



Quantum Leap in Wind Power Development in Asia and the Pacific

Wind Power: Accelerating Deployments in Emerging Wind Markets

6 June 2016, Monday, 9:00 AM to 5:30 PM

6 ADB Avenue, Mandaluyong City 1550, Metro Manila, Philippines

Overview

The Quantum Leap in Wind Power Development in Asia and the Pacific (QLW) deep dive workshop will focus on: How can emerging wind markets in Asia and the Pacific accelerate wind power development? The ambitious goals and commitments made in COP 21 will be translated into action in the coming years. Wind power provides the lowest cost clean energy technology, as evidenced by falling PPA prices and falling reverse auction prices for wind energy.

This workshop promises to bring, from around the world, wind power experts, senior government officials, senior utility officials, wind developers and financiers to share experiences, best practices and insights about wind power development. Presenters will discuss barriers, solutions to overcoming barriers and recommendations for changes to policies, tariffs, interconnection, permitting, land acquisition, financing and others. The workshop will share lessons, best practices and recommendations in order to accelerate wind development. All facets of wind project development will be covered: Prospecting, wind resource assessment, siting/engineering, turbine technology, financing, and others.

Schedule

Time	Activity
9:00 – 9:35 AM	Welcome address <ul style="list-style-type: none"> - Dr Priyantha Wijayatunga, Chair of Asia Clean Energy Forum, ADB Keynote address <ul style="list-style-type: none"> - Dr Jitu Shah, ADB
9:35 – 10:30 AM	Country presentations on wind power development: Status, challenges and opportunities Chair: Anthony Jude, Director Energy, South Asia Department, ADB <ul style="list-style-type: none"> - Mongolia, Mr. Angarag, Ministry of Energy - India, Mr. Rakesh Kumar Goyal, Tetra Tech ES - Indonesia, Mr. Ishak Burhani Nasution, PLN

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	<ul style="list-style-type: none"> - Philippines, Mr. Mario Marasigan, OIC Assistant Secretary of DOE Philippines - Sri Lanka, Mr. Ranjith Pathmasiri, SL Sustainable Energy Authority - Thailand, Mr. Iban Vendrell, Mott McDonald - Vietnam, Mr. Mike Ellis, Deloitte Consulting, USAID Vietnam Low Emissions Energy Program
10:30 – 11:00AM	Break
11:00 – 12:30PM	<p>Case studies of wind resource assessment.</p> <p>Chair: Mr. Upali Daranagama, Former Additional Secretary (Planning), Ministry of Power and Energy, Sri Lanka</p> <ul style="list-style-type: none"> - Mongolia: Mr. Bavuudorj, Ministry of Energy - Philippines: Mr. Fortunato Sibayan, Department of Energy - Sri Lanka: Mr. Gayan Subasinghe, United Nations Development Programme - Wind Resource Assessment: Key lessons learned, Dr. Pramod Jain, QLW & Innovative Wind Energy, Inc.
12:30 – 2:00 PM	Lunch
2:00 – 3:30 PM	<p>Accelerating wind power deployments from Government & Utility perspectives and the impact of COP21. This panel discussion will include representatives from governments, policy makers and utilities.</p> <p>Chair: Mr. Mukhtor Khamudkhanov, Principal Energy Specialist, ADB</p> <ul style="list-style-type: none"> - Experiences of rapid wind development in the Philippines. Mr. Mario Marasigan, OIC Assistant Secretary of DOE Philippines - Experiences with wind policies in Vietnam. Mr. Mike Ellis, Deloitte Consulting, USAID Vietnam Low Emissions Energy Program - Experiences with grid integration in Sri Lanka. Ms. Kamani Jayasekera, Dy General Manager Transmission and Generation Planning, Ceylon Electricity Board, Sri Lanka - Experiences with grid integration in the Philippines. Mr. Vincente Loria, National Grid Corporation of the Philippines - Experiences of utilities in managing wind power: Reserves, transmission and dispatching. Dr Clayton Barrows, NREL
3:30 – 4:00 PM	Break
4:00 – 5:30 PM	<p>Accelerating wind power deployments from Developer, Manufacturer and Financier perspectives. This panel discussion will include representatives from wind power developers, consulting companies, turbine manufacturers and financiers.</p> <p>Chair: Mr. Ashok Bhargava, Director Energy, East Asia Department, ADB</p> <ul style="list-style-type: none"> - Desideratum of developers: Best practices to reduce time and cost. Mr. Edgare Kerkwijk, Asia Green Capital - Experiences with wind development in the Philippines: Developer's perspective. Mr. Reman Chua, Energy Development Corporation.

