Caspian Gas Market Trends:
Between Politics and the Markets

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Washington
September 12, 2013

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NATURAL GAS MARKET TRENDS IN EUROPE AND THE CASPIAN REGION, INTERNATIONAL AND REGIONAL PRICING MECHANISMS

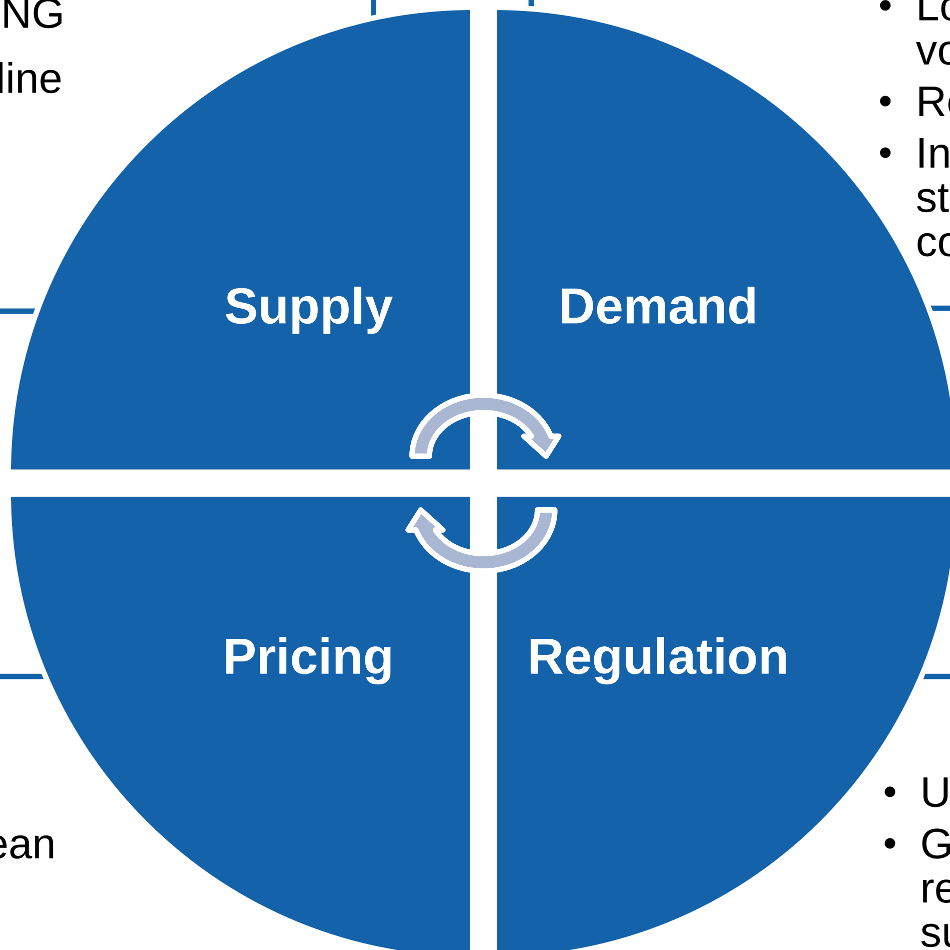
2

IMPACT OF THE GLOBAL SITUATION ON THE REGIONAL RELATIONS AND CASPIAN LITTORAL STATE ENERGY STRATEGIES

Main directions of the European gas market transformation do not favor Russian or Caspian gas exports

- Growing supplies of LNG
- Diversification of pipeline supply sources

- Lower than contracted volumes
- Recovers very slowly
- In the power sector gas is strongly competing with coal



- Spot volumes are increasing very fast (30-40% p.a.)
- Majority of the European stakeholders support transition to the spot pricing

- Unbundling
- Gas Target Model requires all gas to be supplied at the virtual hubs

