

GAS

Medium-Term Market Report 2014

Medium-Term Gas Market Report

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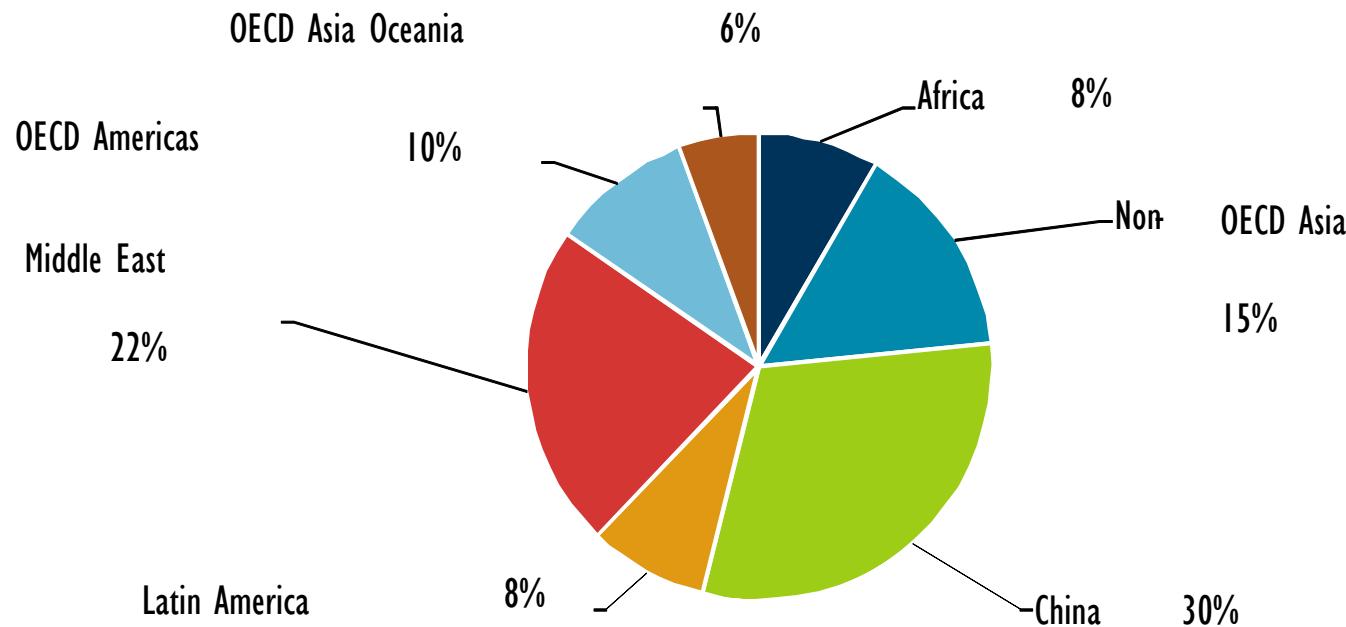


Market Analysis and Forecasts to 2019

Demand grows at 2.2% per year over 2013-19

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Incremental gas demand by region, 2013-19

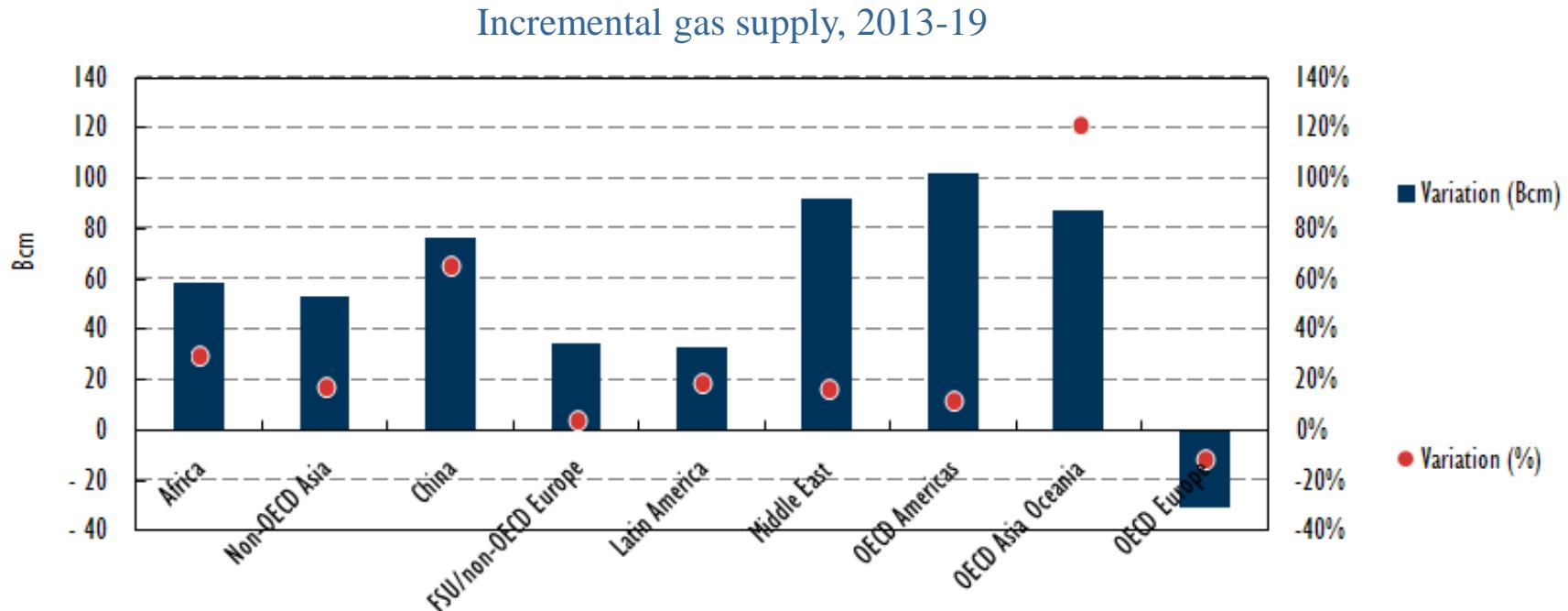


- Demand in the FSU and Europe does not increase

Supply growing, not all available for export



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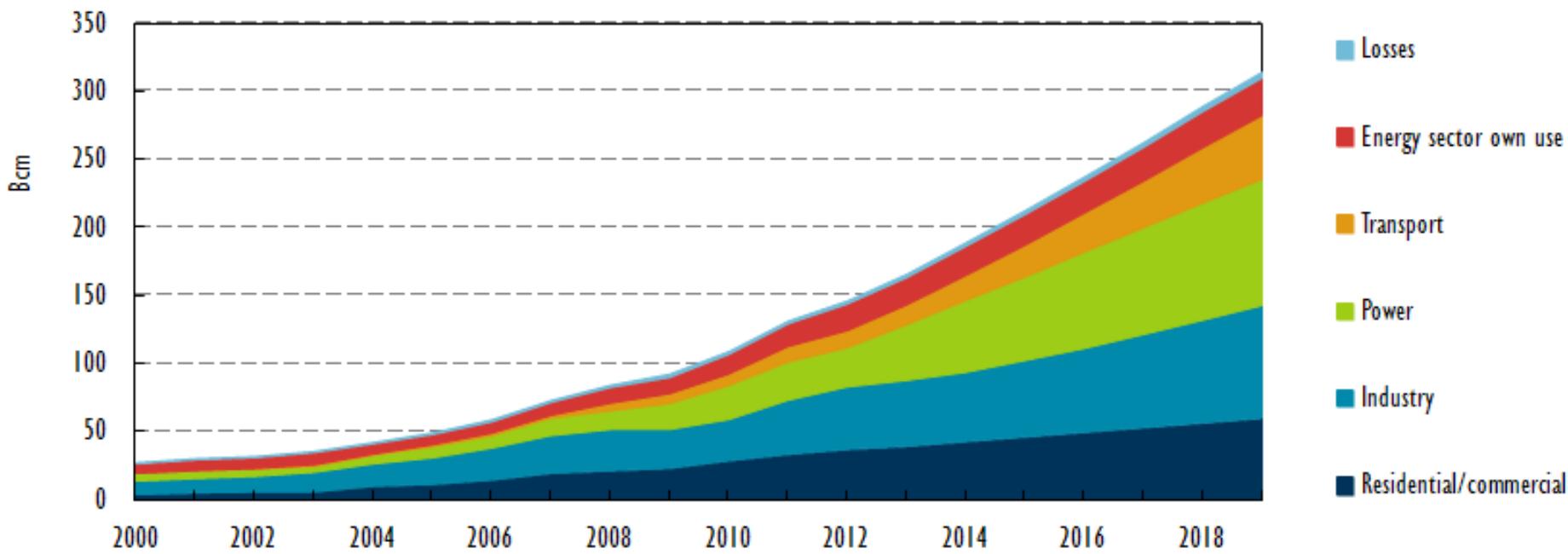
- OECD Americas and Asia Oceania will represent 40% of additional supply, while FSU production falls significantly behind

