



# **SAMDS**

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## **Russia/Central Asia Oil and Gas**

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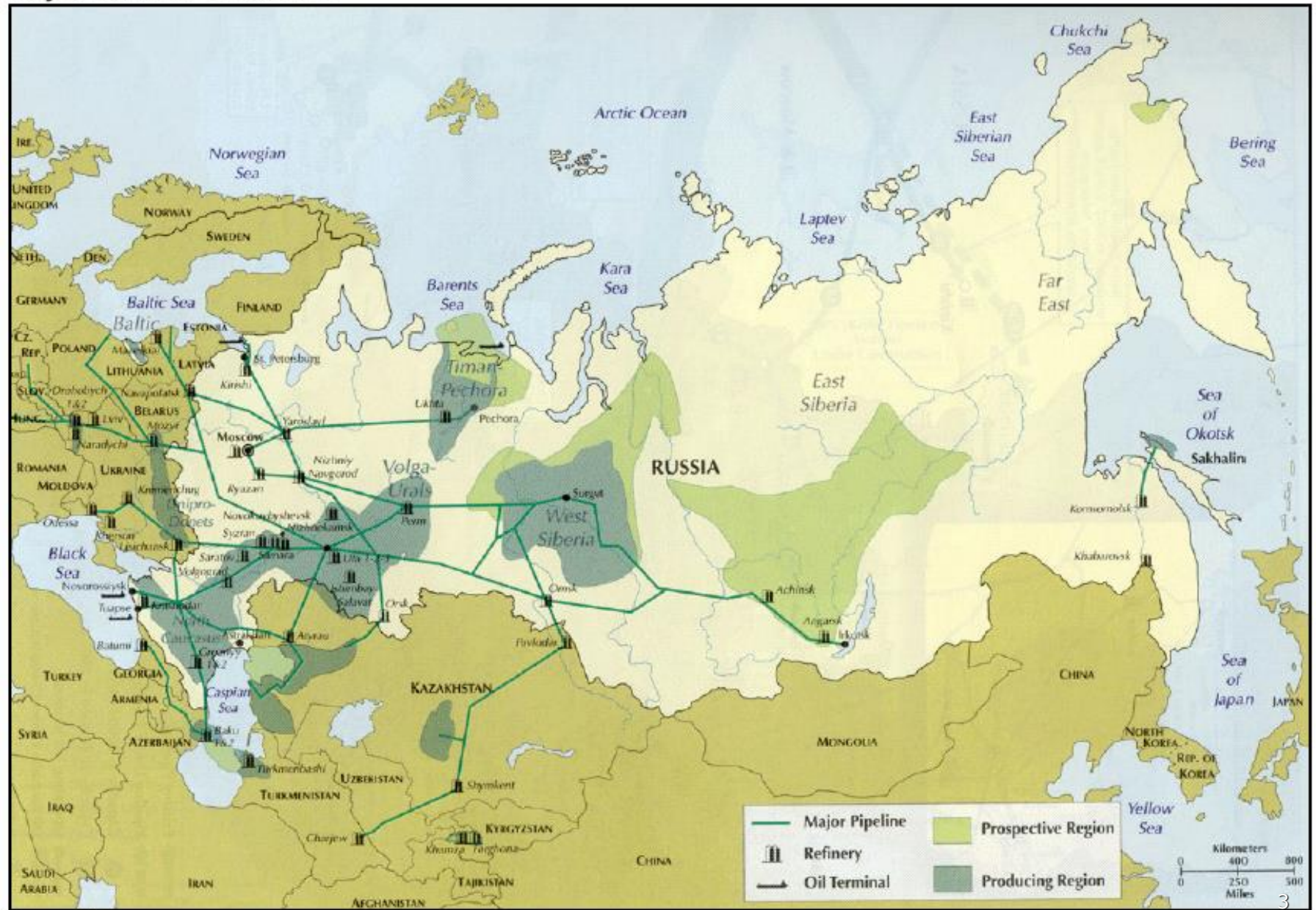
Energy & National  
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# Caspian Oil Resources

<b>Country</b>	<b>Reserves</b> (Billion barrels)	<b>Production</b> (Thousand b/d)	<b>R/P ratio</b>
Russia	87	10,643	22
Kazakhstan	30	1,728	47
Azerbaijan	7	872	22
Turkmenistan	1	222	7
Uzbekistan	1	68	24
Iran	157	3,680	117