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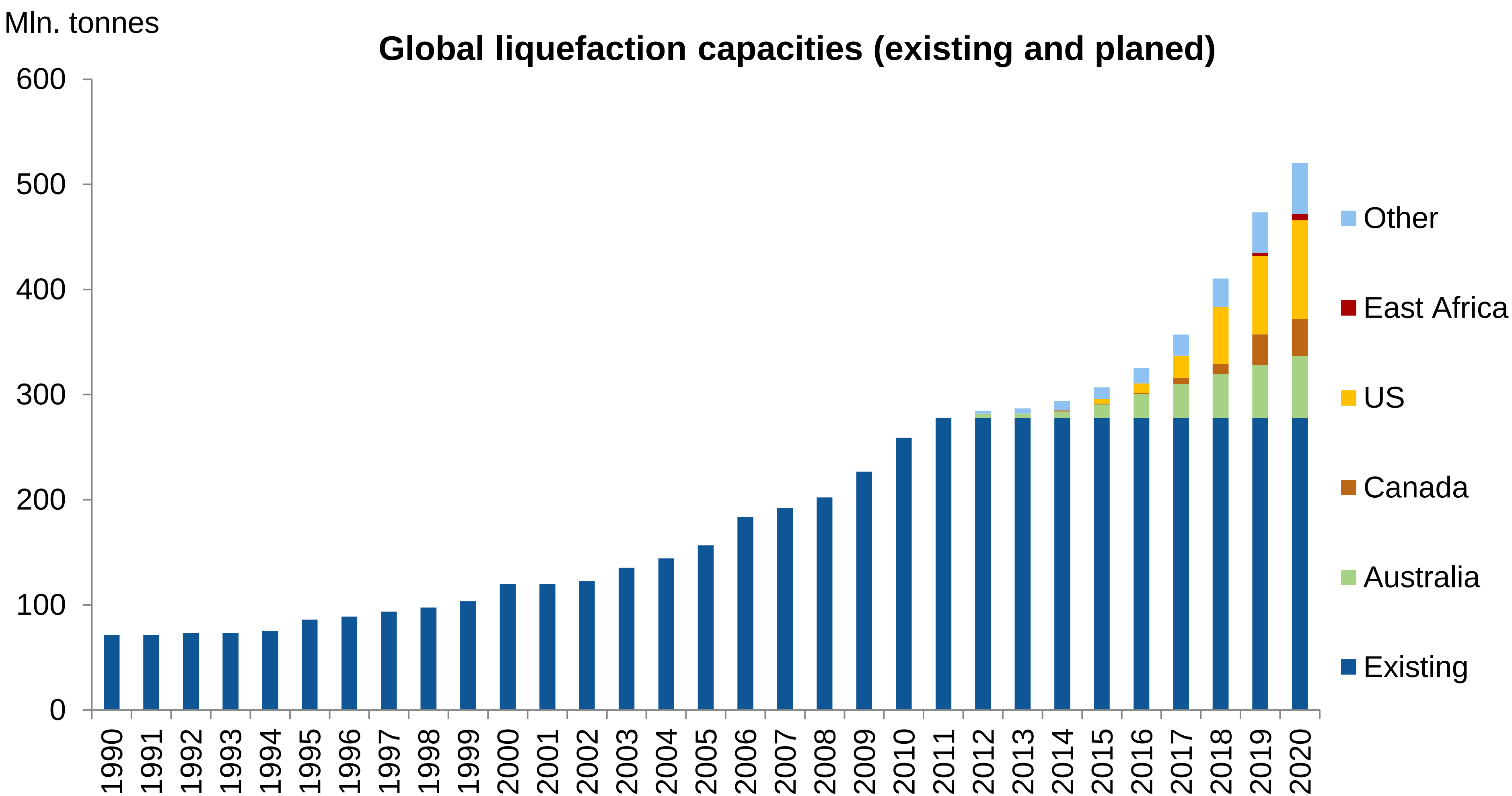
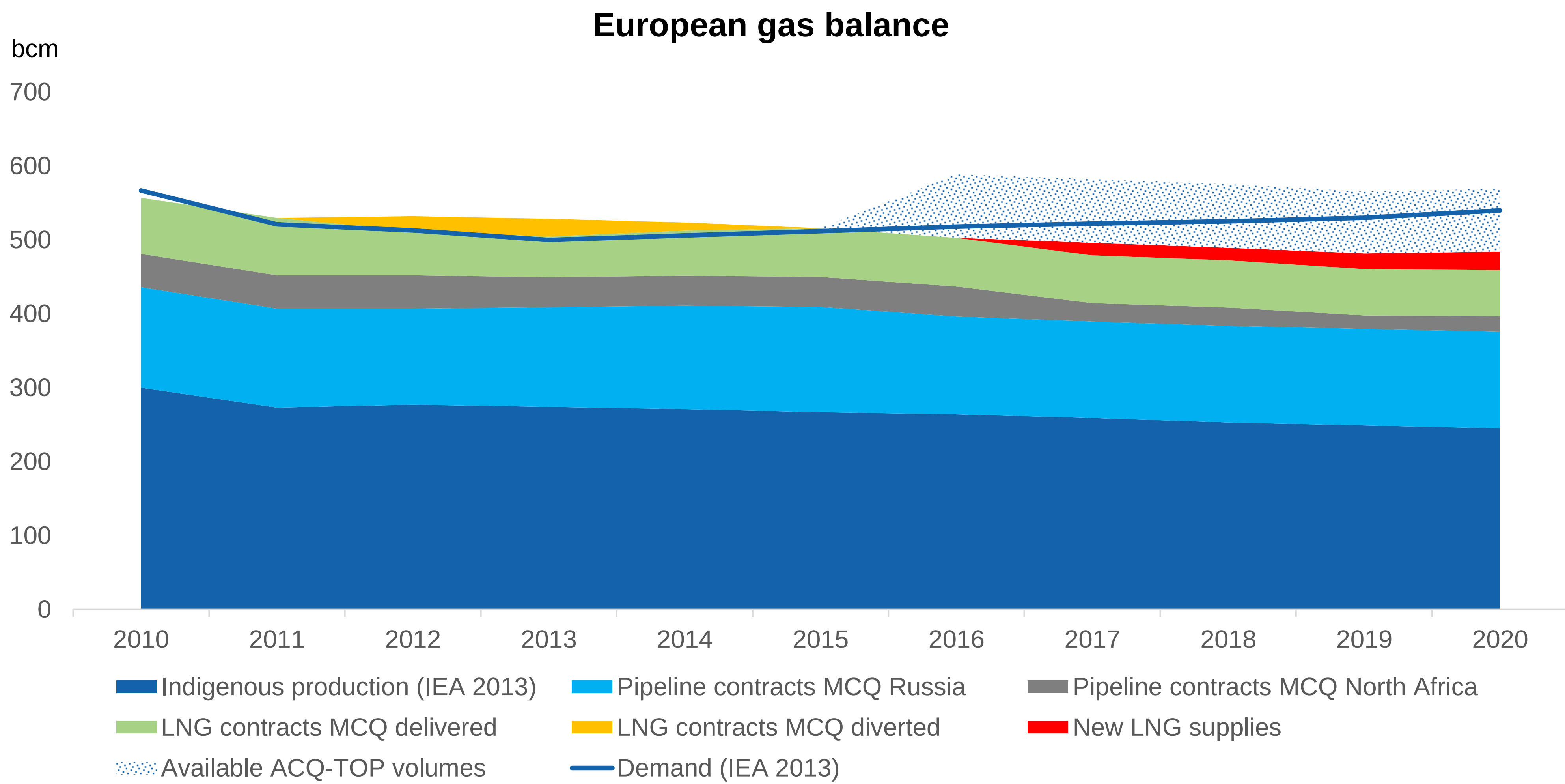
Global LNG supply is expected to boom during the next decade



