



# NORTHEAST ASIA ENERGY FORUM

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# 1. NEA energy cooperation framework initiated by ROK

## ⊙ Background

- ▶ (2005-2015) ROK had initiated "Inter-governmental Collaborative Mechanism for Energy Cooperation in Northeast Asia(ICM-ECNEA)" with Russia, Mongolia DPRK and ROK
- ▶ (2015.9) 3 countries agreed to switch the Inter-governmental framework to **Inter-institutional Cooperation framework**
- ▶ (2016 ~) Korea Energy Economics Institute(KEEI) has initiated Inter-Institutional Energy Cooperation Mechanism with government-affiliated research institutes from China, Japan, Mongolia, Russia and

ROK

## ⊙ Expected effects vs previous intergovernmental framework

- ▶ Discussion on various agenda under more flexible framework.
- ▶ In-depth agenda discussion using expertise from energy experts.
- ▶ Improving operational efficiency through participation in Japan and China.

## 2. Inter-Institutional framework: “NORTHEAST ASIA(NEA) ENERGY FORUM”

- ⊙ (Target) A consultative body aiming **to develop the practical energy cooperation projects** in Northeast Asia and **to explore ways to implement** them.
- ⊙ (Timing) **Yearly event to be held at the 2<sup>nd</sup> half of each year.**
  - ▶ The forum was held sequentially at one of five countries by hosting research institute with support of KEEI.
- ⊙ (Structure) **Presentation session +Discussion Session**
  - ▶ (presentation ) Each 5 research institutes ((ERI(China), IEEJ(Japan) MEEI(Mongolia, ESI-Irkutsk (Russia), KEEI(ROK) ) present their outcomes of researches initiated by KEEI at the early of each year in advance
  - ▶ (Discussion) Participants from public & private sector in NEA or Beyond to share their idea on the pre-setting discussion questions.
- ⊙ (Decision Body) **A working group meeting** who consists of representatives of five research institutes decides the forum's theme and the detailed plan.

# 3. Progress of NEA Energy forum

Year	Theme	Time and Place
2016	[1st] Improvement of NEA Energy Trade	10.21, Seoul, ROK
2017	<b>[2nd] Power Grid Interconnection in NEA: Opportunities and Challenges for Public-Private Collaboration</b>	6.30, Beijing, China
2018	<b>[3rd] Benefits and Costs of Power Grid Interconnection in NEA: Opportunities and Challenges for Future Steps</b>	9.20, Tokyo, Japan
2019	<b>[4th] Power Grid Interconnection in NEA: Supply Potential for Renewable Energy and Cooperation Opportunities</b>	11.1, Seoul, ROK
2020	[5th] Evaluation and Exploration for the Direction of Energy Cooperation in NEA	9.9, Virtual(hosted by Russia)
2021	[6th] Strategies and cooperation of Low-carbon energy development among NEA Countries	11.25, Virtual(hosted by ROK)
2022	[7th] Opportunities & Challenges towards Decarbonization of the Power Sector in NEA	11.17,virtual(hosted by Mongolia)

# 4-1. Agenda of NEA Power-Interconnection in NEA Energy Forum: 2<sup>nd</sup> NEA Forum

## 2<sup>nd</sup> North-East Asia (NEA) Energy Forum

Date : 30 June(Fri), 2017

Venue: Tangla Hotel Beijing, Beijing, China

### Power Grid Interconnection in NEA: Opportunities and Challenges for Public-Private Collaboration

#### Program

Friday, 30 June, 2017	
09:00 am – 09:30 am	Registration and Networking
<b>Opening Session</b>	
09:30 am – 09:45 am	<b>Opening Remarks</b> <i>Mr. Ho Joon Lee, Commercial Attache, the Embassy of Republic of Korea in People's Republic of China</i>
	<b>Congratulatory Remarks</b> <i>Delegate of Mongolian Participation</i> <i>Delegate of Russian Participation</i>
	<b>Photo Session</b>
<b>Session 1 : Power Grid Interconnection in NEA: Opportunities and Challenges</b>	
09:45 am – 11:00 am	Session Chair : Mongolia
	<b>1-1) Overview of Major Concepts of Power Grid Interconnection in NEA ('10)</b> <i>Mr. Shigeki Miwa, SoftBank, Japan</i>
	Q&A ('5)
	<b>1-2) Policies and Strategies for Power Grid Interconnection in NEA : Perspective of Russia ('10)</b> <i>Mr. Boris Seneev, ESI, Russia</i>
	Q&A ('5)
<b>1-3) Policies and Strategies for Power Grid Interconnection in NEA : Perspective of China ('10)</b> <i>Mr. Wan Haibin, SGCC, China</i>	

