

25th world gas conference "Gas: Sustaining Future Global Growth"

Global gas supply, demand and trade

By: Anne-Sophie Corbeau, PGC B Date: 5 June 2012 Venue: Kuala Lumpur





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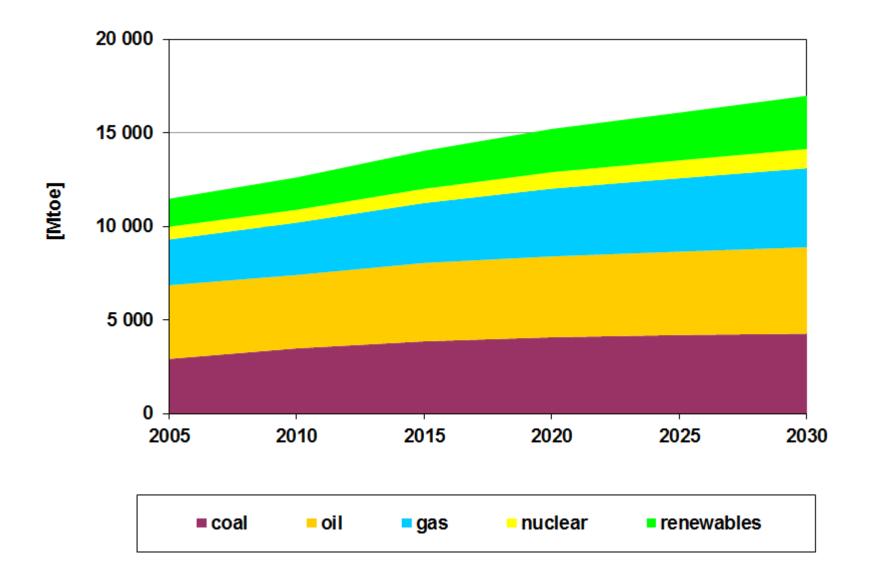
IGU regions



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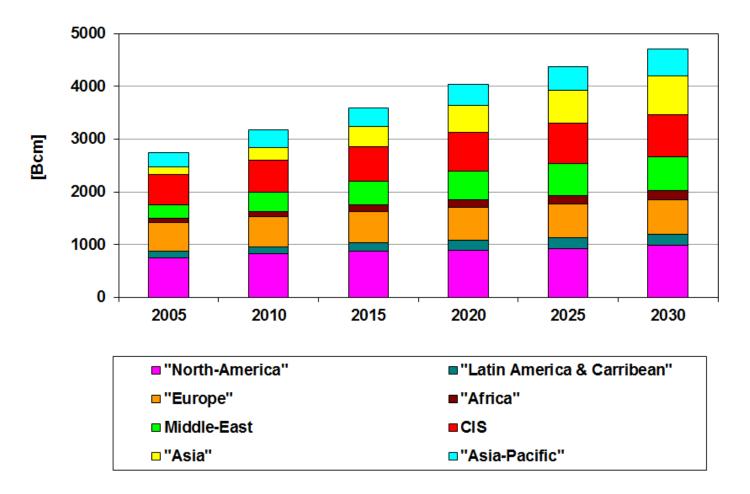
IGU regions and focal points

Gas represents 25% of Primary Energy Consumption by 2030



Gas demand grows in all eight IGU regions

- Gas demand reaches over 4700 bcm by 2030
- Natural gas demand increases at 1.9%/y over 2010-30



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Highlights on regional gas demand

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- Major gas users are (still) North America and CIS in 2030
 - There is a significant upside in the industry and power sectors in North America
 - In CIS, gas demand reaches 800 bcm by 2030, the region remains "addicted to gas"
- Gas demand grows the fastest in Asia, Africa, and the Middle East
 - Demand triples in Asia to 730 bcm. China is THE driver
 - Demand increases by 70% in the Middle East supported by a large resource base
 - Asia Pacific gas demand reaches 510 bcm
 - $_{\circ}$ $\,$ Japan remains the largest gas user
 - There is also healthy growth in Latin America
- More modest growth in Europe by 90 bcm
 - With a big uncertainty regarding the impact of climate discussions on natural gas