Source: ERI RAS

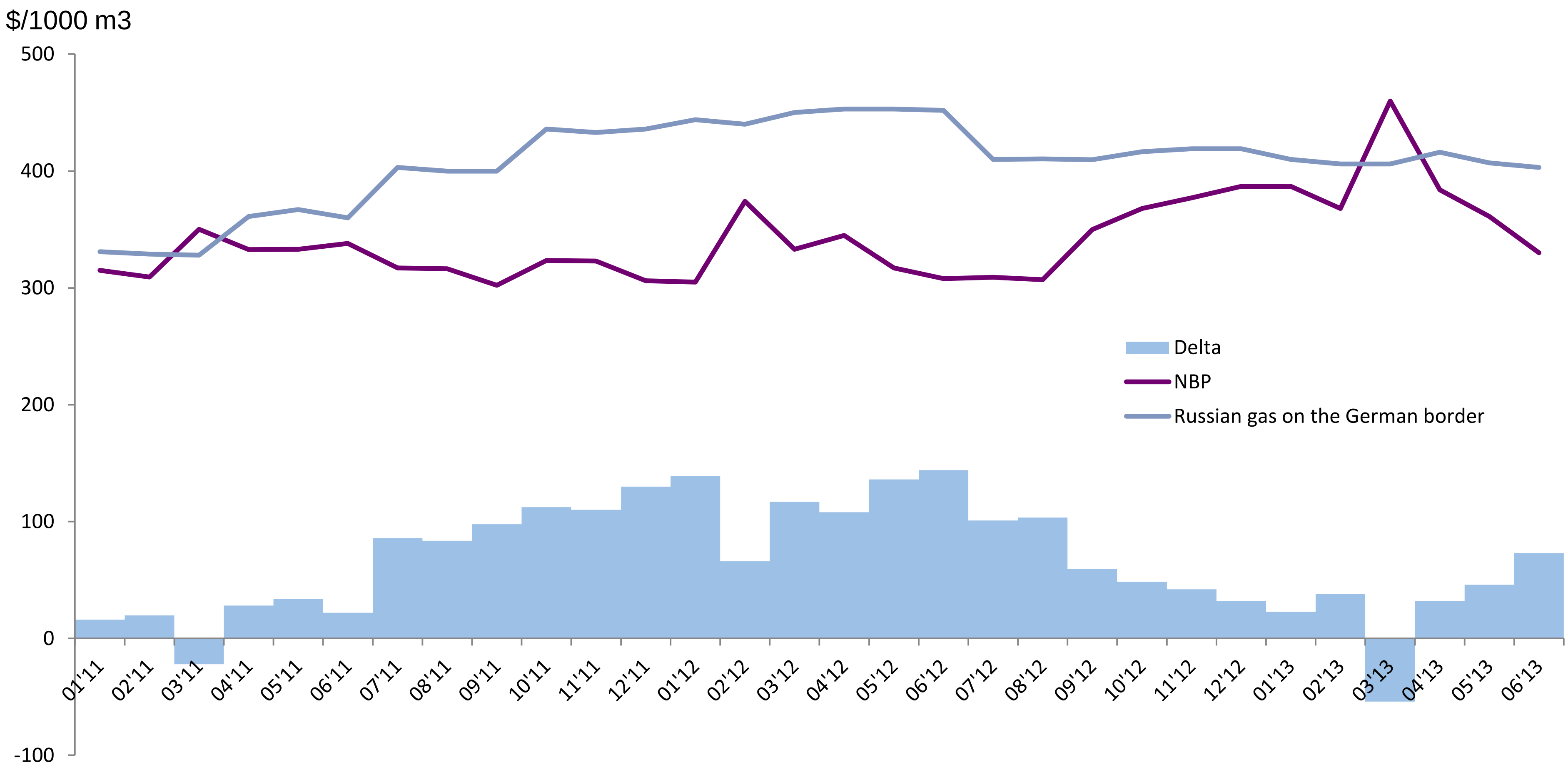
…but European gas market is going to be tight until 2016 as LNG is diverted to Asia



Source: WEO2011, IEA; Cedigaz; ERI RAS.

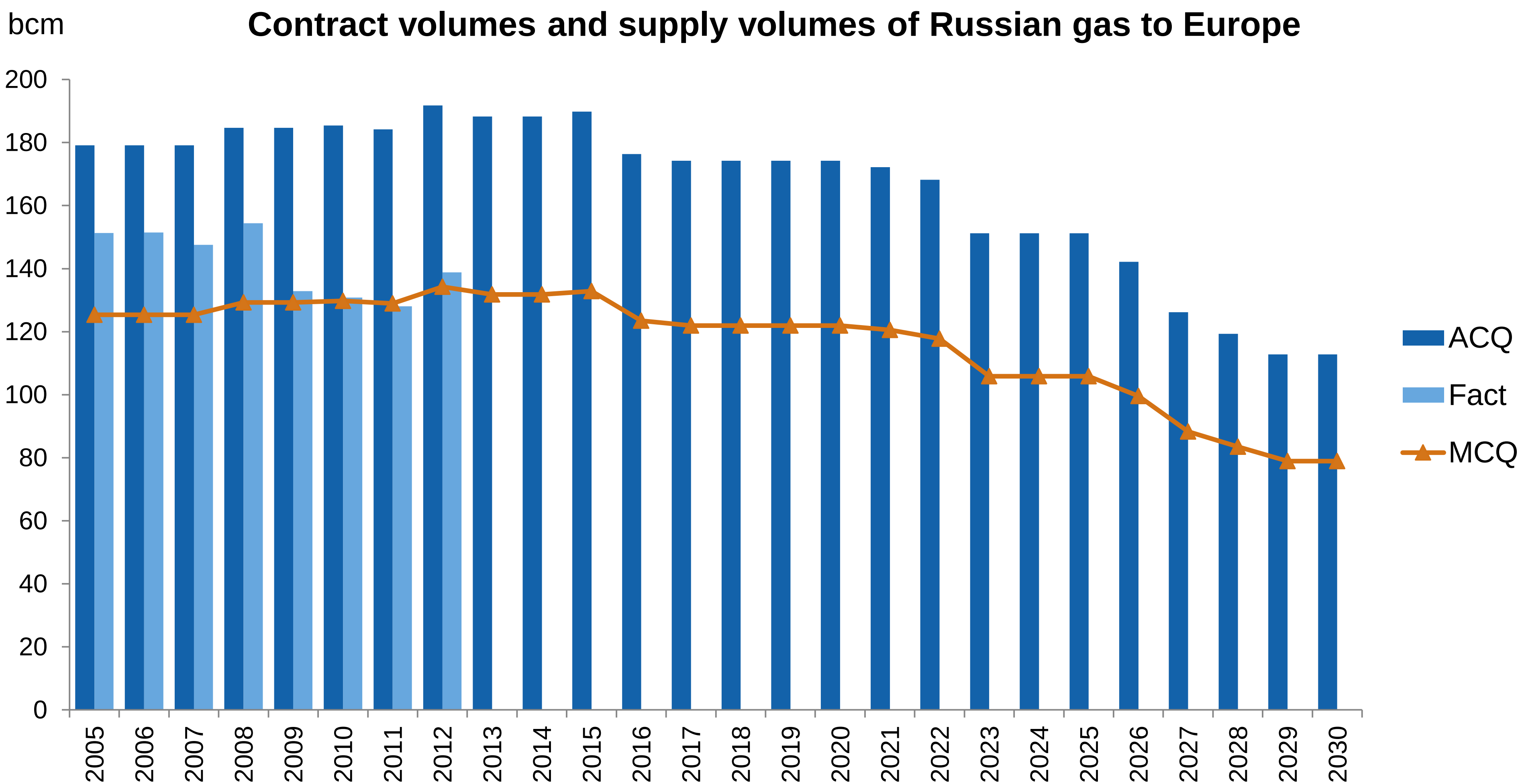
Traditional gas pricing model is questioned now, as even renegotiated oil-linked contract prices are higher than spot-based