Air pollution issues encourages gas use in China



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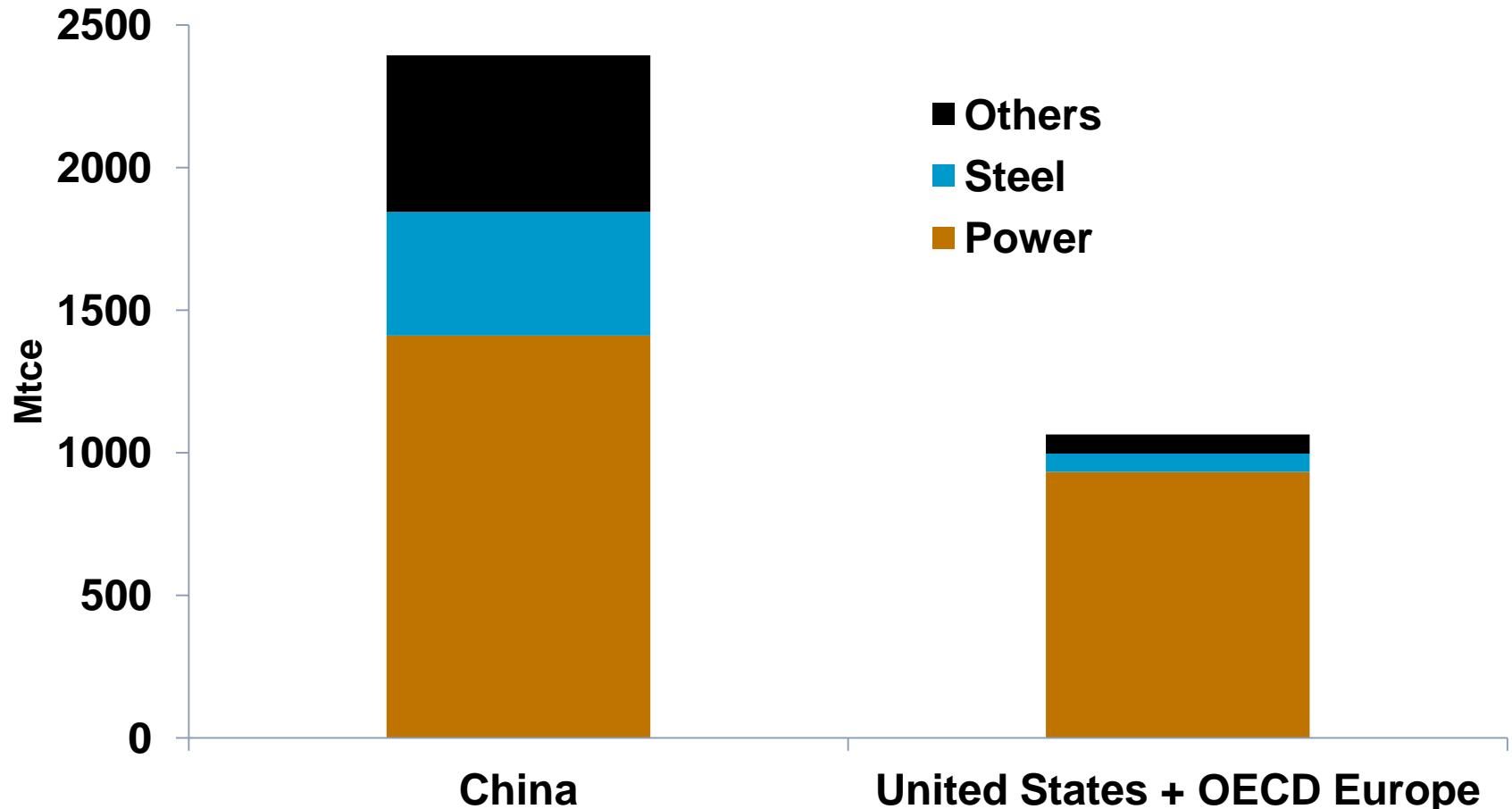
China's gas demand by sector, 2013-19



- Gas demand in China will gain 150 bcm over 2013-19: this is 2 times UK's gas consumption and 2 times China's gas production growth

Coal demand per sector

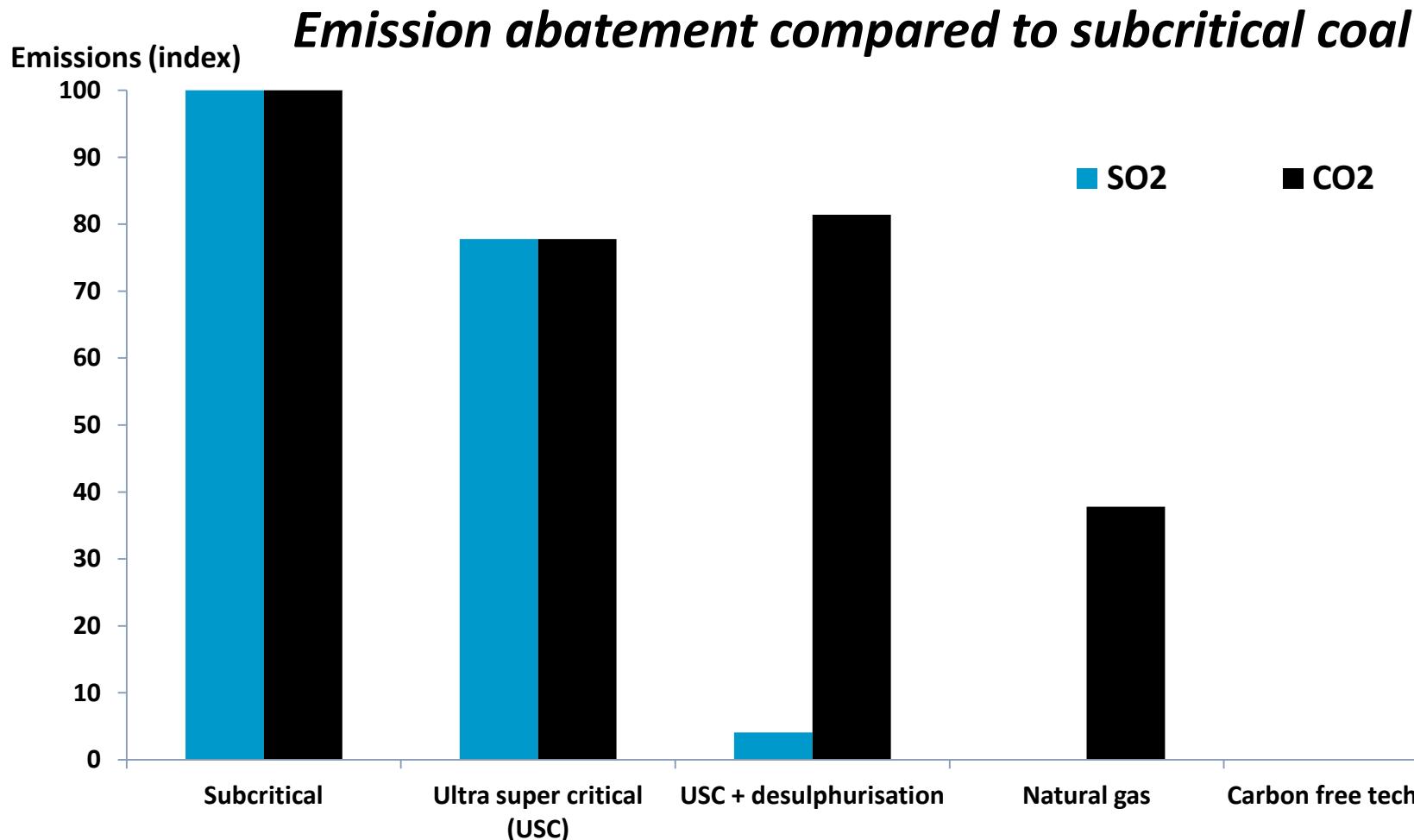
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Local air pollution policies might help gas



