



CAREC Knowledge Sharing Program on ICT for Energy

17-20 April 2017

Seoul, Republic of Korea

ICT can play a vital role for energy sector development. For universal energy access, ICT is transforming the business models to connect those unconnected to the traditional energy grid. For renewable energy growth, ICT is vital to manage the distributed nature of renewable energy sources. ICT can play an important role in energy conservation and efficiency through controlling and monitoring of the information on energy demand and supply.

The knowledge sharing program on ICT for energy is designed to improve understanding of the ICT and other key technologies for energy sector development through some case studies in Korea focusing on key success factors and policy implications related to those programs. The participants will learn from a number of key initiatives on ICT for energy programs implemented in Korea through site visits as well as interactive discussion sessions.

It is expected that around 35 high profile participants from Ministry of Energy, energy utility companies from CAREC countries will join the program in addition to ADB staff relevant to the energy sector program. The knowledge sharing program will be sponsored by Ministry of Trade, Industry and Energy and supported by Korea Smart Grid Association.

PROGRAM

Day 1. 17 April 2017 (Mon)	
Morning Session	(09:00-09:30) Opening Session <ul style="list-style-type: none"> • Mr. Sohail Hasnie, Principal Energy Specialist, CWRD/ADB • Mr. Koo Ja-Kyun, Chairman, Korea Smart Grid Association
	Group Photo
	(09:30-10:30) Setting the Context <ul style="list-style-type: none"> • Presentation on CAREC Energy Program (20 min), Mr. Sohail Hasnie, Principal Energy Specialist • Panel discussion among CAREC members (40min, one delegate per each country)

	(10:30-11:00) Coffee Break
	(11:00-12:00) Energy for All and Micro-Grid <ul style="list-style-type: none"> • Presentation on "A consideration of off-grid Micro-grids" by Jinho Lee, Team Leader/Principal Research Engineer, LSIS (20 min) • Presentation on National EMS, Jiyeon Park, Associate, KDN (20 min) • Q&A
12:30-13:30	(12:00 - 13:00) Lunch
Afternoon Session	(13:00 - 15:00) Moving to Site (about 2 hours) (15:00 - 16:30) Site 1. Wind-Farm Energy Storage System (16:30 - 18:30) Returning to Hotel
	Welcome Dinner at Plaza Hotel
18April 2017 (Tue)	
Morning Session	(07:30-11:00) Moving to Site (about 3 hours and 30 min) (11:00-12:30) Site 2. Floating Solar Power Plant over (12:30 - 14:00) Moving to Site (about 1 hour and 30 min)
14:00-15:00	Lunch
Afternoon Session	(15:00 - 16:30) Site 3. K-Water Integrated Water Management Center (16:30 - 18:30) Moving to diner place in Seoul (18:30 - 20:00) Dinner (20:00 - 20:30) Returning to Hotel
	Dinner
Day 3. 19 April 2017 (Wed)	
Morning session:	(09:00-10:30) Smart Grid <ul style="list-style-type: none"> • Presentation on Shifting Paradigms in Energy and Industry, Arij van Berkel, Ph.D., <i>Research Director</i>, Lux Research (20 min) • Presentation on Micro-Grid Strategies in Remote Areas by Mr. Dae Kyeong Kim, Senior Energy Specialist, SDCC/ADB (20 min) • Q&A
	(10:30-11:00) Coffee Break
	(11:00-13:00) Energy Management System and Energy Storage System <ul style="list-style-type: none"> • Presentation on Energy Management System (Energy through ICT) by Jundong Lee, General Manager, Korea Telecom (20 min) • Presentation on Large-Scale Energy Storage System (ESS) for Smart Grid by Jeong Min Lee, Hyosung (20 min) • Presentation on KEPCO`s ESS Projects for Frequency Regulation



Ministry of Trade,
Industry and Energy



	<p>by Namgil PAIK, General Manager, KEPCO (20 min)</p> <ul style="list-style-type: none"> • Q & A
13:00-14:00	Lunch
Afternoon session	<p>(14:00-14:45) Group Discussions Participants have time to reflect on key takeaways. Participants will form groups and feedback will be provided from the rest of the group.</p> <p>(14:45-15:00) Coffee Break (15:00-16:30) Group Presentation (16:30 -17:00) Wrap-up & Closing (17:30 -18:30) Moving to dinner place</p>
18:30-20:00	Dinner (arranged by partner)
20 April 2017 (Thu)	
Morning Session,	(09:00 - 12:00) meetings with Global Green Growth Institute and Green Climate Fund
13:00-14:00	Lunch

Appendix. Visiting Sites

Site 1. Wind-Farm Energy Storage System

- Location: Yeongheung-myeon, Ongjin-gun , Incheon Korea, South (2 hrs from Seoul City Hall)
- Construction On Jun 01, 2015
- Paired Grid Resource : 46 MW Wind
- ESS : Lithium-ion Battery, 4,000 KW
- Utility : Korea South-East Power Co. (KOSEP)
- Energy Storage Technology Provider :LG Chem
- Power Electronics Provider :Hyosung Corporation



KOSEP applies ESS for renewable integration. ESS charges energy that is generated by wind farm and discharges energy at peak-time. By these process, ESS contributes Energy Supply at peak-time and provides additional economic benefits to KOSEP by REC. PCS and PMS is provided by Hyosung Corporation and Battery is provided by LG Chem.

Site 2. Floating Solar Power Plant Over

- location: Boryeong Dam, Chungnam Province (3.5 hrs from Seoul City Hall)
- construction : Feb 25 2016 since 2013
- Electricity: 2,781 MWh for 700 households a year
- Partner companies: LSIS, POSCO



Boryeong Dam to Yeongheung Power Plant (2 hrs and 44 min)

Site 3. K-Water Integrated Water Management Center

- Location: 200 Sintanjin-ro, Daedeok-gu, Deajeon 34350, Korea (2 hours and 30 min from Seoul)
- Website: <http://english.kwater.or.kr/eng/main.do>

