sandbank: 2nd and 3rd release for BSH (tower)	2014-2016
	Helwin Beta, Assessment of the Protection schema (auxilliary systems)	2016
Sinovel	SL6000-128 according to GL Offshore (2005)	in progress
	SL6000-155 according to GL Offshore (2012)	in progress
DONG ENERGY	Certificate of Conformity, 2nd / 3rd release BSH, Borkum Riffgrund 1, RNA + Support Structure + Innerpark Cable	
	Production surveillance RNA + tower	
	-Initial Inspections of main components for Borkum Riffgrund 01	2013
	-Surveillance Inspection for Borkum Riffgrund 01	2013-2015
	-Surveillance Inspection of Suction Bucket Jacket production for Borkum Riffgrund 01	2014
	- checking of the InstallationManual of WEA for BKR01	2013
	3rd release electr. Components GOWI+II	2014-2015
	Evaluation of array cable GOW I & GOW II	2014-2015
	Project Certificate for Borkum Riffgrund 01	in progress
	Evaluation of As-built-Documents for Borkum Riffgrund 01	in progress
	Commissioning Inspection for Borkum Riffgrund 01	in progress
TENNET	DolWin Alpha insulation coordination	2013
	auxiliary power supply	2013-2014
	BorWin 1 document assessment	2015
	DolWin Beta, lightning protection and earthing	2016
Numerous projects in the tender phase for Offshore Type Certifications acc. to IEC or GL and Project Certifications acc. to BSH		
Trianel	periodic inspection of service lifts at Borkum West II offshore wind farm	2015-2016
RWE International SE	periodic inspection of service lifts at Nordsee Ost offshore wind farm	in progress
TENNET	DolWin Alpha insulation coordination	2013
	auxiliary power supply	2013-2014
	BorWin 1 documentation assessment	2015
	DolWin Beta, lightning protection and earthing	2016
	DolWin Alpha, check of low-voltage system	2017
	DolWin Beta, check of low-voltage system	in progress

References

3rd Party Expert Opinion, Inspection, Certification & Technical Consultancy

Client	Country	Service	Date
Enertrag Energiebau	France	Site Specific Statement	2001
Nordex	China	Site Specific Statement	2001
DeWind	Japan	Turbulence Report	2002
Nordex	Netherlands	Impact of a tank farm on wind profile / CFD	2002
Nordex	Norway	Assessment of vertical flow inclination at a cliff / CFD	2002
Nordex	Australia	Site Specific Statement	2003
Nordex	Ireland	Turbulence Report	2003
Nordex	Norway	Turbulence Report for a site with 80 wind turbines	2003
Enairgy	Austria	Risk Assessment: Shedding of ice for a site located in the Alps	2003
Municipal Emden	Germany	Risk Assessment: Blade fracture for a dike, street and an adjacent industrial area	2003
Ökostrom Consulting Freiburg	Germany	Risk Assessment: Blade fracture and shedding of ice for a cable car	2003
DeWind	Ireland	Turbulence Report	2004
REpower	Germany	Risk due to blade fracture for an adjacent nuclear power plant	2004
Essent Wind Deutschland	Germany	Blade fracture due to overspeed of a ENERCON E-112 wind turbine	2004
DeWind	United Kingdom	Turbulence Report	2004
Nordex	Estonia	Site Specific Statement	2004
EBV Management Holding	Germany	Impact of wind turbine wake on a power line / CFD	2004
e.n.o. Energiegesellschaft Nordost	Germany	Turbulence Report	2005
WSB Planung	Germany	Turbulence Report	2005
Energie-Projekt-Nord	Bulgaria	Turbulence Report	2006
BOREAS Project	Germany	Turbulence Report	2006
Denker & Wulf	Germany	Turbulence Report	2006
REpower	United Kingdom	Assessment of vertical flow inclination / CFD	2006
Fuhrländer	Polen	Site Class Study	2007
DeWind	Germany	Comparison reinforced concrete	2007
REpower	Italy	Wind Condition Evaluation Report	2007
Plambeck Neue Energien	Germany	Turbulence Report	2007
REpower	United Kingdom	Wind Condition Evaluation Report	2007
IREE	South Korea	Annual Energy Production Study	2007
REpower	Australia	Wind Condition Evaluation Report	2007
WPD	Germany	Turbulence Report	2007
AREVA Renewables	France	Technical Due Diligence	2007
Babcock & Brown	Germany	Final Inspection	2007
REpower	Poland	Wind Condition Evaluation Report	2007
Eole	France	Windpotential Study	2007
REpower	USA	Site Specific Statement	2007
REpower	USA	Wind Condition Evaluation Report	2008
REpower	Australia	Wind Condition Evaluation Report	2008
ABO Wind	Ireland	Turbulence Report	2008
ABO Wind	France	Turbulence Report	2008
ABO Wind	Spain	Turbulence Report	2008
ENERTRAG	Germany	Due Diligence	2008
BSU / Vattenfall	Germany	Wind farm configuration optimisation	2008
Agro	Germany	Shadow Flicker Analysis	2008
Wallenborn Projektentwicklung	Croatia	Turbulence Report	2008
REpower / EdF	Canada	Wind Condition Evaluation Report	2009
Energiekontor	Germany	Turbulence Report	2008
Essent	Germany	Turbulence Report	2008
IREE	South Korea	Annual Energy Production Study	2008
Tomis Team / Cube Engineering	Romania	Construction inspections on foundations	2009
E.ON Climate Renewables	France	Soil Assessment	2008
E.ON Climate Renewables	Poland	Soil Assessment	2008
IMS	Germany	Turbulence Report	2009
Windwärts	Germany	Turbulence Report	2009
hessenEnergie	Germany	Turbulence Report	2009
WKN NORD	Germany	Turbulence Report	2009
Landkreis Emsland	Germany	Shadow Flicker Analysis	2009
Nordex	Ireland	Wind Condition Evaluation Report	2009
REpower	Australia	Wind Condition Evaluation Report	2009
REpower	USA	Wind Condition Evaluation Report	2009

