

Comments on Super Grid Development

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<Personal Opinion>

◆ NEA-PSI : North-East Asian Power System Interconnection

◆ Meaning of PSI : Roadmap for Sustainable Peace & Economics

◆ So Many Interconnection Scenarios ... Multilateral & Bilateral

◆ Necessary on Technical & Economic Detailed Feasibility Study

◆ Practical Inter-Governmental & Utility Talks are necessary

◆ To be determined Topics for Asian Energy Highway

<PSI & Future Power System >

- ◆ **“Power System Interconnection & Cross-Border Trade”**
 - Enhancement the sustainable Regional Peace parade
 - Economic Win-Win game & Technical Reserve Supporting System, But Positive & Negative Points in Energy Security
 - No more Exist Border on power trading
- ◆ **Grid : Technically Advanced ICT Power System Web**
 - Most Advanced Distributed Networking
 - Hyper-Navigation Type Service
 - Grid Computing using AI

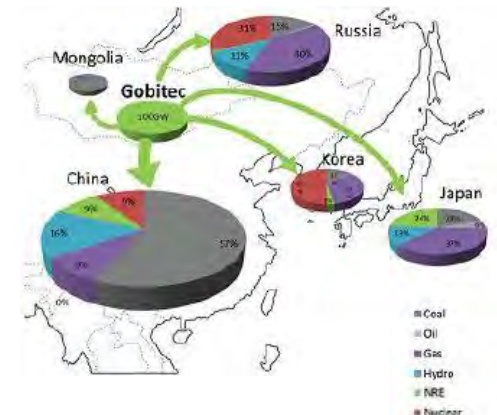
<CBT Projects & Scenarios in NEA>

◆ Many Studies performed on NEA-CBT since 2000 (Multilateral PSI)

- NEAREST (KERI, ESI 2003)
- Asian Super Grid (JREF 2011)
- GOBITEC (ECS 2014)
- Northeast Asia Supergrid (KEPCO, KEEI with Skoltech, 2014)
- GRENATEC (HRENATEC 2010)
- Asia Pacific Power Grid (Japan Policy Council 2011)
- And so on ...

◆ Bilateral PSI Scenarios

- KO-CH, KO-JP, KO-RU in terms of KOREA
- CH-RU, RU-JP ...



<Common Issues for PSI & Deregulation>

- ◆ **[Technical] Transmission planning & Operation**
 - Planning : Capacity, Voltage, AC/DC, System design
 - Analysis the interconnected system security (short-term)
 - Evaluation the generation/load adequacy (short and long-term)
- ◆ **[Economic/Environmental] Generation tracking and electricity market**
 - Creation of international electricity market
 - Electricity and CO2 trading (Green market)
 - Pricing : Fixed or Negotiated pricing
- ◆ **Institutional & Marketable Issue**
 - Institutional considerations
 - Market Power & International Negotiation
- ◆ **Energy Security & Political & Financial considerations**
 - Intra political & financial factor (Deregulation)
 - Inter political & financial factor (Interconnection) & Energy Security