

ASIA CLEAN ENERGY FORUM 2018

HARNESSING INNOVATION TO POWER THE FUTURE

Manila, Philippines • 4-8 June 2018



Battery Technology for Clean Energy

Background

As Asia-Pacific countries develop renewable energy generation capacity, there are still challenges that must be addressed, including intermittency and wastage of excess energy production. Energy storage systems like batteries offer a solution to these problems. However, in order to truly mainstream such technologies, enabling policy environments and extent of benefits vis-à-vis investment costs (including benefits that improve grid operation beyond the integration of renewable energy) must be well understood by key stakeholders.

Objective of the Workshop

The workshop aims to provide participants (specifically energy policy makers, RE project developers, and grid operators) with updated information on battery technology, specifically:





- Policy frameworks from Asia, China and Korea intended to enable R&D and utilization
- The current economic viability of battery technology
- Uses and benefits for grids, microgrids and renewable energy integration

Agenda

Time	Activity
09:00 – 10:30	Policy (Moderator: Mr. Dae Kyeong Kim)
	Presentation 1: China (George Dudley, CNESA)
	Presentation 2: India (Rahul Walawalkar, IESA)
	Presentation 3: Korea (Yu Tack Kim, KBIA)
10:30 – 10:45	Coffee Break
10:45 – 12:15	Economics & Financing (Moderator: Dr. Rahul Walawalkar)
	Presentation 1: Levelized Cost of Storage (Itamar Orlandi, BNEF)
	Presentation 2: Economics - PV + ESS (Satish Singh, Deloitte)
	Presentation 3: Financing Options (Sara Jane Ahmed, IEEFA)
	Presentation 4: ESS Optimization - Microgrid (Harsh Thacker, CES)
12:15 - 14:00	Lunch Break
14:00 – 15:30	Application - Grid (Moderator: Dr. Yang Liu)
	Presentation 1: Frequency Regulation (Ali Zain Banatwala, TierEnergy)
	Presentation 2: Demand Response (JuneWoo Ryu, Gridwiz)
	Presentation 3: DG Optimization (C. Robert Pedraza, EnerBlu)
	Presentation 4: Energy Access (Katarina Hasbani, ARE)
15:30 – 15:45	Coffee Break
15:45 – 17:15	Application - Renewable Energy (Moderator Mr. Susumu Yoneoka)
	Presentation 1: Solar Power Integration (Hans-Henning Judek, JEA)
	Presentation 2: Solar Power Integration (John Lumawag, SunAsia Energy)
	Presentation 3: Wind Power Integration (Romain Gouttefangeas, SAFT)
	Presentation 4: NAS Battery (Tetsuya Hatta, NGK)

Speakers

<p>George Dudley, China Energy Storage Alliance George manages international engagements at the China Energy Storage Alliance (CNESA), China's first non-profit association dedicated to promoting the energy storage industry.</p>	
<p>Rahul Walawalkar, India Energy Storage Alliance Rahul is founder and executive director of India Energy Storage Alliance. He is involved in shaping the National Energy Storage and EV policy with a mission to make India a global hub for R&D and manufacturing of advanced energy storage & EV systems.</p>	
<p>Tetsuya Hatta, NGK</p>	
<p>Yu Tack Kim, Korea Battery Industry Association YT Kim is battery R&D, demonstration and international standard (IEA, ISO) expert. He is a member of Energy Storage policy maker in MOTIE and KEA. New research areas are battery Reuse, Re-fabrication, Recycling using the end of life-time battery from EV</p>	
<p>Itmar Orlandi, Bloomberg New Energy Finance Itamar leads BNEF's Frontier Power research team, covering innovative ways to achieve energy autonomy and use distributed resources where power supply is inadequate or inefficient.</p>	
<p>Satish Singh Satish having 13 years of experience in Power Sector. He is a Sr. Manager with Deloitte Touché Tohmatsu India LLP and is currently associated with USAID in implementing innovative pilots under Greening the Grid- Renewable Integration for Sustainable Energy (GTG-RISE) initiative in India.</p>	
<p>Sara Jane Ahmed, Institute for Energy Economics and Financial Analysis Sara Jane Ahmed is an IEEFA energy finance analyst and former investment advisor specializing in originating and structuring energy opportunities in emerging markets.</p>	
<p>Harsh Thacker, Customized Energy Solutions India Pvt. Ltd. Harsh is Sr. Consultant with CES and leads MICRO, the Microgrid Initiative for Campus and Rural Opportunities. MICRO has set a goal of driving down cost of energy for microgrids by 30-50% by 2020.</p>	
<p>Ali Zain Banatwala, Tier Energy Ali is a power systems engineer specializing in network planning and operations. His experience includes managing frequency regulation services for German Transmission System Operators. He is currently working as a consultant for ADB.</p>	
<p>JuneWoo Ryu, Gridwiz JuneWoo is the Vice President of Gridwiz and a co-founder of the company. Gridwiz is a start-up providing a suite of smart grid solutions. In his role, Junewoo evaluates and develops go-to-market strategies and business cases for demand response, energy storage, renewable energy, and EV.</p>	
<p>C. Roberts Pedraza, EnerBlü C. Robert Pedraza is President for India and MENA region for EnerBlü. He also serves as Chief Strategy office and oversees global strategy development of EnerBlü on an enterprise wide basis.</p>	
<p>Katarina Hasbani, AREz Katarina is Vice President of the Alliance for Rural Electrification. She is also founder of Enrupt and is on mission to create partnerships between energy startups and corporations where new ideas thrive and get executed.</p>	

<p>Hans-Henning Judek, J.E. Access Ltd., Japan Hans is a long-term resident of Japan and engaged in the “greening” of the Japanese power landscape. He operates a joint venture for floating solar and low-cost energy storage projects in Chennai, Tamil Nadu for projects in South and SE Asia.</p>	
<p>John Raymond Lumawag, SunAsia Energy Inc. Philippines John leads the technical and research team of SunAsia Energy and its subsidiary focusing on energy storage applications for both the distribution and transmission grid.</p>	
<p>Romain Gouttefangeas, SAFT Romain Gouttefangeas, APAC Bid Manager for on & off-grid application. From project structuring to design of storage solutions or hybrid systems, Romain worked on various projects in Asia and Africa such as hybrid microgrids and integration of renewables power plants.</p>	
<p>Tetsuya Hatta, NGK INSULATORS, LTD Tetsuya Hatta is Manager of NAS Battery Sales & Marketing Department, NGK Insulators, LTD. He engaged in engineering and system development of NAS® battery systems for more than 10 years. Currently he is a sales engineer of NAS Battery covering Asia, Africa, Oceania and North America.</p>	

About the Organizer

Global Energy Storage Alliance

The Global Energy Storage Alliance (GESA) is a 501(c) non-profit organization founded in 2014 whose mission is to advance education, collaboration, knowledge and proven frameworks about the benefits of energy storage and how it can be used to achieve a more efficient, cleaner, reliable, affordable and secure electric power system globally.

GESA was jointly founded by the California Energy Storage Alliance (CESA), the German Energy Storage Association (BVES), the China Energy Storage Alliance (CNESA), the India Energy Storage Alliance (IESA), the US Energy Storage Association (ESA), and the Alliance for Rural Electrification (ARE).

For any questions, please contact:

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