

**KEEI Expert Workshop
“Towards Multilateral Energy
Cooperation in Northeast Asia”**

**DPR Korea Implications for
Regional Energy Cooperation**

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Background and Geography

- Command Economy
- Limited Previous Regional Participation
- Economically Disadvantaged
- Inexperienced Legal System
- Location Key for ROK Participation
- Terrain Presents Unique Challenges



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Current DPRK Limitations

- Limited Personal Access
- Legal System
- Inadequate Electric Transmission
- No Gas Infrastructure
- Political Constraints



Critical DPRK Needs

- Access to Primary Energy
- Environmental Improvement
- Economic Development
- Capital Infusion
- Technology



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Past DPRK Experience KEDO Heavy Fuel Oil

INTENT – Support DPRK with interim energy needs until LWRs were built

REALITY – No Longer Supplied

High sulfur oil created environmental and mechanical problems while permanently degrading installed plant



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HFO Problem Analysis

SO_3 – Combustion Product of Sulfur in Oil

H_2O - Combustion Product of Hydrocarbon

Result - $\text{SO}_3 + \text{H}_2\text{O} \Rightarrow \text{H}_2\text{SO}_4$

DPRK Experienced corrosion in ductwork, air preheaters, ID Fans and Stacks



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Requirements For Progress

- Reestablish Trust
- Mutually Beneficial Project
- Rapid Implementation
- External Funding
- Political Support



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KoRus - Pipeline Example

DPRK Drivers

- Access to Primary Energy
- Speed – Short Term Implementation with mutually observable milestones
- Environmentally Friendly
- Known Technologies
- Vehicle to Reestablish Trust



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KoRus - Pipeline Multilateral Drivers

- Political Requirements of DPRK (Nuclear)
- Economic Advantages
- Russian access to ROK Market
- Short Term Implementation
- Vehicle to Reestablish Trust



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KoRus

Political Considerations

- DPRK Provides Essential Energy Development
- ROK Fuel Supply Diversity, Economics
- USA Supports ROK and Russia
Improves US Image in Korea
Improves DPRK Situation
- RUSSIA New Markets for Gas
- Non Nuclear Option



KoRus US Political Support

- US Congress – Curt Weldon recognized the value of KoRus to DPRK and US
- US State Department – Any resolution of DPRK Nuclear Issue Will Require a Viable Energy Component
- United Nations Secretary General



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KoRus Pipeline



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KoRus Layout

- Komsomalski → Khabarovsk → Vladivostok → DPRK → ROK
- 1,500 Kilometers in Russia
- 600 Kilometers in DPRK
- 200 Kilometers in ROK
- 2,300 Kilometers Total Length



KoRus Regional Energy Strategy

- Promotes Regional Interdependence
- Utilizes Currently Stranded Gas
- Provides Partnerships for Regional Development
- Makes DPRK Economic Participant
- Integrates With Existing Rail and Electric Grid
- Enables Environmentally Friendly Energy Growth



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KoRus Parameters

- 1 Meter Diameter
- Initial Volume - 10 BCM per year
- Total Capacity – 20+ BCM per year
- Project Cost Between \$2.5 - \$4 Billion
- 4 Year Construction Schedule



Challenges & Opportunities

- Establish Peaceful Regional Political Stability
- Negotiate Settlement with DPRK
- Develop DPRK Energy Infrastructure
- Support Regional Economic Development
- Provide Leadership



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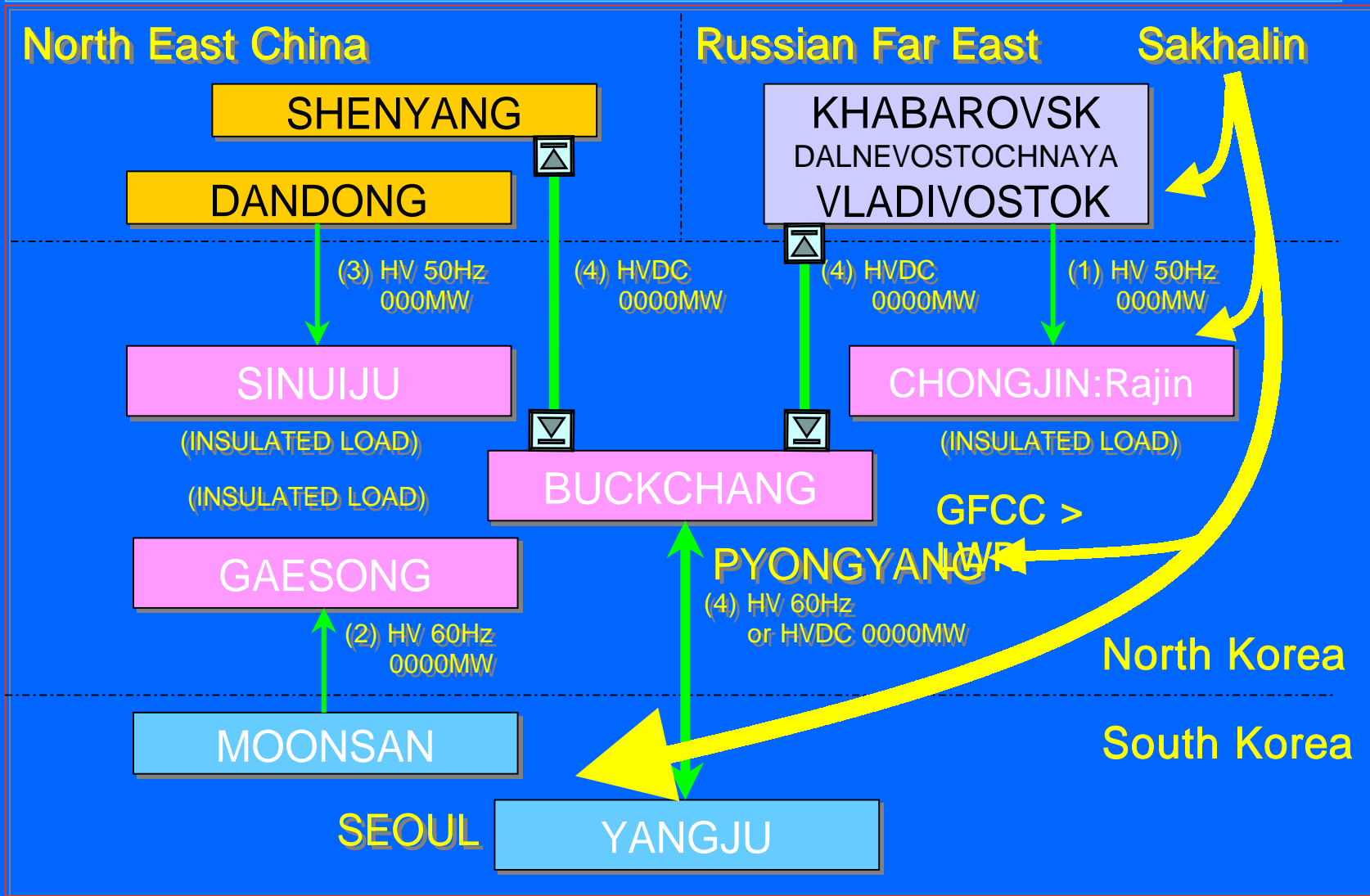
KoRus Summary

- Least Expensive Gas Supply Option
- Promotes Regional Energy and Economic Integration
- Enhances Regional Security
- Supplies Environmentally Friendly Energy
- Improves US Role & Image in Region



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KoRus + PEACE Network



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Thank You



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