References

3rd Party Expert Opinion, Inspection, Certification & Technical Consultancy

Client	Country	Service	Date
CTC	South Korea	Annual Energy Production Study	2009
REpower	Spain	Wind Condition Evaluation Report	2009
Volkswind France	France	Geotechnical Site Investigation for 8 WTG in France	2009
Vestas Central Europe	Germany	Geotechnical Site Investigation for 5 WTG in Germany	2010
EVIAG	France	Geotechnical Site Investigation for 10 WTG in France	2010
E.ON France	France	Foundation Design Consultancy for 7 WTG in France	2010
Eurocape	Romania	Geotechnical Site Investigation for 6 WTG in Romania	2010
E.ON Poland	Poland	Foundation Design Consultancy	2010
Volkswind France	France	Geotechnical Site Investigation for 5 WTG in France	2010
EEN GmbH	Germany	Turbulence Report	2010
EVN AG	Austria	Turbulence Report	2010
EVN AG	Austria	Technical Due Diligence	2010
RWE	Germany	Turbulence Report	2010
Vortex	Germany	Turbulence Report	2010
Gamesa	Germany	Turbulence Report	2010
ENERCON	Austria	Turbulence Report	2010
ETL	Germany	Shadow Flicker Analysis	2010
ENNI	Germany	Wind Farm Design	2010
WEB Windenergie AG	Germany	Wind Farm Design	2010
REpower	Canada	Wind Condition Evaluation Report	2010
Stadtwerke Duisburg AG	Germany	HAZOP: Tower collapse & Blade fracture	2010
EUROGATE	Germany	Roughness Classification	2011
EVN AG	Austria	Turbulence Report	2011
G.A.I.A.	Germany	Turbulence Report	2011
Windwärts Energie	Germany	Turbulence Report	2011
IMS	Germany	Wind Potential and AEP Study	2011
West GmbH	Germany	Wind Potential and AEP Study	2011
Jagd- und Forstgesellschaft	Germany	Wind Potential and AEP Study	2011
REpower	Canada	Wind Condition Evaluation Report	2011
ABO Wind	Ireland	Wind Condition Evaluation Report	2011
ABO Wind	Ireland	Assessment of vertical flow inclination (CFD)	2011
Nordex	Ireland	Wind Condition Evaluation Report	2011
EMERGY Capital Ltd.	Croatia	Wind Condition Evaluation Report	2011
Energie 21	Germany	Noise Impact Assessment	2011
Energie 21	Germany	Shadow Flicker Analysis	2011
Ökoenergie	Austria	Shadow Flicker Analysis	2011
POWERWINGS Windkraftanlagen	Germany	Shadow Flicker Analysis	2011
GB Geotechnics	Sweden	Foundation Design Consultancy for 10 WTG in Sweden	2011
Vestas Central Europe	Germany	Geotechnical Site Investigation for 17 WTG in Germany	2011
Eurocape	France	Geotechnical Site Investigation for 5 WTG in France	2011
Energie Verde	Romania	Geotechnical Site Investigation for 9 WTG in Romania	2011
E.ON	Poland	Foundation Design Consultancy for 12 WTG in Poland	2011
Vestas Central Europe	Germany	Inspection of excavation pit floors for 17 WTG in Germany	2011
HAMBURG ENERGIE	Germany	Risk Assessment: Shedding of ice fragments & Blade fracture	2011
Ober-Bloibaum	Germany	Risk Assessment: Shedding of ice fragments & Blade fracture	2011
Dollegoor	Germany	Risk Assessment: Tower collapse & Blade fracture	2011
Repower	Germany	Risk Assessment: Shedding of ice fragments	2011
LENPower	Germany	Risk Assessment: Shedding of ice fragments	2011
Energiewerkstatt Consulting	Austria	Risk Assessment: Shedding of ice fragments	2011
ENERCON	Germany	Risk Assessment: Shedding of ice fragments	2012
ENERCON	Germany	Risk Assessment: Blade fracture & Tower collapse	2012
juwi Wind GmbH	Germany	Risk Assessment: Blade fracture	2012
Biogas Witte Moor	Germany	Risk Assessment: Shedding of ice fragments	2012
EOLOS Wind farm Project	Turkey	Risk Assessment: Blade fracture	2012
Dollegoor	Germany	Micrositing (CFD) in the vicinity of suburban building structures	2012
Vestas Deutschland GmbH	Spain	Assessment of vertical flow inclination (CFD)	2012
Vestas Deutschland GmbH	Spain	Wind Potential and AEP Study	2012
Gimcheon Wind Power Co., Ltd	South Korea	Wind Potential and AEP Study	2012
REpower Systems SE	USA	Wind Condition Evaluation	2012
Repower Systems SE	Netherlands	Wind Condition Evaluation	2012

References

3rd Party Expert Opinion, Inspection, Certification & Technical Consultancy

Client	Country	Service	Date
EnBW Erneuerbare Energien GmbH	Germany	Wind Potential and AEP Study	2012
FEFA GmbH	Germany	Wind Potential and AEP Study	2012
Nordex	France	Wind Potential and AEP Study	2012
Nordex	France	Noise Impact Assessment	2012
City of Hamburg	Germany	Wind Potential and AEP Study	2012
Energie Verde	Romania	Geotechnical Site Investigation for 37 WTG in Romania	2012
Volkswind France	France	Geotechnical Site Investigation 8 WTG in France	2012
RWE Innogy	Spain	Geotechnical Site Inspection for a wind farm project in Spain	2012
Fröhling & Rathjen	Ireland	Foundation Design Consultancy & Plausibility Check of Irish Soil Reports for 28 WTG	2012
Gamesa / Spain	Egypt	Plausibility Check of an Egyptian Soil Report for 100 WTG in Egypt	2012
Repower Systems SE	Germany	Plausibility Checks of Soil Reports for 7 wind farm projects in Germany	2012
Nordex	Germany	Plausibility Check of a Soil Report for 2 WTG in Germany	2012
County Court Bielefeld	Germany	Geotechnical expert's opinion for county court Bielefeld	2012
Repower Systems SE	Germany	Plausibility Checks of Soil Reports for 16 wind farm projects in Germany	2013
Vestas Deutschland GmbH	Germany	Plausibility Checks of Soil Reports for 22 wind farm projects in Germany	2013
GE Wind	Germany	Plausibility Checks of Soil Reports for 3 wind farm projects in Germany	2013
Juwi	Germany	Plausibility Check of a Soil Report for 6 WTG in Germany	2013
VENSYS Energy AG	Germany	Inspection of excavation pit floors and crane hardstandings for 3 WTG in Germany	2013
Goldwind	Australia	Plausibility Check of an Australian Soil Report for 73 WTG in Australia	2014
Volkswind France	France	Geotechnical Site Investigation for 11 WTG in France	2014
Volkswind France	France	Geotechnical Site Investigation for 9 WTG in France	2014
PACADAR	Spain	Plausibility Check of a Spanish Soil Report for 1 WTG	2013
SWM / Munich	Germany	Foundation Design Consultancy for 1 WTG in Bavaria	2014
VSE Aktiengesellschaft	Germany	Risk Assessment: Blade fracture & Tower collapse	2013
Ingenieurbüro Dr. Lüth GmbH	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse & Fire	2013
WKN AG	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse & Fire	2013
naturwind schwerin gmbh	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse & Fire	2013
juwi Energieprojekte GmbH	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse	2013
E.ON Hanse AG	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse & Fire	2013
EUROGATE GmbH & Co. KGaA, KG	Germany	Risk Assessment: Shedding of ice	2013
Verbund Renewable Power GmbH	Germany	Risk Assessment: Shedding of ice	2013
ENERCON GmbH	Germany	Risk Assessment: Shedding of ice	2013
TimberTower GmbH	Germany	Risk Assessment: Shedding of ice	2013
REpower Systems	Sweden	Site Class Study	2013
ImWind & Partner GmbH	Austria	Site Class Study	2013
REpower Systems	Canada	Site Class Study	2013
REpower Systems	Canada	Assessment of vertical flow inclination (CFD)	2013
Energiekontor AG	Germany	Wind Condition Assessment	2013
Goldwind	Australia	Site Class Study	2013
Gamesa	Egypt	Site Class Study	2013
REpower Systems	Germany	Site Class Study	2013
juwi Energieprojekte GmbH	Germany	Wind Potential and AEP Study and Turbulence Report	2013
WindStrom Erneuerbare Energien GmbH	Germany	Wind Potential and AEP Study, Shadow Flicker and Noise Impact Analyses	2013
IMS – Ingenieurbüro Michael Schmidt	Germany	Wind Potential and AEP Study and Turbulence Report	2013
WEB Andresen GmbH	Germany	Wind Potential and AEP Study and Turbulence Report	2013
Vestas Deutschland GmbH	Germany	Health, Safety and Environment site supervision during WTG commissioning for 245 projects	2013-2015
Vestas Deutschland GmbH	Germany	Health, Safety and Environment site supervision during excavation works for 12 WTG projects	2013-2015
Vestas Deutschland GmbH	Germany	Health, Safety and Environment site supervision during WTG erection for 245 projects	2013-2015
Vestas Deutschland GmbH	Germany	Health, Safety and Environment coordination for 9 WTG projects	2013-2015
BayWa r.e. Wind GmbH	Germany	Turbulence Report	2013
Outsmart	The Netherlands	Site Class Study	2014
Goldwind	Australia	Plausibility Check of an Australian Soil Report for 73 WTG in Australia	2014
SWM / Munich	Germany	Foundation Design Consultancy for 1 WTG in Bavaria	2014
Volkswind France	France	Geotechnical Site Investigation for 9 WTG in France	2014
Volkswind France	France	Geotechnical Site Investigation for 11 WTG in France	2014
Volkswind France	France	Geotechnical Site Investigation for 7 WTG in France	2014
innoVent Planungs GmbH & Co. KG	Germany	Geotechnical Site Investigation for 4 WTG in Germany	2014
Repower Systems SE	Germany	Plausibility Check of a Soil Report for 1 WTG in Germany	2014
Senvion SE	Germany	Plausibility Checks of Soil Reports for 7 wind farm projects in Germany	2014
GE Wind	Germany	Plausibility Checks of Soil Reports for 2 wind farm projects in Germany	2014

