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Euro-Mediterranean Gas Markets: Emerging Trends and Perspectives

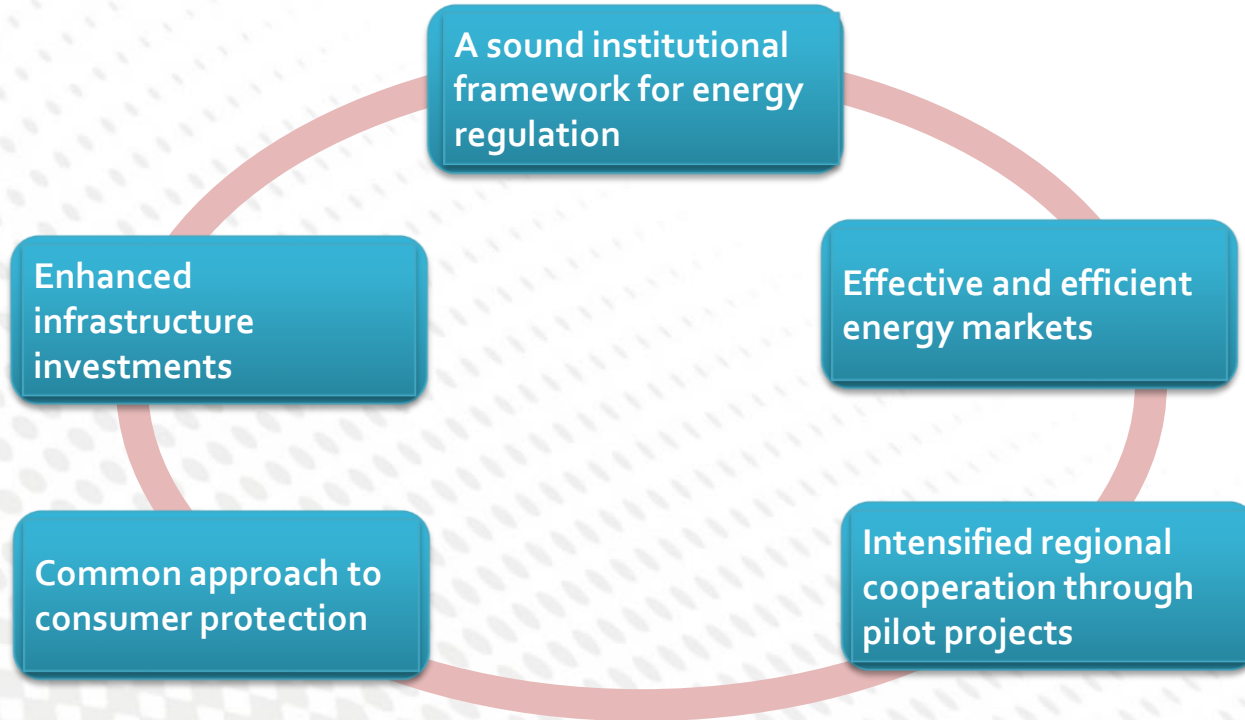
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25 regulators (electricity & gas) from 21 countries

- Mission
 - To promote a harmonised, compatible, and non-discriminatory regulatory framework with a view to ensuring a secure, sustainable and competitive Mediterranean energy market
- Through
 - Fostering cooperation, information exchange and sustainable developments
 - Providing capacity development activities
 - Promoting greater compatibility of the energy markets
- MEDREG focuses on five areas of activities through its working groups: Electricity, Gas, Institutional, RE-EE and Consumer



