Multilateral cooperation for power interconnection in Northeast Asia
South Asian power pool: member states and grid
South Asian bil-/tri-lateral power cooperation

• Bilateral Agreements between countries of South Asia have started since 1970s (in particular between India and Nepal on Hydropower development)

• Currently Electricity Trade takes place in Eastern Region of the South Asia: India- Nepal, India-Bhutan, India-Bangladesh.

• Current form of trade between South Asian countries is bilateral - long and medium term

• Trilateral India – Bhutan – Bangladesh power interconnection is under consideration
South Asian power pool: Key Milestones

1985 - South Asia Association of Regional Cooperation (SAARC) was created

2000 - Technical Committee on Energy was set up by SAARC

2006 - SAARC energy Center was created

2009 – SARC Energy Ministers approved the concept of a South Asia Energy Ring

2014 - Intergovernmental framework agreement (IGFA) on Energy Cooperation was signed among the member countries
West African power pool: member states and grid
West African power pool: Key Milestones

- **1975**: Treaty on Economic Community of West Africa States (ECOWAS)
- **2000**: Intergovernmental MOU to create WAPP
- **2006**: Utilities signed Article of Agreement, covering operating procedures, regulatory affairs, dispute resolution etc.
- **2008**: Creation of ECOWAS Regional Electricity Regulatory Authority (ERERA)
Russia – NEA countries activities in power sectors

- Russia
- Mongolia
- China
- DPRK
- RoK
- Japan

- High-ranked governmental officials contacts
- Work of intergovernmental commissions and working groups
- Contacts on the level of industry
- Contacts on the level of academics
- MOUs signed
- Agreements signed
Russia – Mongolia intergovernmental / bilateral activities in power sector

Russia-Mongolia intergovernmental commission on trade, economic, scientific and technical cooperation

Agreement between Governments of Russia and Mongolia on economic and near-border cooperation, 1999

Agreements between Russian and Mongolian System operators on parallel operation, dispatching and technical data exchange, 2008

Agreements between Inter RAO EES (Russia) and Power grid companies of Mongolia on power supply, 2015

Study of Russia-Mongolia power trading expansion and export to the adjacent country

Study of power export to the adjacent country

Agreement between Eurosibenergo (Russia) and Just Group (Mongolia) on strategic cooperation in electric power, 2010

Road map on development of Russia – Mongolia cooperation in electric power, 2013
Russia – DPRK intergovernmental / bilateral activities in power sector

**Russia-DPRK intergovernmental commission on trade, economic, scientific and technical cooperation**

**Russia-DPRK joint working group on cooperation in electric power**

- Agreement between Governments of Russia and DPRK on cooperation in electric power, 2015
- Study of Russia-DPRK interconnection with extension to RoK and power trading
- Study of interconnection and power trading
- Study of Russia-DPRK interconnection and power trading
- Protocol of Meeting of delegations of RAO EES of Russia and Ministry of electric power and coal industry of DPRK, 2008
- Agreement between RAO EES of Russia and Ministry of electric power and coal industry of DPRK, 2001
- Study of interstate interconnections and power trading
Russia–RoK intergovernmental / bilateral activities in power sector

- Agreement between Governments of Russia and RoK on cooperation in energy, 2000
- Russia–RoK intergovernmental commission on economic, scientific and technical cooperation
- MOU among Russia, DPRK, RoK, 2002
- Russia–RoK joint plan of actions in trade and economic cooperation, 2005
- Protocol of 13th Meeting of Russia-RoK intergovernmental commission, 2013
- MOU among Inter RAO EES of Russia, Russian grids, KEPCO, 2015
- Russia-RoK-DPRK power interconnection study
Russia – Japan intergovernmental / bilateral activities in power sector

Russia-Japan intergovernmental commission on trade and economic issues

Protocols on cooperation among RAO EES of Russia and Sumitomo and Marubeni Corporations, 1999-2004

Cooperation of RusHydro and Mitsui, 2016

Study of Russia-Japan power bridge

12th meeting of Russia-Japan intergovernmental commission, 2016

Study of Russia-Japan power bridge

Study of Russia-Japan power bridge
Multilateral nongovernmental activities in power sectors of NEA region

• MOU on Study of Gobitec and Asian Supergrid, 2013
  o Energy Charter
  o Energy Economics Institute (RoK)
  o Ministry of Energy (Mongolia)
  o Renewable Energy Foundation (Japan)
  o JSC “Institute of Energy Systems” (Russia)

• MOU on Study of NEA wide grid prospects, 2016
  o Russian grids company (Rosseti)
  o Korea Electric Power Corporation (KEPCO)
  o China State Grid Corporation
  o SoftBank (Japan)
Organizational and regulatory infrastructure for development of NEA power interconnections

NEA level

- NEAwide intergovernmental body
- Multilateral MOUs on NEA interconnection

Country level

- Bilateral agreements and MOUs on interconnections
- Bilateral intergovernmental commissions

Governmental activities

Non-Governmental activities

Governmental and Non-Governmental activities
Conclusions

• Electric power cooperation in NEA region is currently proceeding based mainly on bilateral intergovernmental and inter-company agreements.

• Multilateral cooperation in the region is just emerging.

• The world experience witnesses that electric power cooperation succeeds when special multilateral intergovernmental bodies promote interstate power cooperation.

• Such a body needs to be established in NEA to make NEA-wide electric power cooperation more effective and intensive.
Thank you very much!