References

3rd Party Expert Opinion, Inspection, Certification & Technical Consultancy

Client	Country	Service	Date
Vestas Deutschland GmbH	Germany	Plausibility Checks of Soil Reports for 50 wind farm projects in Germany	2014
Vestas Deutschland GmbH	Germany	Inspection and plate load tests of crane hardstandings for 12 WTG in Germany	2014
Vattenfall Vindkraft A / S, Sweden	Denmark	Certification Report concerning the soil conditions for 21 WTG in Denmark	2014
Energiekontor AG	Germany	Site Class Study	2014
UKA Cottbus Projektentwicklung GmbH & Co. KG	Germany	Shadow Flicker and Noise Impact Analyses	2014
Senvion SE	Germany	Foundation Design Consultancy / Pile load calculations for 10 WTG in Germany	2015
Vestas Deutschland GmbH	Germany	Plausibility Checks of Soil Reports for 8 wind farm projects in Germany	2015
RWE Innogy	Germany	Impairment of microwave	2015
Volkswind France	France	Geotechnical Site Investigation for 5 WTG in France	2015
Volkswind France	France	Geotechnical Site Investigation for 9 WTG in France	2015
Volkswind France	France	Geotechnical Site Investigation for 16 WTG in France	in progress
Volkswind France	France	Geotechnical Site Investigation for 10 WTG in France	2015
Volkswind France	France	Geotechnical Site Investigation for 7 WTG in France	2015
Blue Development GmbH	Lithuania	Wind Potential and AEP Study	2015
Amperax Energie GmbH	Finland	Wind Potential and AEP Study	2015
Gamesa Energie Deutschland GmbH	Germany	Shadow Flicker and Noise Impact Analyses	2015
juwi Energieprojekte GmbH	Germany	Turbulence Report (Investigation of Site Suitability of WTG)	2015
EEN GmbH	Germany	Turbulence Report	2015
WKN AG	Germany	Turbulence Report	2015
WSB Projekt GmbH	Germany	Turbulence Report	2015
EVN AG	Austria	Turbulence Report	2015
ENERCON GmbH	Germany	Turbulence Report	2014
wpd onshore GmbH	France	Turbulence Report	2014
Hamburg Energie	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse & Fire	2014
juwi Energieprojekte GmbH	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse	2014
Energiewerkstatt Consulting GmbH	Austria	Risk Assessment: Shedding of ice	2014
ImWind Operations GmbH	Austria	Risk Assessment: Shedding of ice	2014
Gamesa Energie Deutschland GmbH	Germany	Risk Assessment: Shedding of ice	2014
WPD Onshore GmbH & Co. KG	Germany	Risk Assessment: Shedding of ice	2014
LENPower GmbH	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse, Fire & Lightning	2014
Fraunhofer - ICT	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse & Fire	2015
ERG Renewables	Bulgaria	End of Warranty Inspection at 16 Vestas V90 2.0 WTG	2014
Volkswind Germany	Germany	Periodic Inspection at 5 Gamesa G87 2.0 MW WTG	2014
GE Wind	Germany	Comissioning of lift and crane in varios wind farms	in progress
Nordex	Germany	Comissioning of 8 Nordex N117 2.4 MW WTG	2015
ENERTRAG AG	Germany	Evaluation and Assessment for Extended Operational Lifespan for 14 GE and ENERCON WTG	2015
VESTAS CENTRAL EUROPE-ZAGREB d.o.o.	Croatia	Health, Safety and Environment auditing for a wind farm project in Croatia	in progress
Rio Energy	Brazil	Turbulence Report	2015
Senvion SE	Germany	Wind Potential and AEP Study	2015
erneuerbare energien europa e3	Germany	Wind Potential and AEP Study	2015
Energiekontor	Germany	Wind Potential and AEP Study	2015
Windwärts Energie	Germany	Wind Potential and AEP Study	2015
BMR energy solutions GmbH	Germany	Wind Potential and AEP Study	2015
WKN Windkraft Nord	Germany	Wind Potential and AEP Study	2016
BBWind Projektberatungsgesellschaft	Germany	Wind Potential and AEP Study	2016
Agrowea GmbH & Co. KG	Germany	Wind Potential and AEP Study	2016
vortex energy Deutschland GmbH	Germany	Wind Potential and AEP Study	2016
BBWind Projektberatungsgesellschaft	Germany	Turbulence Report	2016
SL Windenergie GmbH	Germany	Turbulence Report	2016
Dunoair Windpark Planung GmbH	Germany	Turbulence Report	2016
UKA Meißner Projektentwicklung GmbH & Co. KG	Germany	Turbulence Report	2016
wpd onshore GmbH	Germany	Turbulence Report	2016
Dunoair Windpark Planung GmbH	Germany	Examination of minimum distances to overhead power lines	2016
Various	Germany	Comissioning inspection of range visibility sensor systems at GE and ENERCON wind farms	in progress
Dunoair Windpark Planung GmbH	Germany	Comissioning inspection of ENERCON ice detection system	2015
Volkswind GmbH	Germany	Periodical inspections of 35 Vestas and Nordex WTG in various wind farms	2015-2016
STEAG GmbH & Co KG	Germany	End of Warranty Inspection at 18 Nordex N117 WTG	2016
UKA GmbH & Co KG	Germany	Comissioning inspection of 9 GE 2.75 WTG	2015
Windpark Dornumergrode	Germany	Evaluation and Assessment for Extended Operational Lifespan for 12 ENERCON WTG	in progress