	Q&A ('5)
	<b>1-4) Development Plan and Strategies for Renewable Energy in Mongolia ('10)</b> <i>Mr. Sukhbaatar Tsegmid, Clean Energy LLC., Mongolia</i>
	Q&A ('5)
	<b>1-5) Current Issues for Promoting Power Grid Interconnection Projects in NEA: Focusing on Public-Private Collaboration ('10)</b> <i>Mr. Song, Ho-Seung, KEPCO, Korea</i>
	Q&A ('5)
<b>Session 2: Current Status and Prospects for Public-Private Collaboration in Power Grid Interconnection in NEA</b>	
	Session Chair: <i>Dr.Pak, Yong-Duk, KEEL, Korea</i> Participants : Delegation of Government, Business, Institute of each country (Korea, China, Japan, Mongolia, Russia)
11:00 am – 12:10 pm	<b>Discussion 1 ('30)</b>
	<ul style="list-style-type: none"> <li>● The Role of the Government, Industry and Academia in Developing and Operating Power Grid Interconnection Project</li> <li>➢ Challenges and Opportunities for Public-Private Collaboration</li> <li>➢ The Potential areas of Public-Private Collaboration</li> </ul>
	<b>Discussion 2 ('40)</b>
	<ul style="list-style-type: none"> <li>● The Necessity of Public-Private Collaboration Mechanism in the Energy Sector in NEA</li> <li>➢ Possible Frameworks and Strategies for Building Public-Private Collaboration Mechanism</li> </ul>
<b>Session 3: Warp-up and Closing</b>	
12:10 pm – 12:30 pm	Chair: <i>Dr.Pak, Yong-Duk, KEEL, Korea</i>
	<ul style="list-style-type: none"> <li>● Discussion on 3<sup>rd</sup> NEA Energy Forum</li> <li>● Closing</li> </ul>
12:30 pm – 2:00 pm	Luncheon

# 4-2. Agenda of NEA Power-Interconnection in NEA Energy Forum: 3<sup>rd</sup> NEA Forum



## The 3<sup>rd</sup> North-East Asia (NEA) Energy Forum

Date : 20 September, 2018

Venue: Hikari (29F), Grand Nikko Tokyo Daiba, Tokyo, Japan

### Benefits and Costs of Power Grid Interconnection in NEA: Opportunities and Challenges for Future Steps

#### Program

Thursday, 20 September, 2018

08:30 am – 09:00 am Registration and Networking

#### Opening Session

	<b>Opening Remarks</b> TBA, the Ministry of Trade, Industry and Energy, Korea
09:00 am – 09:20 am	<b>Congratulatory Remarks</b> TBA, the Embassy of Republic of Korea in Japan TBA, the Institute of Energy Economics, Japan (IEEJ) <b>Photo Session</b>

#### Session 1 : The Findings and Implications of Cross-border Interconnection in Europe

09:20 am – 10:10 am	<b>1. The Findings and Implications of Cross-border Interconnection in Europe (30)</b> Mr. Hans-Arild Bredesen, CEO, Nord-Pool Consulting <b>Q&amp;A (20)</b>
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10:10 am – 10:30 am Coffee Break

#### Session 2: Potential Economic Benefits and Costs of Super-Grid Projects in NEA

Moderator: Institute of Energy Economics, Japan (IEEJ)