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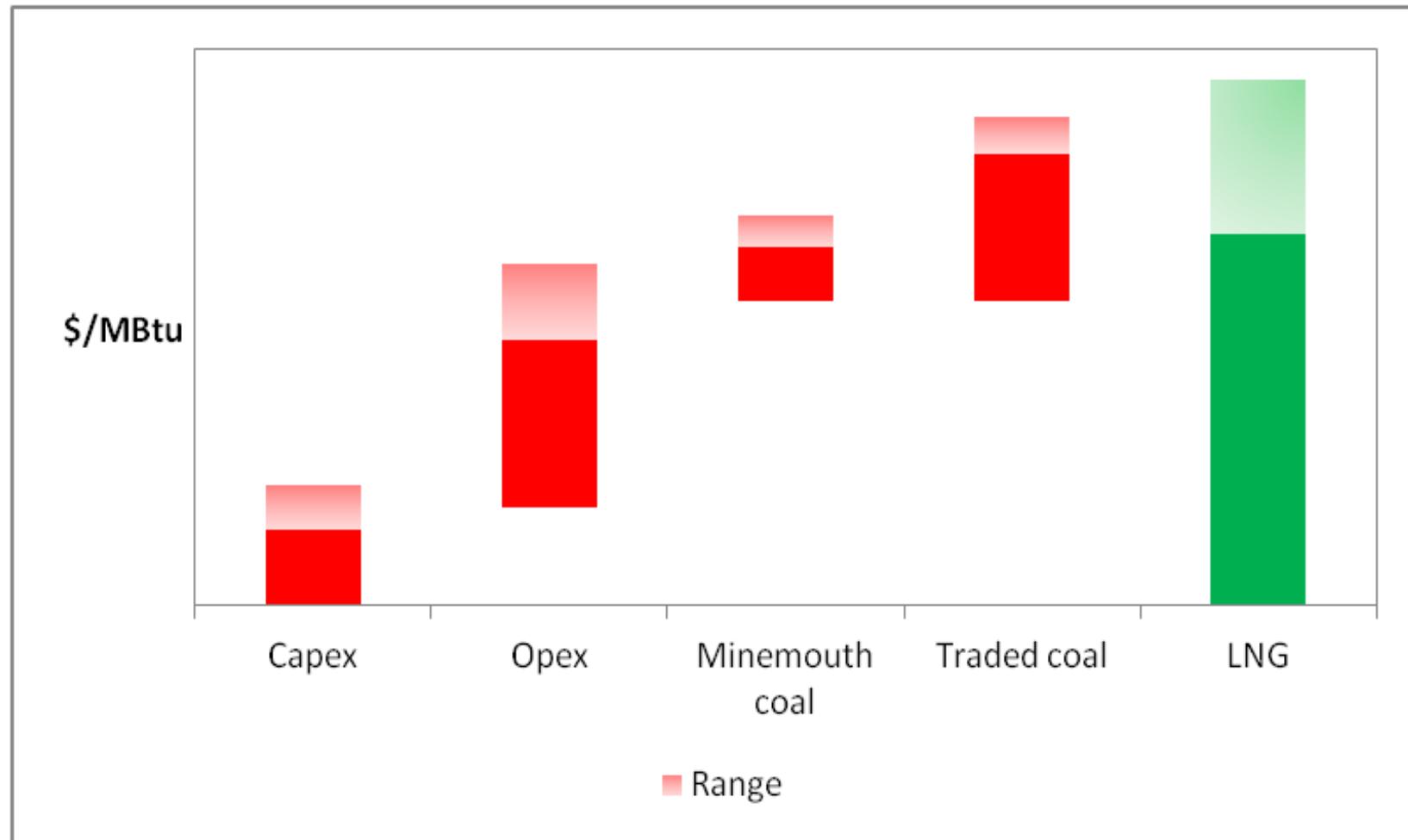


Or they might increase coal demand further



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AN ESTIMATE OF COAL-BASED SNG



Case study: Clean energy for the city of Shanghai

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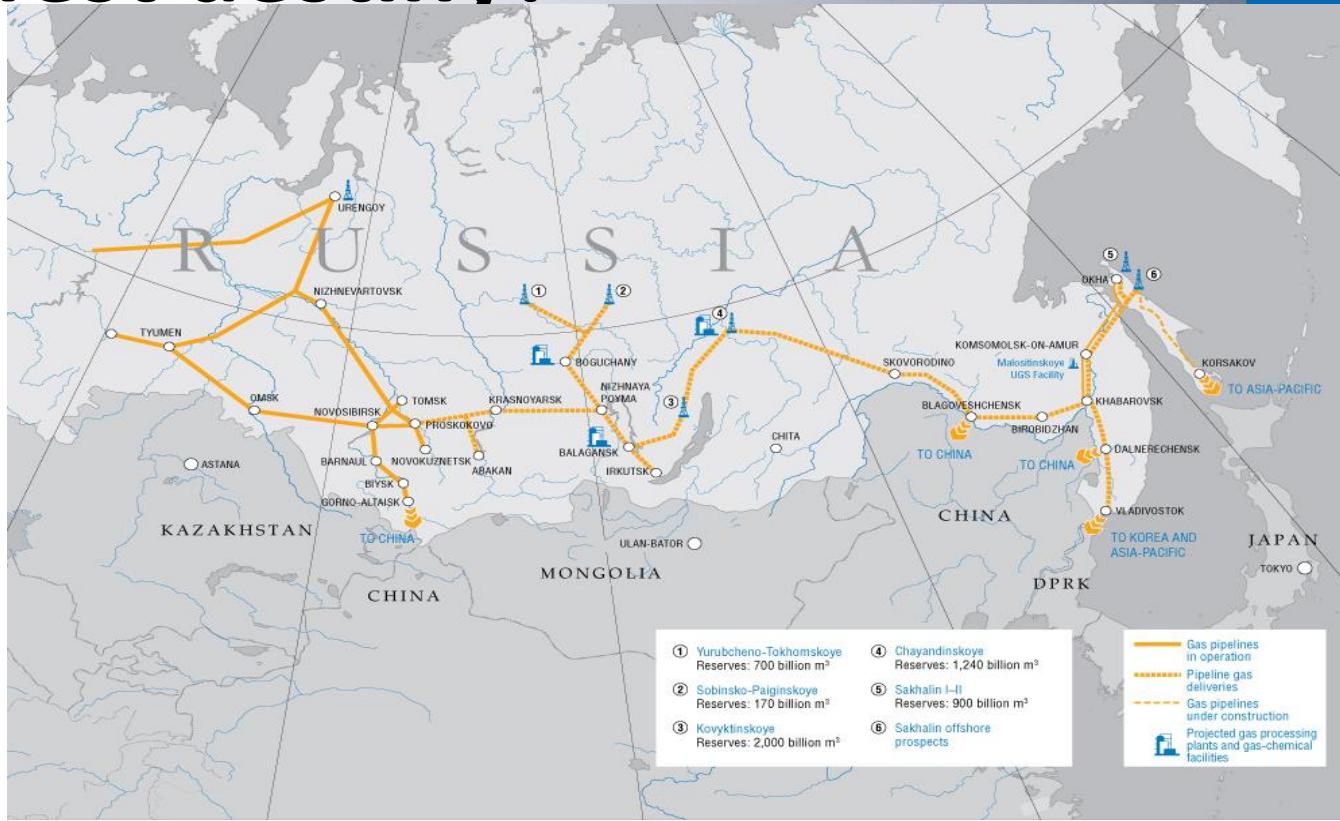
The only country with a rapid energy growth and cold winters

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Russian gas: the East is the manifest destiny?

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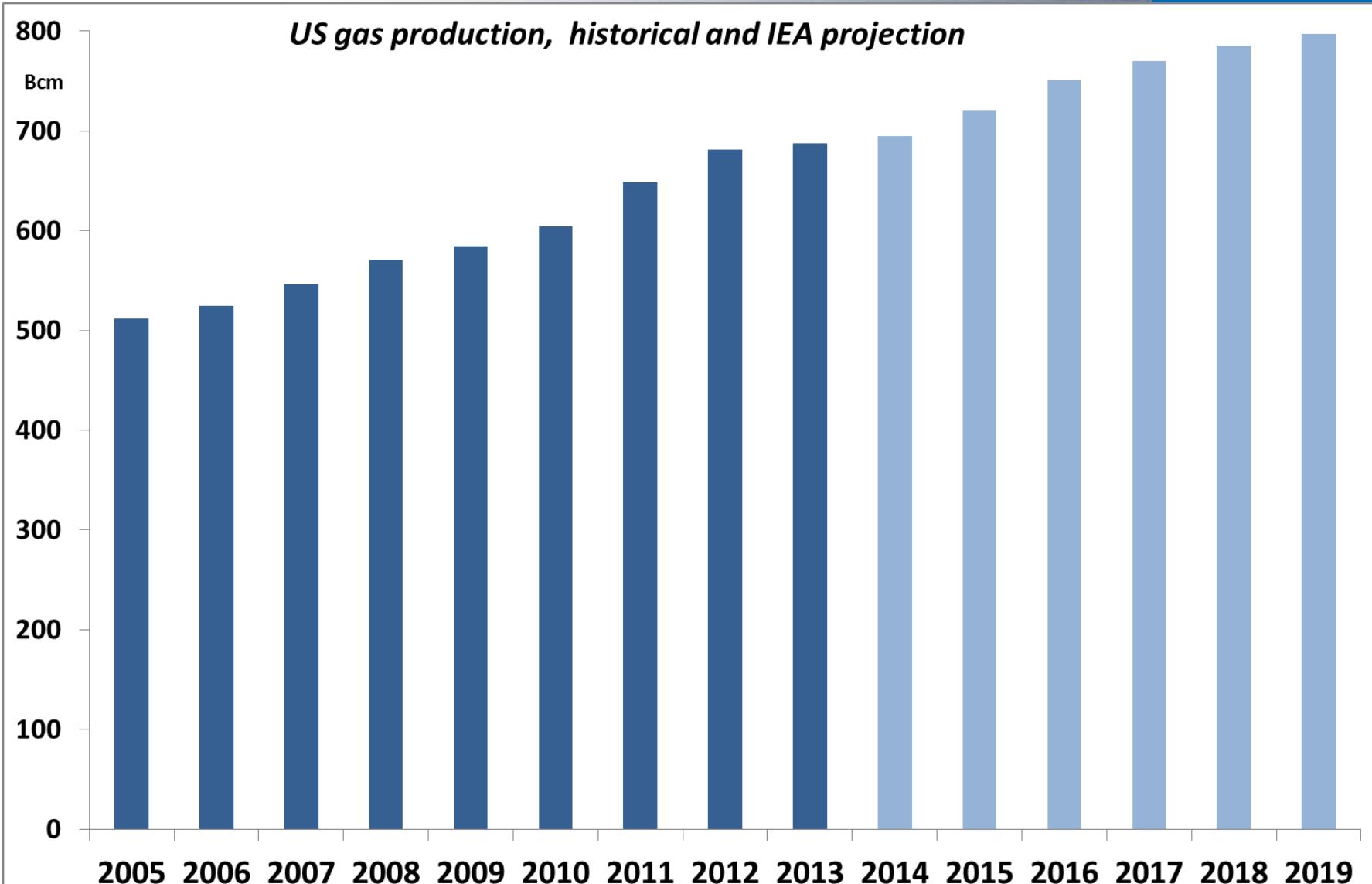
Source: Gazprom

- *Production constrained by EU and domestic demand*
- *Surging independent production backed by NGLs*
- *Asian exports depend on capital-intensive infrastructure*

North American shale: defying gravity



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Why US gas production is unstoppable?



