FINAL 15 JANUARY 2016

Wednesday 20 January		
09.00	Registration & coffee	
	Opening session – Frontiers of Science and Technology Chairs: John Olav Tande, SINTEF/NOWITECH and Trond Kvamsdal, NTNU/NOWITECH	
09.30	Opening and welcome by chair	
09.40	Initiative for Global Leadership in Offshore Wind, Matthijs Soede, Research Programme Officer, European Commission	
10.10	Innovations in offshore wind energy, John Olav Tande, director NOWITECH	
10.35	Cooperation as a key to cost reductions for offshore wind, Kristin Guldbrandsen Frøysa, director NORCOWE	
11.00	Hywind Scotland, Knut Erik Steen, Technical Manager, Statoil	
11.30	EERA research programme on wind energy and the offshore challenges, Thomas Buhl, DTU	
11.55	Closing by chair	
12.00	Lunch	
	Parallel sessions	
	A1) New turbine and generator technology Chairs: Karl Merz, SINTEF	**C1) Met-ocean conditions** Chairs: Valerie-Marie Kumer, Uni of Bergen, Joachim Reuder, Uni of Bergen, Birgitte Rugaard Furevik, met.no
13.00	Introduction by Chair	Introduction by Chair
13.05	Development of a TLP substructure for a 6MW wind turbine – use of steel concrete composite material, F. Adam, Wind Power Construction GMBH	Turbulence Intensity Model for offshore wind energy applications, K. Christakos, Uni Research Polytec AS
13.30	A parametric CFD study of morphing trailing edge flaps applied on a 10 MW offshore wind turbine, Eva Jost, Univ of Stuttgart	Boundary-Layer Study of FIN0vale1, B. Svardal, CMR
13.50	Latest results from the EU project AVATAR: How to model large wind turbines aerodynamically? J.G. Schepers, ECN	High-resolution simulations of surface wind climate, ocean currents and waves, H. Agustsson, Kjeller Vindteknikk AS
14.10	Design Load Cases investigation and comparison between Vertical and Horizontal Axis Wind Turbines, C. Galinos, DTU	Analysis of offshore turbulence intensity – comparison with prediction models, K. Lamkowska, Lodz Univ of Technology
14.30	Closing by Chair	Closing by Chair
14.35	Refreshments	
	A2) New turbine and generator technology (cont.)	**C2) Met-ocean conditions (cont.)**
15.05	Introduction by Chair	Introduction by Chair
15.10	Development of an analysis and simulation tool for a multi-rotor wind turbine floater, P.E. Thomassen, Simis	Coherence of turbulent wind under neutral wind conditions at FINO, L. Eliassen, NTNU / Statkraft
15.30	Influence of Aerodynamic Model Fidelity on Rotor Loads during Floating Offshore Wind Turbine Motions, D. Matha, Ramboll Wind	Assessment of offshore wind coherence by pulsed Doppler lidars, J.B. Jakobsen, UiS
15.50	A coupled floating offshore wind turbine analysis with high-fidelity methods, V. Leble, Univ of Glasgow	Turbulent Structure over Air-Sea Wavy Interface: Large-Eddy Simulation, M.B. Paskyabi, UiB
16.10	Closing by Chair	Closing by Chair
18.00	**Conference reception** Guided tour at Erkebispegården followed by entertainment (Trondheim Bassorkester) and light food	