10:30 am – 12:00 am	<p><b>2-1. Presentation – Korea (15)</b> Mr. Keunsoo Kang, General Manager, Korea Electric Power Corporation (KEPCO)</p> <p><b>2-2. Presentation – China (15)</b> Dr. Xinpeng Guan, Assistant to Director-General, Global Energy Interconnection Development and Cooperation Organization (GEIDCO)</p> <p><b>2-3. Presentation – Japan (15)</b> Ms. Mika Ohbayashi, Director, Renewable Energy Institute (REI)</p> <p><b>2-4. Presentation – Russia (15)</b> TBA, Public Joint Stock Company Rossetti (PJSC ROSSETTI)</p> <p><b>2-5. Presentation – Mongolia (15)</b> Dr. Bannudorj Ovgor, Head of Renewable Energy Division, The Ministry of Energy (MoE), Mongolia</p>
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12:00 pm – 1:30 pm Lunch

#### Session 3: Non-economic Benefits of Super-Grid Projects in NEA

1:30 pm – 3:00 pm	<p>Moderator: Dr. Yongduk Pak, Managing Director, Korea Energy Economics Institute (KEEI)</p> <p><b>3-1. Presentation – Japan (15)</b> Mr. Ichiro Kitani, Senior Economist, Institute of Energy Economics, Japan (IEEJ)</p> <p><b>3-2. Presentation – Russia (15)</b> Dr. Sergei Popov, Energy Systems Institute (ESI)</p> <p><b>3-3. Presentation – Mongolia (15)</b> Mr. Tumenjarгал Мухибал, Director, Mongolian Energy Economics Institute (MEEI)</p> <p><b>3-4. Presentation – China (15)</b> Dr. Ming Su, Deputy Director, Energy Research Institute (ERI)</p>
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3:00 pm – 3:20 pm	<p><b>3-5. Presentation – Korea (15)</b> Dr. Sung-Kyu Lee, Senior Research Fellow, Korea Energy Economics Institute (KEEI) <b>Q&amp;A (15)</b></p>
3:20 pm – 3:50 pm	<p><b>Coffee Break</b></p> <p><b>Session 4: Roundtable Discussion</b></p> <p>Moderator: Dr. Yongduk Pak, Managing Director, KEEI</p> <p><b>Roundtable Discussion (30)</b></p>
3:50 pm – 4:00 pm	<b>Wrap-up and Closing</b>

# 4-3. Agenda of NEA Power-Interconnection in NEA Energy Forum: 4<sup>th</sup> NEA Forum



## The 4<sup>th</sup> North-East Asia (NEA) Energy Forum

Date: 1 November (Friday), 2019.

Venue: Brahm's Hall (19F), Hotel President, Seoul, Republic of Korea.

### Power Grid Interconnection in NEA: Supply Potential for Renewable Energy and Cooperation Opportunities

#### Tentative Program

Friday, 1 November, 2019.	
1:00 pm - 1:30 pm.	Registration and Networking.
<b>Opening Session.</b>	
1:30 pm - 2:10 pm.	<b>Opening Remarks</b> Mr. Woosuk Choi, Director General for New and Renewable Energy Policy Bureau, Ministry of Trade, Industry and Energy, Korea.
	<b>Keynote Speech</b> Dr. Yongsung Cho, President, Korea Energy Economics Institute (KEEI), Korea.
	<b>Photo Session</b>
<b>Session 1: Supply Potential for Renewable Energy to NEA Power Grid and Cooperation on the Development of Renewable Energy.</b>	
2:10 pm - 3:50 pm.	<b>1-1) Renewable &amp; Security in Korea's Power Sector ('20)</b> Dr. Keunhae Lee, Senior Research Fellow, New and Renewable Energy Research Team, KEEI.
	<b>1-2) The Development of China's Renewable Energy Power and the Potential to Supply North-East Asia (NEA) Regions ('20)</b> Dr. Ming Su, Deputy Director, Energy Research Institute (ERI), China.
	<b>1-3) Costs and Benefits of Power Grid Interconnection between Japan and Korea for Addressing Curtailment Issues ('20)</b> Dr. Takashi Otsuki, Researcher, Electric Power Industry & New and Renewable Energy Unit, Institute of Energy Economics, Japan (IEEJ), Japan.