European spot and oil-linked gas prices



Source: Bloomberg; ERI RAS.

Existing long-term contracts guarantee stable sales volumes for Russia until at least 2022



Sources: Cedigaz, Gazprom, ERI RAS.

Russia: oil indexation vs. gas indexation

Oil indexation

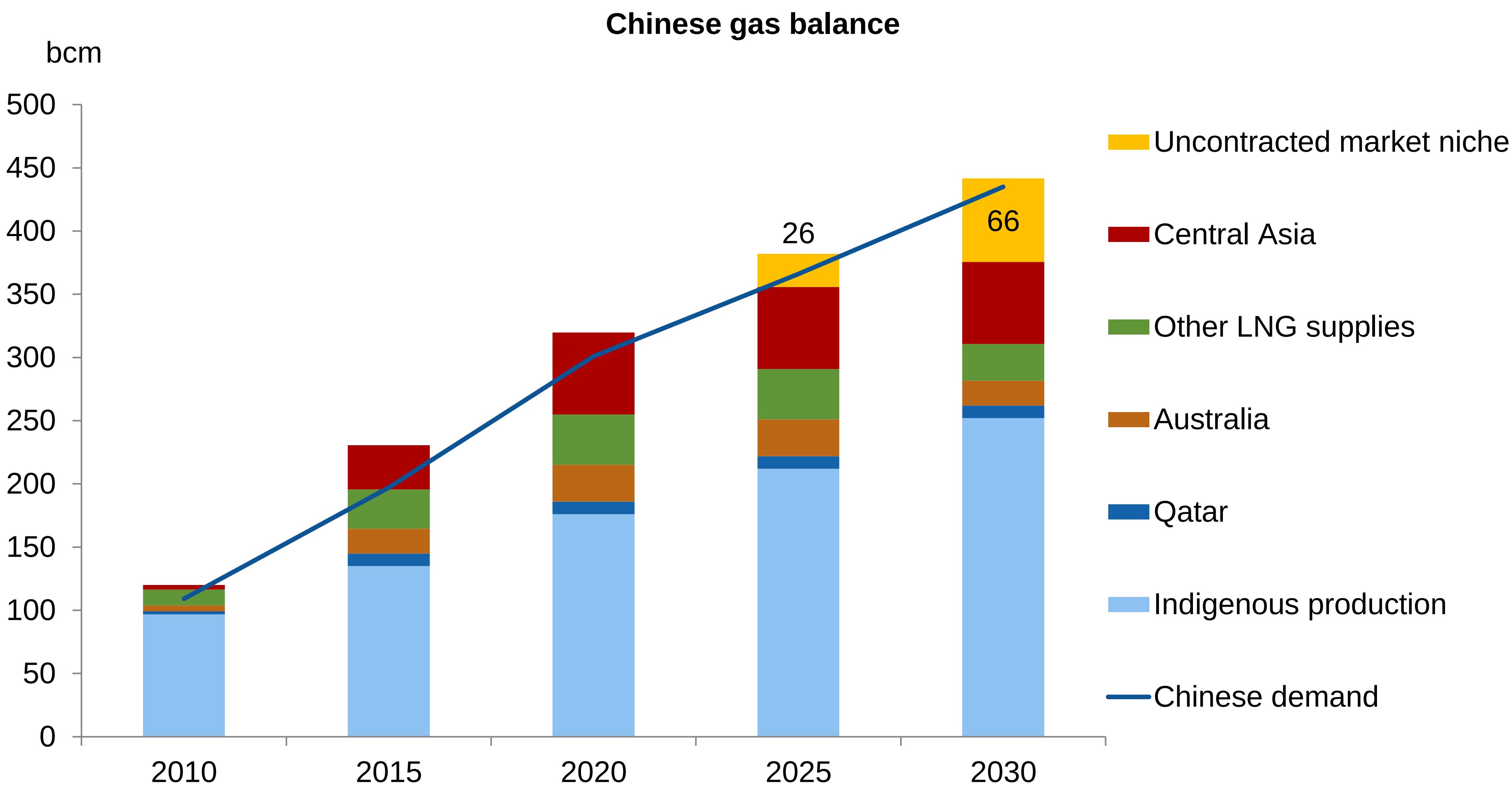
- Disappearing gas glut on the European gas market in the medium term – gap between oil-indexed and spot prices will narrow
- Arbitration lasts for several years
- Gazprom will face price reopening and contract expiration only after 2015
- With high oil prices even lower sales volumes are providing high revenue
- New projects need high prices
- Oil indexation is needed for the project financing

Spot indexation

- Strong pressure from the customer side
- Gazprom could demand financial compensation for contract review + 3rd Package exemption for the South Stream and NEL + transitional period for price adjustments + European-level financial support for its mega-projects (like EBRD and other European financial institutions)
- Gazprom could become a dominant player dictating prices at the spot market by changing its supply volumes