Side event

16.10 – 18.00: Planning meeting for EERA SP Offshore Wind Energy

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Thursday 21 January		
	Parallel sessions	
	X1) Online technology transfer network for wind energy research Chair: Martijn van Roermund, ECN	**E1) Installation and sub-structures** Chairs: Prof Hans Gerd Busmann, Fraunhofer IWES Jørgen Krokstad, Statkraft; Michael Muskulus, NTNU
09.00	Introduction by Chair	Introduction by Chair
09.05	▪ Background on the initiative to set up an online tech transfer network on wind energy research. How does industry interact with the research community? ▪ Presentation of the online IP repository as developed for EERA. How to present your IP/technology? ▪ Discussion on further development of the online tech transfer network.	Accurate frequency domain method for monopiles K. Merz, SINTEF Energi
09.30		Crack growth fatigue modeling for monopiles, L. Ziegler, Rambøll/NTNU
09.50		The effect of slamming on a one degree of freedom model of an offshore wind turbine: experimental results, L. Suja-Thauvin, Statkraft/NTNU
10.10		Towards a risk-based decision support for offshore wind turbine installation and operation & maintenance, T. Gintautas, Aalborg Univ.
10.30	Refreshments	
	X2) Numerical reference wind farms Chair: Kristin Guldbrandsen Frøysa, director NORCOWE and Karl Merz, SINTEF Energy	**E2) Installation and sub-structures (cont.)**
11.00	▪ NORCOWE Reference Wind Farm, Kristin Guldbrandsen Frøysa, director NORCOWE ▪ NOWITECH Dogger Bank Reference Wind Farm, Karl Merz, SINTEF Energy Research	SATH platform concept study, Carrascosa, Saitec
11.20		Methodology for risk assessment of floating wind substructures, R.Proskovics, ORE Catapult
11.40		Scaling up floating wind – investigating the potential for platform cost reductions, M.I. Kvittem, DNVGL
12.00	Closing by Chair	Closing by Chair
12.05	Lunch	
	B1) Grid connection and power system integration Chairs: Prof Olimpo Anaya-Lara, Strathclyde University	**G1) Experimental Testing and Validation** Chairs: Tor Anders Nygaard, IFE Ole David Økland, MARINTEK, Amy Robertson, NREL
13.05	Introduction by Chair	Introduction by Chair
13.10	High Density MMC for platform-less HVDC offshore wind power collection systems (KEYNOTE), Chong NG, Offshore Renewable Catapult	Validation of a FAST Model of the Statoil-Hywind Demo Floating Wind Turbine, J. Jonkman, NREL
13.35	Cluster Control of Offshore Wind Power Plants Connected to a Common HVDC Station, J.N. Sakamuri, DTU Wind Energy	Real-time hybrid testing of a braceless semi-submersible wind turbine, E. Bachynski, MARINTEK
13.55	Coordinated Tuning of Converter Controls in Hybrid AC/DC Power Systems for System Frequency Support, A. Endegnanew, SINTEF Energi	OC5 Project Phase I: Validation of Hydrodynamic Loading on a Fixed Cylinder, A.N. Robertson, NREL
14.15	Fulfilment of Grid Code Obligations by Large Offshore Wind Farms Clusters Connected via HVDC Corridors, A.B. Attya, Univ of Strathclyde	Hydro-Elastic Contributions to Fatigue Damage on a Large Monopile, J-T. Horn, NTNU
14.35	Refreshments	
	B2) Grid connection and power system integration (cont.)	**G2) Experimental Testing and Validation (cont.)**
15.05	Optimal transmission voltage for very long HVAC cables, T.K.Vrana, SINTEF Energi AS	Validation of uncertainty in IEC damage calculations based on measurements from alpha ventus, K. Müller, Univ of Stuttgart
15.25	Investigation on Fault-ride Through Method for VSC-HVDC Connected Offshore Wind Farms, Raymundo Torres, NTNU	Experimental Validation of the W2Power Hybrid Floating Platform, P. Mayorga, W2Power
15.45	Minimizing Losses in Long AC Export Cables, O. Mo, SINTEF Energi	Unsteady aerodynamics of floating offshore wind turbines: toward experimental validation of equivalent lumped-element models, A. Zasso, Politecnico di Milano
16.05	Scaled Hardware Implementation of a Full Conversion Wind Turbine for Low Frequency AC Transmission, R. Meere, UCD	Aerodynamic damping of a HAWT on a Semisubmersible, S. Gueydon, Maritime Institute of The Netherlands
16.25	Closing by Chair	Closing by Chair
16.30	Refreshments	
17.00	**Poster session**	
19.00	Conference dinner	

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Thursday 21 January: 17.00 Poster Session with refreshments

