

ASIA CLEAN ENERGY FORUM 2019

PARTNERING FOR IMPACT

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Deep Dive Workshop

Monday, 17 June 2019, 2:00 – 5:30 p.m.

Auditorium D

The Twelfth Meeting of Asia Solar Energy Forum *“Development Trends in Solar Manufacturing and Diversified Application”*



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Background

The Asia Solar Energy Forum (ASEF) was established with the support of Asian Development Bank as a non-profit regional knowledge sharing platform organization to help facilitate solar energy technology transfer across Asia and the Pacific. ASEF aims to bridge the information gap between suppliers and developers in the public and private sectors, support the growth of local solar energy competence in the developing countries of Asia and the Pacific, while addressing the barriers to trade in solar and smart grid applications.

Recent technological advances have made solar energy more competitive than fossil fuel-derived energy, and localized renewable-based distributed energy systems such as micro/mini-grids have expanded access to electricity. In addition, multiple trends are driving the transformation of global energy systems, especially electricity networks. Accelerated deployment and rapid cost declines of solar and other renewables, energy storage, electric vehicles, smart grid technology, and Internet of Things (IoT) can facilitate the growth of digitalized, decentralized, decarbonized energy systems, increasing network resilience while creating opportunities for new business models and operations.

Along with these trends, deployment of solar energy can contribute greatly to operational priorities in ADB Strategy 2030, and we can extend the meaning of letter “S” in ASEF to include “Storage” and “Smart Grids”.

Objective

Covering strategic considerations for managing 21st century energy networks, the Twelfth Meeting of ASEF will highlight two topics: (i) deployment of solar manufacturing capacity in our developing member countries, and business model development of S (Solar, Storage, Smart Grids); and deployment of solar manufacturing capacity in our developing member countries, and business model development of S (Solar, Storage, Smart Grids); and (ii) diversified solar application and distributed energy system (i.e. solar for urban (building-integrated PV), solar for agriculture/water (solar pump, solar greenhouse), solar for transport (street lighting, EV charging), solar for urban (vertical farming), etc.). In addition, this ASEF Deep Dive Workshop will provide a platform to participants to a) network with excellent speakers on exciting solar application and distributed energy systems, and b) leverage the resource for ideas, suggestions and possible solutions to more deployment of solar.

Agenda

- 1.30 p.m. – 2.00 p.m. Registration
- 2.00 p.m. – 2.05 p.m. **Opening Remarks**
- Yongping Zhai, Asian Solar Energy Forum, ADB
- 2.05 p.m. – 2.20 p.m. Keynote Address
- Rakesh Kumar, Programme Director, International Solar Alliance
- 2.20 p.m. – 3.40 p.m. **Session 1**
Deployment of solar manufacturing capacity in DMCs, and business model development of S (Solar, Storage, Smart Grids)
Moderator: Maria Theresa C. Capellan, Chairman of the Board, Philippine Solar and Storage Energy Alliance
Presentations: (12 min each)
- Relocation of solar PV manufacturing capacity (Jia Yu, Peking University)
 - Thin-film solar technology and diversified application (James Chen, Hanergy)
 - Global standards for quality solar PV deployment (Yong Chen, IRENA)
 - Solar business model in the Philippines (Lee Kevin Lamela, VIVANT)
- 3.40 p.m. – 4.00 pm Coffee Break
- 4.00 p.m.– 5.20 pm **Session 2**
Solar +(Plus): Diversified solar application and distributed energy systems such as; solar pumps/irrigation (Agri/Water), solar mini/microgrids, solar street lighting, solar building (Urban), solar energy trading (Digital)
Moderator: Dan Millison, Manager, Transcendergy L.L.C.
Presentations: (8 min each)
- Solar Risk Mitigation Initiative (Shishir Seth, International Solar Alliance)
 - WB solar project showcases in South Asia (Amit Jain, World Bank)
 - Solar application in demand-side (Venkatesh DWIVEDI, Energy Efficiency Services Limited, and Jiwan Acharya, ADB)
 - Solar development in Malaysia including P2P trading (Mohd Adzha Bin Husin, Sustainable Energy Development Authority)
 - Deployment of Solar home system for education and health (Xia Li, Shenzhen Power-Solution)

- Floating solar projects (Karlo P. Abril, SunAsia Energy Inc.)
 - Solar energy services for women and households (Joe Fernandez, Solageo)
- 5.20 p.m. – 5.25 pm Closing
- 5.30 p.m. – 5.50 pm ASEF General Meeting (Invitation Only)
- ASEF boards and members