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- New technologies for emerging wind markets: Turbines for lower wind speed regimes, grid friendliness. Mr. Gil Opina, Vestas
- Differences in market for wind turbines in developing compared to developed wind markets, Mr. Thierry Delmas, Gamesa
- Laos' first wind farm, a 600MW wind energy development, - infusing clean energy to a sustainable Asean Grid future, Mr. Somboon Lertsuwannaroj, Impact Electrons Siam.

Speakers

Dr. Jitendra (Jitu) Shah, Special Project Facilitator at the Asian Development Bank (ADB)

Jitu promotes participatory problem-solving for grievances caused by ADB-assisted projects. He has over 30 years of experience including 20 years with the World Bank where he has carried out environment, climate and social development programs. He led urban, regional and global air pollution work and developed RAINS-ASIA, URBAIR, initiated Clean Air Initiatives, regional and local climate change programs and Quantum leap in Wind to promote sustainable technologies like clean fuels, unleaded gasoline, removal of two stroke polluting engines from cities, and renewable energy.



Eng. M. M. R. Pathmasiri, Director General – Sri Lanka Sustainable Energy Authority.

Since joining the Energy Conservation Fund of the Ministry of Power and Energy, Sri Lanka in 2003 as Energy Management Director, Eng. Pathmasiri has largely contributed to the development of energy sector of Sri Lanka. Throughout his career he has pioneered many projects with national benefits on Energy Efficiency Improvement & Conservation. Now he plays a major role in sustainable energy development of the country as the Director General of Sri Lanka Sustainable Energy Authority. He holds a Master of Engineering in Energy Technology from the University of Moratuwa, Sri Lanka.



Iban Vendrell, Business Development, Mott McDonald.

Iban is a chartered energy engineer and advisor with a wide variety of experience in project development, procurement and engineering appraisal as well as government advisory work. Iban has worked for energy technology developments and projects including utility scale onshore wind, solar (photovoltaic (PV), concentrated solar power (CSP) and solar thermal), and off-grid hybrid renewables.

Has directed and managed advisory projects for key international multi-laterals and a wide range of private investors and developers. Working on projects for Mott MacDonald in all continents, has also been based in the



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UK, South Africa, United Arab Emirates and Thailand for different periods.

Angarag Myagmar, Head of Renewable energy Division, Ministry of Energy, Mongolia.

Mr. Angarag Myagmar currently works at the Ministry of Energy as a Head of Renewable energy division. He has worked in Public sector for 11 years in a variety of roles. He is responsible for foreseeing upcoming Renewable energy projects, providing policy proposals and monitoring of the ongoing projects and studies. Currently he is promoting policies such as Minigrid (as a distributed energy as an island projects), Integration of small scaled RE systems to energy systems, and Regulations of RE connection to the GRID. He graduated from National Graduate Institute /GRIPS/ Tokyo as Master in Public Policy and gained his Bachelor degree in Germany and Mongolia in fields of Business Management.



Mr. Bayasgalanbaatar Baasankhuu, Specialist at Renewable Energy Division, Ministry of Energy of Mongolia. He has ten years of continuous working experience in renewable energy field for state and government organizations and worked as a consultant for multiple local solar and wind energy projects. He attended specialized training programs in Japan, Thailand, Korea and China. Mr. Bayasgalanbaatar is a highly motivated and dedicated professional with vast knowledge of Mongolian renewable energy sector.



Mr. Bavuudorj Ovgor, Specialist in renewable energy technologies. He has worked as consultant for numerous renewable energy projects both financed nationally and internationally. Bavuudorj Ovgor gained experience in detailed wind energy resource assessment working as national consultant for various projects. His main research interests are wind energy technology, renewable energy resource assessment and renewable energy project development. Bavuudorj Ovgor received PhD in energy engineering at Inha University of Republic of Korea and Master of Science in Interdisciplinary program (wind energy) at Texas Tech University, USA.



Mr. Rakesh Kumar Goyal, India country head of Tetra Tech. He is a senior Power Sector Specialist with over 30 years of experience in power sector. He has specialized in power sector reform and clean energy. He has worked in all aspects of power sector: generation, transmission, distribution and regulatory affairs. He began his career with the Uttar Pradesh State Electricity Board, the largest vertically-integrated electric company in Asia, and later worked with Tata Power and SIEMENS. He was Chief of Party of USAID programs and led several clean energy projects sponsored by ADB and World Bank on smart grid, renewable energy and on energy efficiency. Currently he is leading a project in Egypt for establishment of energy efficiency unit.



