

World LNG market: current developments and prospects

CEDIGAZ

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Introduction: an exceptional 2010 year



- Spectacular growth in world gas supply in 2010 (+ 7.2%) largely compensating for the 2009 historic decline
- Many growth factors (economic recovery, climatic conditions, gas price competitiveness, dynamism of emerging markets)
- New records set for:
 - US production (+ 4.8%) and consumption (+ 5.6%)
 - European gas consumption (+ 7.5%)
 - International pipeline gas and LNG trade (+ 11%)
 - Production/consumption in the Middle East and Asia
 - Russian gas production (+ 11.6%)
- Record growth for world LNG trade (+22%) to 296 bcm: very strong economic recovery in Asia, build up of Qatari deliveries to Europe, emergence of new markets (Latin America, Middle East)...



World LNG trade in 2011



- Expected double-digit growth rate of world LNG trade (+12-18%),
- Supply growth led for more than 2/3 by Qatar (+ Qatargas IV in Feb-2011), and to a lesser extent, Yemen and Peru
- Indonesian LNG exports' decline: -15%
- The UK overtook Spain as the world' third largest LNG importer after Japan and South Korea
- Growing Qatari LNG imports in Belgium and France too
- LNG growth in Asia in both emerging (China, India) and traditional markets (economic growth, Japan nuclear crisis)