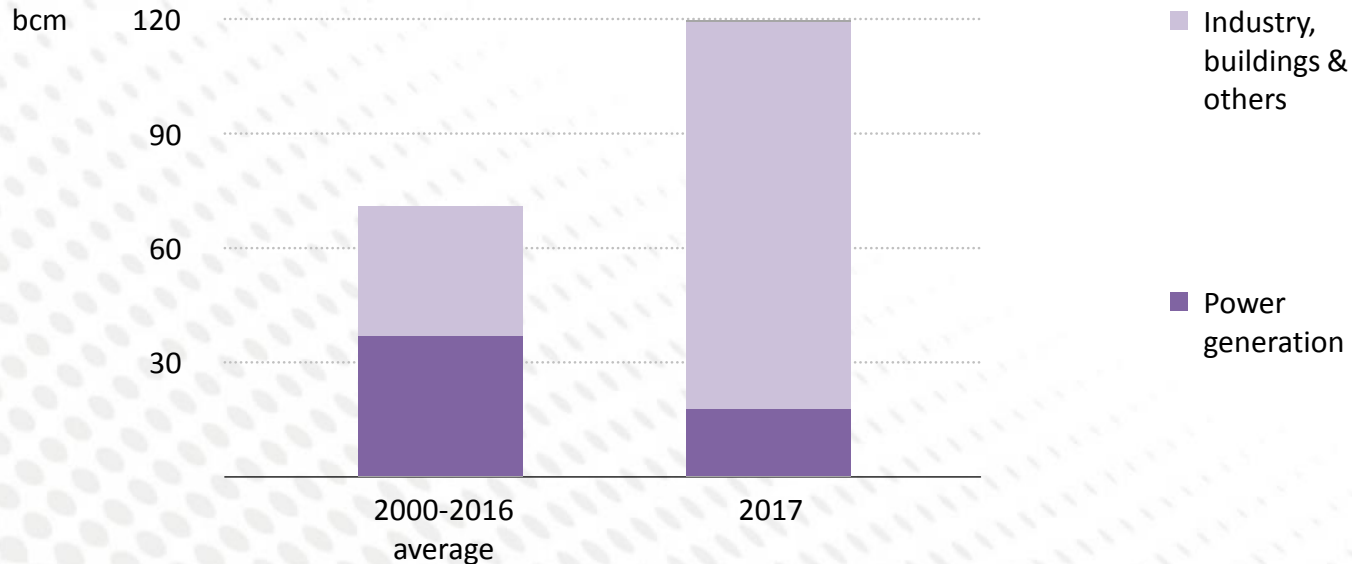
Gas markets in the next five years

- Gas demand is in the fast lane, thanks to its flexibility & ability to ease environmental problems
- Global gas markets are being re-shaped by three major structural shifts
 - *China becoming the world's largest natural gas importer*
 - *US gas production and LNG exports rising dramatically*
 - *Industry displacing power generation as the leading growth sector*
- The gas industry's future remains bright, but it is not without challenges
 - *Gas price competitiveness & market reforms in emerging markets*
 - *Curbing methane leaks along the value chain*

Source:IEA

Natural gas – life in the fast lane

Growth in global natural gas demand

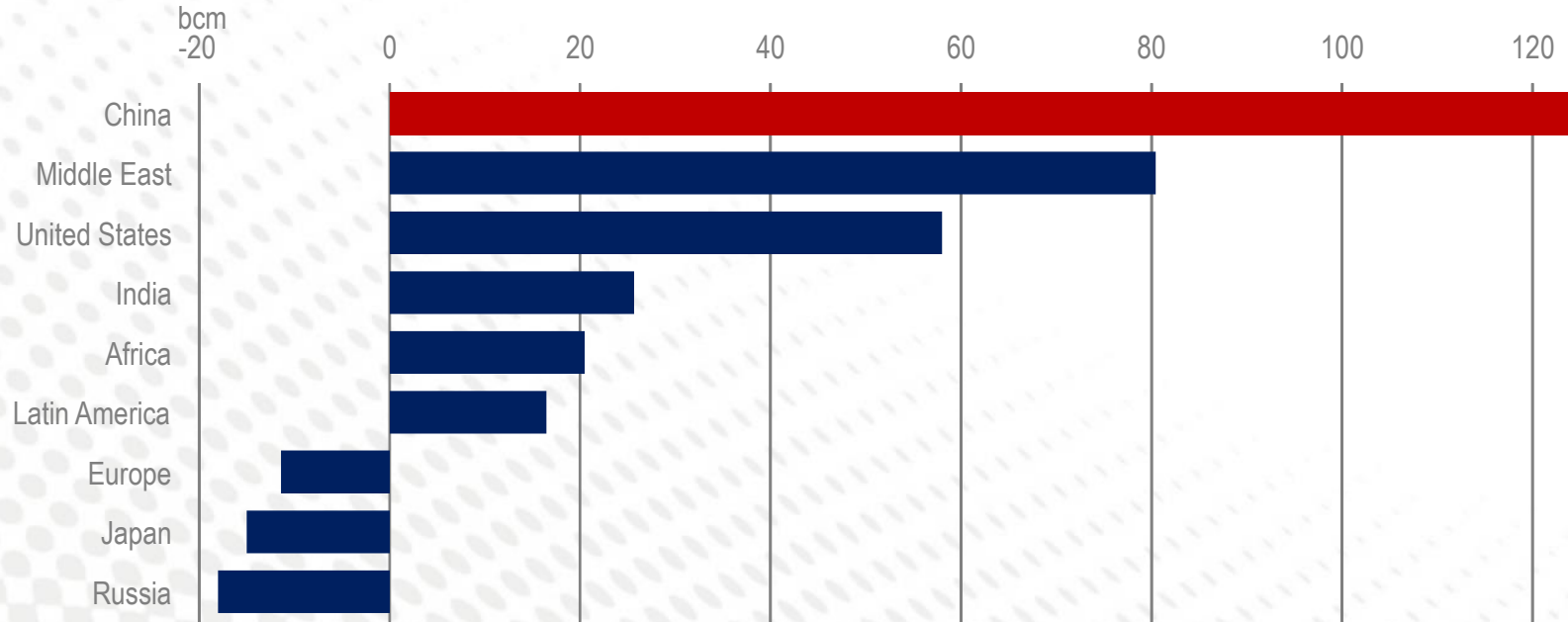


- *Industry & buildings have taken over from the power sector as the drivers of gas demand;*
- *China accounted for 30% of the increase in global gas demand in 2017*