References

3rd Party Expert Opinion, Inspection, Certification & Technical Consultancy

Client	Country	Service	Date
TurboWind Energie GmbH	Germany	Shadow Flicker and Noise Impact Analyses for one wind farm in Germany	2016
TurboWind Energie GmbH	Germany	Shadow Flicker and Noise Impact Analyses for one wind farm in Germany	2016
iTerra energy GmbH	Germany	Shadow Flicker and Noise Impact Analyses for one wind farm in Germany	2016
BBWind Projektberatungsgesellschaft	Germany	Shadow Flicker and Noise Impact Analyses for one wind farm in Germany	2016
Reenergys GmbH & Co. KG	Germany	Shadow Flicker and Noise Impact Analyses for one wind farm in Germany	2016
Reenergys GmbH & Co. KG	Germany	Shadow Flicker and Noise Impact Analyses for one wind farm in Germany	2016
swb CREA GmbH	Germany	Shadow Flicker and Noise Impact Analyses for one wind farm in Germany	2016
erneuerbare energien europa e3	Germany	Shadow Flicker and Noise Impact Analyses for one wind farm in Germany	2016
BMW Group	Germany	Risk Assessment: Shedding of ice	2015
HAMBURG ENERGIE GmbH	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse & Fire	2015
Voltgrün Projekt GmbH	Germany	Risk Assessment: Shedding of ice	2016
ENERCON GmbH	Germany	Risk Assessment: Shedding of ice	2015
GE Wind Energy GmbH	Germany	Risk Assessment: Shedding of ice	2015
juwi Energieprojekte GmbH	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse & Fire	2016
Windwärts Energie GmbH	Germany	Risk Assessment: Shedding of ice	2016
wpd onshore GmbH & Co. KG	Germany	Risk Assessment: Shedding of ice	2016
BMR energy solutions GmbH	Germany	Risk Assessment: Shedding of ice	2016
Volkswind France	France	Geotechnical Site Investigation for 10 WTG in France	2017
Volkswind France	France	Geotechnical Site Investigation for 6 WTG in France	2016
Volkswind France	France	Geotechnical Site Investigation for 5 WTG in France	in progress
Volkswind France	France	Geotechnical Site Investigation for 4 WTG in France	2016
Volkswind France	France	Geotechnical Site Investigation for 9 WTG in France	in progress
Volkswind France	France	Geotechnical Site Investigation for 7 WTG in France	2017
Volkswind France	France	Geotechnical Site Investigation for 6 WTG in France	2016
Vestas Ukraine	Ukraine	Foundation Design Consultancy & Plausibility Check of Ukrainian Soil Reports for 167 WTG	in progress
Vestas Deutschland GmbH	Germany	Plausibility Checks of Soil Reports for 13 wind farm projects in Germany	2016
Gamesa / Spain	Egypt	Evaluation Report concerning the soil conditions for 110 WTG in Egypt	2016
European Energy A / S	Germany	Wind Potential and AEP Study	2016
FPJ Development GmbH & Co. KG	Germany	Wind Potential and AEP Study	2017
INEV GmbH	Germany	Wind Potential and AEP Study	2017
wpd	Germany	Wind Potential and AEP Study	2017
SAB Projektentwicklung	Germany	Wind Potential and AEP Study	2017
BayWa r.e. Wind GmbH	Germany	Wind Potential and AEP Study	2017
BEC Energie Consult GmbH	Germany	Wind Potential and AEP Study	2017
WindStrom Erneuerbare Energien GmbH	Germany	Wind Potential and AEP Study	2017
UKA Nord UKA Nord Projektentwicklung GmbH & Co. KG	Germany	Turbulence Report	2017
ENERCON GmbH	Germany	Plausibility Checks of Turbulence Report	2017
wpd onshore GmbH	Germany	Turbulence Report	2017
iTerra energy GmbH	Germany	Turbulence Report	2017
Energiekontor AG	Germany	Turbulence Report	2017
Senvion SE	Germany	Investigation of Typemodification on Turbulence intensities	2017
Gamesa / Spain	Scotland	Site Specific Load Assessment for 11 WTG in Scotland	2016
Gamesa / Spain	Mexico	Site Specific Load Assessment for a wind farm in Mexico	in progress
BMR energy solutions GmbH	Germany	Risk Assessment: Shedding of ice, Fire	2017
WindStrom Erneuerbare Energien GmbH & Co. KG	Germany	Risk Assessment: Shedding of ice	2017
ENERCON GmbH	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse	2017
juwi Energieprojekte GmbH	Germany	Risk Assessment: Shedding of ice, Blade fracture, Tower collapse	2017
WPD Onshore GmbH & Co. KG	Germany	Risk Assessment: Blade fracture, Tower collapse	2017
PFALZWERKE AG	Germany	Risk Assessment: Blade fracture, Tower collapse	2017
Ventotec GmbH	Germany	Risk Assessment: Shedding of ice	2017
NET Windenergie GmbH	Germany	Risk Assessment: Shedding of ice	2017
Voltgrün Projekt GmbH	Germany	Risk Assessment: Shedding of ice	2017
Ventureal Projekt GmbH	Austria	Risk Assessment: Shedding of ice	2017
TurboWind Energie GmbH	Germany	Risk Assessment: Shedding of ice	2017
Vestas Deutschland GmbH	Germany	Calculation of pile load bearing capacities and pile lengths for 16 WTG in Germany	2016
Vestas Ukraine	Ukraine	Supervision of pile construction works and static test pile loading for 7 test piles in the Ukraine	2017
Vestas Deutschland GmbH	Germany	Plausibility Checks of Soil Reports for 32 wind farm projects in Germany	2017
Windenergiepark Wetzlar GmbH	Germany	Geotechnical Site Investigation for 3 WTG in Germany	2017
vortex energy Deutschland GmbH	Germany	Geotechnical Site Investigation for 6 WTG in Germany	in progress

References

Certifications & Type Approvals

Client	Type of Turbine	Rotor Blade	Hub Height	Guideline	Class	Date	Scope
AELEON	-	AEOLON45.2-F3	-	GL (2010)	-	2014	A-DA + fatigue test (IEC 61400-23)
	-	AEOLON43-F2	-	GL (2010)	-	2014	A-DA + fatigue test (IEC 61400-23)
	-	AEOLON56.6-F3	-	GL (2010)	-	2014	A-DA + fatigue test (IEC 61400-23)
	-	AEOLON56.5-F3	-	GL (2010)	-	2015	A-DA + fatigue test (IEC 61400-23)
	-	AEOLON56.5-F3-M2	-	GL (2010)	-	2015	A-DA + fatigue test (IEC 61400-23)
aerodyn	aeromaster1.5	ae1.5	70 / 80 m	GL (2003 / 2004)	IIA, IIIA, SA	2012	A-DA
	aeromaster2.5	ae2.5	80 / 90 m	GL (2003 / 2004)	IIA, IIIA, SA	2013	A-DA
aerodyn d+m	SCD6.0		100 m	GL Offshore (2005)	S	2013/in progress	C-DA / A-DA
Airwerk	MD77		112 m lattice tower	DIBt (2004)	II		
Clipper	Liberty 2.5 MW	C100	80 m	GL (2010)	IIA	2011	Loads
DDIS	D60-800	EU 60.1400	50 / 60 m	GL (2003 / 2004)	IIIA	2012	A-DA
DeWind	D4-48 600 kW	RL 48	70.0 m	GL		2000 / 2001	
	D4-48 600 kW	LM 48					
	D4-48 600 kW	ARA 48					
	D4-48 600 kW	LM 21.0	60.0 m	DIBt	II	2003	
	D4-48 600 kW	NOI 23.3	70.0 m	DIBt	II	2003	
	D6-64 1250 kW	DW 62	65 / 91.5 m	DIBt / IEC / GL	II / IIIA / III	2001 / 2004	
	D6-62 1000 kW	DW 60	68.5 m	DIBt / GL	II / III	2002	
	D6-62 1000 kW	APX 60 / LM 29.1P	68.5 / 91.5 m	DIBt / GL	II / III	2002 / 2004	
	D6-62 1250 kW		65.0 m	GL	II	2003	
	D8-80 2000 kW		100.0 m	DIBt	II	2003	
ECOTÉCNIA / ALSTOM	ECOTÉCNIA 62	LM 29.1	45 m	IEC (1999)	IA	2006	
	ECOTÉCNIA 1670	LM 37.3	70 m	IEC (1999)	IIA	2003	
	ECOTÉCNIA 74	LM 34.0	56 / 60 / 70 / 80 m	WT01-IEC (1999)	IIA	renewal in progress	
	ECOTÉCNIA 80	LM 37.3	60 / 70 / 80 m	WT01-IEC (1999)	IIIA	2010	
	ECOTÉCNIA 80 (Badaia)	LM 37.3	60 m	IEC (1999)	sitespecific/IIIA	2009	
ENERCON	E-30	E30-4	44 m	GL (1999)	IA	2003	TC
	E-33	E30-5	49 / 50 m	IEC / NVN / DIBt	IIA	1	TC
	E-40	E40-6	45 / 50 / 65 m	NVN II / IEC II	IIA	2003 / 2007	TC
	E-40	E40-4	40-68 / 74 m	GL	I / IIA	2003 / 2004	TC
	E-40		63 m	DIBt		2004	
	E-44		64 m	IEC	IA	2006	Tower + Foundation
	E-48		50 / 57 / 74 m	IEC / NVN / DIBt	II	2004-2008	Tower + Foundation
	E-66		58 / 63 / 65 m	IEC / NVN / DIBt	II	2002 / 2003	TC
	E-66		65-112 m	DIBt		2004	
	E-70 E4	E70-4	64 / 84 / 85 / 98 m	TNP20/IEC61400-22-IEC (2005)	IIA	2012 / 2016	TC
	E-70 E4	E70-4	74 m / 64 m	TNP20/IEC61400-22-IEC (2005)	IA	2011/2013/2017	TC
	E-82	E82-1	83 / 97 / 107 / 137 m Hybrid	IEC (1999) / DIBt / NVN / EN	DIBt III, IEC IIA	2006-2008	Type Approval, Tower + Foundation
	E-82 E2	E82-2	83 / 97 / 107 / 137 m Hybrid	IEC (2005) / DIBt / NVN / EN	DIBt III, IEC IIA	2009 / 2010	Type Approval, Tower + Foundation
	E-82 E3	E82-3	83 / 97 / 107 / 137 m Hybrid	IEC (2005) / DIBt / EN	DIBt III, IEC IIA	2010 / 2011	Type Approval, Tower + Foundation
	E-92	E92	107 m, precast concrete	DIBt (2004), IEC (2005)	DIBt III, IEC IIA	2014	Type Approval, Tower + Foundation
	E-92	E92	97 m, precast concrete	DIBt (2004), IEC (2005)	DIBt III, IEC IIA	2013	Type Approval, Tower + Foundation
	E-92	E92	83 m, precast concrete	DIBt (2004), IEC (2005)	DIBt III, IEC IIA	2013	Type Approval, Tower + Foundation
	E-101	E101-1	99 / 135 m Hybrid	IEC (2005) / DIBt (2004)	DIBt III, IEC IIA	2013	Type Approval, Tower + Foundation
	E-101	E101-1	122 m, precast concrete	DIBt (2012), IEC (2005)	DIBt III, IEC IIA	2015	Type Approval, Tower + Foundation
	E-101	E101-1	74.4 m, Steel	DIBt (2012), IEC (2005)	DIBt WZ4, IEC IA	in progress	Type Approval Type Approval / DA, Tower + Foundation
E-112	E112-12	95 / 124 / 136 m	DIBt	div.	2003-2007	div.	
E-115	E115	133 m, precast concrete	DIBt (2012), IEC (2005)	DIBt III, IEC IIA	2014	Type Approval, Tower + Foundation	
E-126	E126-1	116 m, steel	DIBt (2004)	III	2006	Single Approval	
E-126	E126-4	136 m, precast concrete	IEC (2005) / DIBt (2004)	IC / III	2007-2009	Type Approval, Tower + Foundation	
Fuhrländer	FL2500-100	LM48.8	85 / 100 m	GL (2003 / 2004)	IIIA	2008	A-DA / TC
	FL2500-100	LM48.8	85 / 100 m	GL (2003 / 2004)	IIA	2012	A-DA / TC
	FL2500-100	SI 50.3	85 / 100 m	GL (2003 / 2004) / DIBt (2004)	IIIA / WZ II	2010	A-DA + Type Approval
	FL2500-100	SI 50.3	85 / 100 m	GL (2003 / 2004)	IIA	2014	A-DA
	FL2500-100	LM48.8	141 / 160 m (Lattice)	GL (2003 / 2004)	IIIA	2012	A-DA
	FL2500-90	LM43.8	85 / 100 m	GL (2003 / 2004)	IIA	2012	A-DA
	FL2500-90	LM43.8	105 m (Lattice)	GL (2003 / 2004)	IIIA	2011	A-DA
Freyssinet	-	-	120 m concrete tower	GL (2010)	Design Loads	2012	Tower + Foundation
Gamesa	G-52	Gamesa 25.3	44 / 49 / 55 / 65 m	IEC	IA	2007	TC
	G90-2.0 MW	LM 44.0 P	78 m, 90 m	IEC 61400-22 - IEC (2005)	IA	2013	TC
	G97-2.0 MW	G97C, G97GF	120 m	DIBt (2012)	WZ 3	2013	Type Approval