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- Marcellus
- NGLs and Light Tight Oil
- Technological progress
- Access to capital

“This plant, if it’s located in Germany, energy costs are double, maybe triple; same in Japan. So this gives us a big edge”

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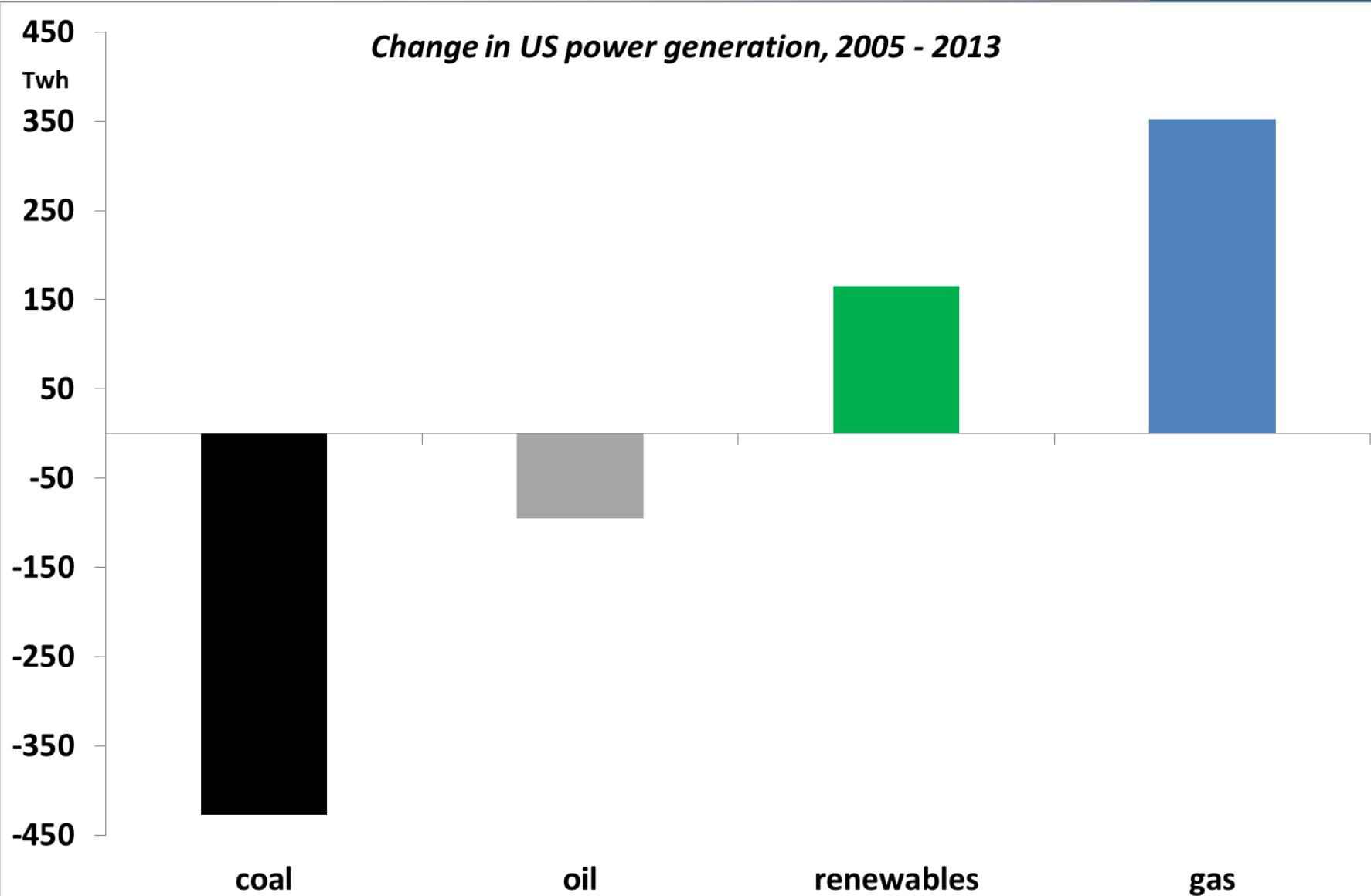
President Obama at the AcelorMittal steel plant in Cleveland

The Obama plan and US gas demand



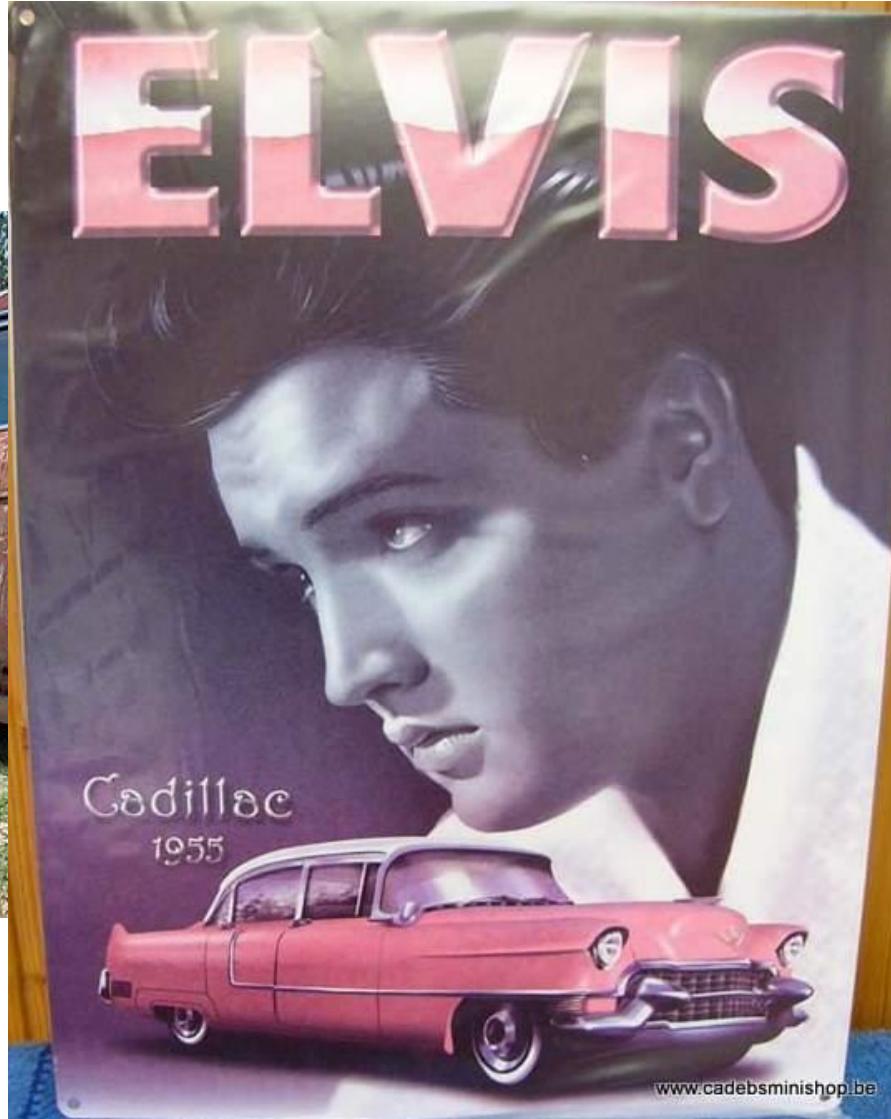
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Change in US power generation, 2005 - 2013



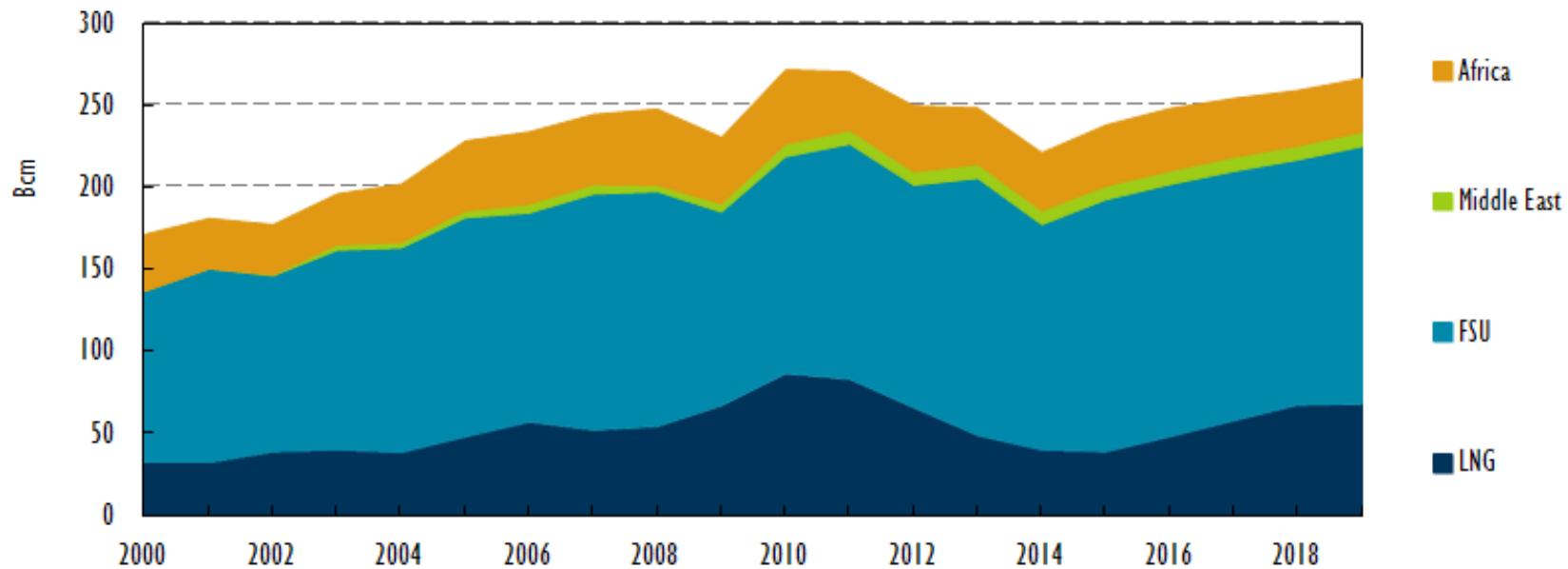
Coal was the KING of the US But capacity is now showing its age power system

