East Siberia Pacific Ocean Oil Pipeline Project from Korean Perspective

Moon Young-Seok
Korea Energy Economics Institute

Pacific Energy Forum
2005 Sep 6~8

Contents

<Motivation of the Research>

- Background
  - ☑ International competition to secure Russian energy potential
  - ☑ Change of Russia energy policy toward foreign investment in the upstream sector
- Objective
  - ☑ Recent trend of Russia's strategy of East Siberian resource development and its export policy aiming NEA market
  - ☑ Evaluate the economics of ESPO and Korea's role for the East Siberia resource development

Energy Export Policy of Russia

- Long Term Energy Vision of Putin Administration
  - ☑ Outward: Strong Russia
    - ➢ Use hydrocarbon resources as geopolitical leverage
  - ☑ Inward: Strong Central Government
    - ➢ Regain government control over energy sector and Oligarchies
- 'Russia Energy strategy toward 2020'
  - ☑ Target: Stable Tax Revenue, Strengthening Geopolitical Position
  - ☑ Task
    - ➢ Energy development in East Siberia and Russian FE
    - ➢ Increasing market share in the world energy market
    - ➢ Expanding pipeline infrastructure and export diversification

Energy Export Policy of Russia

- Policy change of Putin Admin.: Shift From indirect to direct control over energy sector due to

In Export sector

- ☑ Private oil companies pipeline construction plan
  - ➢ Export oriented business strategy

In Production sector

- ☑ Private oil companies focus on production volume increase rather than upstream development

In Foreign relations

- ☑ Private oil companies deals with Majors through M&A and foreign direct investment