Source: BP Statistical Review of World Energy, June 2013

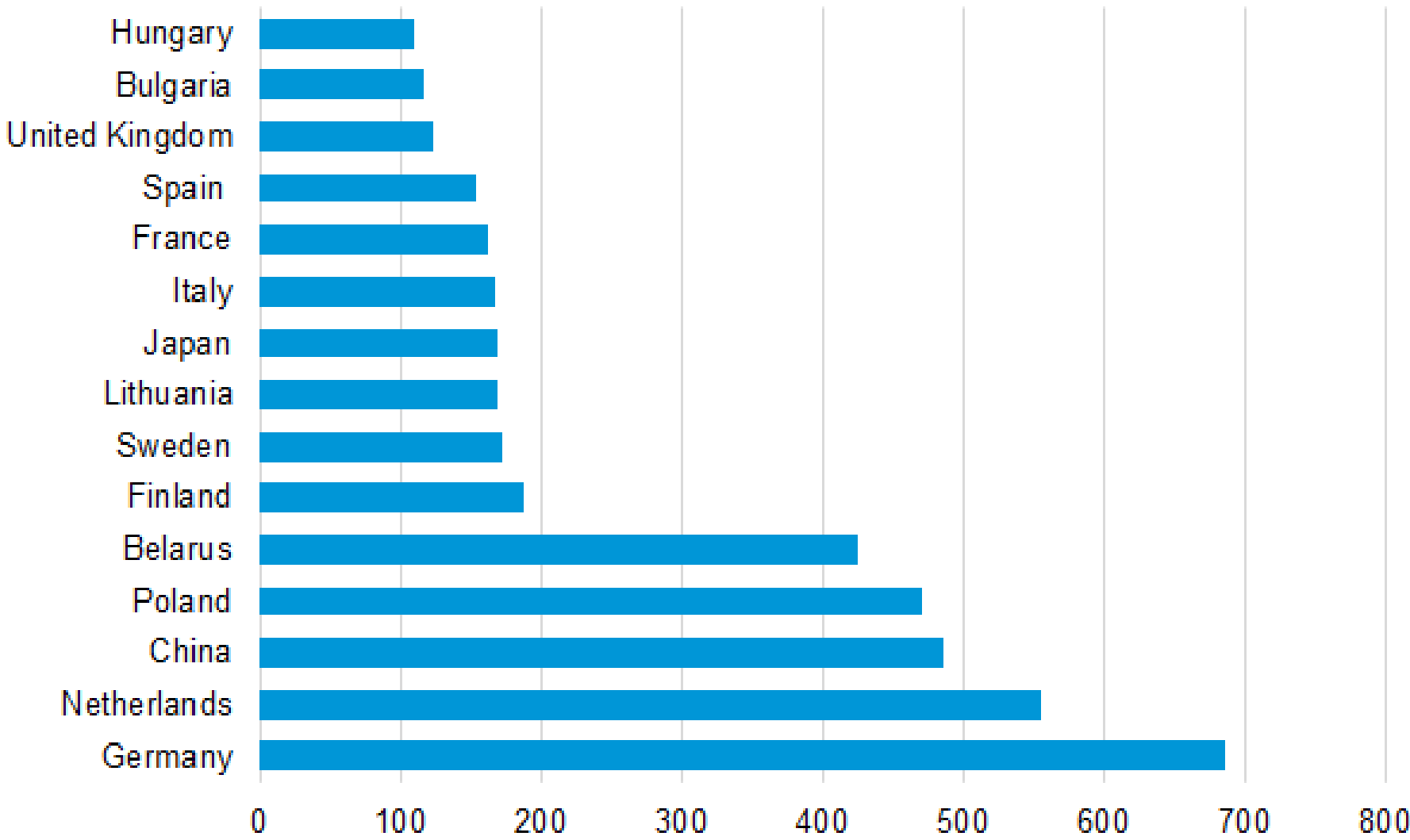
# Major Russian oil basins



Source: IEA

# Russia's crude oil and condensate main export destinations, 2012

thousand barrels per day



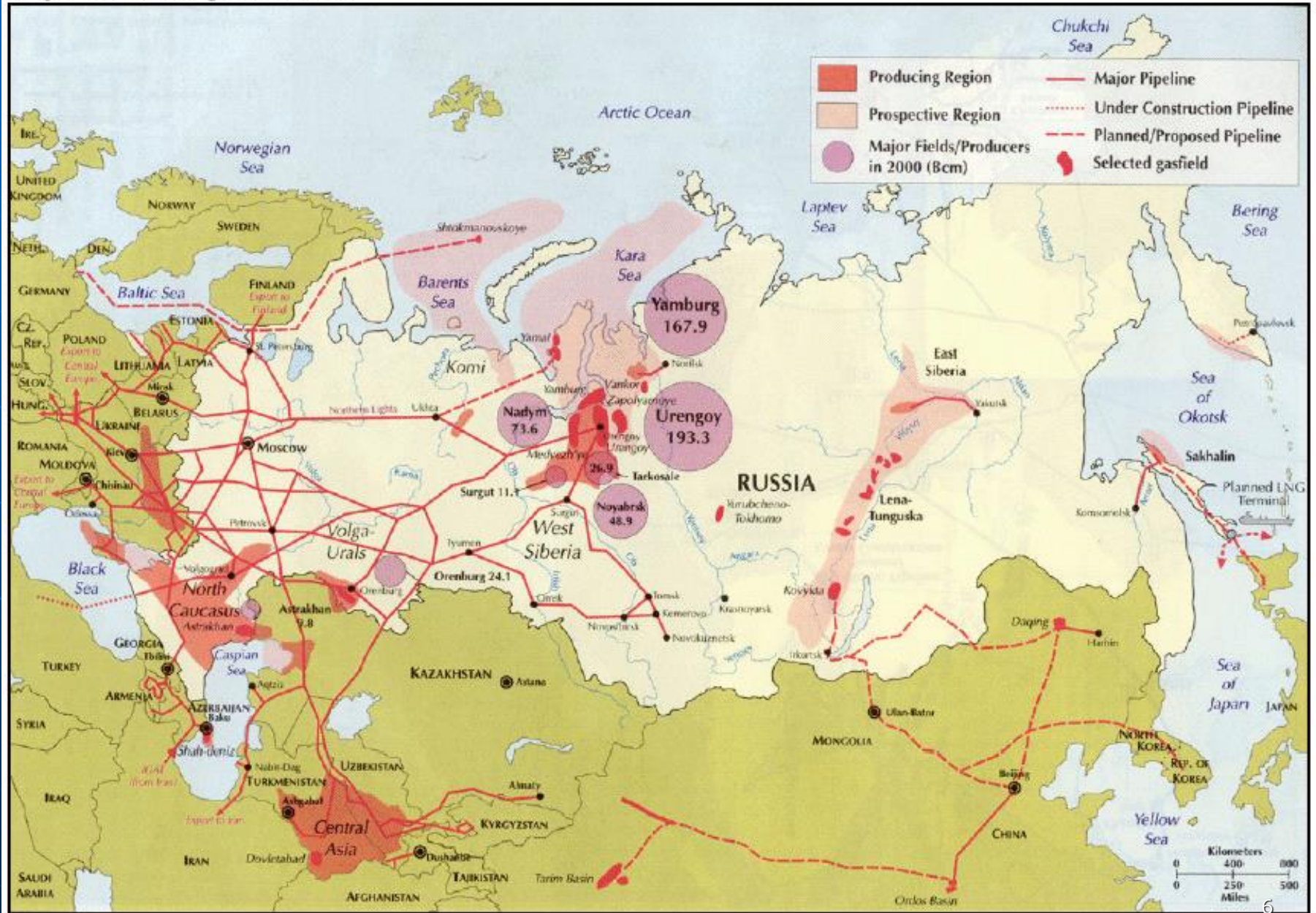
Source: Global Trade Atlas, U.S. Energy Information Administration

# Caspian Natural Gas Resources

<b>Country</b>	<b>Reserves (tcm)</b>	<b>Production (bcm/a)</b>	<b>R/P ratio</b>
Russia	33	592	57
Kazakhstan	1	20	66
Azerbaijan	1	16	57
Turkmenistan	18	64	272
Uzbekistan	1	57	20
Iran	34	161	209