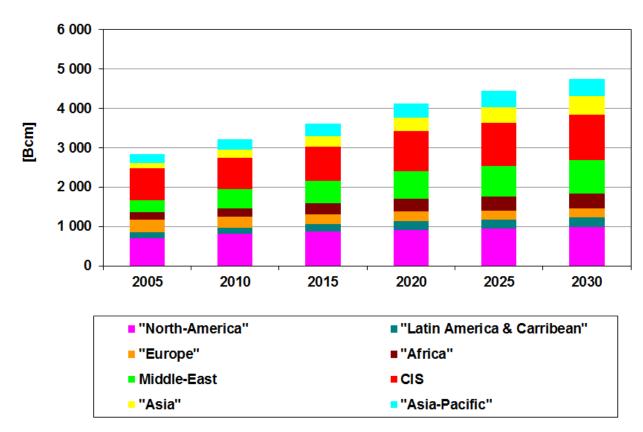
Highlights on sectoral gas demand

- The main driver is the power sector
 - Power will represent 40% of total gas demand in 2030
 - The regions with the strongest growths are Asia, Latin America, Europe, and the Middle-East
- Industry is the second fastest growing sector with an incremental demand of almost 400 bcm between 2010 and 2030
- In contrast, the residential-commercial sector sees a more modest growth from 750 bcm to 970 bcm
 - More energy conservation and efficient use of resources, added to the use of heat pumps and renewables, will reduce gas demand growth in mature markets
- Gas consumption from the transport sector almost doubles
 - But this sector accounts for a small share in total gas demand

Gas production



- CIS and North America remain the backbone of global gas supply, followed by the Middle East
- Asian and African gas production doubles over 2010-30
- Europe is the only region where gas production declines





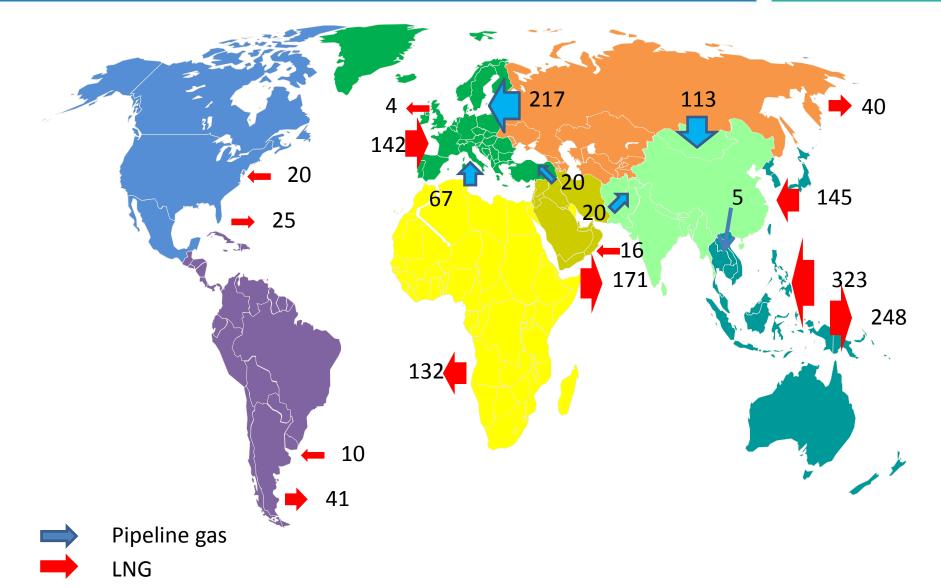
- The natural gas balance is the outcome of the different regional analyses
- For each region, gas demand has been taken as an input
 - Supply is regarded as productive capability which could be constrained
- Supply must match demand at a global but also at a regional level
- LNG exports are combined into a global LNG pool
- Existing infrastructure, including the relationships between buyers and sellers (such as long-term contracts), represents the basis of this analysis
 - Including infrastructure projects currently under construction or in some cases planned

Global gas trade – Key results

- Three importing regions stand out
 - Europe with net imports reaching 442 bcm by 2030
 - Asia is the second largest importing region with imports reaching 270 bcm
 - Asia-Pacific is the third largest importing region
 - Not only historical importers such as Japan and Korea, but also Southeast Asian countries
- The largest exporter is and remains the CIS region, exporting both LNG and pipeline gas
- Africa and the Middle East are also large exporting regions
 - Despite some imports for the Middle East
- North America is a slightly exporting region, while Latin American exports LNG