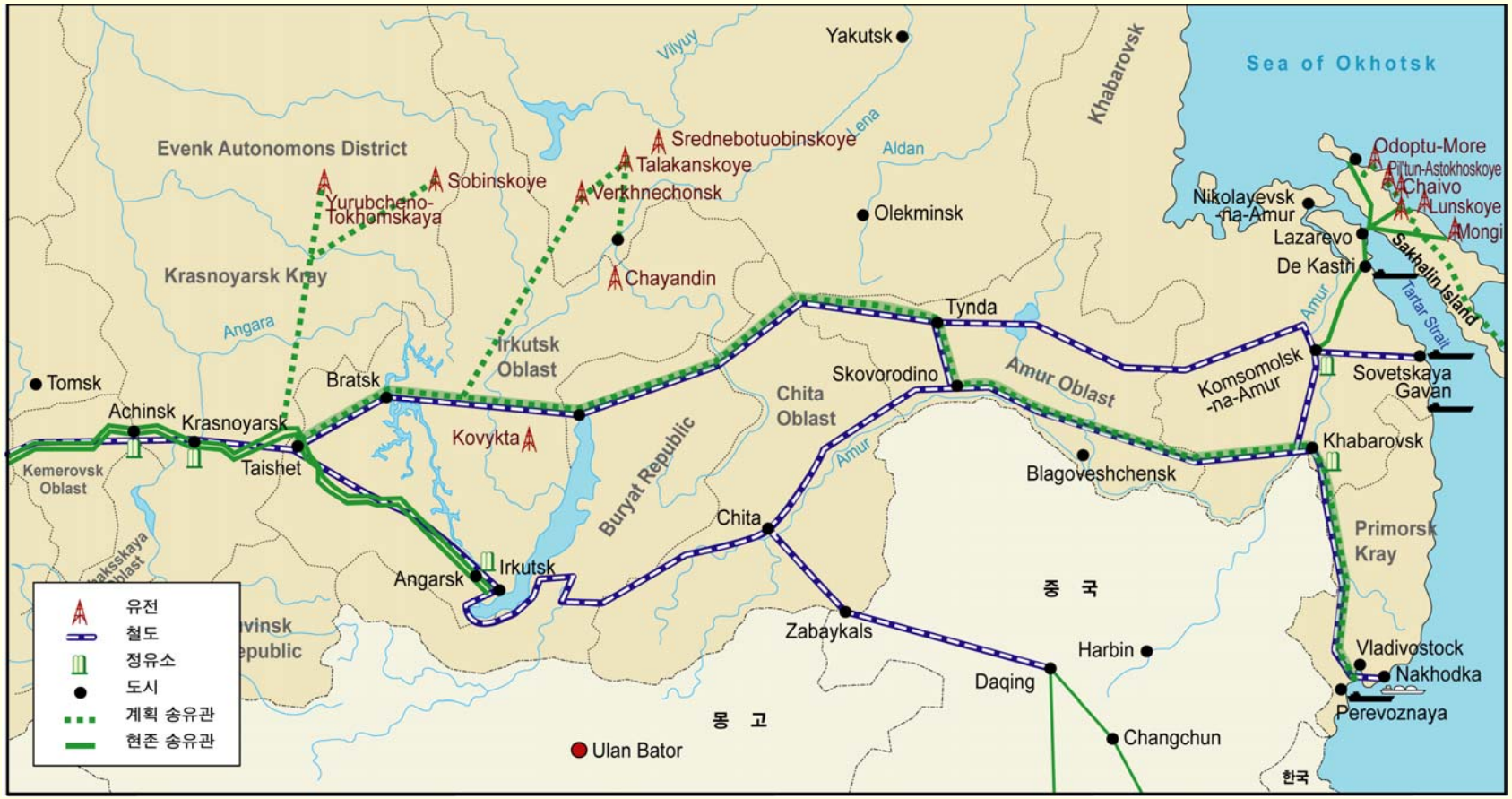
Outline of ESPO

- 'Taishet~Perevoznaya' Route Decision (2004. 12)
  - ☑ Two stage construction plan: 'Taishet~Skovorodino' and 'Skovorodino~Perevoznaya'
  - ☑ Initially transport to China by rail, possibility for branch to China
    - ➢ Parallel construction of Taishet~Skovorodino pipeline and Perevoznaya loading Terminal

	Construction stage	
	1st Stage	2nd Stage
Location	Taishet~Skovorodino	Skovorodino~Perevoznaya
Distance (4,188km)	2,269km	1,919km
Capacity	1.6 million b/d (0.6 million b/d to China)	1 million b/d
Cost (billion $)	60	55
Construction Period	Completion by 2008	?

Outline of ESPO

- ‘Taishet~Perevoznaya’ Route



Outline of ESPO

- Pipeline construction will be completed by two phase
  - ☑ Facilitate to mobilize investment fund
  - ☑ Time and investment are needed to E&P in East Siberia
  - ☑ Postponing geopolitical decision about China-Japan competition
- Financing
  - ☑ Estimated cost range from 11.5 to 16 billion dollar
    - ➢ Cost Uncertainty : steel price, route, tax exemption etc.
    - ➢ Reserve Uncertainty: no explicit participation of oil companies
  - ☑ Transneft would like to finance 1st stage by its own credit
    - ➢ 1st stage: BPS(Baltic) project finance type
    - ➢ 2nd stage: international project finance

Economics of ESPO

	Daqing route			Perevoznaya route	
	Daqing	Dalian	N. Korea		
Distance (km)	2,285	3,282	3,438	3,878	
Diameter (Inch)	40	42	42,20	42	
Capacity	0.6 Mbd	1Mbd	1Mbd	1 Mbd	
Pump Station	20	30	33	35	
Monomooring	0	2	0	3	
Export to Korea (million b/d)	0	0.2	0.2	0.2	
Construction Cost (billion $)	2.42	3.75	3.36	4.37	
Maintenance cost (30 yr) (billion $)	2.31	3.66	4.46	44.88	
Total cost	4.73	7.41	7.81	8.86	
Tariff (KEEI) ($/bbl)	2.77	3.27	3.65	1 Mbd	0.6 Mbd
				2.98	4.96
Tariff (BP) [1]	2.35	-	-	2.7	3.6
Tariff (IEEJ) [2]	-	-	-	1.6 Mbd	-
				3.63	-

source: KEEI(2003), Kanekiyo(2005) ;
1) Cost: Daqing 2 billion $, Perevoznaya 5 billion, 2) Cost: 12 billion $

Economics of ESPO

- Tariff Estimation
  - ☑ IEEJ Report : loan payment period(10 yr) $7.38 /bbl
    (30 yr) $ 3.63/bbl
  - ☑ Transneft's feasibility study (unofficial) : $6.4~7.0/bbl
    - ➢ Internationally competitive tariff rate is known as less than $5/bbl
    - ➢ More than 25 yrs long term credit is critical for ESPO project to be economically viable

    → Inter-governmental guarantee and financial support (including tax exemption) would be necessary to raise fund for this project in the international financial market

Challenges of ESPO

- Additional Reserve
  - ☑ Planned pipeline capacity is 1.6 Mbd
  - ☑ Transneft Plan: W. Siberia 0.48 Mbd, E. Siberia 1.12 Mbd
    - ➢ Yurubcheno- Tokhomskaya, Srednebotuobinskoye: 0.8 Mbd, Verknechonsk, Talakanskoye, Yakutinskoye : 0.32 Mbd
    - ➢ Russian Ministry of Natural Resources report to Putin (2005.2) : Production capacity 2011: 0.74Mbd, 2016: 1 Mbd

- China Factor
  - ☑ Rosneft-China made supply contract of 48.4 million ton up to 2010 (2005. 1. 23.)
    - ➢ CNPC offered 6 billion dollar to Rosneft-Yuganskneftgaz deal

Challenges of ESPO

- Pipeline Construction Difficulty
  - ☑ Route terrain and climate condition
    - ➢ permafrost
    - ➢ Pipeline passes 100 rivers, 26 railways, 113 road
  - ☑ Pipeline supply (1,220mm, 10.0 Mpa)
  - ☑ Required electricity for pumping station
  - ☑ Environmental concern of NGO
    - ➢ Baikal lake and Perevoznaya bay