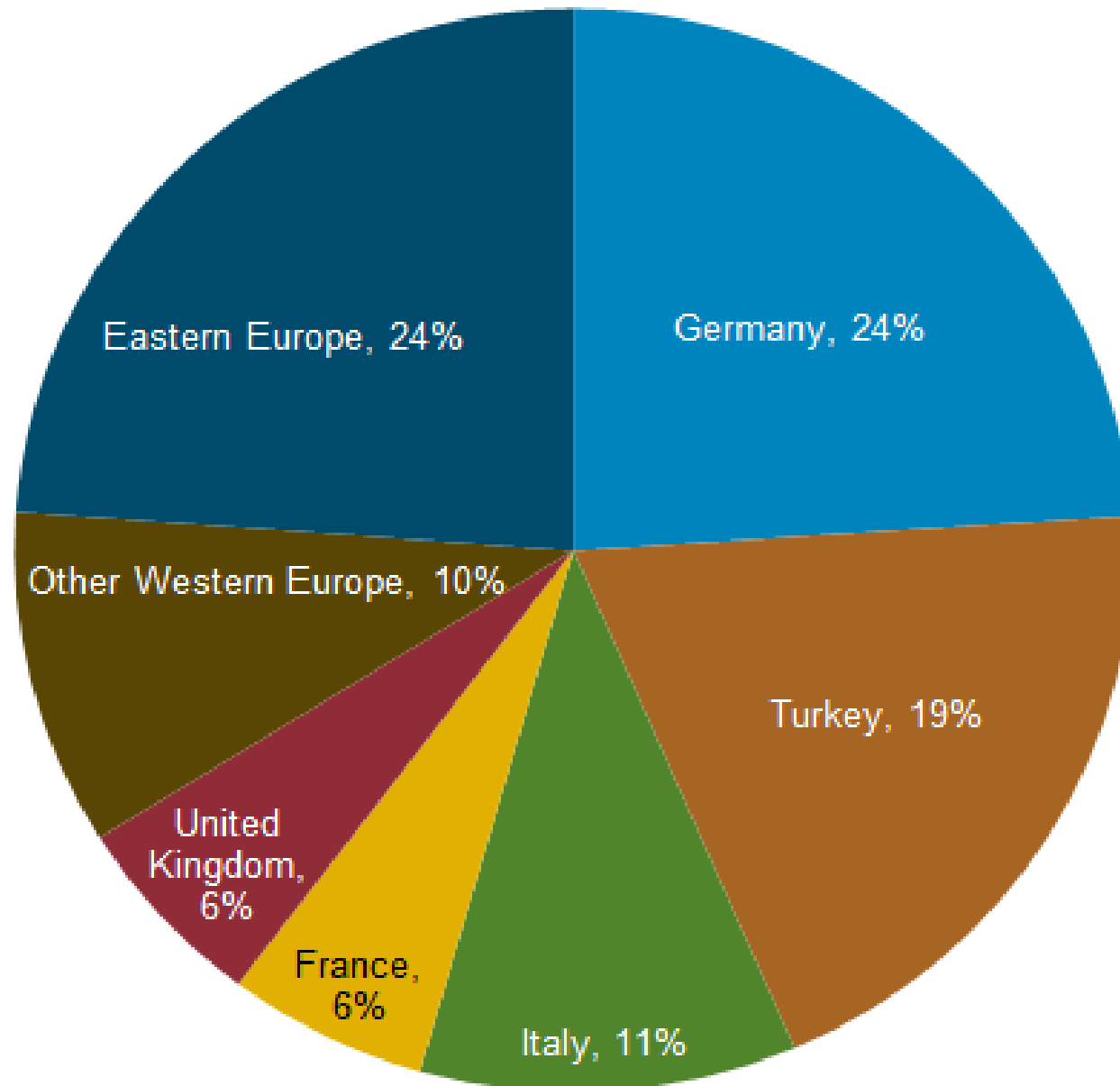
Source: BP Statistical Review of World Energy, June 2013

# Major Russian gas basins



Source: IEA

## Share of Russia's natural gas exports by destination, 2012



# Geography and Pipelines





# Partial Russian Reform in 1990s

- Privatization of oil assets
- Domestic oil prices freed
- Reinvestment with modern equipment, technology and management
- **Pipelines remain under state control**
- Little reform of gas sector, including on domestic pricing
- Opening for foreign direct investment
- Business practice remain opaque

# Policy Reversal in Putin 1.2

- Renationalization and re-control in oil
- Gazprom's monopoly position solidified
- Gas pricing reform stalled
- Rosneft emerges state oil champion
- *Siloviki* takes over from oligarchs
- Role of private sector constrained
- Limited room for foreign direct investment

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**Don't  
mess with  
Russia**



