



Gas Co-operation in Northeast Asia: Issues and Institutional Barriers

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BP China

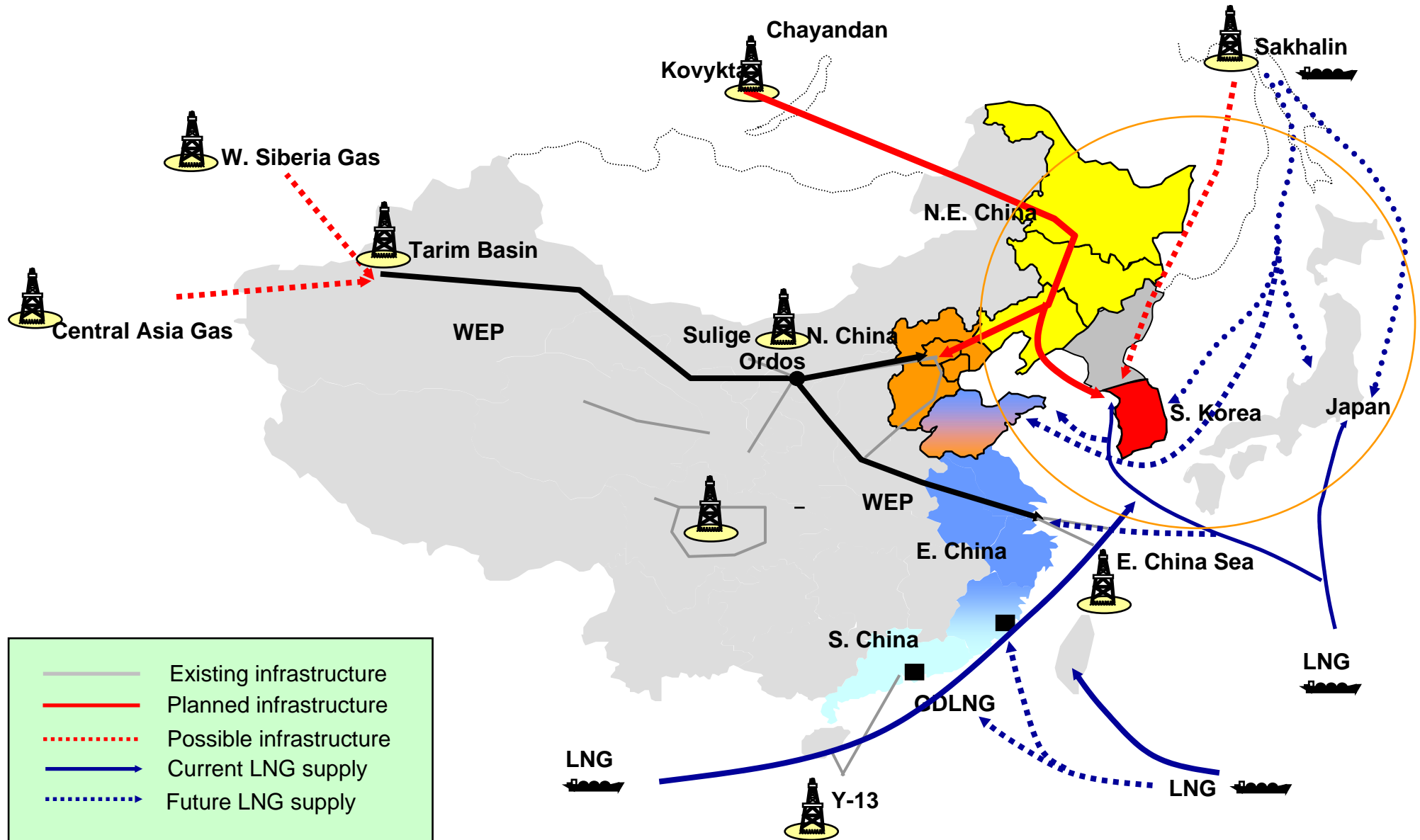
Seoul, 17 March 2004

Northeast Asia Gas Co-operation: What does it mean?