Effect of ESPO

- ESPO pipeline improves NEA oil supply diversification
  - ☑ Maximum 1.6 million b/d Russian oil flows to NEA
    - China branch: 0.6 Mbd , Local demand in Russian Far East: 0.2~0.3 Mbd , Japan, Korea and others: 0.7~0.8 Mbd
  - ☑ NEA oil market can be vitalized: First pipeline oil to NEA
    - 1.6 million b/d is 10~15% of China-Japan-Korea demand
    - Contribute to lessening Asian premium of Middle east oil
    - In the long run, NEA spot crude market can be formed
  - ☑ Korea can be logistic center of NEA oil market
    - Perevoznaya to Korea is 2-3 day distance by ship
    - China branch construction diminish the positive effect to Korea, only indirectly contribute to Korea by lessening the burden of increasing Chinese demand
  - ☑ Malacca Sea-lane congestion and security concern free

Case-Scenario of ESPO

- Pipeline Project Scenario: Critical Factors
  - ☑ 1st stage : Financial Source and Condition ?
    - Transneft prefers to corporate financing, but not likely to mobilize investors as planned.
    - International finance experts expect international institutional financing is necessary to mobilize multi billion dollar
      - In this case, completion date will be delayed
  - ☑ 2nd stage: Additional reserve and Russia energy policy to foreign investment
    - To expedite 2nd stage, foreign investment in upstream sector of East Siberia is critical. The current trend of Russian oil company oriented development policy will deter the finding of oil to fill the 2nd stage pipeline.

Case-Scenario of ESPO

Scenario	Condition	Possible Effect
Scenario I: Delay from 1st stage	1st stage financing has problem and delay	The most probable scenario right now and may require inter-governmental negotiation to finance the project
Scenario II: 1st stage successful and proceed to China branch, but 2nd stage delay	1st stage investment financed from Russia & China, 2nd stage delay due to lack of East Siberia E&P	Korea and Japan worry about this scenario, and it may intensify the competition and conflict among NEA countries
Scenario III: 1 & 2nd stage proceed as planned (Transneft plan)	1st stage investment financed successful and Russia policy change toward foreign investment in East Siberia E&P sustained	Contribute the formation of NEA oil Market and energy security, but takes longer time to develop East Siberia resources,
Scenario IV: 1 & 2nd stage parallel construction (Japan proposal)	1st stage investment financed from Russia & Japan,	Contribute the formation of NEA oil Market and energy security, also speed up East Siberia resources development

Implications for Korea

< Scenario I > : 1st stage financing plan is delayed

- ☑ If Transneft can't finance the 1st stage investment by corporate financing, and has to rely on international Project Finance. Project commencement is likely to be delayed

Implication

- ☑ Japan-Korea-China may have to cooperate to finance the project either by government loan or by international consortium's commercial loan
  - ➢ Korea will have a chance to participate both in financing and in construction

Implications for Korea

< Scenario II > : 1st stage financing is successful, but delay of 2nd stage progress

- ☑ Ist stage construction proceed as planned either by Transneft's own credit or Federal government budget assistance
- ☑ If 1st stage investment is financed from China, resource competition and conflict among NEA countries may intensify
  - ➢ Also development to 2nd stage is likely to be delayed

Implication

- ☑ No need of Foreign Government Loan
- ☑ Korean firms can participate bidding of construction of pipeline and loading terminal but very little room for Korean government's role

Implications for Korea

< Scenario III > : 1st stage complete, then 2nd stage project progress as planned

- ☑ Additional Reserve exploration and Russian government policy on foreign investment will be critical to go into 2nd stage
  - ➢ If current trend of Russian policy toward foreign investment in East Siberia upstream sector sustained, development to 2nd stage takes lots of time.

Implication

- ☑ Implication for Korea is similar to Scenario II

Implications for Korea

<Scenario IV>: Parallel construction of 1st & 2nd stage

- ☑ If the project is mainly financed by Japanese tied loan
  - ➢ Under this scenario, oil flows to Pacific coast rather than Chinese branch → contribute to the formation of NEA oil market and speed up the E&P activity in East Siberia and Sakhalin

Implication

- ☑ Korean government is likely to participate in the financing with Russia and Japan.

Strategy

- In-depth Research is prerequisite
  - ☑ Uncertainty about the financing and development policy
  - ☑ Further study on the economics and government role of the Project → reserve, tariff, oil company, international financial institute etc.
- Government/Public Sector initiative is reasonable
  - ☑ Russia regard this project as strategic government business → government level dialogue is necessary
  - ☑ Importing countries also consider this project from energy security perspective

Strategy

- Multilateral and multi-dimensional cooperation is desirable
  - ☑ Government level: investment security and risk sharing between
  - ☑ Business level: Importing countries' national oil companies need to cooperate with Transneft, Rosneft, Gazprom
- Strategic approach based on international-consortium is recommended
  - ☑ Russia is negative to accept tied-loan aiming participation of pipeline construction/operation and upstream license in East Siberia
  - ☑ Based on inter-governmental agreement, formation of international consortium including oil importing refineries, E&P firms, and construction companies, commercial banks is recommended

Thank You