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Europe flat and lacking options

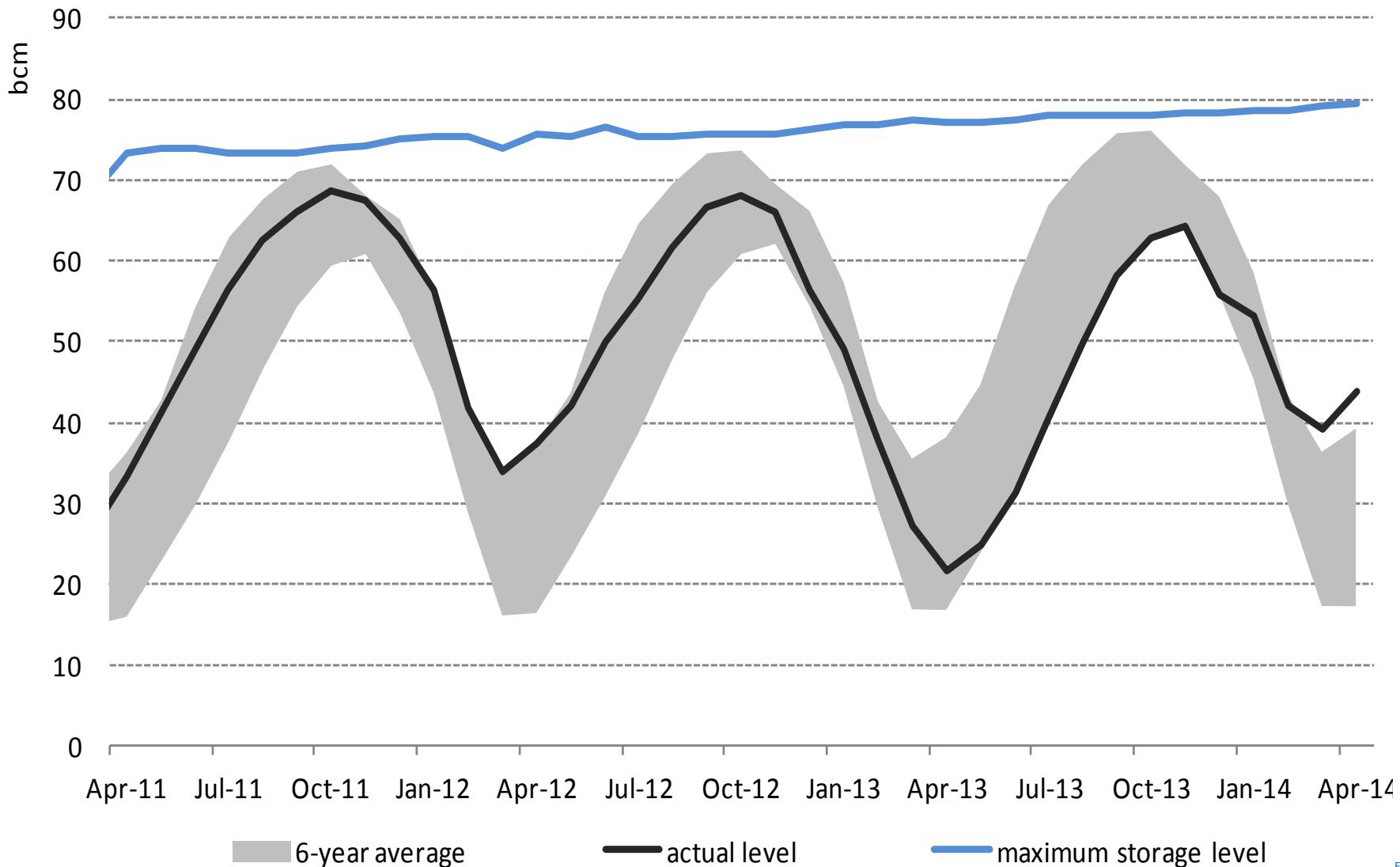
European gas imports, 2000-19



- Even in a context of anemic demand, Russia remains a large component of Europe's supplies

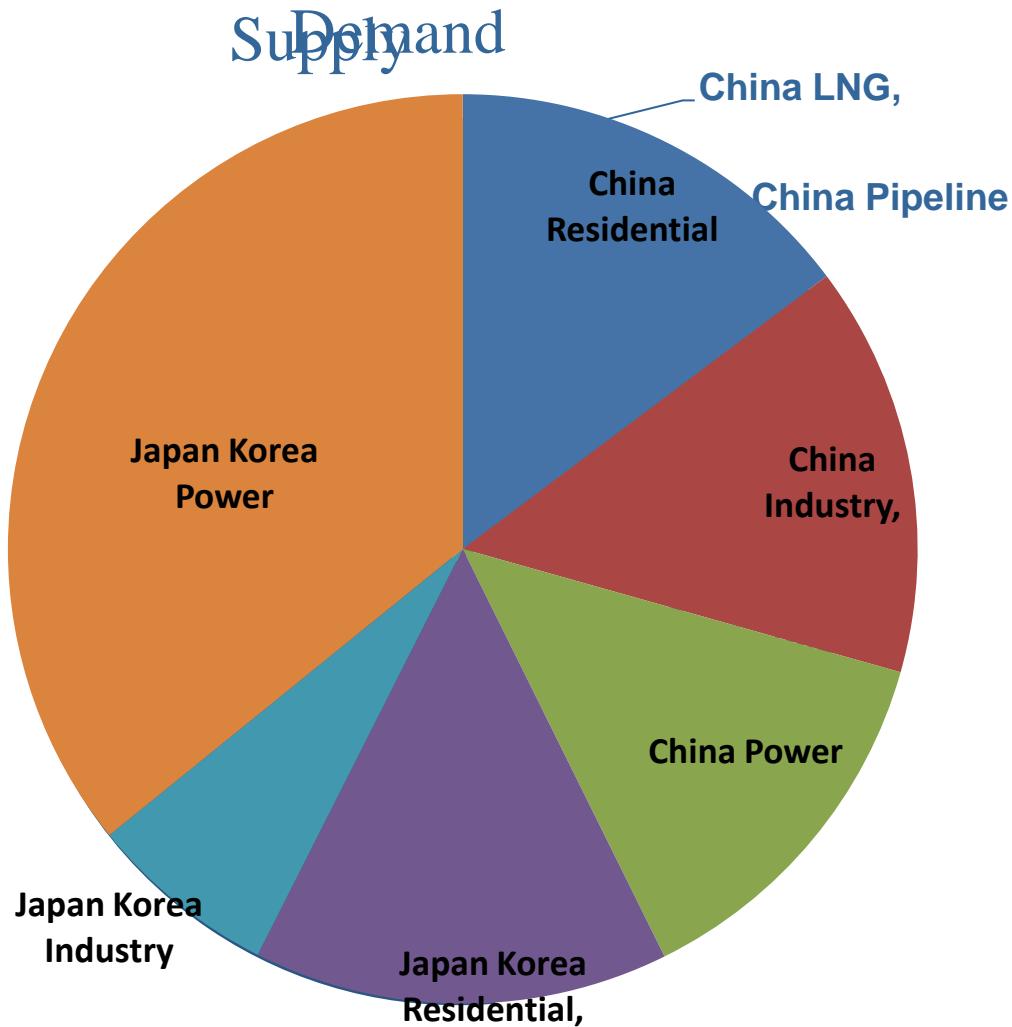
Expanding storage capacity and high initial level – but no incentive for a full fill up