- Pipeline gas from Russia to consuming countries
- LNG projects:
 - 3 world's largest LNG importers (Japan, Korea, Chinese Taipei)
 - Competition by other LNG importing sources
- Pipeline gas versus LNG:
 - Complementarity of LNG with pipeline gas
 - Problems caused by the varying degrees of maturity between LNG market and pipeline gas market
- Focus on pipeline gas projects

Competing Gas Supply Sources



Specific Features of Cross-border Pipeline Gas Projects



- Gas pipeline different from oil and power projects
 - Gas has no captive market, a demand driven project
 - High transportation cost
 - Stringent links between segments of value chain through e.g Take-or-Pay contract
 - Synchronisation of investment, particularly downstream end-user projects with the pipeline completion schedule
- Cross-border gas pipeline different from domestic pipeline
 - International trade and transit
 - Multiple players and regulatory regimes

Conditions for Long-distance Gas Pipelines

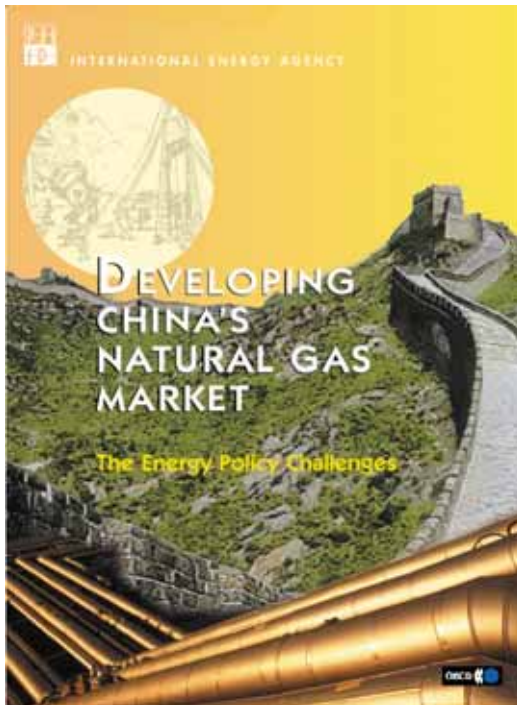


Chapter 7

Issues Surrounding Long-Distance Gas Pipelines

Highlights:

- *Building a long-distance pipeline is an important challenge in all parts of the world. It is particularly so in an emerging gas market such as China. Two of the main preconditions are a sufficiently large paying demand and adequate gas reserves. Once these preconditions are met, the most critical success factors are the alignment of the interests of all the major players and a well-balanced risk-reward allocation among the players.*
- *The key short-term issue for ...*



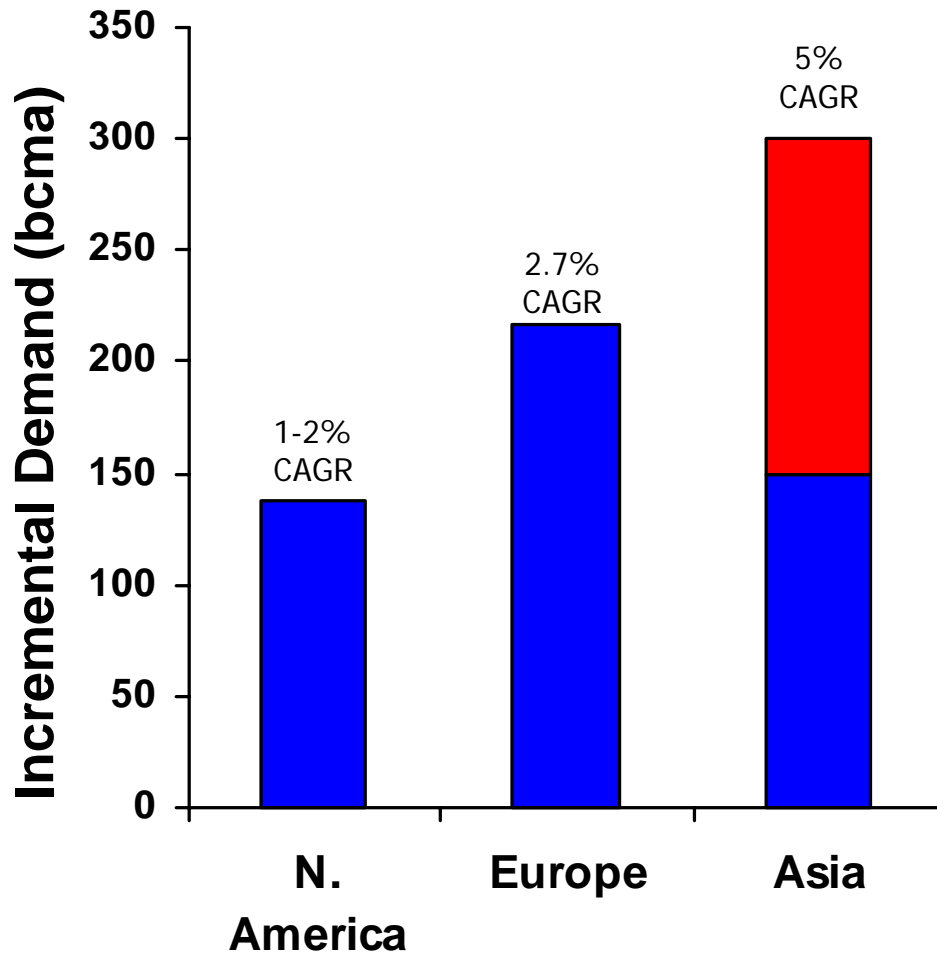
General Conditions for Long-distance Gas Pipelines