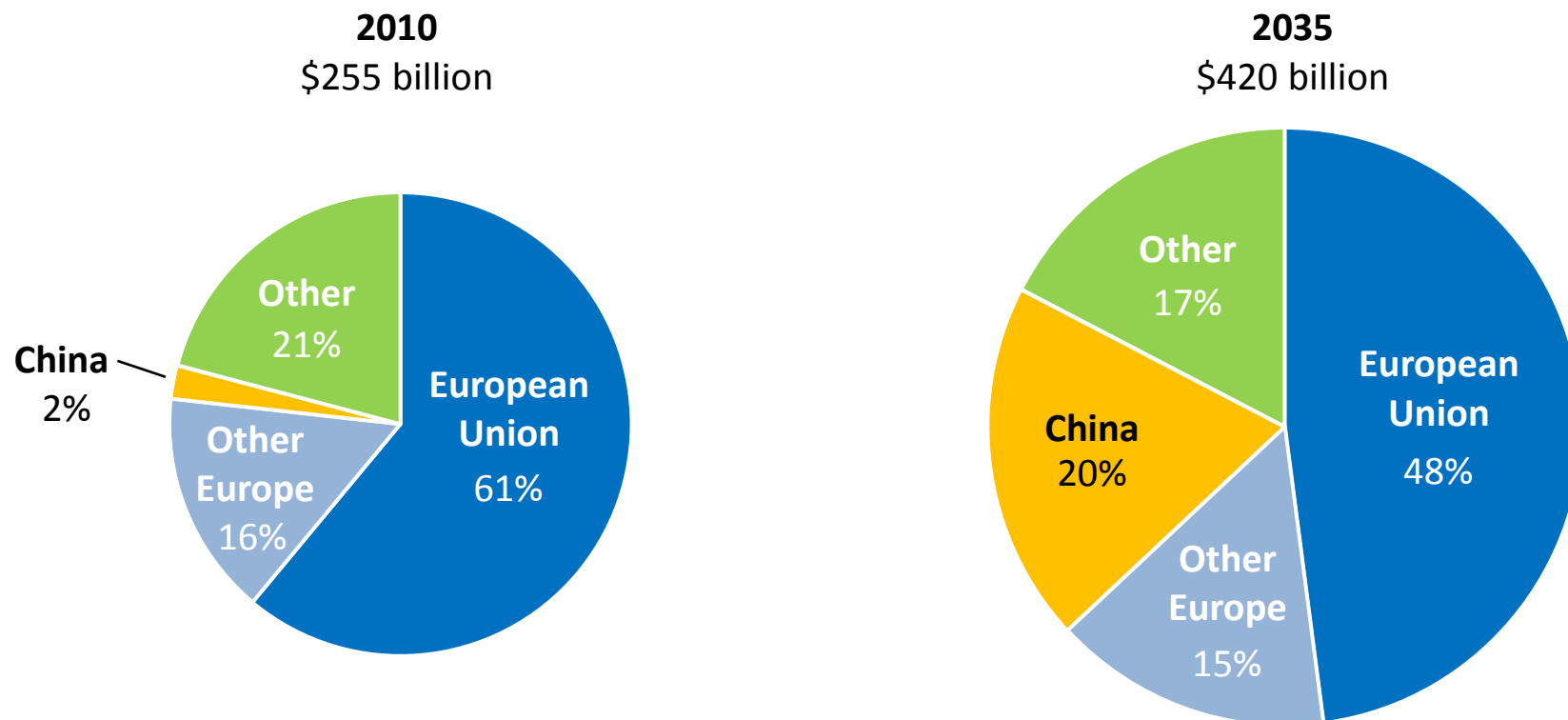
Russia is more of a petro-state than the Soviet Union. Oil and gas equal more than 50% of budget revenue, more than 70% of export earnings.

# External Energy Policy

- “Privileged interests” in former Soviet space
- Need for Caspian oil and gas supply?
- Market control and downstream integration in Europe
- Partnership with European national champions
- **Control of oil and gas transit**
- World demand moving east – China syndrome

# Russia remains a cornerstone of the global energy economy

## Russian revenue from fossil fuel exports



*An increasing share of Russian exports go eastwards to Asia, providing Russia with diversity of markets and revenues*