Indicative List of Speakers

- Yongping Zhai, Chief of ESG SDCC, ADB, ASEF Board Member
- Rakesh Kumar, Programme Director, International Solar Alliance (ISA)
- Maria Theresa C. Capellan, Chairman of the Board, Philippine Solar and Storage Energy Alliance
- Jia YU, Ph.D. Director, Dept. of the International Development Cooperation, Institute of New Structural Economics at Peking University, PRC
- James Chen, CEO of Hanergy Philippines, HANERGY THIN FILM POWER GROUP, Philippines
- Yong Chen, Programme Officer for Sustainable Urban Energy, International Renewable Energy Agency (IRENA)
- Lee Kevin Lamela, Business Development Manager, VIVANT, Philippines
- Shishir Seth, Sr. Consultant, International Solar Alliance (ISA)
- Mohd Adzha Bin Husin, Project Engineer of RE Technologies, Sustainable Energy Development Authority (SEDA), Malaysia
- Amit Jain, Ph.D. Senior Energy Specialist, World Bank
- Venkatesh DWIVEDI, Director (Projects & BD), Energy Efficiency Services Limited (EESL), India, and Jiwan Acharya, Principal Energy Specialist, ADB
- Xia Li, Founder, Shenzhen Power-Solution Ind. Co., Ltd.
- Karlo P. Abril, Floating Solar Projects Lead, SunAsia Energy Inc.
- Joe Fernandez, Executive Director, Solageo

Speakers

Yongping Zhai, Chief of Energy Sector Group of ADB and Chair of ASEF

Dr. Zhai has been working on energy development in Asia and Africa for more than 25 years. He is currently Chief of Energy Sector Group of the Asian Development Bank (ADB), in charge of overall energy policy coordination and technical support to ADB energy sector operations. He is also in charge of developing energy sector knowledge work for ADB and interacts with worldwide energy sector partners.



Rakesh Kumar, Programme Director, International Solar Alliance (ISA)

At present Program Director & Senior Consultant (Technical), International Solar Alliance, an inter-governmental body initiated by India and France to promote & scale-up solar energy in 121 prospective member countries.

Has a diverse experience of 36 years in energy sector, in companies like NHPC, POWERGRID, PTC India, Solar Energy Corporation of India and last two years with International Solar Alliance (ISA).

He played key support role in Cross-Border Transmission Inter-connections & power trade with Bhutan, Nepal and Bangladesh and in the development of a vibrant power market in India. His team efforts in rooftop solar won SECI a National Award from Ministry of New & Renewable Energy, Government of India in year 2016.

He has earlier been National Consultant – India for ADB “SAARC Regional Energy Trade Study, March 2010”; contributed to World Energy Outlook 2011 as member of peer review team, served as member of National Task Force on Power Exchange in India and Programme Director for “Indo Norwegian Programme for Institutional Cooperation”. In ISA, he is leading the Program 4 “Scaling Rooftop Solar”, part of expert groups’ support to member countries, team initiatives for assessment/ aggregation of demands for solar irrigation pumps and solar rooftops, besides assistance in developing select institutional partnerships/ collaborations and ISA outreach to its member countries.



Maria Theresa C. Capellan, Chairman of the Board, Philippine Solar and Storage Energy Alliance

Selected in 2013 as the Power Woman of the Year, Tetchi is a pioneer in renewable energy in the Philippines. In 2006, she began her career in renewable energy as Country Director for the US-government funded rural electrification project, where her work energized 500 villages using solar home systems and micro-hydropower systems. Immediately after the implementing rules of the Renewable Energy Law became effective, she joined MEMC-SunEdison in 2011 as Country Advisor for the Philippines. That same year, she founded the Philippine Solar and Storage Energy Alliance, the country's not-for-profit industry association solar developers, system integrators, panel manufacturers, and solar EPC contractors pushing for policies supporting solar power and energy storage. By 2012, together with reputable business leaders, she founded SunAsia Energy Inc., and was responsible for developing the 3rd largest solar power plant in the Philippines. She received the Most Outstanding Scientist Award in Singapore in 2016, and was recognized in Shanghai as the one of the 2018 World's Developer for Solar and Storage.



A Harvard University alumni and formerly Undersecretary of the Philippine Department of Agriculture, she travels extensively and shares the Philippine experience as resource speaker on solar energy in various international conferences and exhibition.

Yong Chen, Programme Officer – Sustainable Urban Energy International Renewable Energy Agency (IRENA)

Mr. Chen is the Programme Officer at the International Renewable Energy Agency's (IRENA) Innovation and Technology Centre (IITC) in Bonn, Germany. He has been with IRENA since 2012 and now is leading the sustainable urban energy programme with a focus on developing the methodologies of assessing renewable energy options to meet the energy demand in cities. Prior to his role in Bonn, Yong spent six years as a Regional Programme Officer for Asia and the Pacific with the Country Support and Partnership team at IRENA's Headquarters in Abu Dhabi, United Arab Emirates. He not only profiled the Agency in the region by facilitating the adoption and use of IRENA's knowledge products, but also led and contributed to the technical assistance and thematic studies in the Asia-Pacific region.