- A sufficiently large base of paying demand
- A sufficient level of reserves
- Risk sharing and mitigation mechanisms
- A facilitating investment regime

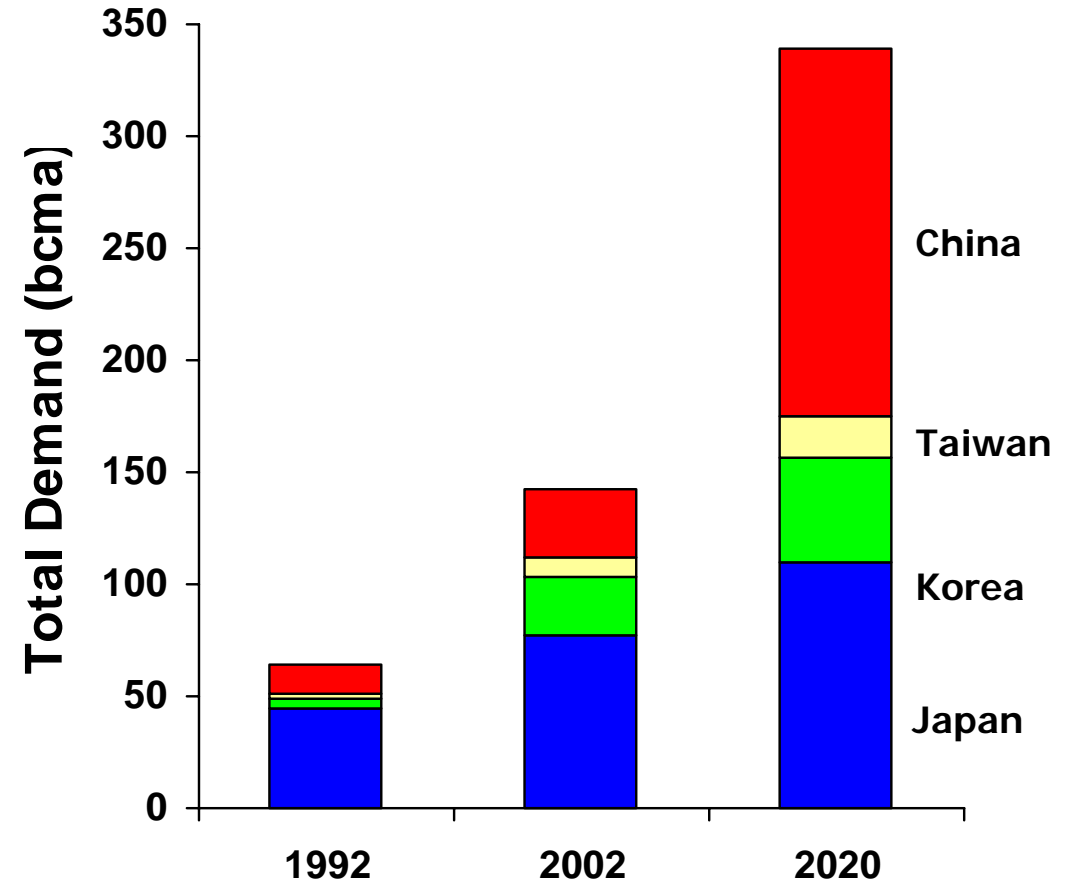
Gas Demand Growth in North East Asia



Incremental Demand 2002 - 2020