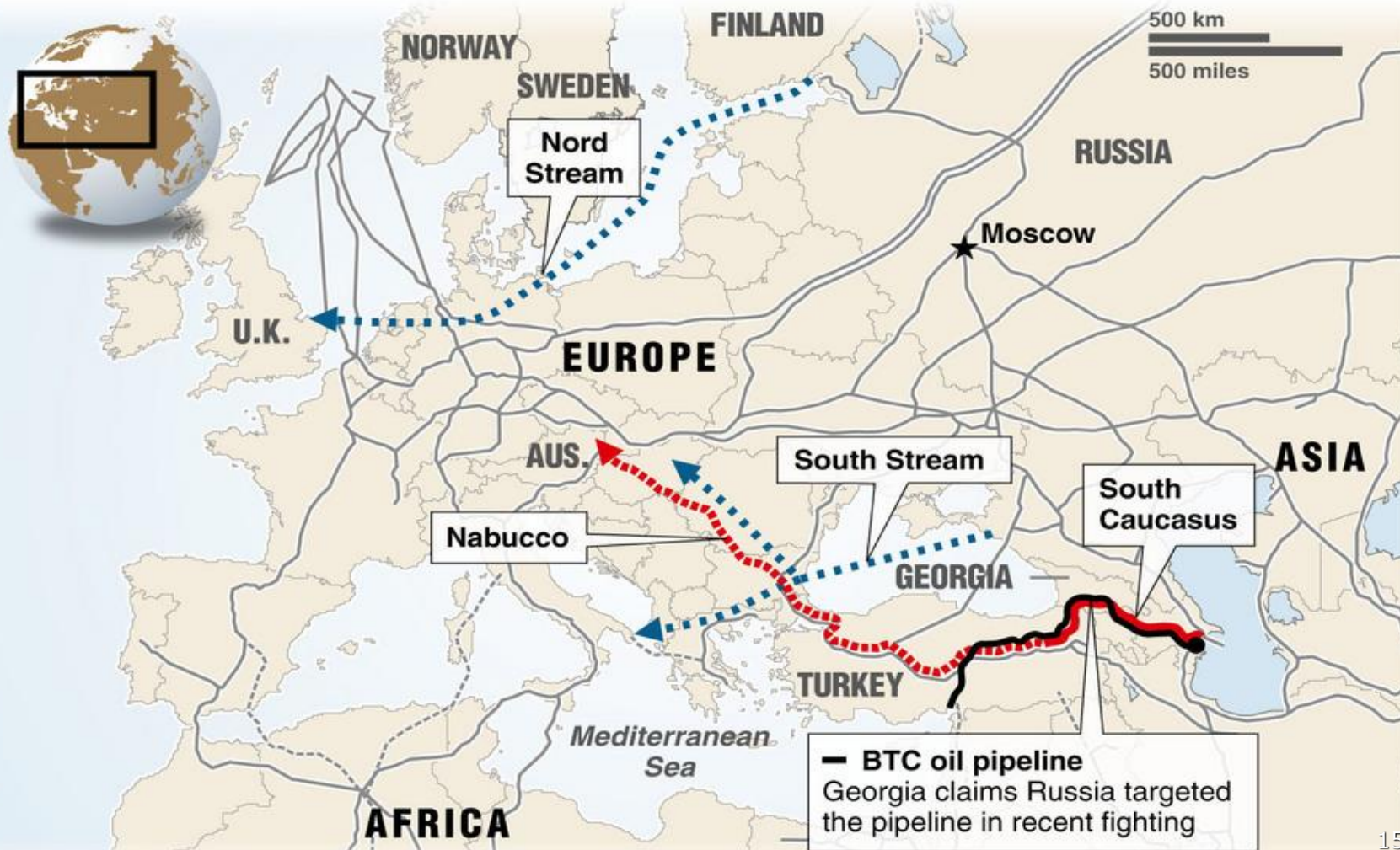
# Political Drivers of Petroleum Policy

- Demand and enable centralization
- Maximize government take
- **Control paramount, profitability secondary**
- Social benefit, public work, employment
- Public spending, not investment
- Strategic industry justifies national champions, Rosneft and Gazprom
- Facilitates rent seeking by elites

# Russia's latest weapon

Recent fighting in Georgia and a race to build new gas pipelines has underscored competition between Moscow and the West for control of the vast energy resources that flow westward to European consumers.

**Natural gas pipelines**  
— Existing    - - - - Proposed/planned  
◀ - - - - Major Russian routes planned    ◀ - - - - Major pro-Western route planned



# The ESPO Crude Oil Pipeline Route





# New Developments Under Putin 2.0

- Shale gas and tight oil revolution
- LNG market
- Delinking of oil and gas prices
- Role for IOCs in Russia
- Energy strategy and modernization
- China
- Arab “spring”
- **Ukraine**

# Challenge – Investment Lifeblood of Petroleum Industry

- Brownfield revival period over
- Price increases cannot be counted on to make up stagnate volume
- High-risk frontier exploration and development needed
- Need better technology and project management
- Availability and cost of capital
- Who will bear the risks?
- Role of foreign investment

# Caspian Oil and Gas



# Caspian Landscape in 1990s

- Newly independent states – little capacity
- World-class plays for IOCs to develop
- Exploration potential, geographic barriers
- Explicit economic bargain
- Implicit political bargain

# Shifting 21<sup>st</sup> Century Bargain

- Tens of billions in sunk investment
- Higher prices – revenue expectations
- Limited exploration success
- Rising cost and environmental challenges
- Growing confidence of indigenous elite
- Rise of NOC competition – local and regional
- Bargain not as clear or balanced

# New Challenges, New Rules?

- Assertive host governments
- Increased competition
- Access to resources
- Stability of terms
- Higher costs
- Risked rate of return
- Logistical challenges remain
- Investment flow

# Caspian Oil Pipelines



# Caspian Gas Pipelines





# Caspian Export Routes

- Dominated by Russia previously
- New Western funded pipelines from Azerbaijan and Kazakhstan to Black Sea and Mediterranean
- New routes via Iran, China
- Confusing overlap of politics with economics, roles of governments and business