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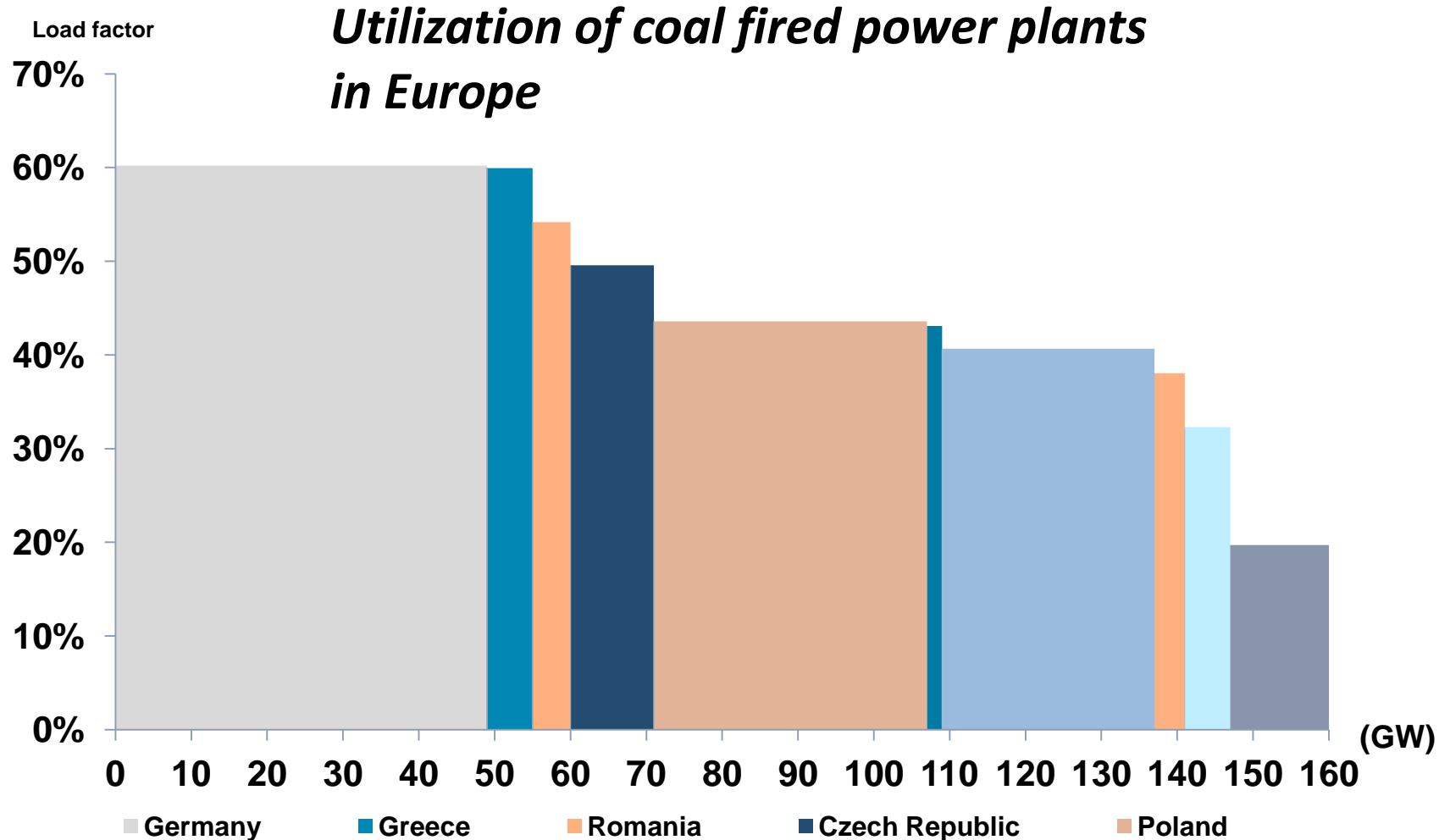


Asia has very little supply or demand flexibility should Europe want more LNG

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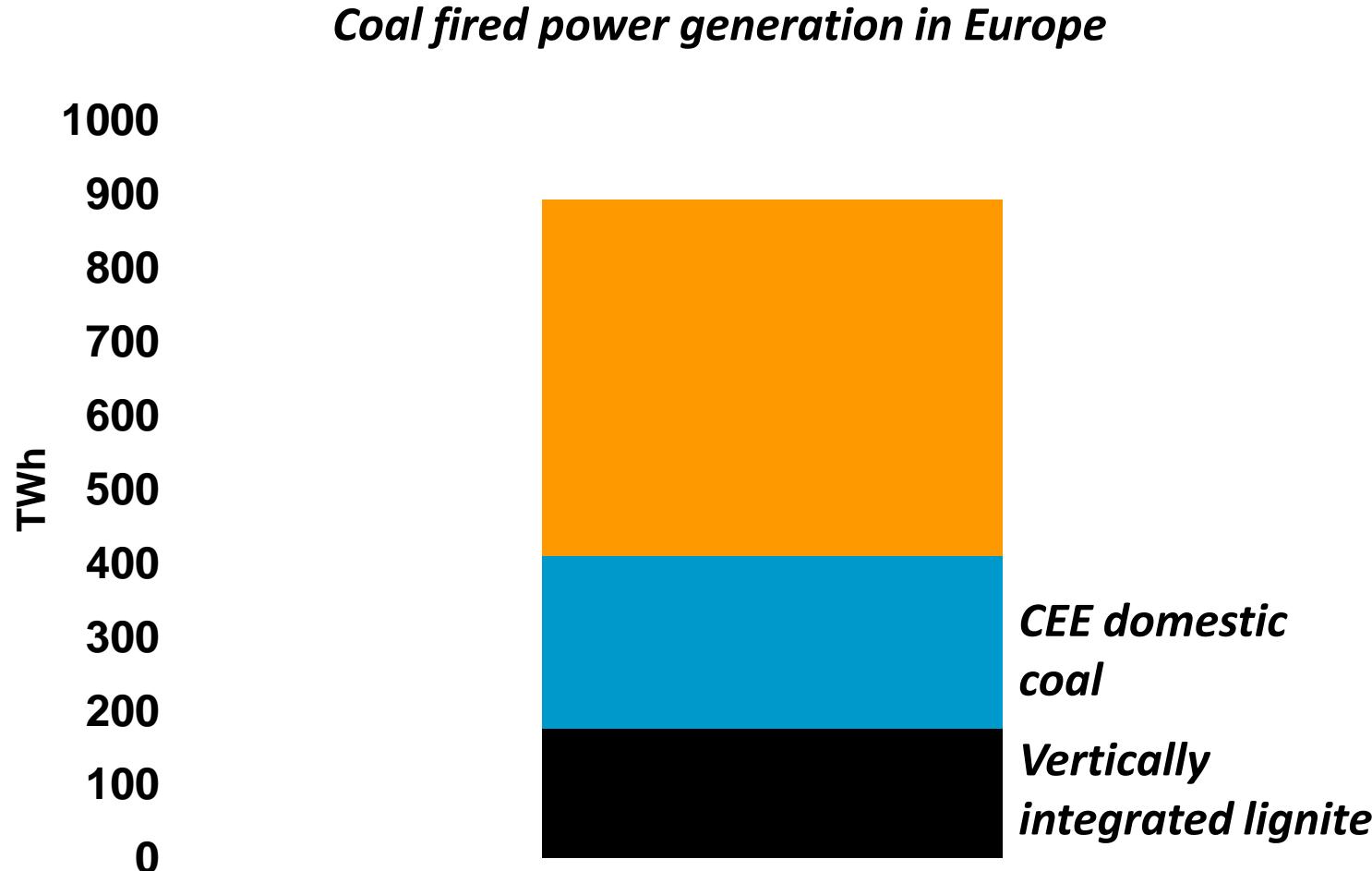
Further switching to coal is limited



Can coal to gas switch deliver EU climate targets?