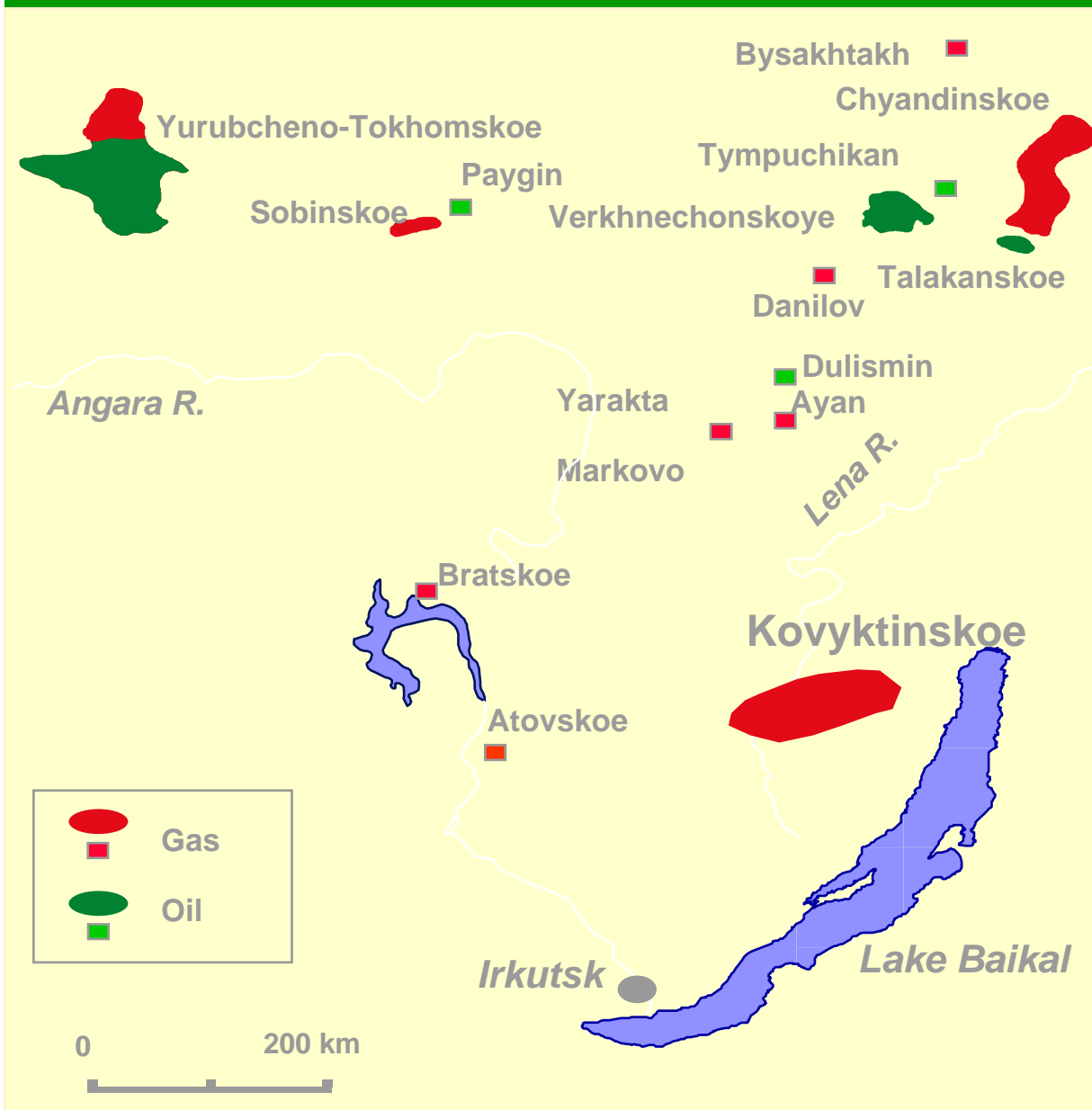


Total Demand 1992 - 2020



Strong Growth - *double the global average in gas*

East Siberia – A World Class Gas Resource



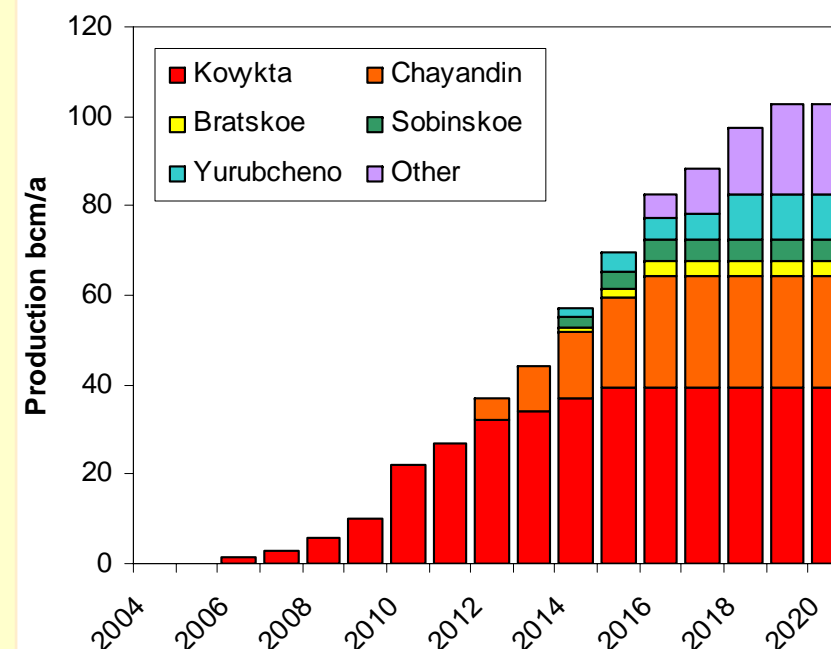
World class basin potential

East Siberia resource base:

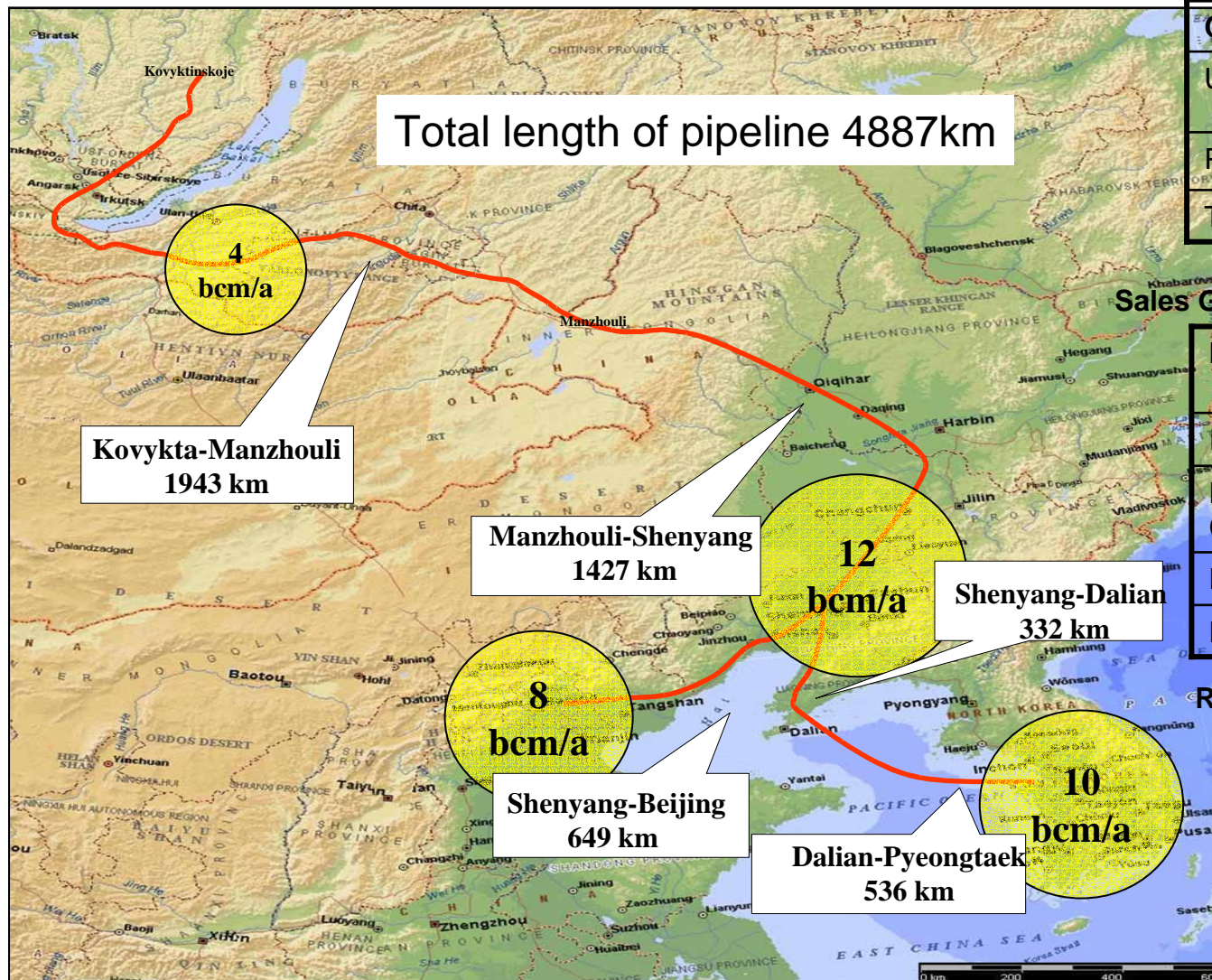
Oil: 2.9 bln tonnes

Gas: 29.9 tcm (1000 TCF)

Production of 100bcm/a by 2020



Kovykta Gas Project is a Concrete Start