	<p><b>1-4) A Shift in the Paradigm of Energy Cooperation between Russia and NEA Countries in the Face of New Global and Regional Challenges: The Role of Renewable Resources ('20)</b> Prof. Boris Saneev, Deputy Director, Energy Systems Institute (ESI), Russia.</p> <p><b>1-5) Renewable Energy Potential Supply to NEA Power Grid and Mongolia's Cooperation on Renewable Energy Development ('20)</b> Dr. Sarangerel Purevsuren, Head of Foreign Cooperation Department, Ministry of Energy, Mongolia. Mr. Tsombabatar Stagdarsoren, Researcher, Mongolian Energy Economics Institute (MEEI), Mongolia.</p>
3:50 pm - 4:10 pm	Coffee Break
<b>Session 2: Roundtable Discussion</b>	
4:10 pm - 5:25 pm.	<p>Chair: Dr. Woongtae Chung, Director of Center for International Energy Cooperation, KEEI.</p> <p>Panelists: (Delegates from the Government, Industry, and Research Institute in Each Country).</p> <p><b>Discussion 1 ('20)</b></p> <ul style="list-style-type: none"> <li>The role of government in driving actions for regional power grid interconnection, focusing on the institutional and regulatory mechanism.</li> </ul> <p>Panelists:</p> <ul style="list-style-type: none"> <li>Mr. Subu Lee, Senior Deputy Director, New and Renewable Energy Policy Division, Ministry of Trade, Industry and Energy, Korea.</li> <li>Dr. Sarangerel Purevsuren, Head of Foreign Cooperation Department, Ministry of Energy, Mongolia.</li> <li>Dr. Vladimir Nikolov, Head of Laboratory of Renewable Energy Sources, Scientific and Technical Center of Autonomous Energy, Institute of Arctic Technologies, Moscow Institute of Physics and Technology, Russia.</li> </ul> <p><b>Discussion 2 ('20)</b></p> <ul style="list-style-type: none"> <li>The barriers in going a step further in realizing power grid interconnection project.</li> <li>Future steps in advancing regional power grid interconnection project.</li> </ul> <p>Panelists:</p> <ul style="list-style-type: none"> <li>Mr. Kabho Park, Director General of Transmission &amp; Substation</li> </ul>



	<p>Department, Regional Headquarters Korea Electric Power Corporation (KEPCO) Gyeongju, Korea.</p> <ul style="list-style-type: none"> <li>Ms. Wei Wu, Deputy Director, Power Planning Research Division of the Economy &amp; Technology Research Institute, Global Energy Interconnection Development and Cooperation Organization (GEIDCO), China.</li> <li>Dr. Seidiro Kimura, Senior Researcher, Renewable Energy Institute (REI), Japan.</li> </ul> <p><b>Discussion 3 ('20)</b></p> <ul style="list-style-type: none"> <li>The future direction for research collaboration in accelerating cross-border trade in electricity, including institutional and regulatory mechanism.</li> </ul> <p>Panelists:</p> <ul style="list-style-type: none"> <li>Dr. Keunhae Lee, Senior Research Fellow, KEEI, Korea.</li> <li>Dr. Ming Su, Deputy Director, ERI, China.</li> <li>Dr. Takashi Otsuki, Researcher, IEEJ, Japan.</li> <li>Prof. Boris Saneev, Deputy Director, ESI, Russia.</li> </ul>
5:25 pm - 5:30 pm.	Wrap-up and Closing.

# 5-1. Challenges of NEA forum operation

- ▶ **Non-Active participation** of other institutes due to no incentives/obligation
- ▶ Depend heavily on **financing sources** from Korea
- ▶ Hard to develop **the tangible/concrete cooperation projects** except identifying potential areas of cooperation(Agenda)
- ▶ **Losing the momentum** to strengthen the energy cooperation among NEA countries due to long-lasting COVID-19 and weakening political relations

## 5-2. Prerequisite for enhancing energy cooperation among NEA countries

- ▶ **Reinstatement** of relations as well as **Revitalization** of bilateral government-led energy cooperation networks among ROK, China, Japan



NEA Energy forum continues efforts to find out the multilateral-level Flagship projects on energy that NEA countries have common interest

The background features a complex network diagram with various sized nodes (circles) in dark blue, light blue, and grey, connected by thin grey lines. Some nodes are highlighted with larger, semi-transparent circles of the same color. A large black rectangle is positioned in the lower right, containing the text 'THANK YOU' in white, with a thin light blue horizontal line below it.

THANK YOU