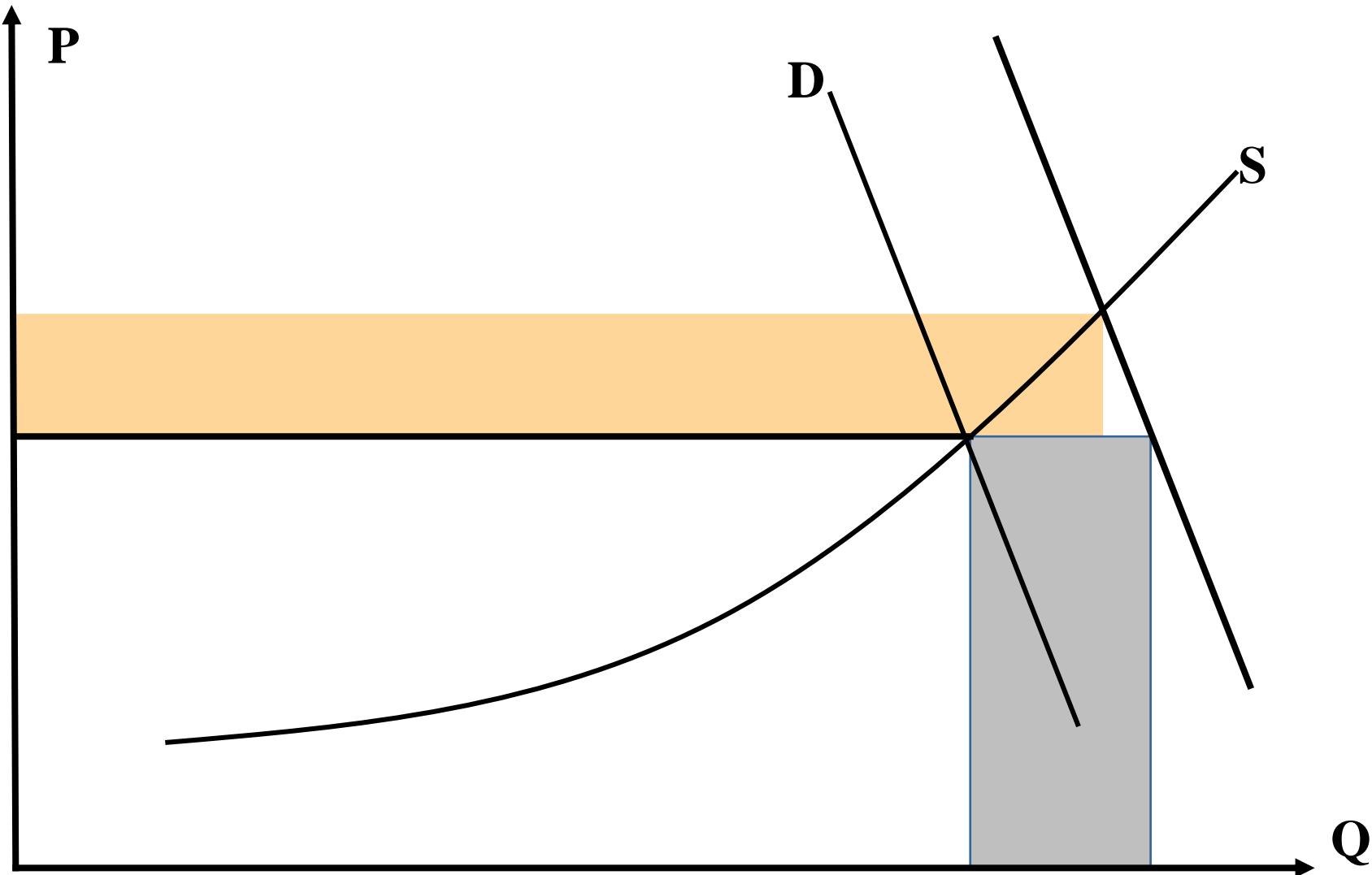


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Coal to gas switch and the microeconomics of gas markets

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Has Europe killed the shale revolution before it has begun?

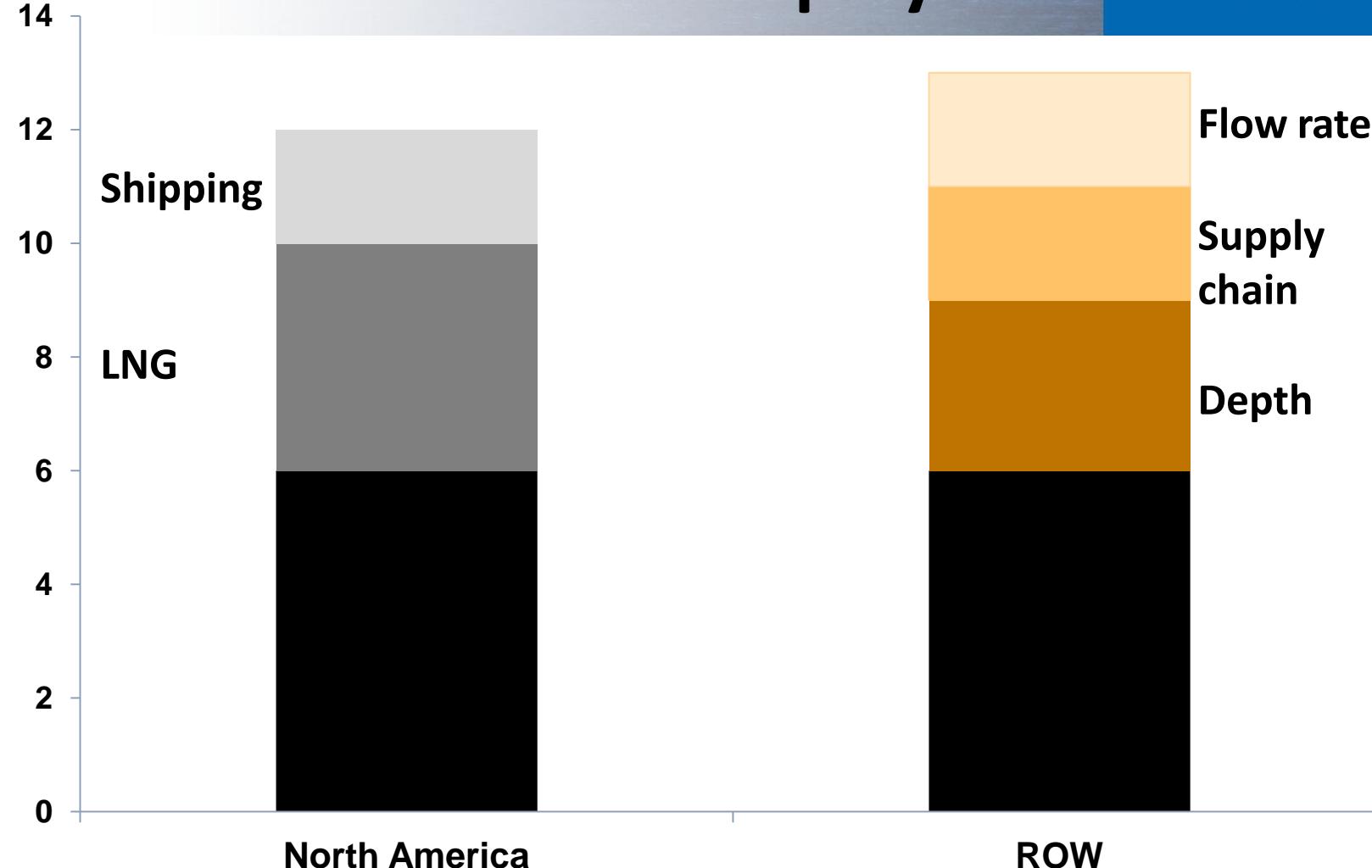


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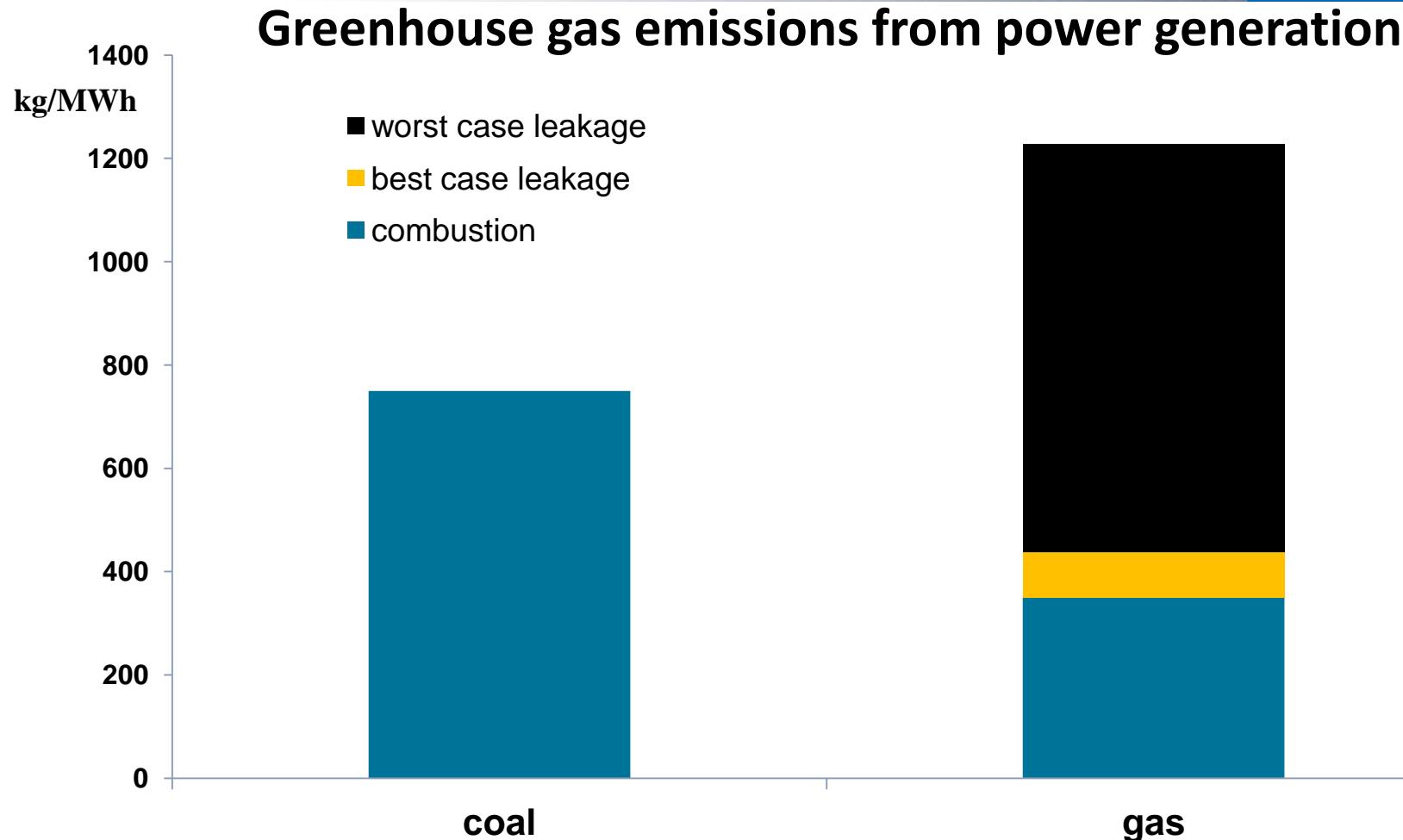
LNG costs are less than the cost differentials between shale plays

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LNG importers with a large shale resource: China, Argentina, Mexico, Brazil

Methane leakage can move gas from solution to part of the problem



North African supplies – is a rapid ramp up likely?