He holds a master's in engineering and business administration. He is an accredited energy auditor.

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Ishak Burhani Nasution, Power system planner at PLN, Indonesian Electricity State Own Company. He has been a power system planner for the last six years. As a planner, his responsibility is to manage power system development especially for Eastern Indonesia Region. He attended college at Bandung Institute of Technology and receiving a B.S. in Electrical Engineering Science.



Mr. Gayan Subasinghe, Project Coordinator of UNDP NAMA, Sri Lanka Project

Gayan Subasinghe is a consultant with over 8 years of experience in power and energy sector. He has been involved in the design, technical support, analysis, and evaluation of many renewable energy and recourse recovery projects. Gayan served Sri Lanka Sustainable Energy Authority as a research engineer and Renewable Energy (RE) resource analyst, and led Quantum Leap in Wind Resource Assessment project in Sri Lanka. Gayan holds a bachelor's degree in mechanical engineering and Erasmus Mundus joint master degree in project management and engineering of energy and environment.



Mr. Vicente Loria, Division Head, National Grid Corporation of the Philippines.

Mr. Loria was previously involved in the conduct of project feasibility studies of thermal power generation projects of the National Power Corporation (NPC). Starting in 2003, as part of the transition towards the privatization of NPC's transmission function, he supervised the project planning and development of various transmission projects of the National Transmission Corporation (TransCo) in Luzon. In 2009, he joined NGCP as one of the Division Heads of the Transmission Planning Department, primarily involved in the preparation of the 10-year Transmission Development Plan (TDP). He is a registered electrical engineer and completed the academic requirement for Master of Engineering Program of the Technological University of the Philippines - Manila. He also completed and passed six online training courses conducted by the Renewable Energy Academy (RENAC AG) of Germany under its Capacity Building Program (CapREG).



Ms. Kamani Jayasekera, Deputy General Manager Transmission and Generation Planning, Ceylon Electricity Board, Sri Lanka.

Kamani Jayasekera serves as the Deputy General Manager (Transmission & Generation Planning) of the Ceylon Electricity Board, Sri Lanka. She is an electrical engineer by profession and has wide experience in power system operations, generation planning and transmission planning. She has been involved in many studies on grid integration of renewable energy sources, feasibility studies for generation projects, studies on South Asia Regional Electricity Grid and securing finances for transmission and generation



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projects. She holds a B.Sc. Engineering degree from University of Moratuwa, Sri Lanka and a M.Sc. in Energy Conservation and the Environment from Cranfield University, the United Kingdom.

Edgare Kerkwijk, Managing Director, Asia Green Capital Partners, Singapore.

Edgare Kerkwijk is the Managing Director of Asia Green Capital Partners and is based in Singapore. Asia Green Capital Partners (AGCP) is one of the first pan-ASEAN renewable energy developers. AGCP is developing 5 wind projects in Indonesia, Thailand and Vietnam with a combined capacity of over 450 MW. AGCP, through its joint-venture Aurora Partners, is developing a solar project in the Philippines with a capacity of 20 MW. Prior to joining AGC, Edgare was Partner and CFO for BioX Group, an integrated renewable energy firm. Edgare holds a Masters of Business Economics from the Erasmus University in Rotterdam (Netherlands).



Thierry Delmas, Director Asia Pacific, Gamesa

Thierry joined GAMESA in 2014 to help the Wind Turbine manufacturer to develop his activities in Asia, with a strong focus on South-East Asia and Pacific.



Clayton Barrows, Electric System Modeler, NREL, USA

Dr. Clayton Barrows is a member of the Energy Forecasting and Modeling Group. His research focuses on improving the technical and economic efficiency of electrical systems through advanced computation and analysis. At NREL, Clayton focuses on electric system planning and operations models. He is a core developer of the RPM capacity expansion model, and he has designed and implemented a time domain partitioning method to parallelize production cost model simulations. Additionally, Clayton serves as a special detailee to the Federal Energy Regulatory Commission, where he leads analysis of electricity market data. He received his B.S. in Electrical Engineering from the University of Wyoming and his Ph.D. in Energy and Mineral Engineering from The Pennsylvania State University.