References

Certifications & Type Approvals

Client	Type of Turbine	Rotor Blade	Hub Height	Guideline	Class	Date	Scope
	G80-2.0 MW	Gamesa Éolica 39m	60 m	IEC 61400-22 - IEC (2005)	IA	2015	Parts of Project Certification
	G97-2.0 MW	G97i, LM47.6P3	104 m	IEC 61400-22 - IEC (2005)	SA	2014	TC
	G114-2.0 MW	Gamesa 56m	125 m	DIBt (2012)	WZ II	2015	Type Approval
GARUDA	700.54	EU54	73 m	IEC WT01-IEC (2005)	IIIA	2013	TC
	1700.8		82 m	IEC WT01-IEC (2005)	IIA	in progress	TC
	1700.84		82 m	IEC WT01-IEC (2005)	IIIA	in progress	TC
GE Wind Energy	GE 1.5xle	GE40	80 m	GL (2003 / 2004) / IEC (1999)	III B	2009	A-DA
	GE 1.5xle windextend	GE40xle1 / LM40.3P	80 m	GL (2003 / 2004) / IEC (1999)	S	2013	A-DA
	GE 1.5-77	GE37c2	65 / 80 m	GL (2003 / 2004) / IEC (1999)	IB	in progress	A-DA
	GE 1.6xle	GE 40xle2 / 4	80 m	GL (2003 / 2004) / IEC (1999)	S	2013	TC
	GE 1.6xle	GE 40xle2 / 4	65 / 80 m	GL (2003 / 2004) / IEC (1999)	IIB / IIB	2013	A-DA
	GE 1.6-82.5	GE40xle2/4/LM40.3P	80 / 100 m	GL (2003 / 2004) / IEC (1999)	IIB / S	2013	A-DA
	GE 1.6-100	GE 48.7c / c2 / g	80 / 96 / 100 m	GL (2003 / 2004) / IEC (1999)	IIB / S	2014	A-DA
	GE 1.68-82.5	GE40xle2/4/LM40.3P	80 m	GL (2003 / 2004) / IEC (1999)	IIB / S	2013	A-DA
	GE 1.6-87	LM 42.1P2	80 m	GL (2003 / 2004) / IEC (1999)	S	2013	TC
	GE 1.7-100	GE 48.7 g	80 m	GL (2003 / 2004) / IEC (1999)	S	2013	A-DA
	GE 1.7-103	GE 50.2	80 m	GL (2003 / 2004) / IEC (1999)	S	2014	TC
	GE 1.75-100	GE 48.7 c2	80 m	GL (2003 / 2004) / IEC (1999)	S	2013	A-DA
	GE 1.85-82.5	GE 40xle2	65 / 80 m	GL (2003 / 2004) / IEC (1999)	S	2012	A-DA
	GE 1.85-87	LM 42.1P2	80 m	GL (2003 / 2004) / IEC (1999)	S	2013	A-DA
	GE 2.0-116	GE56.9 / LM56.9P	80 / 94 m	IEC 61400-22 - IEC (2005)	S	in progress	DECS
	GE 2.3-107	GE52.2 / LM52.2P	80 / 94 m	IEC 61400-22 - IEC (2005)	S	in progress	DECS
	GE 2.3-116	GE56.9 / LM56.9P	80 / 94 m	IEC 61400-22 - IEC (2005)	S	2016	TC
	GE 2.4-107	GE52.2 / LM52.2P	80 / 94 m	IEC 61400-22 - IEC (2005)	S	in progress	DECS
	GE 2.4-116 (uprated 2.3-116)	LM 58.7 P	75 m	IEC 61400-22 - IEC (2005)	S	in progress	TC
	GE 2.5xl	LM / GE48.7	85 m	GL (2003 / 2004) / IEC (1999)	IIB / IIIA	2010	A-DA
	GE 2.5xl Wind Boost	GE48.7	85 / 100 m	GL (2003 / 2004) / IEC (1999)	IIB	2012	A-DA
	GE 2.5xl (Ireland)	GE48.7	75 m	GL (2003 / 2004) / IEC (1999)	Site specific	2010	A-DA
	GE 2.5-100	GE48.7	100 m	DIBt	III	2010	Type Approval
	GE 2.5-100 (Turkey)	GE48.7	85 m	GL (2003 / 2004) / IEC (1999)	Site specific	2010	A-DA
	GE 2.5-100 (Australia)	GE48.7	85 m	GL (2003 / 2004) / IEC (1999)	Site specific	2011	A-DA
	GE 2.5-100	LM48.7P	85 / 100 m	GL (2003 / 2004) / IEC (1999)	S	2012	A-DA
	GE 2.75-100	LM48.7P	85 / 100 m	GL (2003 / 2004) / IEC (1999)	S	2012	A-DA
	GE 2.75-100	GE48.7	75 / 85 / 100 m	GL (2003 / 2004) / IEC (1999)	IIB / IIIA / SB	2011 / 2012	A-DA
	GE 2.75-103	GE50.2	85 / 100 m	GL (2003 / 2004) / IEC (1999)	SB	2011 / 2012	A-DA
	GE 2.75-103	GE50.2	123.5 m Hybrid	DIBT / IEC	II / IIIA	2011	A-DA / Type Approval
	GE 2.5-100 (derated)	GE48.7	75 / 85 / 100 m	GL (2003 / 2004) / IEC (1999)	IIB / IIIA / SB	2011 / 2012	A-DA
	GE 2.5-103 (derated)	GE50.2	85 / 100 m	GL (2003 / 2004) / IEC (1999)	S	2011 / 2012	A-DA
	GE 2.5-120 DFIG	LM 58.7 P	85 m	GL (2003 / 2004) / IEC (1999)	S	2014	A-DA
	GE 2.5-120 DFIG	LM 58.7 P	110 m	GL (2003 / 2004) / IEC (1999)	S	2013	A-DA
	GE 2.5-120 DFIG	LM 58.7 P	139 m (hybrid)	DIBt (2012)	S	2013	Type Approval
	GE 2.53-103 DFIG	GE50.2	98 m	GL (2003 / 2004) / IEC (1999)	S	2013	A-DA
	GE 2.75-120 DFIG	LM 58.7 P	139 m (hybrid)	DIBt (2012)	S	2015	Type Approval
	GE 2.75-120 DFIG	LM 58.7 P	85 / 98.3 / 110 m	IEC 61400-22 - IEC (2005)	S	2015	DECS
	GE 2.75-120 DFIG	LM 58.7 P	85 / 98.3 / 110 m	IEC 61400-22 - IEC (2005)	S	2015	TC
	GE 2.85-100 DFIG	GE 48.7 / LM48.7P	75 / 85 / 98 m	GL (2003 / 2004) / IEC (1999)	S	2013	A-DA
	GE 2.85-103 DFIG	GE 50.2E	85 / 98 m	GL (2003 / 2004) / IEC (1999)	S	2013	A-DA
	GE 2.85-103 (Katuni)	GE50.2 E-HG	98.3 m	GL (2003 / 2004) / IEC (1999)	IIB	2016	A-DA
	GE 3.2-103 DFIG	GE 50.2E	85 m	IEC 61400-22 - IEC (2005)	IIB / S	2015	DECS
	GE 3.2-103 DFIG (3.2-2.75MW)	GE 50.2E-HG	73,3 / 75 / 85 / 98 m	IEC 61400-22 - IEC (2005)	IIB	2016	DECS
	GE 3.2-103 DFIG (3.2-2.75MW)	GE 50.2E-HG	73,3 / 75 / 85 / 98 m	IEC 61400-22 - IEC (2005)	IIB	2016	TC
	GE 3.2-130 (DFIG)	LM 63.7P	85 m	IEC 61400-22 - IEC (2005)	IIB	2016	DECS
	GE 3.2-130 (DFIG)	LM 63.7P	110 m	IEC 61400-22 - IEC (2005)	IIB	in progress	DECS
	GE 3.2-130 (DFIG)	LM 63.7P	110 m	DIBt (2012)	WZ II	in progress	Type Approval
	GE 3.2-130 (DFIG)	LM 63.7P	134 m Hybrid	DIBt (2012)	WZ II	2016	Type Approval
	GE 3.2-130 (DFIG)	LM 63.7P	164.5 m Hybrid	DIBt (2012)	WZ II	in progress	Type Approval
	GE 3.4-137 (DFIG)	LM 67.2P	164.5 m Hybrid	DIBt (2012)	S	in progress	Type Approval
	Condition Monitoring System CMS	(turbine independent)	GL: CMS for Wind Turbines		2011		DECS
Goldwind	GW100 / 2500	LM48.8P	80 m	IEC 61400-22 - IEC (1999)	S	2014	
	GW82 / 1500	LM40.3P2 / P3	85 m	IEC 61400-22 - IEC (1999)	S	2014	
	GW109	LM53.2P	95 m	GL 2003 / 2004	IIA	2015	DECS