1. *Development of a FAST model for a floating 10MW wind turbine, M. Borg, DTU Wind Energy*
2. *Investigation on Fault-ride Through Method for VSC-HVDC Connected Offshore Wind Farms, W. Sun, NTNU*
3. *Design and Modelling of a LFAC transmission system for offshore wind, J. Ruddy, Univ College Dublin*
4. *A Review on Wind Power Plant Control and Modelling Requirements, O. Anaya-Lara, Univ of Strathclyde*
5. *Synthetic inertia from wind power plant: Investigation of practical issues based on laboratory-based studies, O. Anaya-Lara, Univ of Strathclyde*
6. *Provision of Ancillary Services from Large Offshore Wind Farms, W. Ross, Univ of Strathclyde*
7. *Analysis of cyclone Xaver (2013) for offshore wind energy, K. Christakos, Uni Research Polytec AS*
8. *OBLO instrumentation at FINO1, M. Flügge, CMR*
9. *Energy systems on autonomous offshore measurement stations, T.K. Løken, NTNU*
10. *A Site Assessment of the Hywind Floating Wind Turbine location, L. Sætran, NTNU*
11. *Gust factors in gale and storm conditions at Frøya, L.M. Bardal, NTNU*
12. *Proof of concept for wind turbine wake investigations with the RPAS SUMO, J. Reuder, UiB*
13. Development of a TLP substructure for a 6MW wind turbine – use of steel concrete composite material, F. Adam, Wind Power Construction GMBH
14. *First results from an offshore 40m high TLP met. mast at 65m deep waters in the Aegean Sea, D. Foussekis, Centre for Renewable Energy Sources (CRES)*
15. *Project schedule assessment with a focus on different input weather data sources, G. Wolken-Möhlmann, Fraunhofer IWES*
16. *Nonlinear wave propagation and breaking in the coastal area, M.B. Paskyabi, UiB*
17. *Lagrangian Study of Turbulence Structure Near the Sea Surface, M.B. Paskyabi, UiB*
18. *Evaluation of ensemble prediction forecasts for estimating weather windows, B.R. Furevik, MET*
19. *A surrogate model for simulations – finding optimal operation & maintenance strategies for offshore wind farms, M.R. Gallala, NTNU*
20. *Risk and reliability based maintenance planning for offshore wind farms using Bayesian statistics, M. Florian, Aalborg Univ.*
21. *The operation and maintenance planning based on reliability analysis of fatigue fracture of a wind turbine drivetrain components. A. Beržonskis, Aalborg Univ.*
22. *Operation and maintenance and logistics strategy optimisation for offshore wind farms, I.B. Sperstad, SINTEF Energi*
23. *Vessel fleet optimization for maintenance operations at offshore wind farms under uncertainty, M. Stålhane, NTNU*
24. *Maintenance polar and marine traffic validation on existing wind farm, Colone, L., DTU*
25. *Assessment of the dynamic responses and operational sea states of a novel OWT tower and rotor nacelle assembly installation concept based on the inverted pendulum principle, W. G. Acero, NTNU*
26. *Multi-level hydrodynamic modelling of a 10MW TLP wind turbine, A.P. Jurado, DTU*
27. *A model for jacket optimization in Matlab, K. Sandal, DTU*
28. *Strategy and costs of installing floating offshore wind farms, L.B. Savenije, ECN*
29. *Analysis of second order effects on a floating concrete structure for FOWT's, Prof. Climent Molins, Universitat Politecnica de Catalunya*
30. *Vibration-based identification of hydrodynamic loads and system parameters for offshore wind turbine support structures, D. Fallais, Delft University of Technology*
31. *Improved Simulation of Wave Loads on Offshore Structures in Integral Design Load Case Simulations, M.J. de Ruiter, Knowledge Centre WMC*
32. *Adaptation of Control Concepts for the Support Structure Load Mitigation of Offshore Wind Turbines, B. Shrestha, ForWind*
33. *Comparison of experiments and CFD simulations of a braceless concrete semi-submersible platform, L. Oggiano, IFE*
34. *Parametric Wave Excitation Model for Floating Wind Turbines, F.Lemmer, né Sandner, University of Stuttgart*
35. *On Fatigue Damage Assessment for Offshore Support Structures with tubular Joints B. Hammerstad, NTNU*
36. *Influence of Soil Parameters on Fatigue Lifetime for Offshore Wind Turbines with Monopile Support Structure, S. Schafhirt, NTNU*
37. *Mooring Line Dynamics Experiments and Computations. Effects on Floating Wind Turbine Fatigue Life and Extreme Loads, J. Azcona, CENER*
38. *Semisubmersible floater design for a 10MW wind turbine, J. Azcona, CENER*
39. *Sizing optimization of a jacket under many dynamic loads, A. Verbart, DTU Wind Energy*
40. *Rational upscaling of a semi-submersible floating platform, M. Leimeister, NTNU*
41. *Numerical and experimental investigation of breaking wave impact forces on a vertical cylinder in shallow waters, M.A. Chella, NTNU*
42. *Irregular Wave Forces on Circular Cylinders placed in Tandem, A. Aggarawal, NTNU*
43. *New design concepts of an upwind turbine rotor and their impact on wake characteristics, F. Mühle, NMBU*
44. *Wake modelling: the actuator disc concept in PHOENICS, N. Simisiroglou, WindSim AS*
45. *Wind farm control applications for Windscanner infrastructure, T.I. Reigstad, SINTEF Energi AS*
46. *Real-Time Hybrid Model Testing of a Floating Wind Turbine: Numerical validation of the setup, V. Chabaud, NTNU*
47. *Experimental Wind Turbine Wake Investigation towards Offshore Wind Farm Performance Validation, Y. Kim, LSTM, FAU*
48. *Validation of a Semi-Submersible Offshore Wind Platform through tank test, G. Aguirre, Tecnalia R&I*
49. *Field site experimental analysis of a 1:30 scaled model of a spar floating offshore wind turbine, M. Collu, Mediterranea University*