Source:IEA

China dominates consumption growth

World natural gas consumption growth for selected countries and regions, 2017-23

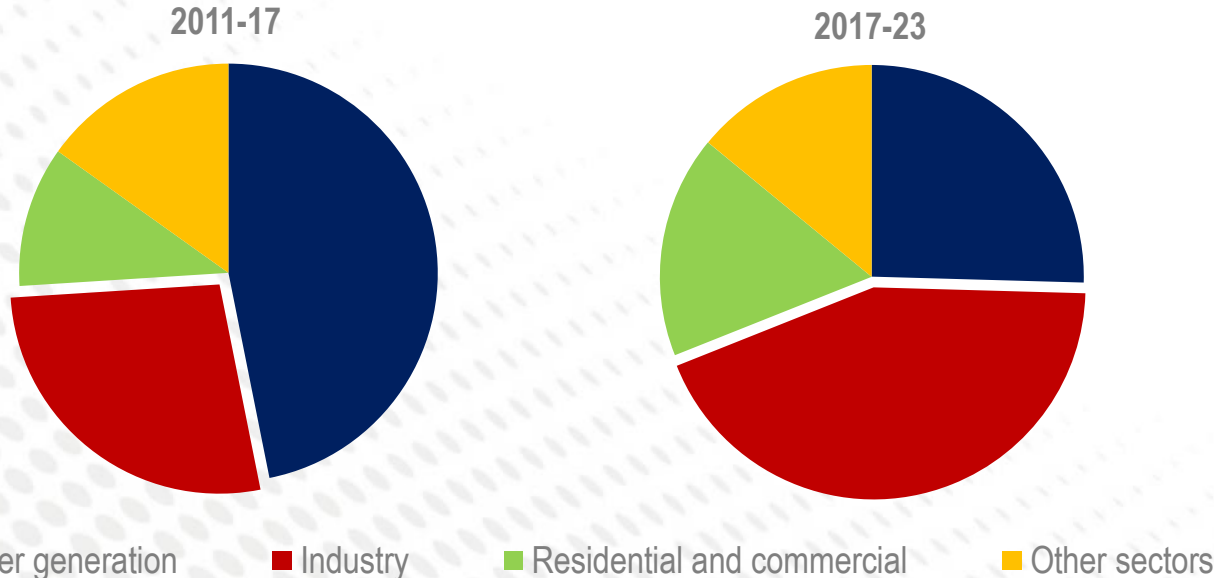


- *Global consumption passes the 4 tcm mark by 2022*
- *China to account for almost 40% of growth driven by clean air policy target*

Source: IEA

Industry surpasses power generation

Natural gas consumption growth by sector (%)

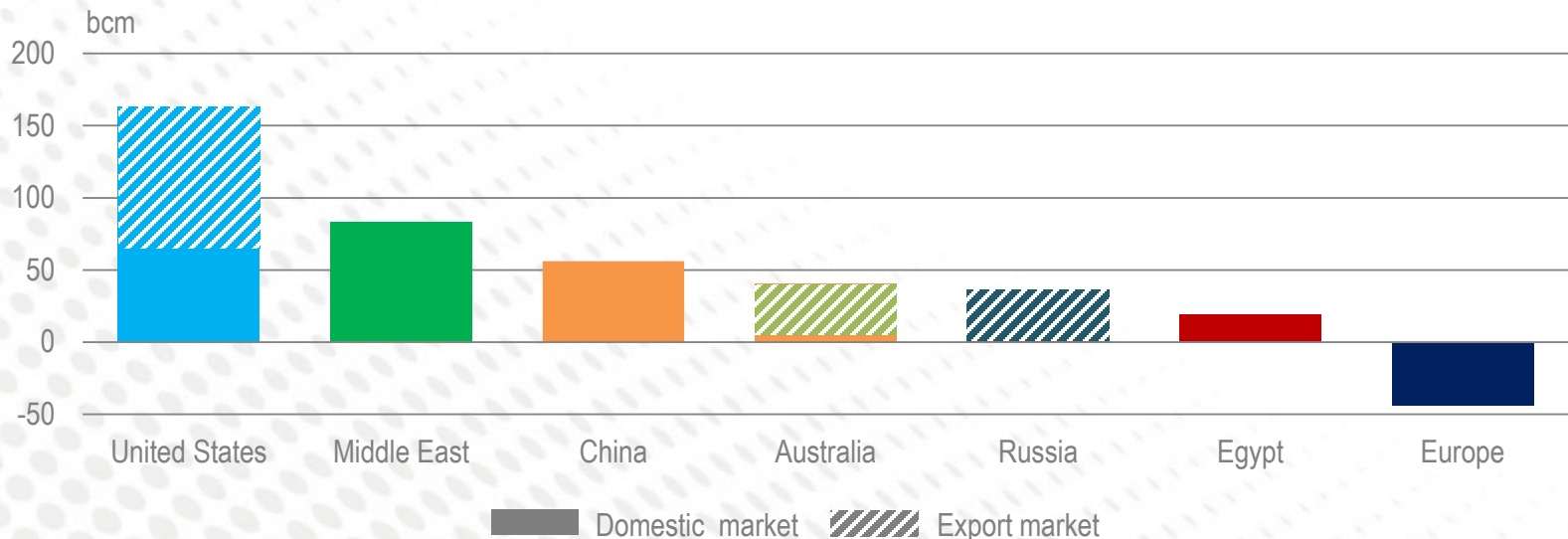


Industry accounts for over 40% of the growth in global gas demand to 2023, mainly on greater use for petrochemicals and fertilizers