References

Certifications & Type Approvals

Client	Type of Turbine	Rotor Blade	Hub Height	Guideline	Class	Date	Scope
HT-rotor blade		HT 48.8		GL (2003 / 2004)	Design Loads	2012	DECS
IMPISA	IWP-70	IWPB-70	71.8 m	WT01-IEC (1999)	SA	2010	DECS
	IWP-83	IWPB-83	72.5 m	WT01-IEC (1999)	IIA	2011	DECS
	IWP-85	LM40.0P	60 m	IEC 61400-22-IEC (1999)	S	in progress	DECS
	IWP-100	AB49 / LM49.1	85 m	IEC 61400-22-IEC (1999)	IIA	in progress	DECS
Jade	-	G90Tecsis	-	GL (2010)	-	2013	Component Certificate
	-	G97Tecsis	-	GL (2010)	-	2013	Component Certificate
Kenersys	K82.0	LM40	80 m	IEC (2005) / DIBt	IIA / III	2008-2010	
	K82.0	LM40	98 m	IEC (2005) / DIBt	IIA / III	2009	
	K100	LM48.8	100 m	IEC (2005) / DIBt	IIA / III	2009 / 2010	
	K100	LM48.8	135 m ATS Hybrid	IEC (2005) / DIBt	IIIA / II	2009 / 2010	
	K100	LM48.8	135 m Ortbeton	IEC (1999) / DIBt	IIIA / II	2011	DA tower, foundation
	K110	LM53	95 m STR	DIBt	II	2011	DECS
	K110	LM53.2P	145 m (ATS hybrid)	IEC (2005) / DIBt (2004)	IIIA / II	2012	DECS
Lagerwey Wind B.V.	L93-2.6 MW	LM45.3P	90 m	IEC 61400-22;IEC 61400-1 Ed.3	IIA	in progress	DECS
	L100 - 2.5MW	LM 49.1P	75 m / 98 m / 135 m	IEC 61400-22;IEC 61400-1 Ed.3	IIIA	2017	TC
	L82 - 2.3MW	LM40.0P	98 m	IEC 61400-22;IEC 61400-1 Ed.3	IA	2016	DECS
	L136 - 4.5MW	LM66.5P	132 m	IEC 61400;IEC 61400-1 Ed.3	IIIA	2017	DECS
LM Glasfiber	-	several	-	IEC 61400-22;IEC 61400-1 Ed.3	-	2015	Component Certificate
LZFRP	-	LZ75	-	GL (2010)	-	2017	SoC A-DA
	-	LZ52.5-2.5-V3	-	GL (2010)	-	2015	SoC A-DA
	-	LZ56.8	-	GL (2010)	-	2017	SoC A-DA
	-	LZ56.8	-	GL (2010)	-	2017	SoC A-DA
	-	LZ55-3.0-V5	-	GL (2010)	-	in progress	SoC A-DA
MADE	AE-61	LM 29.1	60 m	GL	II	2008	Type Approval
	AE-61	LM 29.1	55 / 60 m	GL	I / II	2008	Type Approval
NORDEX Energy	N90 R80	LM 43.8	80 m	DIBt	III	2004	DECS
	N90 R100	LM 43.8	100 m	DIBt	II	2004	TC
	N90 / 2300	LM 43.8 / NR 45	70 / 100 m	IEC	IIA / IIIA	2008	TC
	N90 / 2500	NR 45	80 / 100 m	IEC IB + IIA / DIBt / NVN / DS		2006-2008	TC
	N90 / 2500 (50 / 60 Hz)	LM 43.8P	75 / 80 / 100 m	IEC / DIBt / NVN / DS	IB / IIA / IIIA	2006-2008	TC
	N90 / 2500 HS	LM 43.8P	80 m	IEC	IB	2009	TC
	N90 / 2500 LS	LM 43.8P	100 m	IEC	IIIA	2008	TC
	N90 / 2500 LS	LM 43.8P	75 m	WT 01 / IEC (1999)	IIIA	2008	DECS
	N90 (50 / 60 Hz)	LM 43.8P	80 m	IEC 61400-22 / IEC (2005)	IA	2013	DECS
	N100 / 2500 (50 / 60 Hz)	LM 48.8	100 m	DIBt / IEC (1999)	IIIA	2009	TC
	N100 / 2500 (50 / 60 Hz)	LM 48.8 / NR50	80 / 100 m	DIBt / IEC (2005)	IIIA	2010	DECS
	N100 / 2500 (50 / 60 Hz)	LM 48.8 / NR50	80 / 100 m	IEC 61400-22 / IEC (2005)	IIA	2013	TC
	N100 / 2500 (50 / 60 Hz)	LM48.8P / NR50	140 m hybrid	DIBt / IEC	II / IIIA	2010	TC
	N100 / 2500	NR50, LM48.8P/P3	75 m	IEC 61400-22 - IEC (2005)	IIA	2013	DECS
	N100 / 2500	NR50, LM48.8P/P3	75 m / 80 m / 100 m	IEC 61400-22 - IEC (2005)	IIA, SA	2013	DECS
	N100 / 3300	NR50	75 m / 100 m	IEC61400-22-IEC(2005)/DIBt(2004)	SA	2013	TC
	N100 / 3300	NR50	85 m	IEC 61400-22 - IEC (2005)	SA	2013	TC
	N100 / 3300	NR50	75 m / 85 m / 100 m	IEC 61400-22 - IEC (2005)	SA	2014	TC / DECS
	N117 / 2400 (50 / 60 Hz)	NR58.5	91 m	DIBt / IEC	IIIA	2012	DECS
	N117 / 2400 (50 / 60 Hz)	NR58.5	120 m / 141 m hybrid	DIBt / IEC	IIIA	2012	DECS
	N117 / 3000	NR58.5		IEC 61400-22 - IEC (2005)	IIA	2013	TC
	N117 / 3000	NR58.5	91 m / 120 m / 141 m	IEC61400-22-IEC(2005)/DIBt(2004)	SA	2013	DECS / Type Approval
N117 / 3000	NR58.5	91 m / 120 m / 141 m	IEC61400-22-IEC(2005)/DIBt(2004)	SA	2014	DA tower, foundation	
N117 / 3600	NR58.5	106 m	IEC 61400-22 - IEC (2005)	SA	2016	DECS, TC	
N117 / 3600	NR58.5	91 m	IEC 61400-22 - IEC (2005) / BEK73	SA	2017	PDECS, PTC	
N131 / 3000	NR65.5	99 m / 114 m / 134 m / 144 m	IEC61400-22-IEC(2005)/DIBt(2012)	SA	2016	DECS, TC	
N131 / 3300 & 36000	NR65.5	84 m / 106 m / 112 m / 134 m	IEC61400-22-IEC(2005)/DIBt(2012)	SA	2016	DECS / Type Approval	
N131 / 3900	NR65.5	84 m / 134 m	IEC61400-22-IEC(2005)/DIBt(2012)		2017	DECS	
PACADAR	Vestas V100-1.8, MK7		110 m (hybrid tower)	IEC (2005)	S	2013	
PowerWind	6 AC			DIBt		2007	TC (Re-certification)
	PW 56		59 / 71 m	DIBt / IEC (1999)	III / IIIA	2009	TC (Re-certification)
ReGen	VENSYS 77	LM37.3P2	75 / 85 m	GL (2003 / 2004) / GL 2010	IIIA	2017	TC (Re-certification)
	VENSYS 82	LM40.3P2	70 / 75 / 85 / 100 m	GL (2003 / 2004) / GL 2010	IIIA	2017	A-DA / TC
	VENSYS 87	LM42.1P	85 / 100 m	GL(2003/2004)/IEC(1999)/GL2010	IIIB	2017	TC
	VENSYS 89	CTC43	85 m	GL (2003 / 2004) / IEC (1999)	IIIA	2015	TC
Ruukki	FL2500-100		140 m (hexagonal lattice tower)	IEC (1999), DIBt (2004)	IIIA / WZ II	2011	

