

WWEC 2019 RIO • BRAZIL



18th World Wind Energy Conference
Large-scale Integration of Wind Power

25-27 november 2019

Rio de Janeiro | Brazil

Programme

Day 1

November 25 (Monday)

9h30	OPENING CEREMONY Moderator: <i>Stefan Gsänger (WWEA Secretary General)</i> Speakers: <i>Hon. Peter Rae AO (WWEA President), Everaldo Alencar Feitosa (WWEA2019 Chairman), Reive Barros (Secretary of the Ministry of Energy), Irene Giner-Reichel (Ambassador of Austria)</i>		
10h	Keynote speeches Moderator: <i>Stefan Gsänger (WWEA Secretary General)</i> <i>Irene Giner-Reichel (REN21), Dr. Osman Benchikh (Former UNESCO), Rafael Guerra* (Goldwind), Dipal Barua* (Bright Green Energy Foundation/ Bangladesh)</i>		
11h	MORNING BREAK		
11h15	Wind Energy: a journey around the world The advancements in the field of wind power generation and other renewable sources are going to be presented by spokespeople from their country's perspective. Participants will also be introduced to the main challenges faced by the use of clean energy around the world - themes that will be deepened throughout the conference. Speakers: <i>Gayathi Prakash (IRENA), Prof. Chuichi Arakawa (Japan), Heinrich Bartelt (Germany), Prof. Choong-Yul Son (Korea), Hon. Peter Rae (Australia), Dr. Andriy Konechenkov (Ukraine), Zeeshan Ashfaq (Pakistan), Prof. Everaldo Feitosa (Brazil), Dr. Ibrahim Togola (Mali), Dr. Tetsunari Iida (Community Power), Morten Viktor Petersen (Denmark), Prof. Galal Osman (Egypt), Lukas Tanzmayr (Austria), Angelina Galiteva (California/USA)</i>		
13h	LUNCH BREAK		
	ROOM 1	ROOM 2	ROOM 3
14h	NATIONAL MARKETS AND POLICIES Chairman: <i>Heinrich Bartelt</i>	GRID INTEGRATION OF WIND FARMS Chairman: <i>Choong-Yul Son</i>	WOMEN IN RENEWABLE ENERGY SECTOR <i>(in cooperation with Global Women's Network for the Energy Transition - GWNET)</i>
	Wind Market of Ukraine: From FiT Towards Auctions <i>Galina Shmidt (UWEA, Ukraine)</i>	Intercomparing the performance of four artificial neural network architectures applied to short-term wind power prediction at the Northeast region of Brazil <i>Renan Costa (CER-UFPE, Brazil)</i>	Keynote speech and panel chair: <i>H.E. Irene Giner-Reichel (President of GWNET)</i> <i>Prof. Hirdan Costa (co-author of the study "Energy and Gender, An assessment on Gender Equality in the Energy sector in Brazil")</i>
14h40	Renewable Energy Policies in Pakistan <i>Zeeshan Ashfaq (WWEA Pakistan)</i>	Modeling wind speed and wind power uncertainties in the probabilistic power flow: a case study with the Brazilian Northeast Power System <i>Albert Cordeiro Geber de Melo (CEPEL/UERJ, Brazil)</i>	<i>Elbia Gannoum (Abeeolica President)</i> <i>Prof. Suzana Kahn Ribeiro (COPPE/UFRJ)</i>

* To be confirmed

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15h20	Wind power in Egypt <i>Prof. Galal Osman (Egypt Wind Energy Association)</i>		Renata Koch Alvarenga <i>(Political Analyst/ British Consulate General, Rio de Janeiro)</i> KAS Representative Instituto Iguape Representative CITS Global Representative
16h	EVENING BREAK		
	Chairman: <i>Zeeshan Ashfaq</i>	STORAGE AND HYDROGEN Chairman: <i>Hon. Peter Rae</i>	OFFSHORE WIND FARMS: ASIA Chairman: <i>Chuichi Arakawa</i>
16h30	Value chain in Mexico's wind energy market: The intelligence suppliers <i>Lidia Requena (UT Matamoros, Mexico)</i>	Wind Storage - State of the art <i>Dr. Pedro Rosas (CER-UFPE, Brazil)</i>	Korea Offshore Wind Energy by RE3020 Plan <i>Choong-Yul Son (INHA, Republic of Korea)</i>
16h50	10 years process allows Uruguay getting 38% nationwide electricity supply from wind power: who did what in this market? <i>Tabaré Pagliano Baserga (SOWITEC, Uruguay)</i>	Storage applied to electrical Power systems <i>Spartagus Pedrosa (ITEM Director, Brazil)</i>	Study on the Characteristics of Offshore Wind Resources Parameters under the State of Typhoon <i>Feihong Liu (MY Smart Energy Group, China)</i>
17h10	Incorporation of wind energy in the Uruguayan market <i>Priscila Ebert (UTECE, Uruguay)</i>	Fernando de Noronha Island, Brazil- Hybrid Solar-Wind Storage <i>Carlos Eduardo Chaves (CELPE, Brazil)</i>	Sensibility research on fatigue loads for monopile-supported offshore wind turbines considering wind-wave coupling <i>Cheng Zhang (MY Smart Energy Group, China)</i>
17h30		Storage Applied to Distribution Systems <i>Walmir Pereira (UNICAMP, Brazil)</i>	Prospect of Offshore Wind Energy for Pakistan <i>Dr. Zeeshan Alam Nayyar (UOK, Pakistan)</i>
17h50		Storage and Mobility - Experiences from CPFL <i>Renato Povia (CPFL, Brazil)</i>	
18h10	END DAY 1		