Source: IEA

US leads the growth in global supply

Natural gas production growth for selected countries and regions, 2017-23

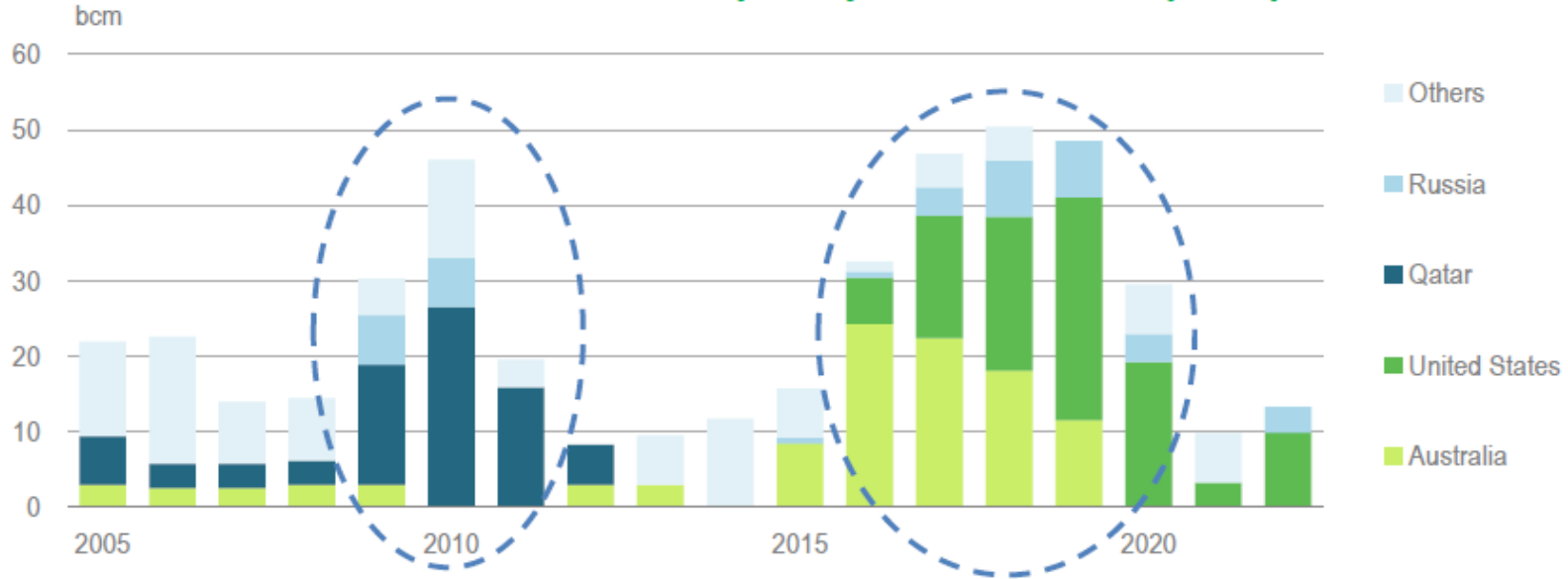


- *The United States accounts for almost 45% of global growth in natural gas production and 75% of growth in LNG exports*
- *Since 2009, US shale gas added some 180 bcm- above Russian's 2016 exports to Europe*

Source:IEA

Second wave of additional LNG

Incremental LNG capacity , 2005 - 2022 (bcm)