Development Capex \$bn

Component	IFS Estimate
Upstream	\$5bn - \$7bn
Pipeline	\$10bn - 12bn
Total	\$15bn - \$19bn

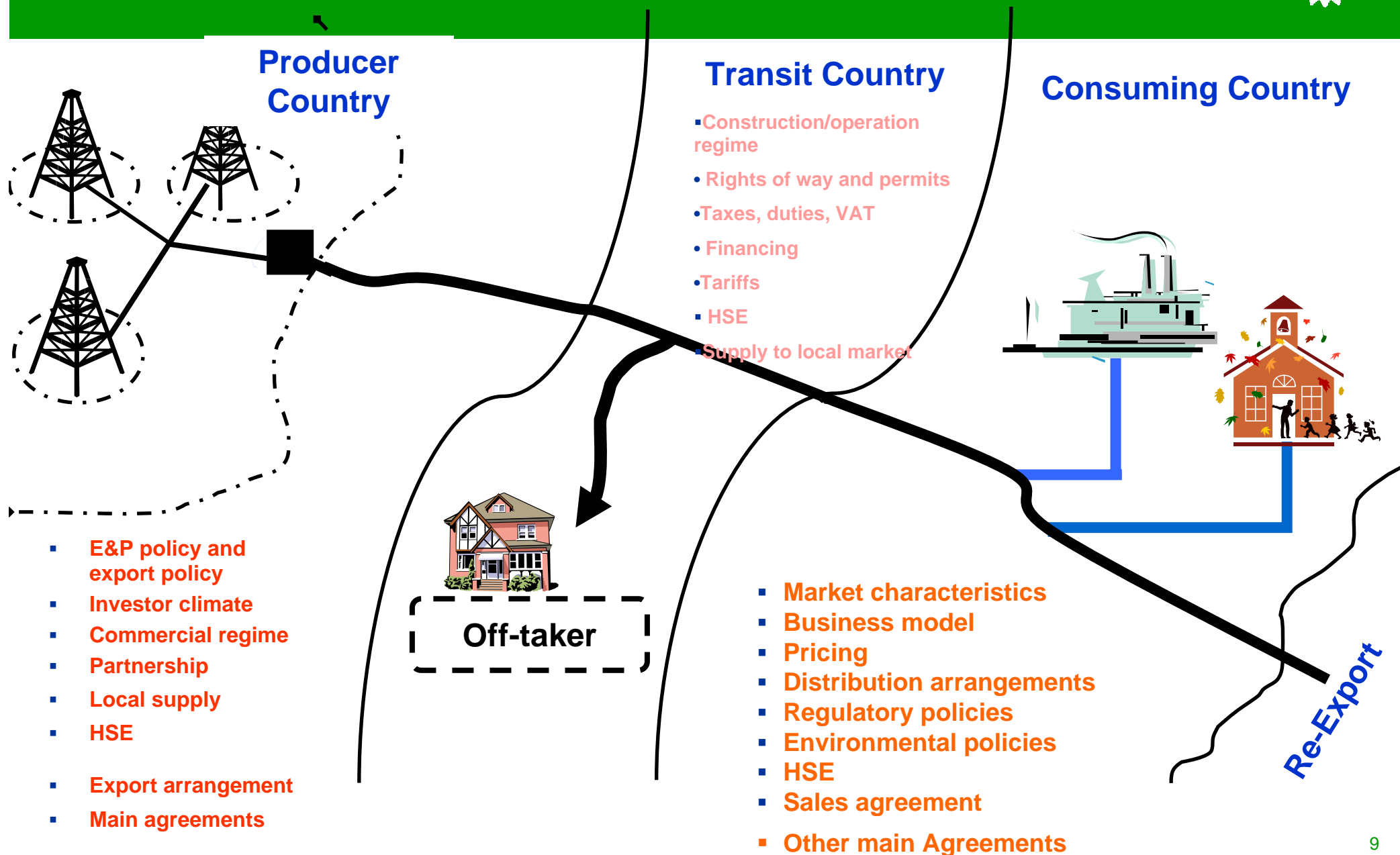
Sales Gas (bcm/a)