# Stakeholders in Energy Transit

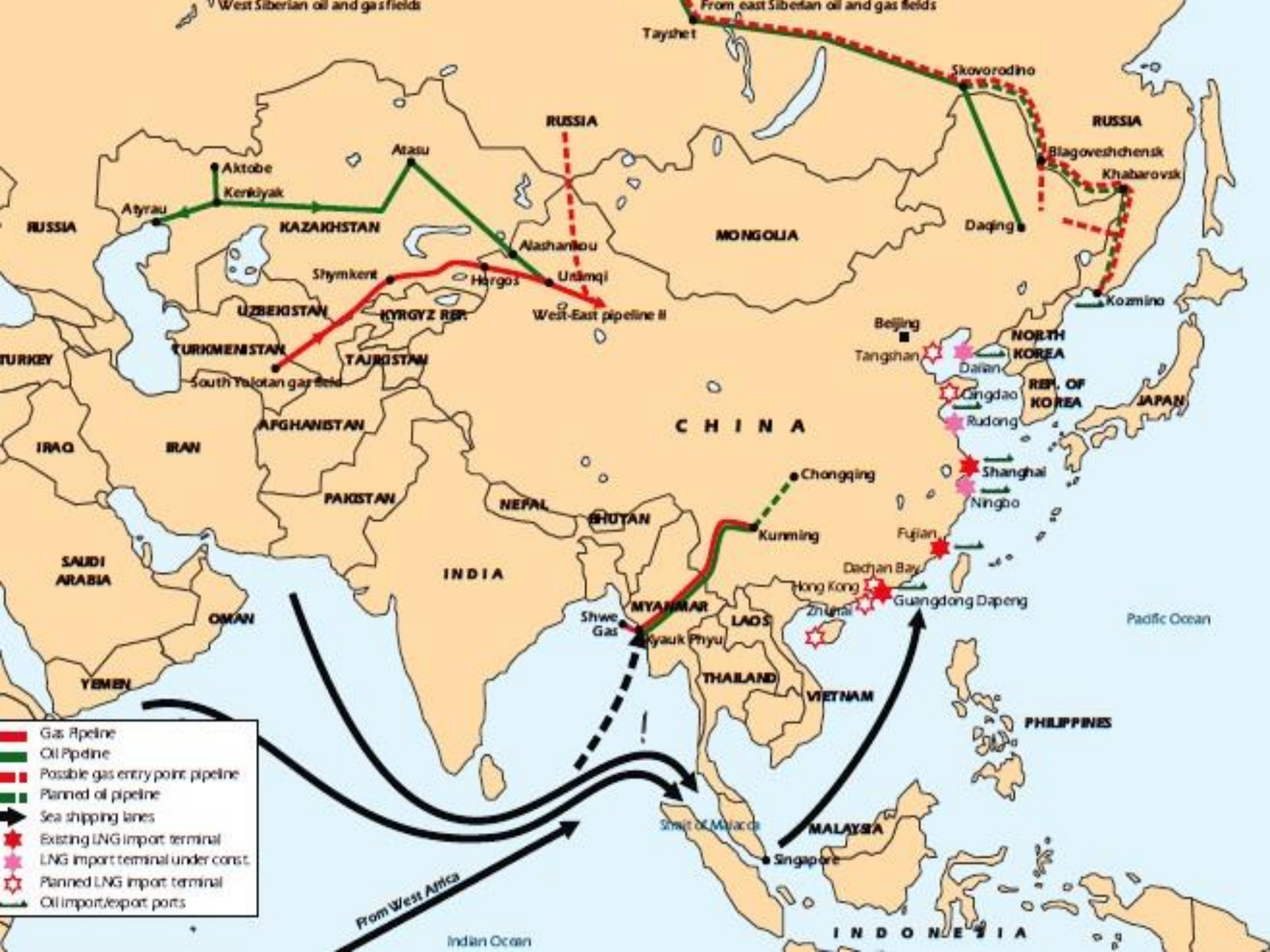
- Producing countries
- Producing companies
- Consuming countries
- Consuming companies
- Transit countries
- Transit companies
- Competitors
- Other interested parties, e.g., USG, lending institutions and contractors