Day 2 November 26 (Tuesday)

9h	MORNING PLENARY: RENEWABLES WORKING TOGETHER Moderator: <i>Stefan Gsänger (WWEA Secretary General)</i> Speakers: <i>Hon. Peter Rae AO (WWEA), Roger Gill (International Hydropower Association - IHA), Marcelo Pinho Almeida (International Solar Energy Society - ISES/ABENS), Heymi Bahar (International Energy Agency - IEA)</i>		
10h15	MORNING BREAK		
10h35	NORTHEAST OF BRAZIL: TOWARDS THE MAXIMUM RENEWABLES With 50 million inhabitants, the Northeast region of Brazil impressively produces 90% of Brazil's wind generation. In this panel, WWEA brings representatives from 9 states in order to discuss the optimum conditions for increase renewables penetration. Chairmen: <i>Jundair Picanço Jr. (FIEC Consultant), Darlan Santos (Director of Natural Resources and Energy Strategy Center - CERNE)</i> Speakers: <i>Luiz Cardoso Ayres Filho (PE Secretary), João Leão (BA Vice-governor), Everaldo Alencar Feitosa (WWEA), Rodrigo Sauaia (ABSolar), Heinrich Bartelt (German WWEA)</i>		
	ROOM 1	ROOM 2	ROOM 3
	COMMUNITY POWER Chairman: <i>Zeeshan Ashfaq</i>	HYBRID AND OFFGRID SYSTEMS Chairman: <i>Ibrahim Togola</i>	OFFSHORE WIND FARMS Chairman: <i>Choong-Yul Son</i>
12h10	Large-scale Integration of Wind Power and how it is connected to community wind power and a CO2-tax <i>Timo Karl (WWEA, Germany)</i>	Grid connected solar wind hybrid power in mariel special development Zone (ZEDM) <i>Prof. Dr. Conrado Moreno Figueredo (CETER/CUJAE, Cuba)</i>	Potential synergy between offshore Oil&Gas exploration and production and wind energy generation: The opportunity of Brazilian mature oil fields <i>Livia Carvalho (Brazil)</i>
12h30	The importance of community power for the shift towards renewable energy <i>Stefan Gsänger (WWEA, Germany)</i>	Complementarity between wind and solar PV systems. Study for three sites in the northeast region of Brazil <i>Franciele Weschenfelder (CER-UFPE, Brazil)</i>	The Synergy between offshore oil and offshore wind: Designing a wind farm in southeastern Brazil <i>Bruna Silveira Guimarães, PPE/ UFRJ - Brazil</i>
12h50	Community Power Initiative, The Case of La Tortuga, Peru <i>Cesar Ruiz Nunura (Peru)</i>	The influence of temporal resolution of meteorological data on the estimated curtailment of hybrid power plants <i>Cleber Onofre Inácio (CENPES PETROBRAS, Brazil)</i>	Development of Methodology and Performance Indicators for Wind Farms Monitoring <i>Fabio Pereira Costa Brilhante(CENPES PETROBRAS, Brazil)</i>
13h10	LUNCH BREAK		

Day 2 - November 26 (Tuesday)