There are strong commercial reasons for Gazprom to protect the oil indexation at least during the next 3 years

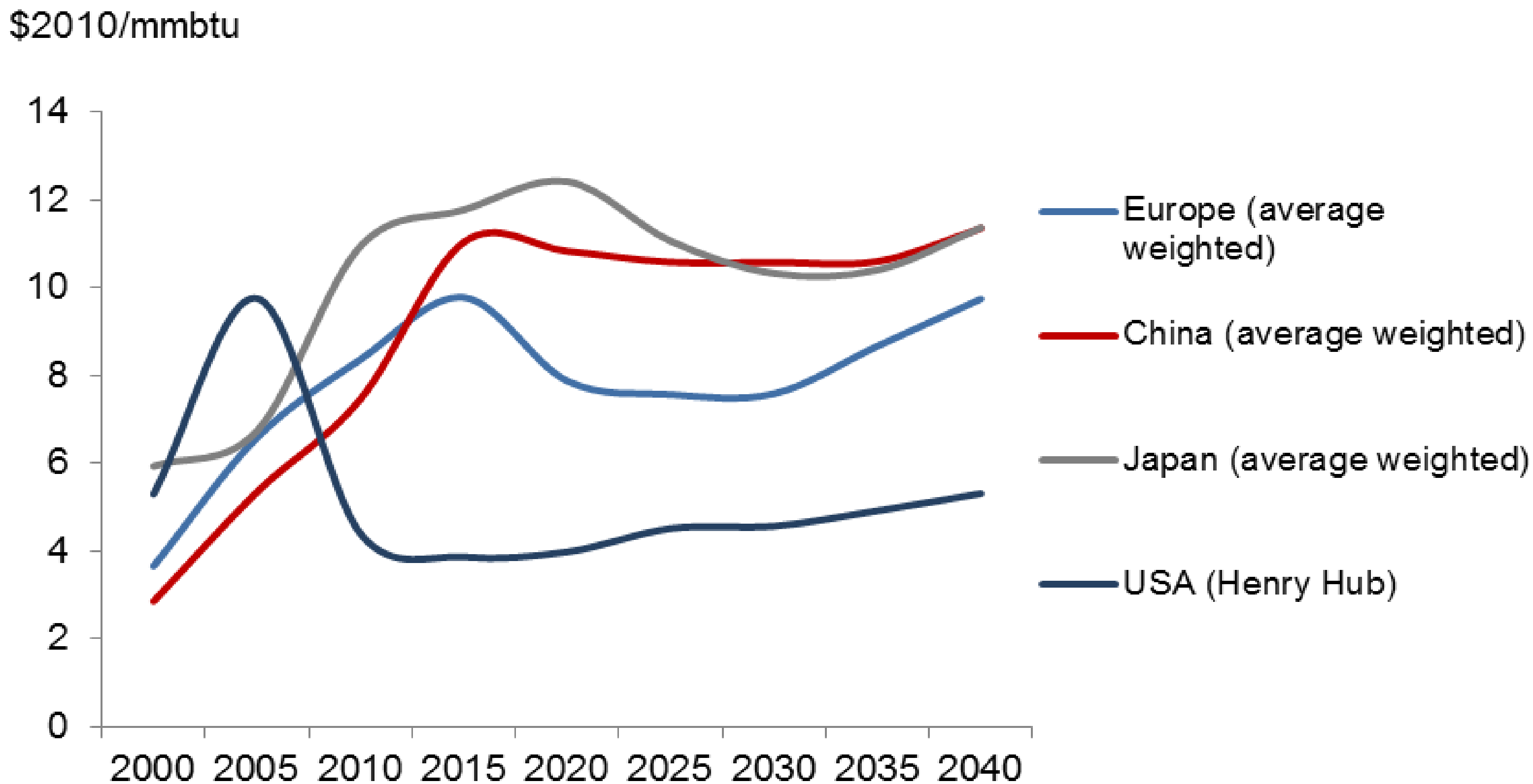
Caspian supplies to China are booming, by 2020 there is already no market niche in China, by 2030 the niche might reach 66 bcm



Source: Cedigaz, ERI RAS

Regional equilibrium gas prices are not expected to grow

Average weighted regional prices* of gas



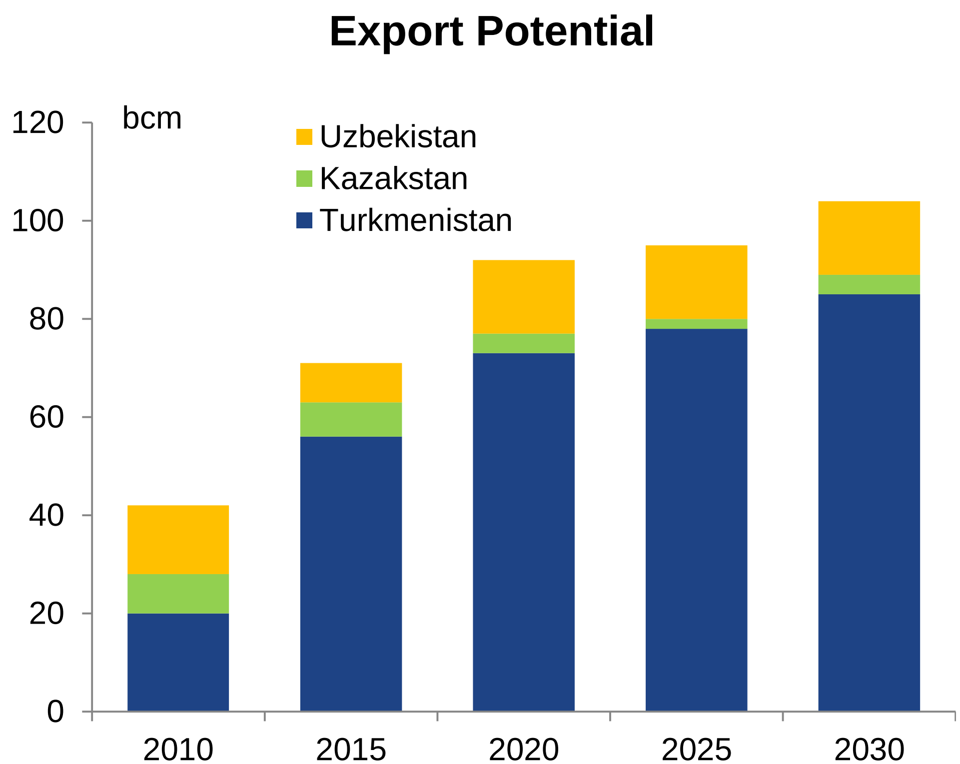
* Weighted average price between the prices of long-term contracts linked to alternative fuels, and spot prices.