References

Certifications & Type Approvals

Client	Type of Turbine	Rotor Blade	Hub Height	Guideline	Class	Date	Scope
S&G Engineering	SG500	RD54	50 m	IEC WT01		in progress	
Schütz	VT110	ADC 53.4	120 m Volkswind In-situ concrete	DIBt (2004), IEC (1999)	DIBt WZ II, IEC IIIA	2011	Type Approval/DA Tower + Foundation
	VT110	ADC 53.4	137.6 m MaxBögl precast concrete	DIBt (2004), IEC (1999)	DIBt WZ II, IEC IIIA	2014	Type Approval/DA Tower + Foundation
	VT110	ADC 53.4	142.6 m Echterhoff In-situ concrete	DIBt (2004), IEC (1999)	DIBt WZ II, IEC IIIA	2014	Type Approval/DA Tower + Foundation
	VT110	ADC 53.4	143.2 m Drössler precast concrete	DIBt (2004), IEC (1999)	DIBt WZ II, IEC IIIA	2015	Type Approval/DA Tower + Foundation
SE Blades	-	SB54	-	IEC 61440-22; IEC 61400-1 Ed.3	-	2015	Component Certificate
	-	SB54HT	-	IEC 61440-22; IEC 61400-1 Ed.3	-	2016	Component Certificate
	-	SB54S2	-	IEC 61440-22; IEC 61400-1 Ed.3	-	2016	Component Certificate
	-	SB63S1	-	IEC 61440-22; IEC 61400-1 Ed.3	-	in progress	Component Certificate
SeeBA	F56		71 m lattice tower	DIBt (2004)		2005	
	MD 77		96.5 / 111.5 m lattice tower	DIBt (2004)		2004	TC
	V60		117 m lattice tower	DIBt (2004)		2008	TC
Senvion	MM 92	LM 45.3	68.5 / 80 / 100 m	WT01-IEC (1999)	II / IIIA	2010	Type Approval
	MM 92	RE45.2	68.5 / 80 / 100 m	WT01-IEC (1999)	II / IIIA	2009	Type Approval
	MM 92	LM 45.3 / RE45.2	80 m	DIBt	III	2010	DECS
	MM 92	LM 45.3 / RE45.2	100 m	DIBt	II	2010	DECS
	MM 92	LM 45.3	93.75 m	IEC (1999)	IIIA site specific	2010	TC
	MM 92	RE45.2	88.5 m	WT01 / IEC (1999)	IIA	2010	TC
	MM 92	LM 45.3	100 m	WT01 / IEC (2005)	IIA	2010	Type Approval
	MM 92	RE45.2	100 m	WT01 / IEC (2005)	IIA	2010	Type Approval
	3.4M104	RE 50.8	125-128 m Hybrid	DIBt	II	2010	Type Approval
	3.4M104	RE 50.8	80 m	DIBt	II	2008 / 2010	TC
	3.XM	RE 50.8	100 m	DIBt	III	2009	TC
	3.4M104	RE50.8	125-128 m Hybrid	WT01-IEC (2005)	S	2011	TC
	3.4M104	RE50.8	93 m	WT01-IEC (2005)	IB	2011	TC
	3.4M104	RE50.8	80 / 100 m	WT01-IEC (2005)	IIA	2011	DECS
	3.4M104	RE50.8	78-80 m / 93 m / 96.5-100 m	IEC WT-01	IB, IIA, S-Class	2013	DECS
	3.2M114	RE55.8	93 m	WT01-IEC (2005)	S	2012	DECS
	3.2M114	RE55.8	143 m	WT01-IEC (2005) / DIBt (2012)	IIIA	2012	Tower + Foundation
	3.2M114	RE55.8	93 m	IEC 61400-22-IEC (2005) / DIBt (2012)	IIA	2013	TC
	3.2M114	RE55.8	120-123 m (MaxBögl precast concrete)	IEC 61400-22-IEC (2005) / DIBt (2012)	IIA	2016	Type Approval
	3.0M122	RE59.8	89 / 119 / 139 m (MaxBögl precast concrete)	IEC 61400-22-IEC (2005) / DIBt (2012)	IIIA	in progress	TC
	3.0M122	RE59.8	89 / 119 / 139 m (MaxBögl precast concrete)	IEC 61400-22-IEC (2005) / DIBt (2012)	WZIII	2016	Type Approval
	3.0M122	RE59.8	139 m High Steel Tower	IEC 61400-22-IEC (2005) / DIBt (2012)	WZIII	2016	Type Approval
	3.4M114	RE55.8	79 / 93 / 116-119 / 143 m	IEC 61400-22-IEC (2005) / DIBt (2012)	S-Class	2016	TC, Type Approval
	3.4M114 NES	RE55.8	93 / 119 m	IEC 61400-22-IEC (2005) / DIBt (2012)	IIA	in progress	TC, Type Approval
	3.2M122 NES	RE59.8	89 / 119 / 139 m	IEC 61400-22-IEC (2005) / DIBt (2012)	S-Class	in progress	TC, Type Approval
	3.4M122 NES	RE59.8	89 / 119 / 139 m	IEC 61400-22-IEC (2005) / DIBt (2012)	S-Class	in progress	TC, Type Approval
	6M	RE61.5	100 m	DIBt	III	2009	A-DA
SEWIND (Shanghai Electric Windp.)	W2000-93	93	90 m	GL (2003)	IIIA	2011	Type Approval
	W2000-87	SE 87	80 m	GL (2003 / 2004)	IIA	2012	DECS + TC
Siemens	SWT-2.5-120	B59-00	92.0 m	IEC 61400-22 - IEC (2005) and BEK73	S	2016	Prototype Certificate
	SWT-2.5-120	B59-00	85.1 m	IEC 61400-22 - IEC (2005)	S	in progress	DECS + Type Certificate
	SWT-2.3-82	B40	58.5 m	IEC 61400-22 - IEC (2005)	S	2016	Tower Component Certification
	SWT-3.15-142	LM69.3P	129.0 m	IEC 61400-22 - IEC (2005)	S	2017	Tower Component Certification
	SWT-3.2-101 / SWT-3.0-101	B49-03	64.0 m / 94 m	IEC 61400-22 - IEC (2005)	IA	2015	Tower Component Certification
	SWT-3.2-108 / SWT-3.0-108	B53-02	74.5 m / 94 m	IEC 61400-22 - IEC (2005)	IA	2015	Tower Component Certification
	SWT-3.2-113 / SWT-3.0-113	B55-01	79.5 m / 99.5 m / 88.0 m	IEC 61400-22 - IEC (2005)	IIB / S	2015	Tower Component Certification
	SWT-3.2-113	B55-01	83.5 m	IEC 61400-22 - IEC (2005)	IIA	2015	Tower Component Certification
	SWT-3.3-130	B63-10	115.0 m, 135.0 m	IEC 61400-22 - IEC (2005)	S	2016	Tower Component Certification
	SWT-3.6-130	B63-10	100.0 m	IEC 61400-22 - IEC (2005)	IIB	2016	Tower Component Certification
	SWT-2.3-93	B45-02	133 m (ATS-Hybrid)	DIBt 2004	II	2011	Type Approval
	SWT-3.15-142	LM69.3P	109.0 m / 129.0 m / 165.0 m (Hybrid tower)	DIBt 2012	S	2017	Type Approval
	SWT-3.2-113 / SWT-3.0-113	B55-01	92.5 m / 115.0 m	IEC 61400-22 - IEC (2005)	S	2017	Type Approval
	SWT-3.6-130 / SWT-3.3-130	B63-10	85.0 m / 115.0 m / 135.0 m	DIBt 2012	S	2016	Type Approval
	SWT-3.6-130	B63-10	165.0 m (Hybrid tower)	DIBt 2012	S	2017	Type Approval
Sinomatech		Sinoma53.8B		GL (2010)		2013	A-DA
		Sinoma53.8C		GL (2010)		2014	A-DA
		Sinoma53.8D		GL (2010)		2014	A-DA
Sinovel	SL6000-128	LZ62	100 m	GL Offshore (2005)	IB	in progress	DECS
	SL6000-155	AE75	110 m	GL Offshore (2012)	S	in progress	TC