Amit Jain, Senior Energy Specialist, World Bank

Amit is a solar engineer, with Phd in solar energy and Fulbright Scholarship from NREL, USA and Chevening Fellow at King's College, London. He loves to shares real life stories on how solar energy is transforming people's lives across health, transport, water and agriculture sector.

He works with the World Bank and is leading \$2 billion renewables portfolio in India, Bangladesh and Maldives. He is leading the world's largest energy access program in Bangladesh and solar program in India.

Amit has led renewable energy programs at the International Renewable Energy Agency (IRENA), Asian Development Bank (ADB) and the Clinton Foundation. He has authored two books on climate change policy and waste to energy, and has international peer reviewed journal publications. His hobbies include scuba diving, badminton and outdoor sports.



Shishir Seth, Sr. Consultant, International Solar Alliance (ISA)

Currently working with International Solar Alliance Secretariat as Senior Consultant and primarily assisting in partnerships, coordination, programme implementation and strategy. In addition, supporting in the preparation of briefs and inputs on the issues relating to solar energy, innovative policies, projects, programmes, capacity building measures and financial instruments to mobilize resources.

Worked with World Bank, secondment to Department of Economic Affairs (DEA), Ministry of Finance, Government of India (GoI) in assisting and overseeing the World Bank / ADB / IFAD / GEF / UNDP portfolio management for India. Have contributed immensely in developing, strengthening and integrating various information management systems for portfolio management that would help DEA for better communication, program management and decision on new projects and servicing un-serviced areas/sectors.



Jia Yu, Senior Operations Officer and Director of International Development Cooperation at the Institute of New Structural Economics, Peking University

Dr. Jia YU is responsible for the application of New Structural Economics to the international investment practice. Her research fields focus on Chinese “Go Global” empirical studies, Industrial Park and Special Economic Zones (SEZ) diagnosis, China’s overseas investment and the interaction of the manufacturing, energy and mining sector as well as their roles in the process of industrialization for Belt & Road countries.

Previously, Dr. YU worked more than 8 years for China State Power Investment Corp. (SPIC) International Minerals & Investment Co., Ltd as the director of the Dept. of Business Development & Public Relations. She was responsible for overseas energy and mining investment, public relations at a corporate level, global resources market research, China’s outward FDI policy, as well as empirical studies at a macro level.

Dr. Yu started her career as a consultant for the utility industry with Accenture after receiving her Ph.D. degree in Development Economics from CERDI-CNRS in France and her two bachelor’s degrees in French Language and Literature and Economics from Peking University.

Dr. YU is a consultant to the Asian Development Bank and she is also the first representative of the People’s Republic of China to be nominated for the “Future Energy Leader” (FEL) by the World Energy Council. She is a global board member of the FEL and was a key member of its development committee (2015-2017).



Jiwan Acharya, Principal Energy Specialist, ADB

Jiwan Acharya is working in Energy Division of South Asia Department of Asian Development Bank (ADB), currently in ADB’s India Resident Mission, as Principal Energy Specialist since January 2016. He currently focuses on developing and implementing energy efficiency, renewable energy and other broader energy sector projects in India and Nepal. Prior to that, he was with Energy Sector Group Secretariat in the Sustainable Development and Climate Change Department of ADB since 1 October 2006 as Senior Energy Specialist. He is a key member of ADB’s Energy Sector Group and Climate Change Team and was responsible for overseeing ADB’s several key initiatives including Energy for All, and Low Carbon Technology Transfer, among others. Mr. Acharya served as ADB’s focal point for Clean Technical Fund (CTF) and Scaling Up Renewable Energy for Low Income Countries (SREP) under the Climate Investment Funds (CIF) as well as Sustainable Energy for All Initiative (SE4All).

Prior to joining ADB, Mr. Acharya was Senior Research Officer in Winrock International in Kathmandu, Nepal covering climate change, carbon financing, energy access and broader clean energy areas.

Mr. Acharya, who is a Nepalese national, has a Master of Arts in Economics, Master of Science in Energy Systems and Management and a Bachelor of Science in Electrical Engineering.



Mohd Adzha Husin, Engineer, Sustainable Energy Development Authority (SEDA) Malaysia

Adzha is a solar engineer, with bachelor degree in Industrial Electronic Engineering from Universiti Malaysia Perlis (UniMAP) . He also certified as a grid connected photovoltaic system designer.