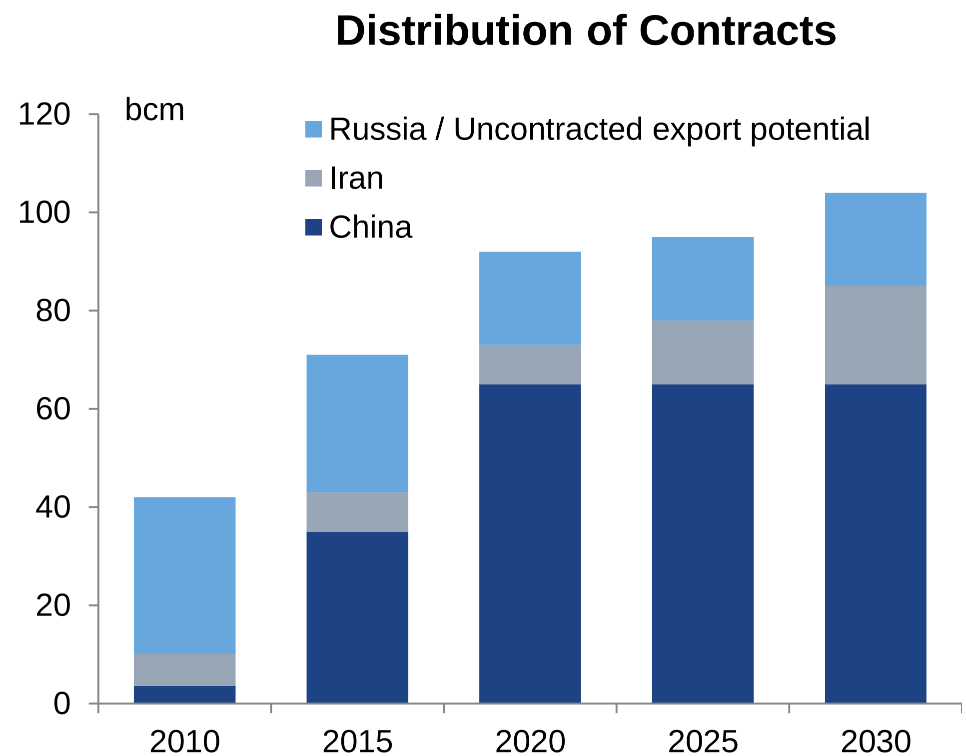
Source: Global and Russian Energy Outlook up to 2040. ERI RAS-AC. 2013.