Mario Marasigan, Officer In-Charge Assistant Secretary and the Senior Official on Energy (SOE) of the Philippine Department of Energy (PDOE), Director of the Renewable Energy Management Bureau (REMB).

Mr Mario Marasigan serves as the PDOE's focal representative to renewable energy industry in international institutions, such as IRENA and the East Asia Summit – Energy Cooperation Task Force, wherein he sits as Co-Chair of the Biofuels for Transport and Other Purposes Work Stream. Mr. Marasigan served as the focal person in the formulation and implementation of policies and programs for the judicious and efficient use of fuels and



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electricity, adoption and promotion of new and alternative energy technologies, and development and utilization of renewable energy resources in the Philippines. Among the highlights of his public service career was the facilitation and administration of the Renewable Energy Law of 2008 and the Biofuels Act of 2006.

Fortunato S. Sibayan, Division Chief of the Solar and Wind Energy Management Division, the Renewable Energy Management Bureau of the Philippine Department of Energy.

Engr. Fortunato S. Sibayan manages and supervises the development and implementation of plans, programs, projects and activities of the Solar & Wind Energy Sub-Program of the National Renewable Energy Program of the Philippines. Engr. Sibayan graduated with a degree of Bachelor of Science in Agricultural Engineering from Central Luzon State University and holds a Master of Science in Agricultural Engineering. He represents the Department of Energy as participant and/or Resource Person in local and international renewable energy activities such as conferences, workshops, meetings and similar activities.



Reman Chua, VP Project Development, Energy Development Corporation, Philippines

Mr Chua is with Energy Development Corporation (EDC) from 2007 to the present, leading business development projects for solar and wind, most notable of which is the company's 150 MW Burgos Wind Project. Reman graduated with a Bachelor of Arts in Economics from Ateneo de Manila University, and holds a Masters in Business Management from the Asian Institute of Management (AIM).



Michael Ellis, Deloitte Consulting LLP, Chief-of-Party and Resident Advisor for the USAID Vietnam Low Emission Energy Program (V-LEEP), Hanoi Vietnam

Mr. Ellis has 40 years of progressive experience in the management of large-scale, multi-disciplinary institutional reform and infrastructure projects worldwide. Currently, he manages the 5-year USAID V-LEEP program which concentrates on promoting on-grid renewable energy development, industrial renewable energy adoption, and industrial energy efficiency in Vietnam. He holds a B.S. in Engineering from California Polytechnic State University, M.S. in Management from the University of California Executive Program at Los Angeles, and has undertaken continuing education at California Institute for Technology and other educational institutions.



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Somboon Lertsuwannaroj, EVP Business Development

Impact Electrons Siam (IES), Bangkok.

Somboon leads a young, active business development team and is responsible for IES' growth strategy. As the first developer for solar in Thailand, Japan and wind in Lao PDR, IES has a pipeline of over 800 MW including solar, wind and biomass. Prior to joining IES, he developed 84 MW Lopburi Solar Project and a combined capacity of 120 MW wind projects in the north east of Thailand. The notable 600 MW Monsoon Wind Power Project, expected to be the largest wind farm in ASEAN, will pave the way for renewable energy development in the region. Somboon holds a B.E. Electrical Engineering from Chulalongkorn University, Thailand and a Director Certification Program from Thai Institute of Director.



Mr. Gil Opina, Technical Bid Manager for Vestas for Philippines, Thailand and Japan.

Gil has more than 8 years' experience in the Wind Energy industry from research and development to technical sales of wind turbine technology. Mr. Opina has a Bachelor of Science in Electronics and Communication Engineering from Mapua Institute of Technology and holds a Master's degree in Power Engineering from Nanyang Technological University (NTU) Singapore.



Pramod Jain, President, Innovative Wind Energy, Inc., USA.

Pramod is author of Wind Energy Engineering, published by McGraw-Hill, New York in 2010 and second edition in 2016. He consults on large wind projects with private developers, ADB, Inter-American Development Bank, UNDP, USAID, US Department of Energy and others. He has worked on wind projects in Guyana, Mongolia, Indonesia, Jamaica, Lebanon, Philippines, Sri Lanka, Vietnam, USA and others. His focus is on bankable wind resource assessment, grid integration and wind energy policy. He holds a B. Tech from Indian Institute of Technology, Bombay and Ph.D. from University of California, Berkeley.



Contact

Pramod Jain

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