Market	First Gas	Plat. Sales Gas
Irkutsk	2006-8	4 bcm/a
North East China	2008	12 bcm/a
North China	2013	8 bcm/a
Korea	2008	10 bcm/a

Reserves bcm

Market	RUSIA
GIIP bcm	1900
Reserves bcm	1500
Build Up Period	9 years
Plateau Period	23 years

Countless Number of Issues



All Kinds of Risks You Can Name...



Upstream Country Regulatory
Supply Fiscal Completion Political
Financing HSE Market
Credit Legal Price Construction
Technical Contract Volume
Currency Commercial

The key is not the existence of risks, but the
availability of means to mitigate risks

The Key Challenge and Requirements



- **Key Challenge:**
 - **Building a robust demand base**
- **Key Requirements:**
 - **A clear and stable investment regime**
 - **A facilitating institutional framework**
 - **An enabling energy policy**

Building a Robust Demand Base



- **China:**
 - Greenfield downstream sector, requires largest investment and patient education
 - Challenge is developing end-use market in a coal-dominated world
 - Anchor market for large volume pipelines
 - Need strong policy drivers
- **Korea and Japan:**
 - Competition from long-distance LNG projects
 - Impacts of regulatory change on LNG models
 - Impacts of evolving LNG models on the pipeline projects