Before joining SEDA's, he serves as an senior engineer at Solar PV developer company, Cypark Resources Berhad and as a technical manager at Solar PV EPCC company in Malaysia. He has completed more than 50MWp solar PV project in Malaysia involving design stage up to interconnection works under the Feed-in Tariff (FiT) and Large Scale Solar (LSS) scheme at various location in Malaysia.

At present, he is apart of the team members in preparing the Malaysia Renewable Energy Transition Roadmap (RETR) 2035, including exploring the potential of energy digitalization such as Peer to Peer (P2P) energy trading and Renewable Energy Certificate (REC).

In leisure time he loves to play soccer, badminton and running



Mr. Lee Kevin A. Lamela, Marketing Director, ET Vivant Solar Corp.

Kevin is a marketing and business development professional specializing in EPC, plant construction and project development. He has been implementing turnkey projects and EPC Services for rooftop and utility scale solar in the Philippines for 6 years now. His advocacies and passion center on marine protection, and climate change to complement his profession focused on renewables and battery storage.

He works with ET Vivant Solar Corp., a joint-venture between Philippine publicly traded company Vivant Energy Corp. and global EPC Solar Company, ET Energy Co. Ltd. headquartered in Nanjing, China. He is the Marketing Director of ET Vivant's projects in distributed generation, rooftop and utility scale solar along with micro-grid systems.

Kevin's experience with over 75 Megawatts of Solar PV Plants commissioned and operating along with 45 Megawatts of Solar PV and Micro-Grid systems in the pipeline, all in the Philippines. His hobbies include history, boxing, swimming and spending time with his family.



Xia Li, Founder, Shenzhen Power-Solution Ind. Co., Ltd.

Xia Li obtained her master's degree in Business Administration from Ursuline College. She is a young entrepreneur and the founder of Shenzhen Power-Solution Ind. Co., Ltd., a solar company dedicated to supply the bottom of the pyramid (BoP) people with high-quality and affordable solar solutions. Her works contributes to the realization of the UN Sustainable Development Goals (SDGs) in the areas of Affordable and Clean Energy (SDG 7) and poverty alleviation (SDG 1).

Over the past nine years, her company has delivered more than three million solar lightings to BoP people. She now works on a project helping BoP people get education and information in an innovative way, which will allow BoP people to find more ways to increase income and enhance their lives.



James Chen, CEO of Hanergy Philippines, HANERGY THIN FILM POWER GROUP, Philippines

I have worked in the communications industry and Energy industry for over 15 years, as the CEO of Hanergy Philippine since 2018. I am professional in sales management, channel management, team management and project management and project negotiation. I am familiar with communication, enterprise solutions, cloudy and energy markets.

Other experience:

2016-2018: Senior Cloud Computing Solutions Specialist in ZTE

2012-2016: CEO of ZTE Philippines, INC.

2008-2012: VP of ZTE India Private Inc.

2006-2008: Sales Director of ZTE India Private Inc.



Venkatesh DWIVEDI, Director (Projects & BD), Energy Efficiency Services Limited

Venkatesh Dwivedi is the the first project manager of EESL's flagship scheme UJALA as well as the National Program Manager for Streetlights National Program of India. With more than 26 years of rich experience, he has been earlier in the Oil and Energy Sector in India in various roles in Project Management, Business Development, Liaison with Government with Expertise in Business Strategy, Corporate Planning, Project Development, Business Liaisoning, Project Team Management, Key Account Management, OEM Relations, Technical Services and Techno-commercial bidding. Mr. Venkatesh Dwivedi is an Electrical Engineer from Faculty of Engineering & Technology, Jamia Millia Islamia, New Delhi and Masters in Business Administration from IIM Calcutta. He is also a BEE Certified Energy Auditor.



Karlo P. Abril, Floating Solar Projects Lead, SunAsia Energy Inc.

Karlo is in SunAsia Energy Inc. currently leading the development of the floating solar project portfolio in the Philippines. His experience includes over 160 megawatts of renewables commissioned in the past five years. He has developed, constructed, and operated wind farm projects, utility solar farms, and commercial rooftop solar. Today, he also leads the development of projects on solar innovations including hybrid, micro-grid, and off-grid systems.



Joe Fernandez, Executive Director, Solageo

Almost 20 years of experience providing global trading services to clients such as Wal-Mart (U.S.A.), Tesco (U.K.), and Bajaj Electricals (India). Over 5 years experience in the off-grid clean energy sector. Expert advisor to a graduate Energy & Environment team at Columbia University. Social Enterprise Lecturer at Hong Kong University of Science and Technology. SOCAP Social Entrepreneur Scholarship recipient, MBA & MSc in Business IT.