References

Certifications & Type Approvals

Client	Type of Turbine	Rotor Blade	Hub Height	Guideline	Class	Date	Scope
Suzlon	S9X	LM47.5P / SB46	90 m	IEC WT01	S	2013	DECS
	S111	SB54	90 m / 120 m / 140 m	IEC 61400-22	III A / S	2017	TC
SE Blades	-	SB54	-	IEC 61400-22	-	in progress	DECS / TC
TimberTower	VENSYS 77	LM 37.3P2	100 m Wooden tower	DIBt	II	2010	
Turbowinds	T600 - 48	LM 23.3P	50 m	WT01 - IEC (2005)	IIA	in progress	DECS
VENSYS Energy	VENSYS 64	ARA 64	85 m	DIBt	II	2005	DECS
	VENSYS 70	APX70 / LM34	65 / 85 m	IEC (1999) / DIBt	IIA / III / iA	2006 / 2012	DECS / A-DA
	VENSYS 77	LM37.3	61.5 / 75 / 85 / 100 m	IEC (1999) / DIBt	IIA+IIIA / II+III	2009	A-DA
	VENSYS 82	LM40.3P2	58 / 70 / 75 / 85 / 100 m	IEC (1999) / DIBt / GL (2003 / 2004)	IIIA / II	2010 / 2011	A-DA
	VENSYS 87	LM 42.1	85 / 100 m	GL (2003 / 2004)	IIIB	2017	A-DA
	VENSYS 89	CTC 43b	85 m	GL (2003 / 2004)	IIIA	2017	A-DA
	VENSYS 90	LM 43.8	80 / 100 m	IEC (1999) / DIBt	IIA / III	2010	A-DA
	VENSYS 100	LM 48.8	80 / 100 m	IEC (1999) / DIBt	IIIA / III	2010	A-DA
	VENSYS 100	LM 48.9	75 / 100 m	GL (2003 / 2004 / 2010)	IIIA / III	2016	A-DA
	VENSYS 109	LM 53.2	90 / 95 / 140 m	DIBt(2005)/GL(2003/2004/2010)	III / IIA	2014	A-DA
	VENSYS 112	LZ 55-3.0-V3	93.5 / 140 m	DIBt(2012)/GL(2003/2004/2010)	IIIA	2017	A-DA
	VENSYS 112 3MW	LM54.8	93,5 / 140 m	DIBt (2012) / GL (2010)	IIIA	in progress	
	VENSYS 120 3MW	LM58.7	90 / 140 m	DIBt (2012) / GL (2010)	IIIA	2016	A-DA
VESTAS	V90-2.0MW	44 m, Prepreg	105 m	IEC (2005) / DIBt	IIIA / II	2010	DA tower
WES IBS	WESpe	CK220	15.5 m	IEC 61400-2 (2006) / DIBt	IIA / IV	2012	
WINDnovation	-	WINDbla-de836-5.0-F33G3S1	-	GL (2012)	-	2017	DA
Windtechnic (Norten Eólica)	generic (1.6-2.0 MW)	generic	110 & 120 m (precast concrete)	IEC (2005)	IIIA	2013	
WinWind	WWD1	EU 30	66 / 70 m	IEC	III	2002 / 2006	
	WWD3		90 m		Site specific	2005	A-DA
	WWD3		88 / 90 / 100 m	IEC	IIIA	2007 / 2008	A-DA + Type Approval
W2E	W2E-93 / 2.0	WN 453	85 / 100 m	GL (2003 / 2004)	IIA	2011	A-DA
Wind to Energy	W2E-93 / 2.0	LM 45.3	85 / 100 m	GL (2003 / 2004) / DIBt (2004)	IIA / WZ III	2011	A-DA + Type Approval
	W2E-93 / 2.0	LM 45.3 / WN453	85 / 100 m	GL (2010)	IIA	2012	A-DA / TC
	W2E-100 / 2.0	WN488	100 m	GL (2010) / DIBt (2004)	IIIA / WZ II	2013	A-DA / TC + Type Approval
	W2E-100 / 2.0	WN488	100 m & 117 / 141 m (Lattice)	GL (2010)	IIIA	2014	A-DA
	W2E-120 / 3fc	EU120-2500	90 / 100 m	GL (2010) / DIBt (2004)	IIA / WZ III	2014	A-DA + Type Approval
	W2E-120 / 3fc	EU120-2500	140 m Hybrid	GL (2010) / DIBt (2012)	IIA / WZ III	2016	A-DA + Type Approval
WTN	WTN646	WWK22.5	65 m	GL (2003 / 2004) / IEC(1999)	IIA	2010 (load assessment)	A-DA / TC
Xyron	EX-55	XT-27	60 m	GL (2010)	IIIB	in progress	A-DA
ZheJiang HeWind	HW82 / 1500	ae40.2	80 m	GL (2003 / 2004)	IIIB	in progress	
	HW77 / 1500	ae37.5	61.4 m	GL (2003 / 2004)	S	in progress	

Offshore Wind Client	Project Name	Location	Scope	Date
Vattenfall	Hollandse Kust Zuid 1&2	Netherland	Project Certification – Design Phase	Start in Q1/2020
Vattenfall	Hollandse Kust Zuid 3&4	Netherland	Project Certification – Design Phase	Start in Q1/2020
Ørsted	Gode Wind 3 & Borkum Riffgrund 3	North Sea	Project Certificate	

TÜV NORD

www.tuv-nord.com

TÜV NORD GROUP