1 Natural gas market trends in Europe and the Caspian region, international and regional pricing mechanisms

2 Strategies of major regional producers and consumers (Turkey, Russia, China, Iran)

Export possibilities of Central Asian countries may exceed 100 bcm by 2030



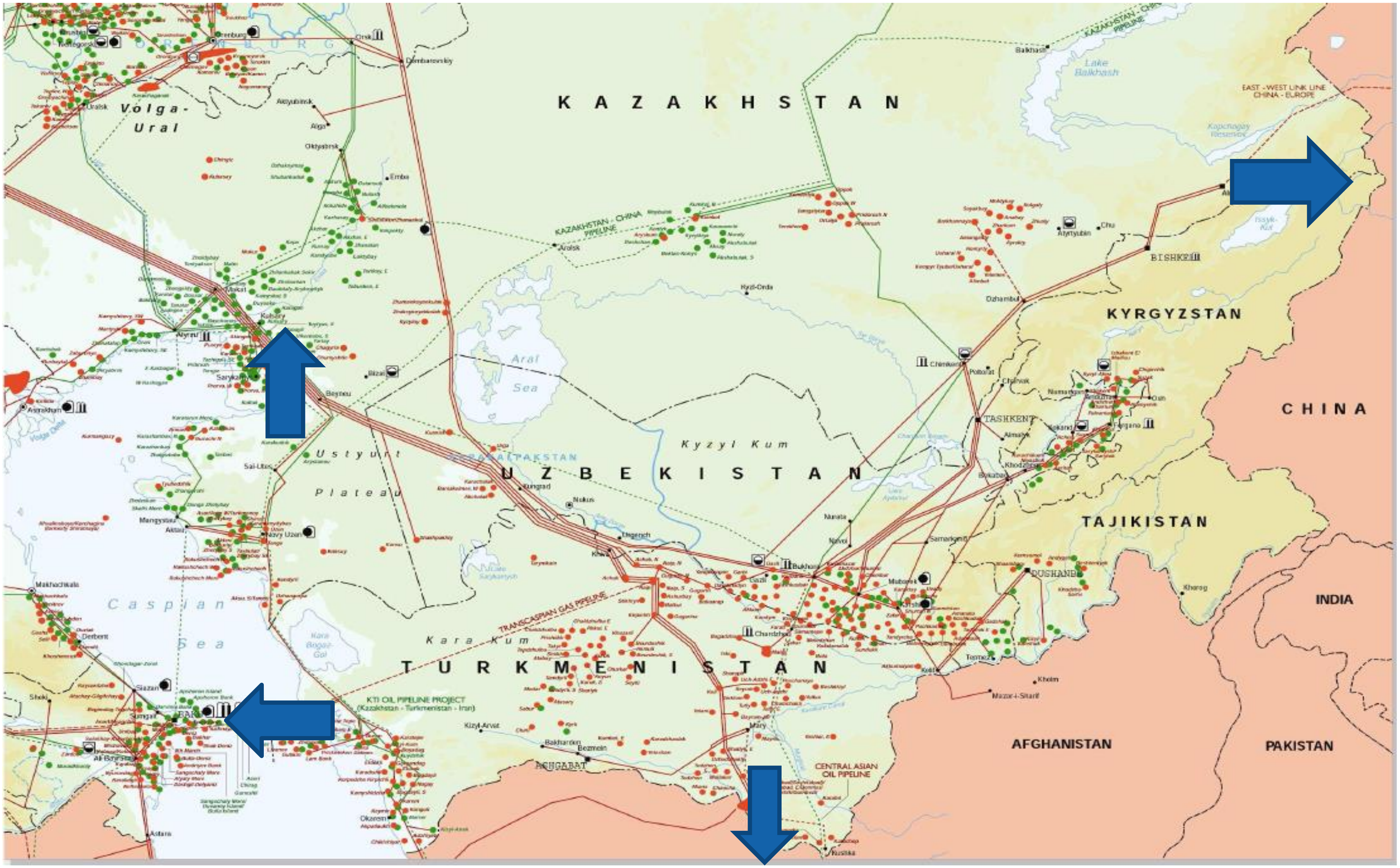


Proven reserves, tcm	
Turkmenistan	**8.03**
Kazakhstan	**2**
Uzbekistan	**1.7**

… however, uncontracted export potential will not exceed 20 bcm

Source: Cedigaz, USGS, IEA, WEO, ERI RAS

Central Asian countries: seeking diversification

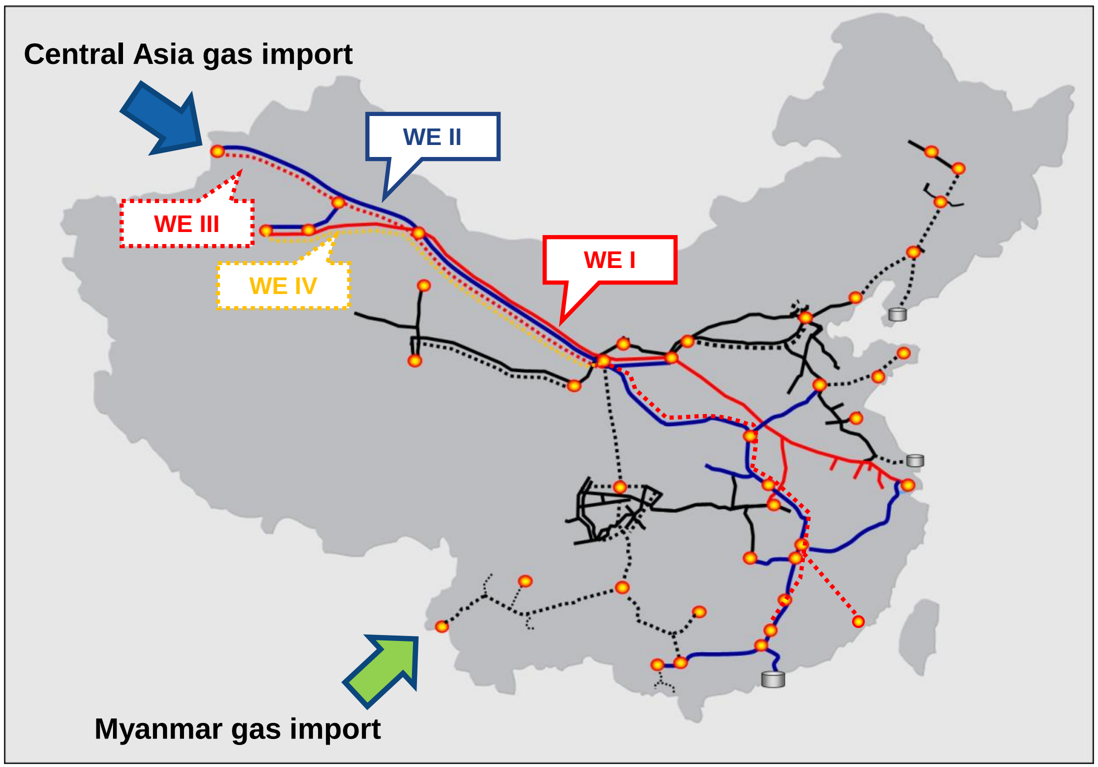


Pipeline infrastructure developing in Central Asia links the region more and more closely to China

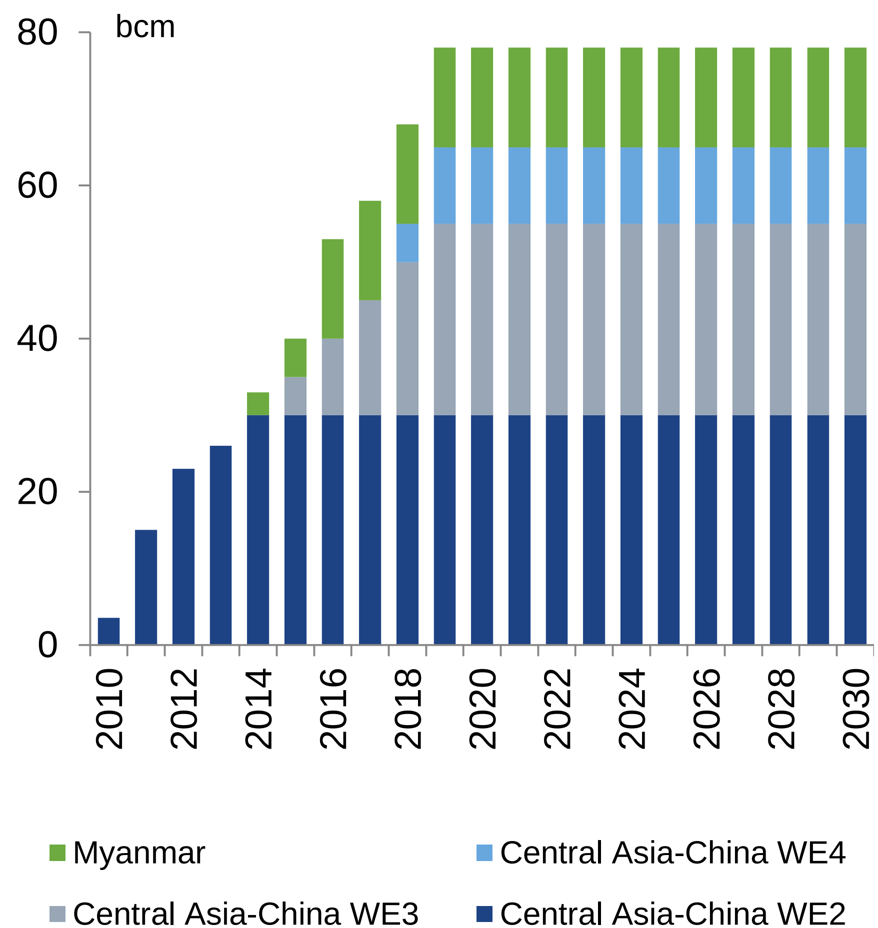
Turkmenistan-China pipeline expansion agreement signed by the end of 2011 and the recent agreement on September 2013 mean that all additional volumes of Central Asian gas production will go to China