14h10	DISTRIBUTIED POWER GENERATION: CHALLENGES AND OPPORTUNITIES IN A HYBRID COUNTRY <i>(In cooperation with Brazilian Distributed Generation Association - ABGD)</i>	WIND OUTPUT FORECASTING Chairman: <i>Galal Osman</i>	OFFSHORE WIND FARMS Chairman: <i>Chuichi Arakawa</i>
	Chairman: <i>Aurélio de Andrade Souza</i> <i>(Usinazul president, ABGD and GCF consultant)</i> Co-Chair: <i>Marília Queiroz</i> <i>(Sustainability diretor of ABGD)</i>	Improving short-term wind power forecasting by means of spectral analysis and time-series decomposition <i>Renan Costa (CER-UFPE, Brazil)</i>	Offshore Wind - Failure Probability and Cost of Maintenance <i>Max Mauro Lozer dos Reis (CENPES PETROBRAS, Brazil)</i>
14h30	Speakers: <i>Dr. Adalberto Maluf</i> <i>(BYD Director)</i> <i>Dr. Antônio Celso de Abreu</i> <i>(President of the Department of Social Public Policies and Universalization of Energy Access MME)</i>	Real-Time Short-term Wind Power Prediction Based in Windfarms Observational Data and Numerical Weather Prediction <i>Fabio Lima (CER-UFPE, Brazil)</i>	Offshore wind - costs components and trends <i>Ezequiel Costa Malateaux da Silva (CENPES Petrobras, Brazil)</i>
14h50	<i>Aurélio de Andrade Souza</i> <i>(ABGD Consultant)</i>	Wind Speed Forecasting Using Computational Intelligence In Bahia, Brazilian Northeast <i>Dr. Erick Giovani Sperandio Nascimento (SENAI CIMATEC, Brazil)</i>	
15h10	<i>Dr. Germano Luis Gomes Vieira</i> <i>(Environment and Development Secretary from Minas Gerais)</i>	Probabilistic Short-Term Wind Power Forecasting: The VENTOS Program <i>José Francisco Moreira Pessanha (CEPEL, UERJ, Brazil)</i>	
15h30	<i>Dr. Gustavo Malagoli Buiatti</i> <i>(ALSOL President)</i>	Uncertainty of a wind farm's energy production calculation: reducing risks and increasing productivity <i>Dr. Vanessa G. Guedes (DME/CEPEL, Brazil)</i>	
15h50			
16h10	EVENING BREAK		

Day 2 - November 26 (Tuesday)

16h40	ENVIRONMENT AND RENEWABLE ENERGY	WIND AND SOLAR RESOURCE ASSESSMENT Chairman: <i>Morten Viktor Petersen</i>	
	The technology status and development trend of acoustic noise emission assessment for wind turbine <i>Chen Baokang (MY Smart Energy Group, China)</i>	Atmospheric boundary layer modeling using different approaches to compute models parameters <i>Charles Pereira (CER-UFPE, Brazil)</i>	
17h	THE ROLE OF MARKET DESIGN, PLANNING AND REGULATION IN NEW MARKETS <i>(in cooperation with Electric Energy Research Center - CEPEL)</i>	Improving Statistical Downscaling Of Local Surface Wind Speed Through Synthetic Regressor Variables <i>Gabriel Dantas (CER-UFPE, Brazil)</i>	
17h20	Chairman: <i>Ricardo Dutra (CEPEL)</i> <i>Giovani Machado (EPE)</i> <i>Christiano Vieira da Silva (Aneel)</i> <i>Camila Rodrigues (ABEEólica)</i>	Interannual variability of surface winds in the northeast brazilian region <i>Doris Veleda (CER-UFPE, Brazil)</i>	
18h		Objective Global Quality Checks Applied To Observational Data For Horizontal, Direct-Normal And Diffuse Solar Irradiance <i>Leonardo Petribu (CER-UFPE, Brazil)</i>	
18h20			
18h40	END DAY 2		

Day 3

November 27 (Wednesday)