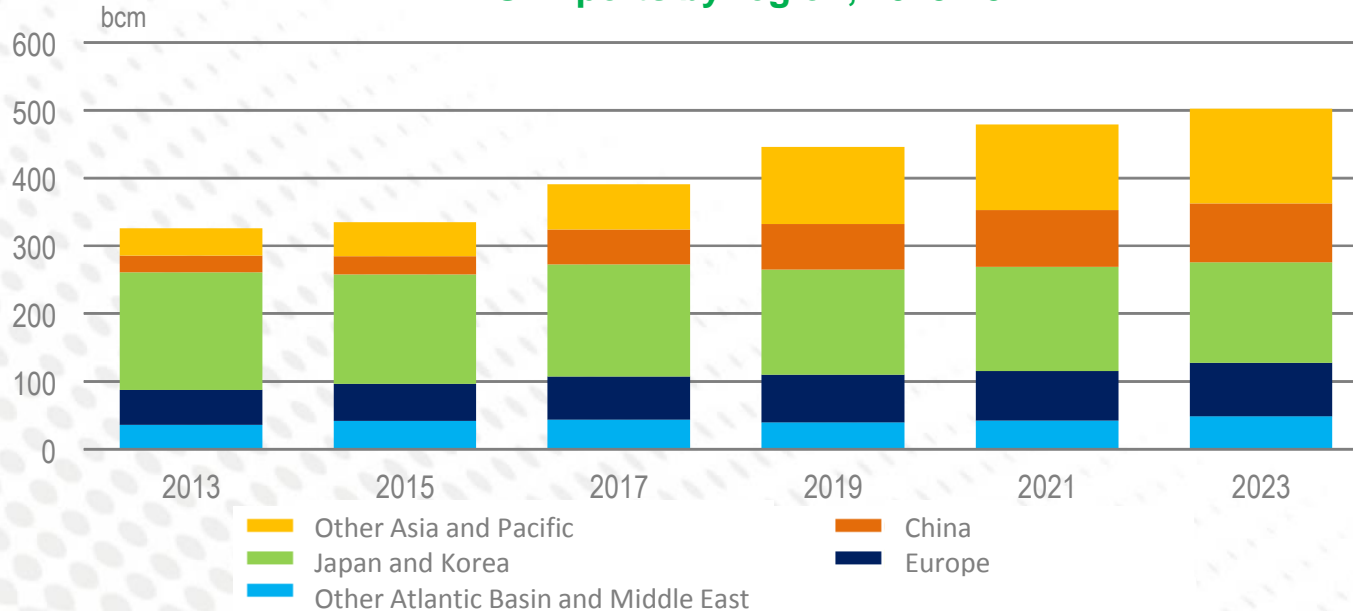


15 new projects with total export capacity of around 140 bcm are now under construction, Australia and US account for 75% of them

Source:IEA

Global LNG market reaches 500 bcm

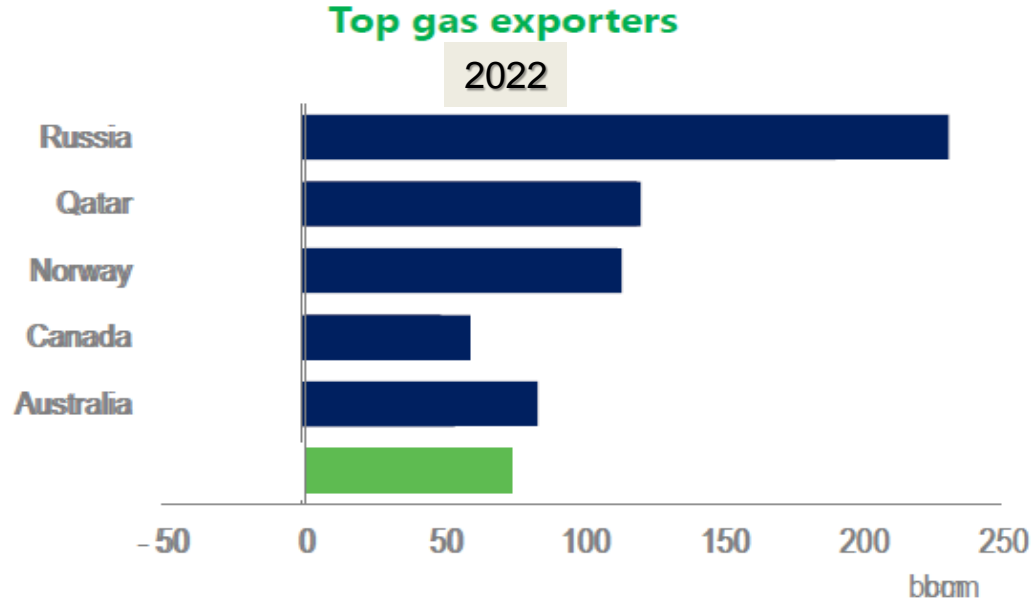
LNG imports by region, 2013-23



LNG trade passes 500 bcm mark by 2023, reaching almost 40% of global gas trade from around a third today; Developing Asian markets account for almost half of LNG market by 2023