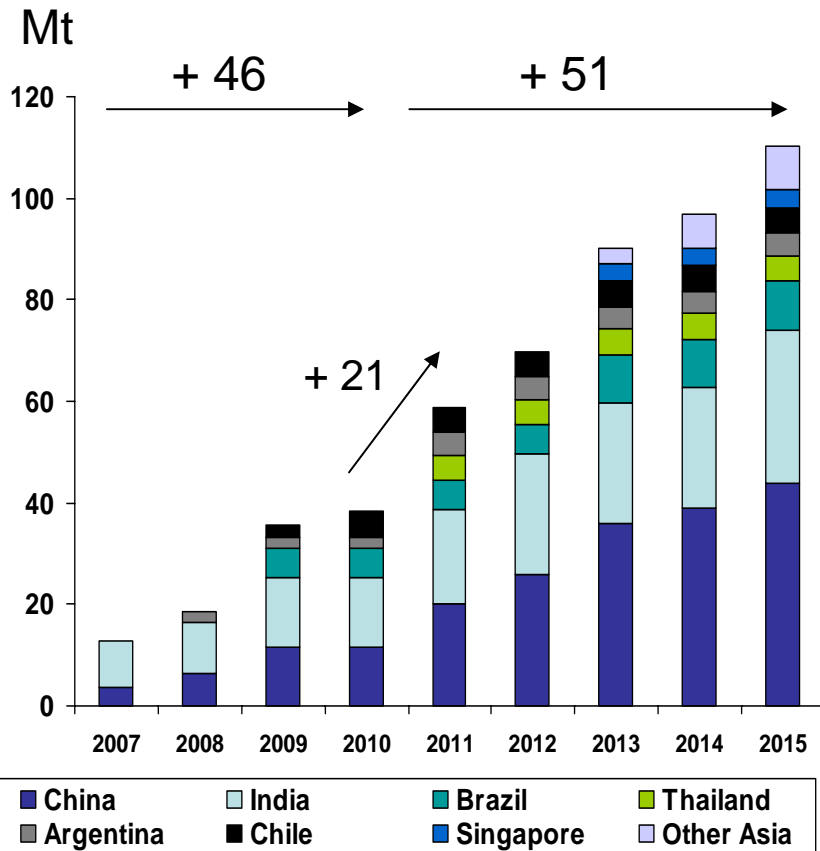


Regasification prospects

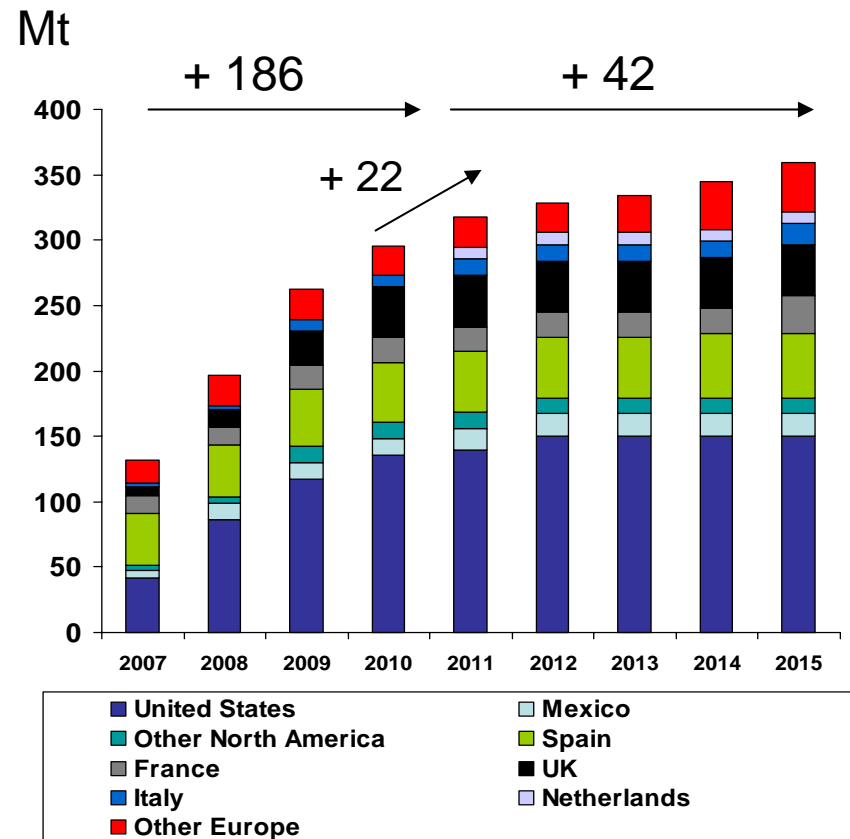


Projects under construction and probable: 2011-2015

Emerging markets – Latin America & Asia



Industrialized markets Atlantic Basin



LNG infrastructures in 2011

- US: start-up of commercial operations of Golden Pass in March 2011
- China (+ 8.5 Mt): Rudong terminal (first LNG cargo in May 2011) + Fujian expansion phase 2 (May 2011) + Dalian (third quarter 2011)
- Thailand: first cargo (5 Mt) expected in July
- Netherlands: Gate terminal (+ 9 Mt), under commissioning
- Italy: offshore Livorno (+ 4.1 Mt)
- Argentina: Escobar (+ 2 Mt) started receiving LNG in May
- Mexico: Manzanillo (+ 4 Mt/y) by end-2011
- India: Dabhol (+ 5 Mt) by December 2011