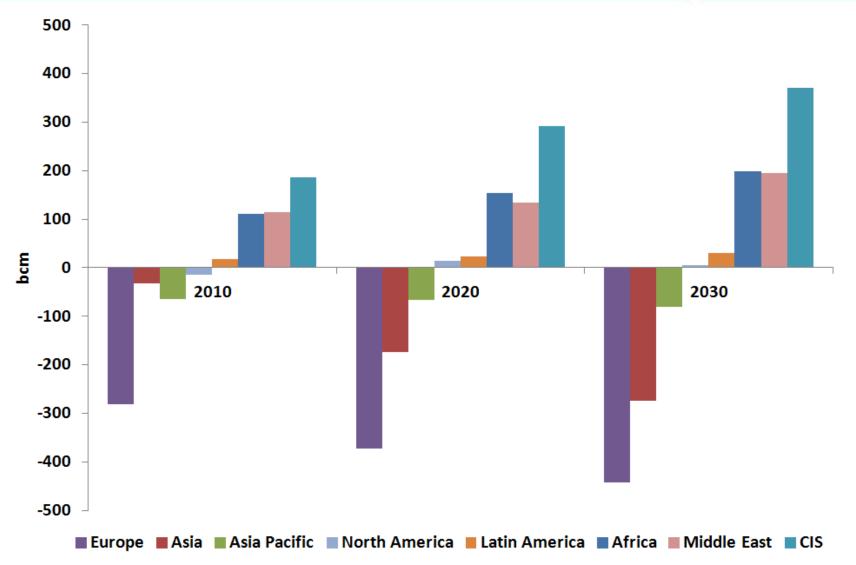
Global interregional trade in 2030







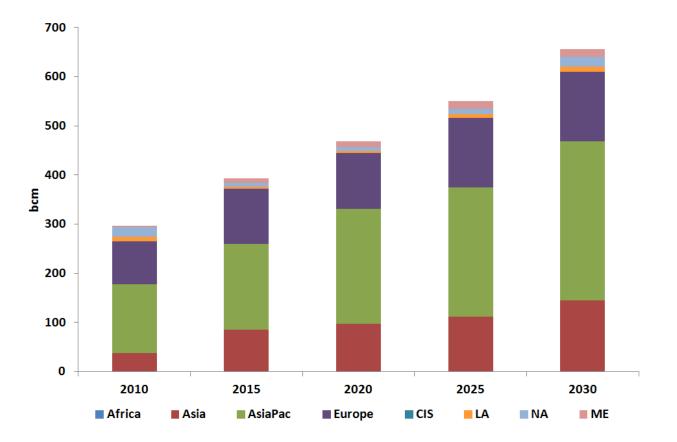
Net imports/exports by region



LNG imports



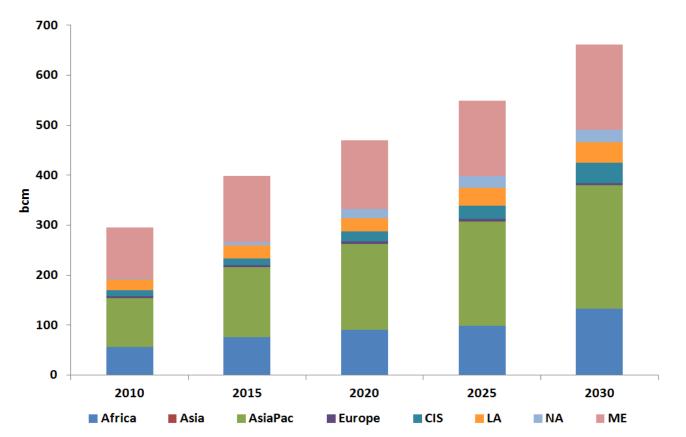
- Asia Pacific and Europe are the largest LNG importers
- Strong growth in Asian LNG imports, driven by China and India
- Other regions import limited quantities of LNG



LNG exports



- Three regions dominate: Asia Pacific, the Middle East and Africa
- In the medium term, large LNG export growth is supported by Australia
- Increasing LNG exports from CIS and Latin America, while North America emerges as an exporter





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