Source:IEA

US will join to top gas exporters

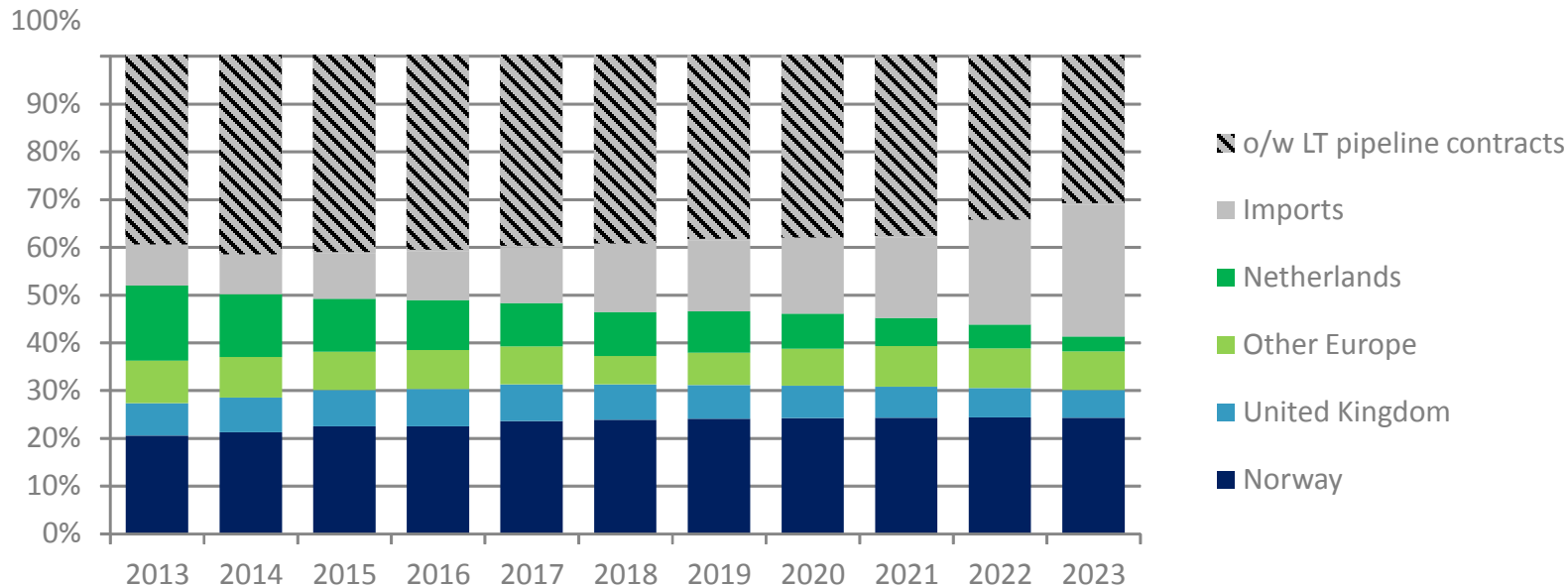


A wave of new LNG supply, led by US, will provide more options to guard against supply shocks, changing the gas security equation

Source:IEA

Europe's supply demand gap increases

Europe's natural gas balance, 2013-23

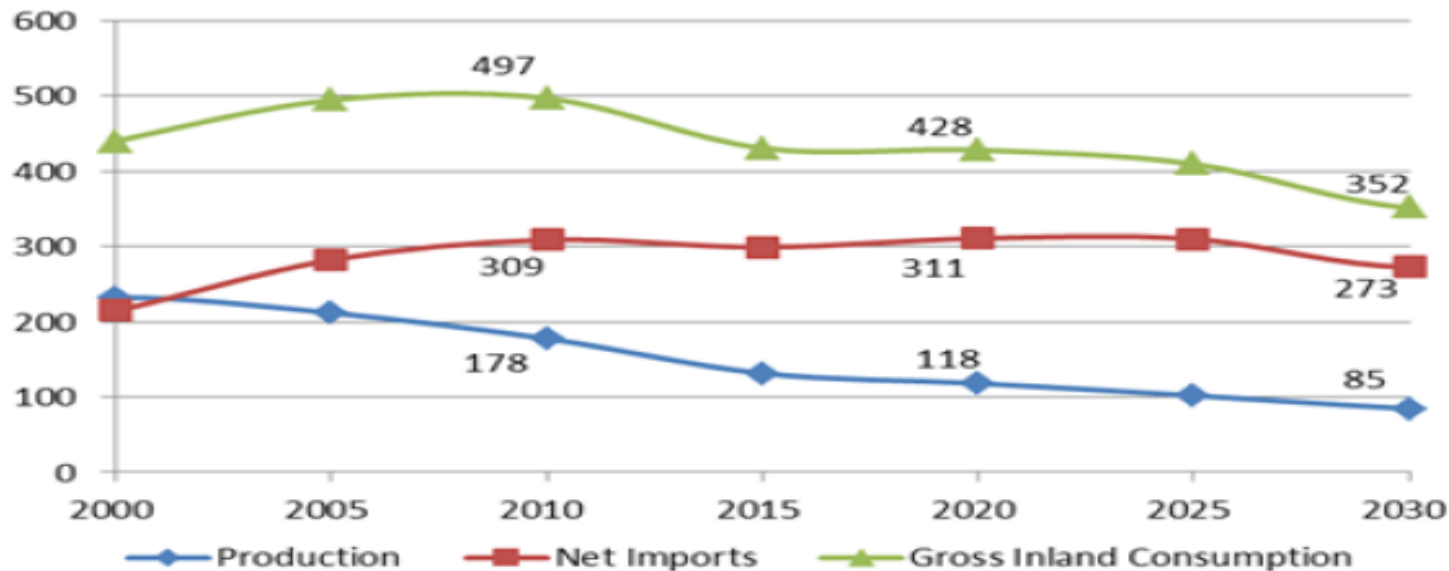


- Domestic production decline further accelerates with plan to phase out Groningen field
- New options for supply from pipeline and LNG, especially in North West Europe