***Success depends on alignment of interests***

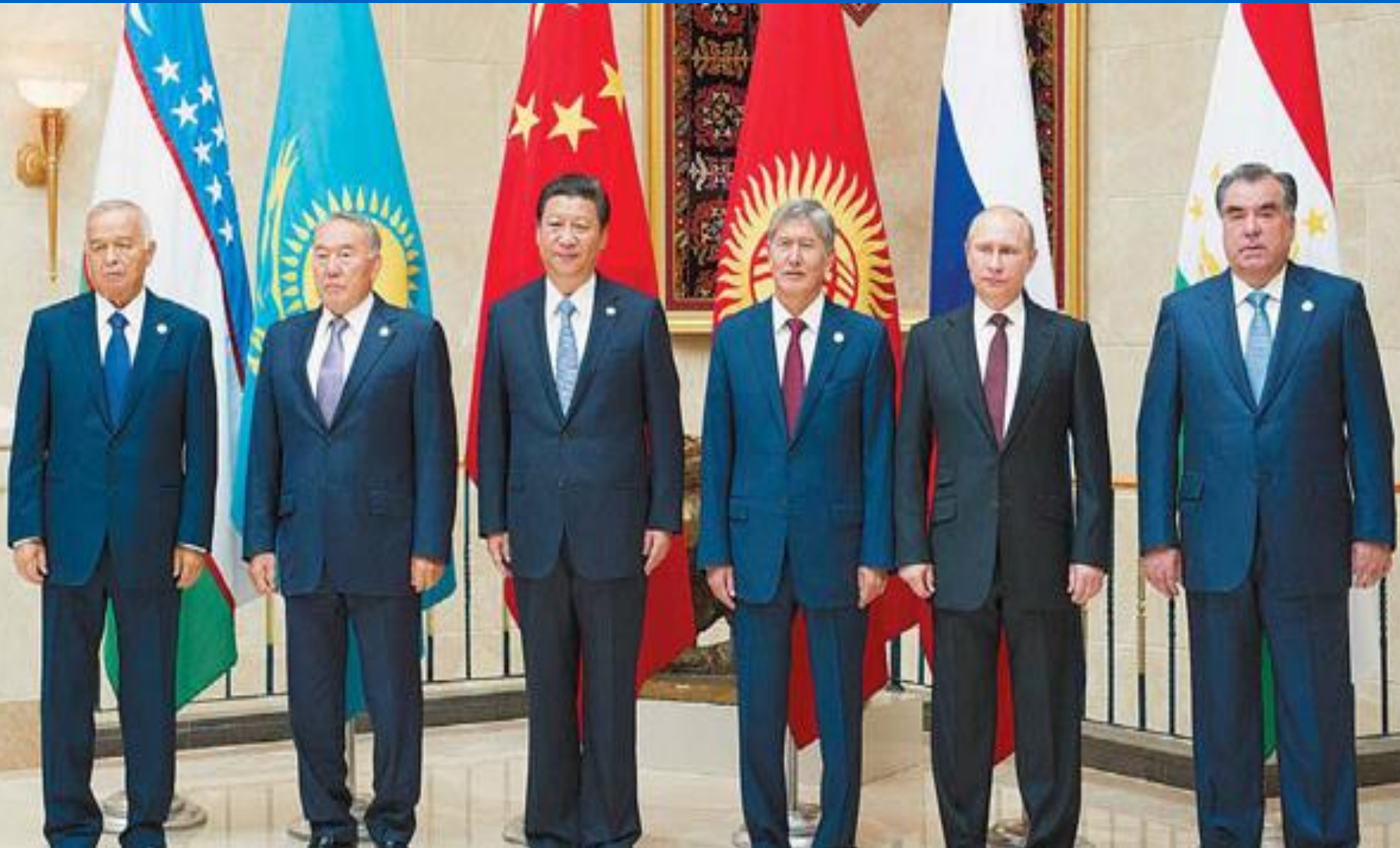
# China Factor

- Supply relationship with Russia
- Equity investment in Central Asia
- Premium for land supply routes – willingness to pre-build pipelines
- Chinese development model
- Neighborhood policy
- Competitive NOCs and service contractors
- *Potential partners for IOCs?*

*Increased Asian competition from Iran, Gulf states, India, Japan, Malaysia, Korea*



# Shanghai Cooperation Organization Summit September 2013 in Bishkek



# Caspian Pipeline Lessons Learned

- International politics can support, but do not determine outcome and more often block sensible commerce
- No bankable volumes, no pipeline
- Project champion is essential: a single committed and capable one is better than multiple one
- Fundamental economics matter—superior netback to wellhead justifies new pipelines and lead to shipper financial guarantees
- Diversity of supply and routes is good, but someone has to pay the premium

Whereto Shah Deniz II, Kashagan, and Galkynysh?

# Pipeline Gas to South Asia



# U.S. National Interests

- Caspian countries' economic independence/political sovereignty
- Incremental oil and gas supply for world market
- **Afghanistan/Pakistan**
- ...
- American commercial interests
- ...
- Supply diversity for friends or allies