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Thursday 21 January: 17.00 Poster Session with refreshments (cont.)
50. *A Review and Comparison of Floating Offshore Wind Turbine Model Experiments, G. Stewart, NTNU* 51. *Wind Model for Simulation of Thrust Variations on a Wind Turbine, E. Smilden, NTNU* 52. *Numerical simulations of the NREL S826 aerofoil performance characteristics – A CFD validation and simulation of 3D effects in wind tunnel testing, K. Sagmo, NTNU* 53. *A Single-Axis Hybrid Modelling System for Floating Wind Turbine Basin Testing, M. Hall, University of Maine* 54. *A design support multibody tool for assessing the dynamic capabilities of a wind tunnel 6DoF/HIL setup, M. Belloli, Politecnico di Milano* 55. *Assessment and evaluation of a wind turbine condition using a time-frequency signal processing method, P. McKeever, Offshore Renewable Energy Catapult* 56. *Development, Verification and Validation of 3DFloat; Aero-Servo-Hydro-Elastic Computations of Offshore Structures, T.A. Nygaard, IFE* 57. *Effect of upstream turbine tip speed variations on downstream turbine performance: a wind farm case optimization, J. Bartl, NTNU* 58. *Droplet Erosion Protection Coatings for Offshore Wind Turbine Blades, A. Brink, SINTEF M&C* 59. *Design of an airfoil insensitive to leading edge roughness, T. Bracchi, HIST* 60. *Socio-economic evaluation of floating substructures within LIFES 50+ project, M. de Prada, IREC* 61. *Coordinated control of DFIG-based offshore wind power plant connected to a single VSC-HVDC operated at variable frequency, M. de Prada , IREC* 62. *Implications of different regulatory approaches for offshore wind in Europe, L. Kitzing, DTU Management Engineering* 63. *Fiskarstrand Verft AS tooling up for renewable energy, Einar Kjerstad, Fiskerstrand Verft AS* 64. *LIFES50+: Innovative floating offshore wind energy .P.A.Berthelsen, Marintek* 65. *Aerodynamic modeling of offshore floating vertical axis wind turbines, Z. Cheng, NTNU* 66. *Scalability of floating Vertical Axis Wind Turbines, E. Andersen, UiS* 67. *Advanced Wind Energy Systems Operation and Maintenance Expertise, J. Melero, CIRCE*

Friday 22 January		
	Parallel sessions	
	D) Operations & maintenance Chairs: Thomas Welte, SINTEF Energi AS Michael Durstewitz, Fraunhofer IWES	**F) Wind farm optimization** Chairs: Annette F. Stephansen, CMR Henrik Bredmose, DTU Wind Energy
09.00	Introduction by Chair	Introduction by Chair
09.05	A Risk Based Inspection Methodology for Offshore Wind Jacket Structures, M. Shafiee, Cranfield Univ	A parametric investigation into the effect of low induction rotor (LIR) wind turbines on the LCoE of a 1GW offshore wind farm in a North Sea wind climate, G. Scheepers, ECN Wind Energy
09.25	Effect of Tower-top Axial Acceleration on Monopile Offshore Wind Turbine Drivetrains, A.R. Nejad, NTNU	ProdBase: Theoretical power production in the time domain using Wind Farm Simulator, M.S. Grønsleth, Kjeller Vindteknikk
09.45	Safety Indicators for the Marine Operations in the Installation and Operating Phase of an Offshore Wind Farm, H. Seyr, NTNU	A continuously differentiable turbine layout optimization model for offshore wind farms, A. Klein, UiB
10.05	Probabilistic assessment of floating wind turbine access by catamaran vessel, M. Martini, Inst of Cantabria	Experimental testing of axial induction based control strategies for wind farm power optimization, J. Bartl, NTNU
10.25	Closing by Chair	Closing by Chair
10.30	Refreshments	
	Closing session – Strategic Outlook Chairs: John Olav Tande, SINTEF/NOWITECH and Trond Kvamsdal, NTNU/NOWITECH	
11.00	Introduction by Chair	
11.05	DeRisk project on extreme wave loads, H. Bredmose, DTU	
11.35	Type Validation for the SeaWatch Wind Lidar Buoy, V. Neshaug, Fugro OCEANOR	
12.05	Increasing wind farm profit through integrated condition monitoring and control, Berit Floor Lund, Kongsberg Renewables	
12.35	Poster award and closing	
13.00	Lunch	

Side event
08.30 – 17.00: IEA OC5 meeting