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The El Arish gas pipeline after a militant attack, Egypt 2013



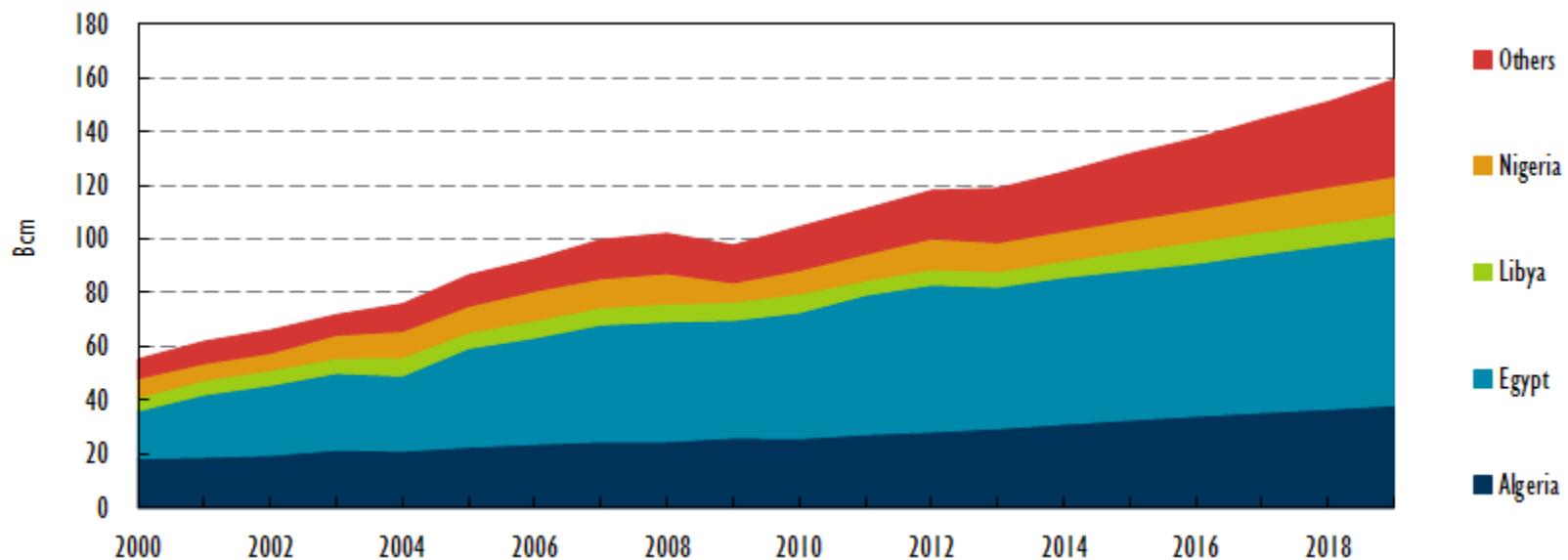
The Algerian army deployed at the In Amenas gas field during hostage taking by extremists, 2013

Africa will be one of the fastest growing regions



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Africa's gas demand, 2000-19 (bcm)

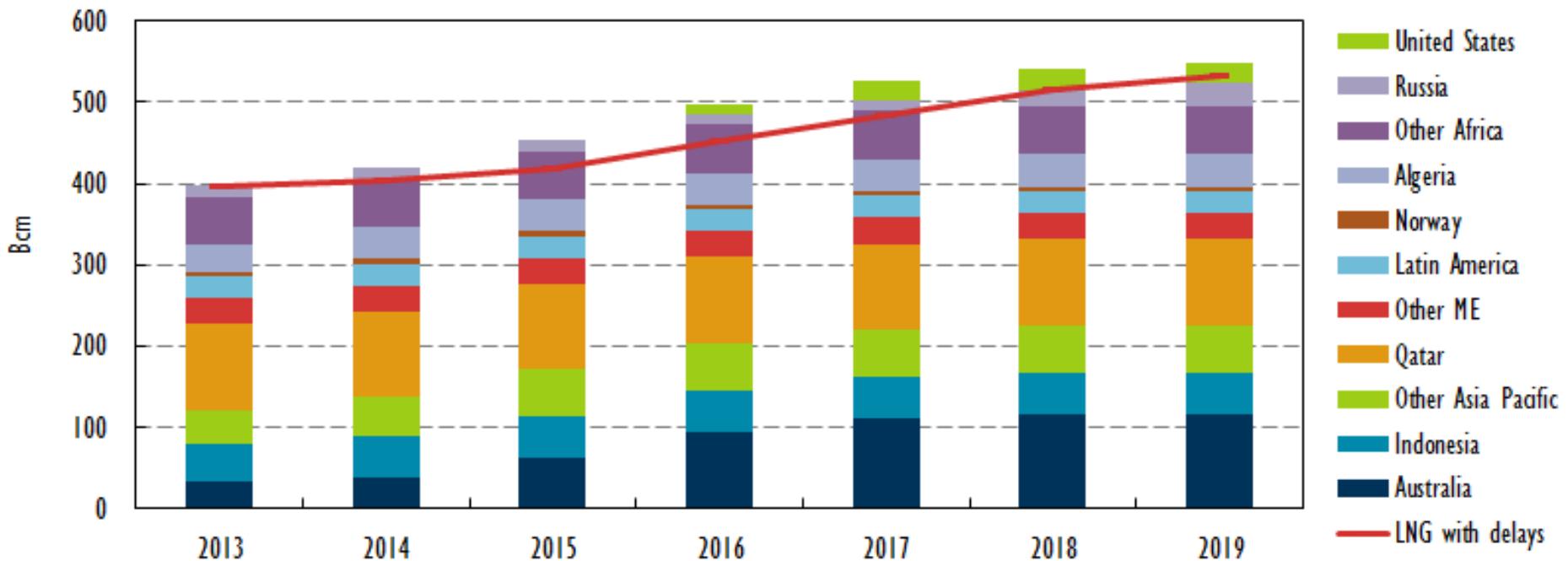


- Africa's thirst for natural gas means that most of the incremental production will be dedicated to the domestic market

Two OECD regions contribute to 40% of the additional supply

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LNG liquefaction capacity, existing and under construction



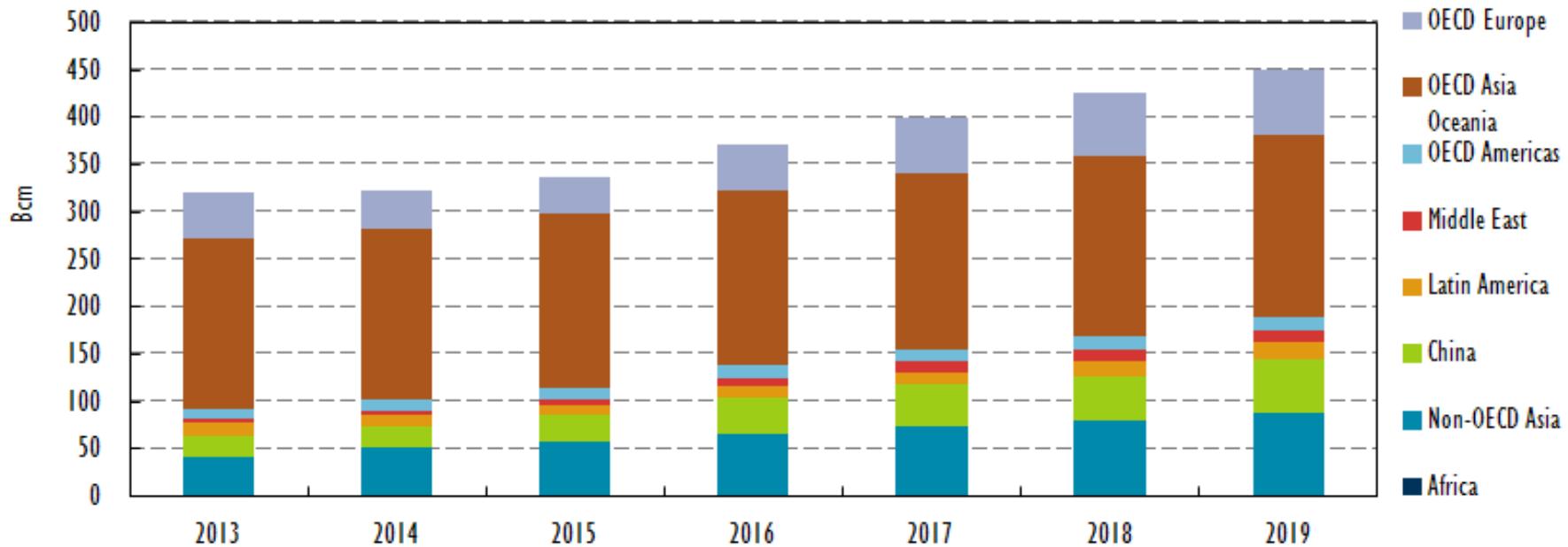
- 150 bcm of LNG export capacity under construction, half of that is coming from Australia

Most of the new LNG will be consumed by Asia



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LNG imports, 2013-19



- Consequently, global LNG trade will rise from 320 bcm in 2013 to 450 bcm in 2019

LNG markets: waiting for the cavalry

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