Pipeline gas imports from the Central Asia and Myanmar may provide up to 80 bcm of gas by 2030

China's Gas Pipeline System



Dynamics of Pipeline Gas Import

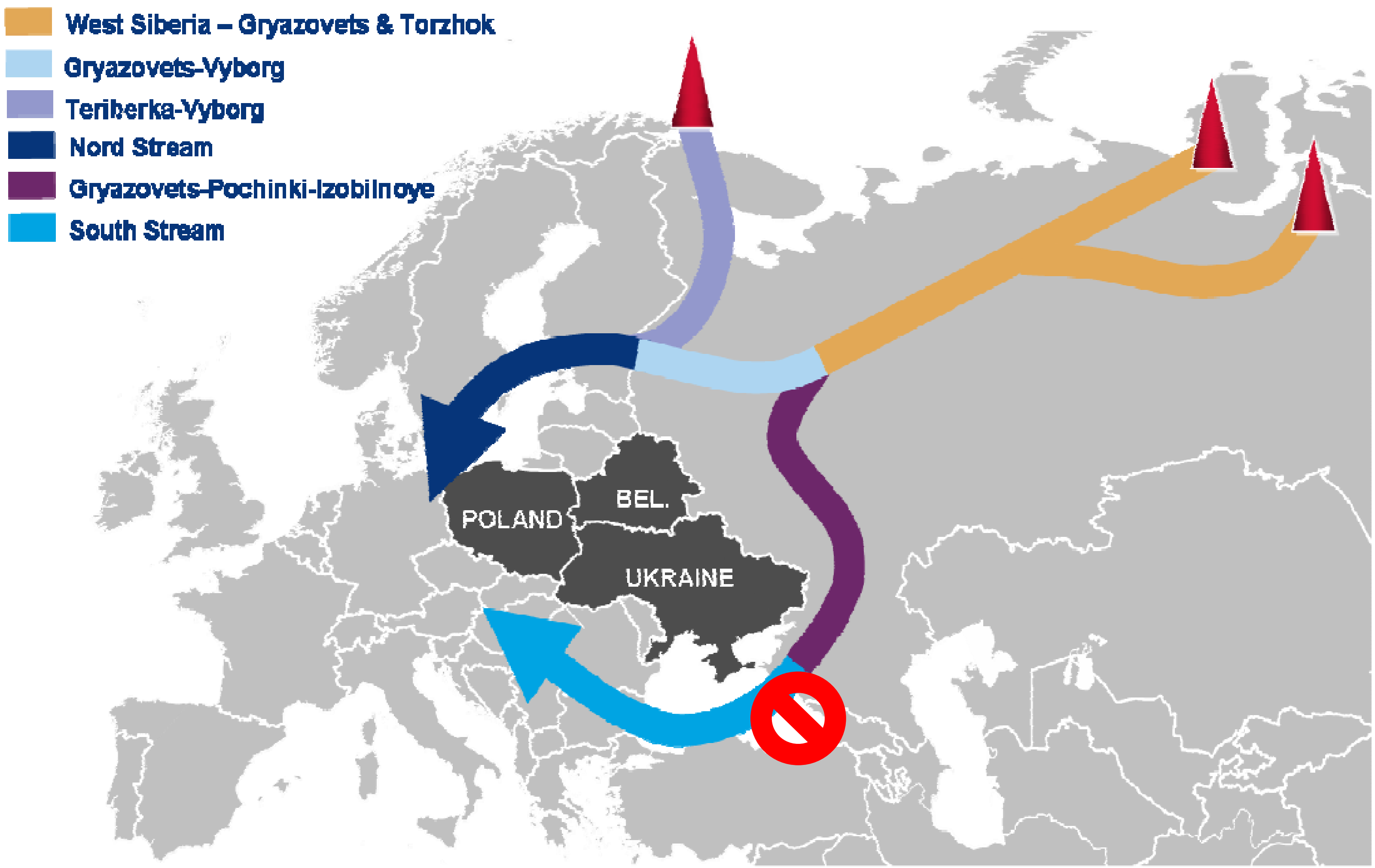


Source: SKOLKOVO Energy Centre

Turkey: regional gas hub

Sources: Petroleum Economist, BP, Enerdata Estimates

Russia: diversifying supply routes, bypassing transit countries and blocking Central Asian gas on its way to Europe



Source: Wood Mackenzie

Central Asian gas prices are too high for Gazprom, but the reason to block this gas is stronger

Gazprom's average contract prices for Caspian gas, $/1000 m3

- Securing an export price related to the international market value of natural gas has been a long-standing goal for Caspian exporters.
- Gazprom agreed that from 2009, export prices would be linked to the price in Gazprom's main continental European markets, minus transportation and other costs.
- But, since 2009, the reduced European and Russian gas demand has reduced the call on Central Asian gas supplies and thus the incentive for Gazprom to buy this gas at such prices.

High prices make Central Asian gas economically less attractive for Russia. These supplies are sustained nevertheless in order to avoid this gas from getting directly to Europe via discussed Transcaspian pipeline.

Iran: powerless under the sanctions regime, but potentially the key game-changer

Contacts

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"Global and Russian Energy Outlook up to 2040"
http://www.eriras.ru/files/Global_and_Russian_energy_outlook_up_to_2040.pdf

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