Session 3: Toward a Northeast Asian Energy Community

“Commentary: IEA view on Northeast Asia”

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TPES in NE Asia: 2002

Mtoe

- China Factor: 2nd largest consumer of energy and oil, largest coal consumer
- Diversity of energy supply
- Regional mismatch = potential co-operation
TPES Projection in NE Asia

Japan/Australia/NZ

Russia

Rep. of Korea

China

2000

2030
• China continues to be the 2nd largest energy consumer
• China will account for 20% of world incremental energy demand and for half of the increase in coal use over the next three decades.
Growing gap between Oil demand and Production in China

- Production
- Consumption

 Mb/d

10 mbd (8%)

2 mbd (2.7%)


Mb/d

Production
Consumption

2000 => 2030

Mtoe

Transp. Electricity Industry Res&Comm
Although China’s gas production will rise rapidly, demand will be increasingly met by imports.
Gas Investment in China

Downstream will account for a growing share of China’s gas investment requirements, as distribution networks need to be expanded.
Russia Seeking a New Energy Trading Partner

- European Market: well-developed but transit is major concerns.
- Northeast Asian Market: high potential but undeveloped.
- Gasprom Strategy affects the development of gas and oil pipeline development?
China’s WE Pipeline and LNG create Gas Demand?

LNG Planned

LNG Approved/Underway
China and Russia agreed to increase oil supply by railway: 3.5 mt/y → 15 mt/y by 2006

- Gazprom and Rosneft: Taishet–Nahodka: 4,130 km: $5B – $10B: 1mbd
- YUKOS, TNK–BP, Sibneft: Angarsk–Daqing: 2,200 km: $2B: 400–600 kbd
Electric Power Link Design in Northeast Asia

- Irkutsk
- Amur
- Shenyang
- Beijing
- Mongolia
- Sakhalin
- Far East
- DPRK
- ROK
- Japan
- Tokyo

Networks:
- Far East Electricity Network
- East Siberia Line
- Hydro Power
- Natural Gas or Nuclear
## Stages of Energy Projects in NE Asia

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<td>1. Concept building</td>
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<td>2. Political endorsement and political framework building</td>
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<td>3. Technical and financial feasibility studies</td>
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<td>4. Regulatory approvals from authorities: routing, health-safety-environmental (HSE) impacts, etc.</td>
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<td>5. Financing</td>
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<td>6. Physical construction:</td>
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<td>7. Production and pipeline operation and management</td>
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Challenge 1: Lack of Infrastructure and Investment: 2000 ~ 2030

- **China**: $2253 billion
- **Russia**: $1050 billion
- **OECD Pacific**: $1000 billion

Billion Dollars

- **Electricity**
- **Coal**
- **Gas**
- **Oil**
Challenge 2: Regulatory Reforms & Market Restructuring

- Cross-border oil & gas projects pass through multiple countries
- A Clear and stable regulatory framework exists in NE Asia?
- APEC recommendations and experience of Energy Charter
- Sakhalin sparks the Japanese energy companies?
Challenge 3: Overall Plans & Studies

- Need more information: reserves, markets, technical & economic feasibility, etc.
- Master plans help policy makers’ involvement in the regional framework
  - F/S for Kovykta gas project
  - NEAREST Study by KERI
  - Gas Demand and Market Study by Northeast Asia Gas and Pipeline Forum
Toward a NE Asia Energy Community

- Cross-border projects = a number of concerned parties
- Strong need for international alignment to avoid obsolescent bargaining
- Areas beyond the capacity of private sector:
  - incompatibility between the laws
  - investment conditions among nations
  - Political changes
- Regional issue needs regional approach
- Regional co-operation framework to promote or trouble shoot
N.B. UNs, IFIs, national & private regional organisations are not included.
Government Role in NE Asia

- A convener to encourage the alignment of interests
- Need clear definition: Primary role of private sector
- Major roles: to establish a clear, transparent and predictable framework for private investment conditions
  - To establish institutional and regulatory framework for production, trade and transport
  - Clearly defined energy policy
IEA’s Role in NE Asia

- IEA Ministers’ encouragement in April 2003
- Start of NE Asia POW in 2003
  - IEA/KEEI conference on NE Asia energy security and regional cooperation in March 2004
  - IEA/KERI/APERC/Vostokenergo symposium on electricity network in May 2004
- POW in 2005/2006
  - Oil and gas study in NE Asia
  - Contribution to HR training: energy experts and data experts