A Clear and Stable Investment Regime

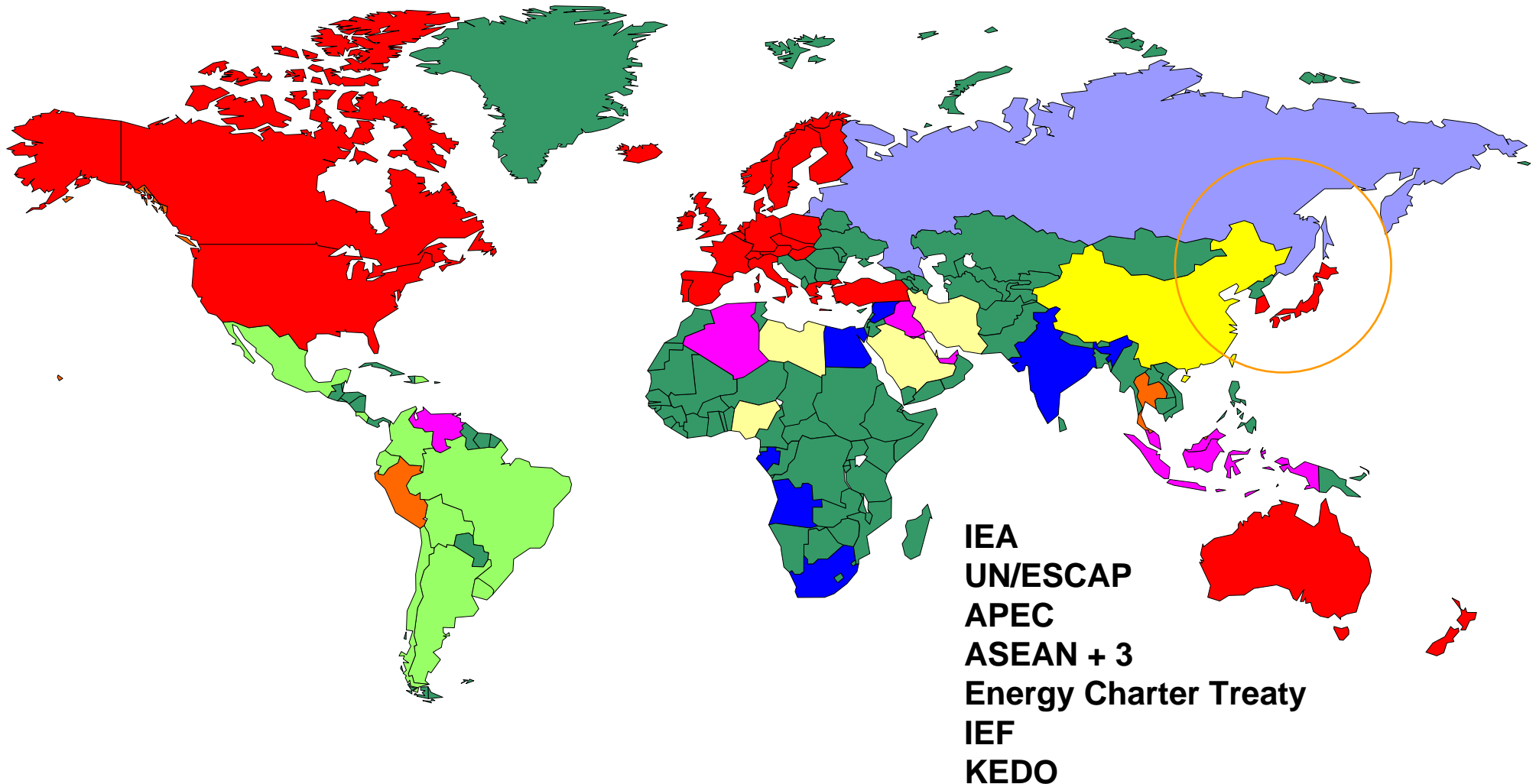


- **Respect commercial principles**
- **Provide long-term legal and fiscal stability**
- **Allow rate of return commensurate with risks**
- **Easy access to financing sources**
- **Effective legal protection**
- **Administration neutrality**
- **Regulatory transparency and stability**
- **Freedom on commercial decisions**
- **etc...**

A Facilitating Institutional Framework



Energy Dialogue Bodies Covering Northeast Asian Countries



A Facilitating Institutional Framework (continued)



- **Lack of multilateral approach to energy policy in countries of the NEA ;**
- **Many existing major energy dialogue bodies touch the region by a long arm;**
- **Need to improve energy policy dialogue between countries and among them;**
- **“NEA Energy Community” needs a strong political will and concrete steps;**
- **A strong political commitment and an enabling national energy policy to underpin investor’s confidence in all countries**

An Enabling Energy Policy



- **Common energy policy drivers:**
 - Supply diversity and security in consuming countries meet the needs of export diversity in Russia
- **Specific country drivers:**
 - China: “Revitalize the Northeast Industrial Heartland”
 - Russia: “Developing the East”
- **Energy policy approaches:**
 - Unilateral, bi-lateral or multi-lateral?
 - Competition or co-operation?
 - Role and place of Russia in the consuming countries’ energy plans
 - Link between gas projects to oil projects

Northeast Asia Gas Co-operation:

Energy Policy Challenges for the Whole Region