Source:IEA

EU Gas projections

EU gas consumption, production, imports Projections to 2030 (EUCO 2030)



Source: EC

Regasification capacity in the EU

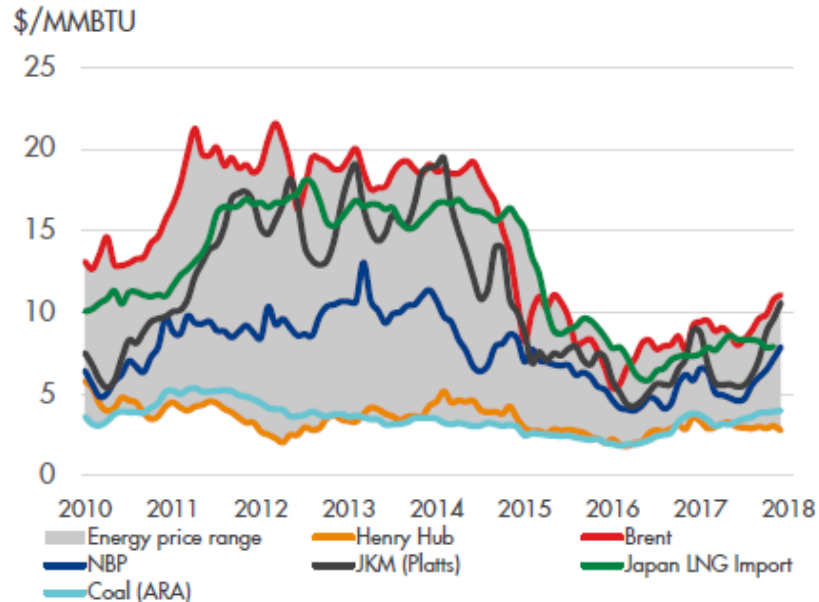


	bcm/a LNG	bcm/a Storage
Austria		9.0
Belgium	9.0	0.8
Bulgaria		0.6
Croatia		0.5
Czech Republic		3.6
Denmark		1.2
France	34.3	12.8
Germany		24.8
Greece	5.0	
Hungary		6.4
Ireland		
Italy	14.7	17.9
Latvia		2.4
Lithuania	4.0	
Malta	2.0	
Netherlands	12.0	14.4
Poland	5.0	3.4
Portugal	7.9	
Romania		3.1
Slovakia		3.4
Spain	68.9	3.0
Sweden	0.8	
UK	48.1	4.8
EU-28	211.7	112.6