9h	TOWARDS VERY LARGE ON-SHORE WIND TURBINES (ROTORS BEYOND 150m): RISKS AND OPPORTUNITIES Chairman: <i>Alexandre Pereira (Diretor UL Brazil)</i> Speakers: <i>Rogério Zampronha (Vestas), Carlos Alves (Acciona/Nordex), Maurício Vieira (GE), Janos Franzner da Silva (WEG), Rafael Guerra* (Goldwind), Aeris, LM</i>		
10h40	FINANCING RENEWABLES: WHAT IS THE BEST FINANCIAL STRATEGY FOR RENEWABLE ENERGY PROJECTS? In order to expand renewable power generation around the world, it is necessary to evaluate how to use them from an economically attractive perspective. Most important financial institutions in Brazil (BNDES and BNB) and comparisons with several countries in the world will be emphasized Chairman: <i>Eduardo Klepacz (Head of Infrastructure GTIS Brazil)</i> Speakers: <i>Helton Chagas Mendes (BNB), Bruno Müller (BNDES), Giovanni Bosco Araujo Fernandes Jr. (Santander), Allan Batista Gabriel (Bradesco), Guilerme Barbosa (XPI), Adriano Spina (Goldman Sachs)</i>		
12h30	LUNCH BREAK		
	ROOM 1	ROOM 2	ROOM 3
13h30	THE BRAZILIAN ENERGY MARKET <i>(In cooperation with Brazilian Wind Energy Association - ABEEolica)</i> Chairwoman: <i>Elbia Gannoum (Abeeolica)</i> Co-Chair: <i>Rosana Santos (Enel Green Power)</i> <i>Fernando Elias (Casa dos Ventos)</i> <i>Erik Rego (EPE)</i> <i>Alexandre Negrão (Aeris)</i> <i>Francisco Arteiro (ONS)</i> <i>Rafael Paniagua (ABB)</i>	WIND FARM OPERATION & MAINTENANCE Chairman: <i>Andriy Konechenkov</i> Deep online analysis of dielectric parameters for lubricants with an innovative oil sensor system: Identification of critical operation conditions of windpower gearboxes for reduction of failure rates and live time enhancement <i>Manfred Mauntz (CMC Instruments, Germany)</i> Title Lifetime Improvement and Higher Efficiency for Gears and Bearings <i>Ewald Michael König (REWITEC, Germany)</i> Development of tools for predictive maintenance of wind turbines based on artificial neural network <i>Nicolás Geremías (FING UdelaR, Uruguay)</i>	ELECTRIC VEHICLES <i>(In cooperation with Brazilian Electric Vehicles Association - ABVE)</i> The impact of the required energy to supply most of brazilian fleet will be analysed Chairman: <i>Ricardo Guggisberg</i> <i>Rosane Santos (ABVE director and president of Nissan Institute)</i> Alexandre Polesi (ABVE director) Juliano Mendes (ABVE vice president and business manager of Moura Batteries) Paulo Maisonnave (ABVE director and E-Mobility Offer of Enel)
	14h30	New wind machine topology: Solving wind energy penetration, efficiency and maintenance <i>Antonio Carlos Neiva (CEPEL, Brazil)</i>	
	14h50	Results From Hpc4e Project Regarding High Performance Computing Systems Applied To Improve Short-term Wind Power Prediction Over The Northeast Region Of Brazil <i>Prof. Alexandre Costa (CER-UFPE, Brazil)</i>	

Day 3 - November 27 (Wednesday)

15h10	BREAK		
15h40	WHY WIND FARMS ARE NOT PERFORMING WELL?	WIND FARM DEVELOPMENT & PLANNING Chairman: <i>Galyna Shmidt</i>	
	<p>This session will raise the most important fact on the financial viability of wind farms. Most of international consultant companies in the world together with large developers will present their recent results</p> <p>Speakers: <i>Alexandre Pereira (UL)</i></p> <p><i>Caaren Studzinski (Aeroespacial)</i></p> <p><i>Fabiano Lima (Camargo Schubert)</i></p>	<p>Comparison of low computational cost wind turbine wake models with experimental data and CFD simulations <i>Dr. Vanessa Guedes (DME/CEPEL, Brazil)</i></p>	
		<p>Considering Wind Uncertainties in the Expansion Planning Problem of Large Hydro Dominated Power System <i>Dr. Maria Luiza (CEPEL, Brazil)</i></p>	
		<p>Simulating Wind Speed With Weather Research And Forecasting (WRF) Model In Northeast Brazil <i>Thiago Silva (CER-UFPE, Brazil)</i></p>	
		<p>Statistical Models Applied To I-v Curve Estimation Under Real Operational Conditions <i>Janis Galdino (CER-UFPE, Brazil)</i></p>	
		<p>Power Curve Models Applied To The Estimation Of Constrained-off Energy In Brazil <i>Valentin Perruci (CER-UFPE, Brazil)</i></p>	
		<p>Simulating Wind Speed And Marine Currents With Coupled-ocean-atmosphere-wave And Sediment Transport (Coawst) Model In The Archipelago Of Fernando De Noronha/PE <i>Francis Lopes (CER-UFPE, Brazil)</i></p>	
		CLOSING CEREMONY	
16h50	<p><i>World Wind Energy Award 2019 / Conference Summary / WWEC2019 Declaration Presentation of Host of WWEC2020</i></p>		
17h50	END DAY 3		

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