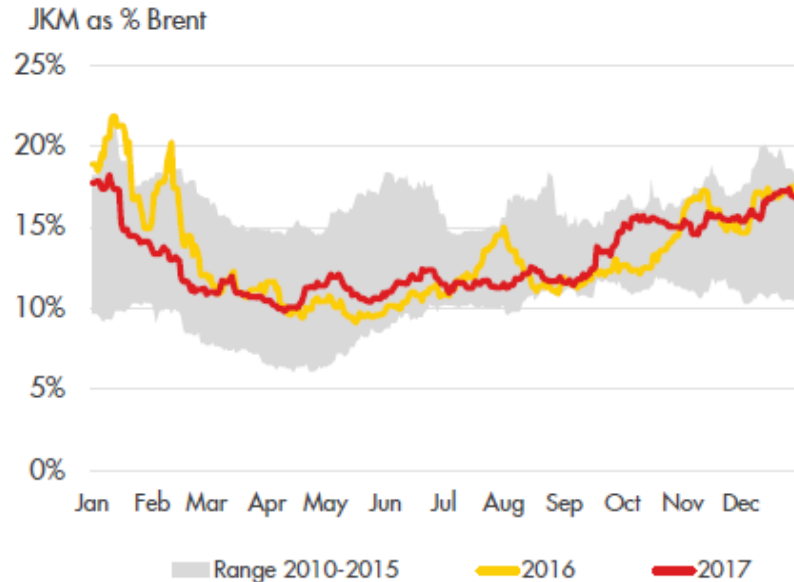
Source:IEA

Spot prices continue to reflect strong demand for LNG

Global energy prices



Asian spot price

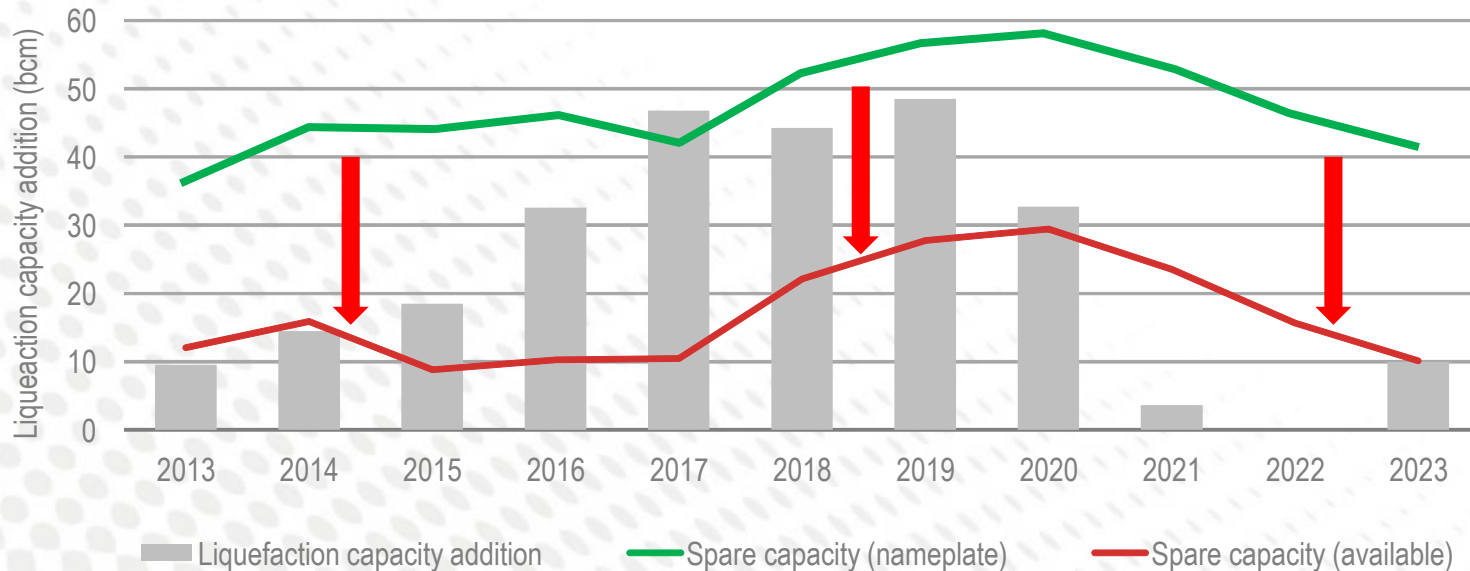


Source: Japanese customs data (Japan LNG import), S&P Global Platts (JKM), ICE (NBP, Brent, ARA coal), NYMEX (Henry Hub)

Source: Shell

LNG market to tighten without new investment

LNG liquefaction capacity and utilisation, 2013-23



Source: IEA

- **Build key LNG related infrastructure**

BEMIP(Baltics), CESEC (Central South East Europe) and South-West

- **Fully implement existing EU energy legislation**

- **Ensure level playing field for existing LNG terminals**

(regulated and exempted)

- Global demand for natural gas to grow strongly over the next 5 years, led by China
- The United States to become a leading player in LNG markets, driven by a 2nd boom in US gas production
- LNG trade to expand by 30% over next 5 years, underpinning a shift to a more competitive, global natural gas market
- New investment will be required along the entire natural gas value chain to provide flexibility & security of supply
- For the future of gas to remain bright, prices need to stay competitive in emerging markets & industry needs to continue to improve its environmental performance

Source:IEA

- Legal and regulatory frameworks are continuously improving
- Market arrangements and import/export levels are still need to be enhanced
- Gas infrastructure is not well developed with some exceptions
- Gas accounts a remarkable amount in electricity generation although not evenly distributed among countries
- Renewable targets and new gas discoveries will likely lead an increased gas usage in the entire region depending on the political consensus

- Due to political and technical barriers in developing pipelines, LNG could offer great flexibility in transporting these resources to the World markets
- Significant proven hydrocarbon reserves could play a vital role not only in the region but also on the European energy market
- A stable, harmonised and transparent regulatory framework is essential to promote investment in infrastructure in the Mediterranean region

- Most of the Mediterranean Countries have recognized the value of a stable, transparent and robust energy regulatory framework, establishing independent regulators provided with adequate powers and resources
- In some countries regulation is not fully empowered to protect consumers, to foster and promoting investments and market developments
- The level of independency from Governments and Parliaments is not sufficient to protect energy regulators from undue influences that may modify regulation

Conclusions-1-

- The exploitation of East Mediterranean hydrocarbons remains a sophisticated geopolitical and financial puzzle, solving which will require not only political, and but also some brave financial and economic endeavours
- Recent discoveries may have massive consequences for the region and also for the European energy markets
- Current proven reserves show that the region possesses a significant potential to forge new commercial ties, strengthen the security of supply and contribute to the resolution of political disputes
- In the medium to long term, the energy resources of the Eastern Mediterranean could help reducing the dependency of both Europe and Balkan countries, including Turkey on Russian gas deliveries

- The downturn in global oil and natural gas prices has already constrained the quick development of these resources and investment
- Delaying the exploration for new discoveries would require greater effort to find markets for the region's natural gas
- Nevertheless, and against the challenging background described above, it appears that the most ideal option for the delivery of East Mediterranean gas to Europe would be the construction of a pipeline, which could transport both Israeli and Cypriot gas to Turkey and then the EU

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