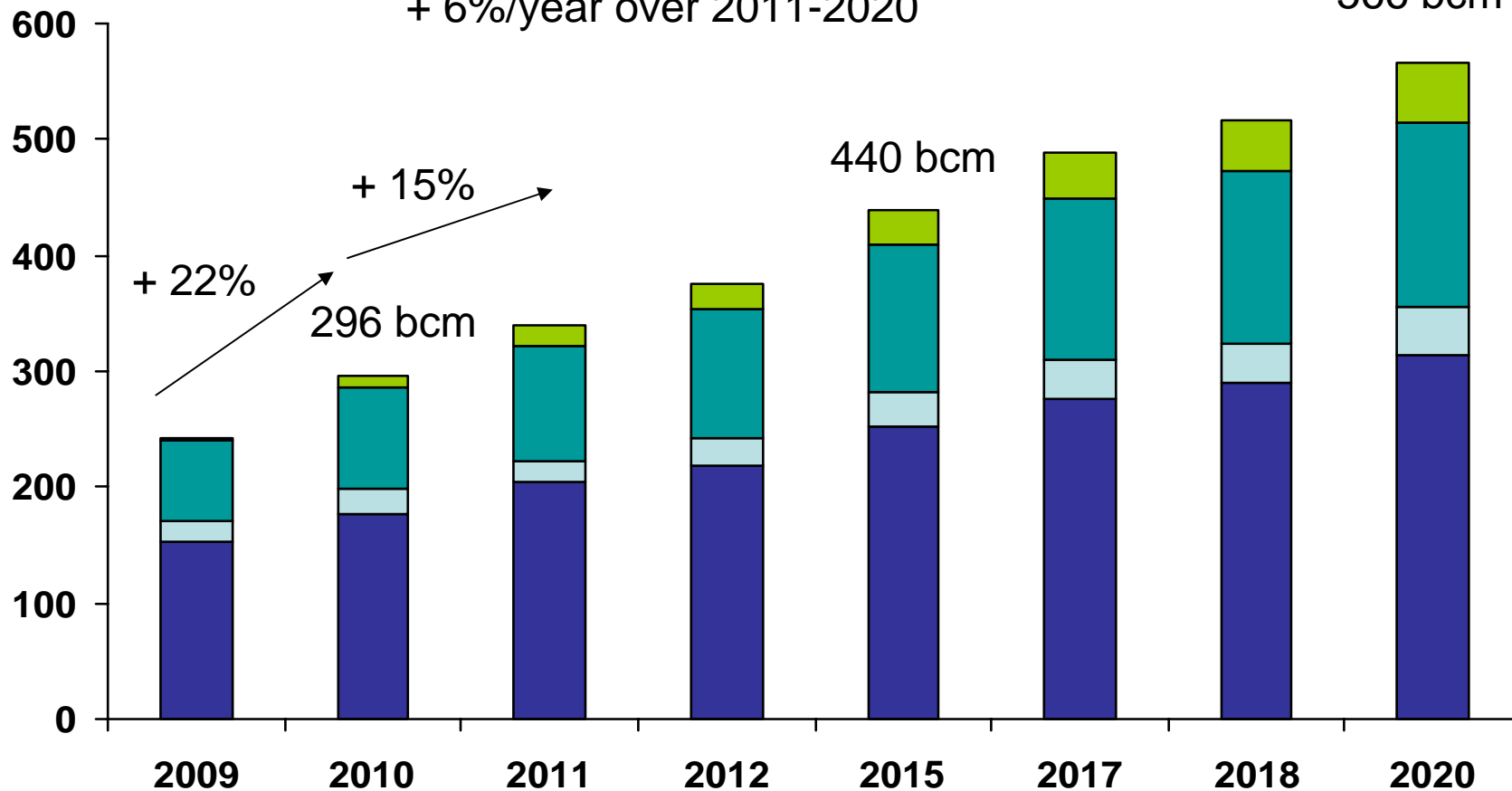
World LNG demand prospects



Bcm

+ 6%/year over 2011-2020

566 bcm



■ Asia ■ North America ■ Europe ■ Latin America & Middle East



Source: CEDIGAZ

World LNG market prospects



- The number of countries importing LNG may increase by at least a third over the next decade.
- 2012 – 2016: emergence of new markets like Vietnam Singapore, Indonesia (West Java), Malaysia, Poland and Croatia...
- Australia: + 30 Mt of liquefaction capacity by 2016 if the projects now under construction (Gorgon, Gladstone LNG, Queensland Curtis LNG) are able to proceed on time
- It is likely that Australia will overtake Qatar to become the world' s largest LNG producer at the end of this decade

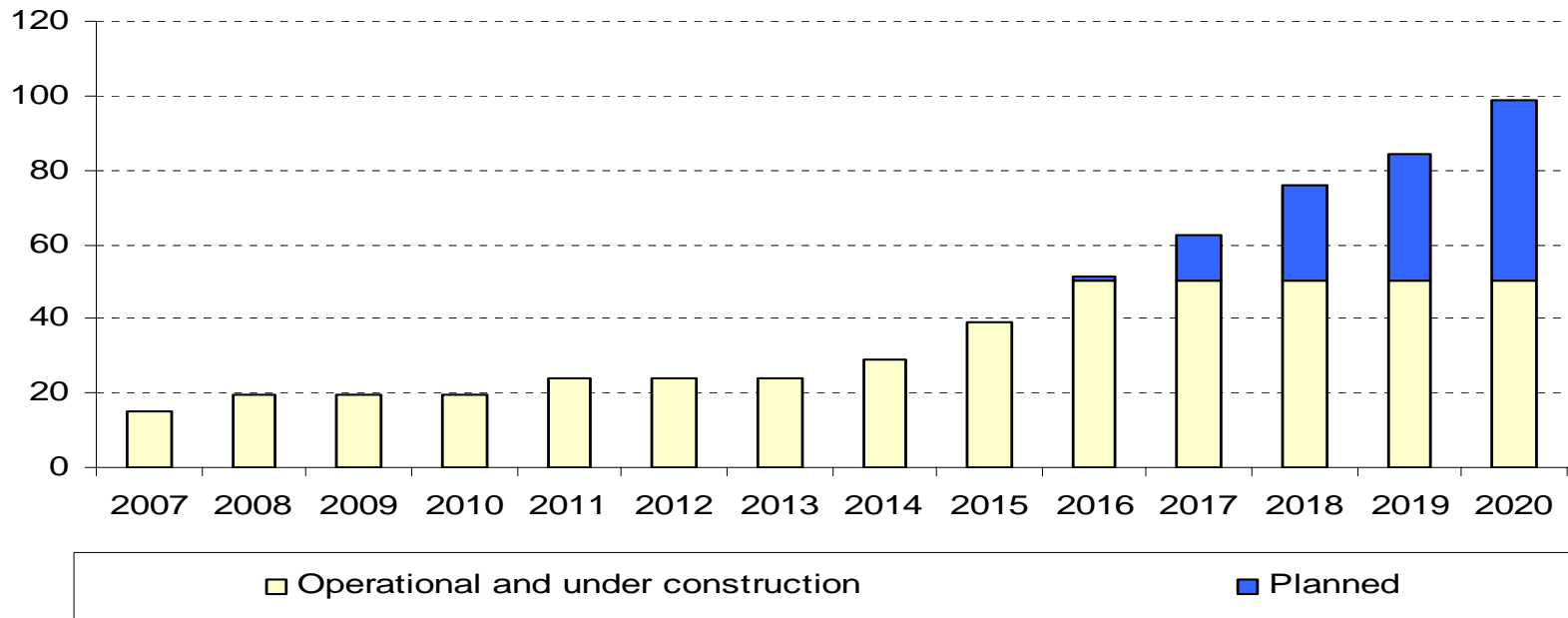


World LNG supply prospects

Liquefaction capacity in Australia



Mt



Australia: from 20 Mt/y to more than 60 Mt/y by 2017 and probably 100 Mt by 2020, according to Cedigaz

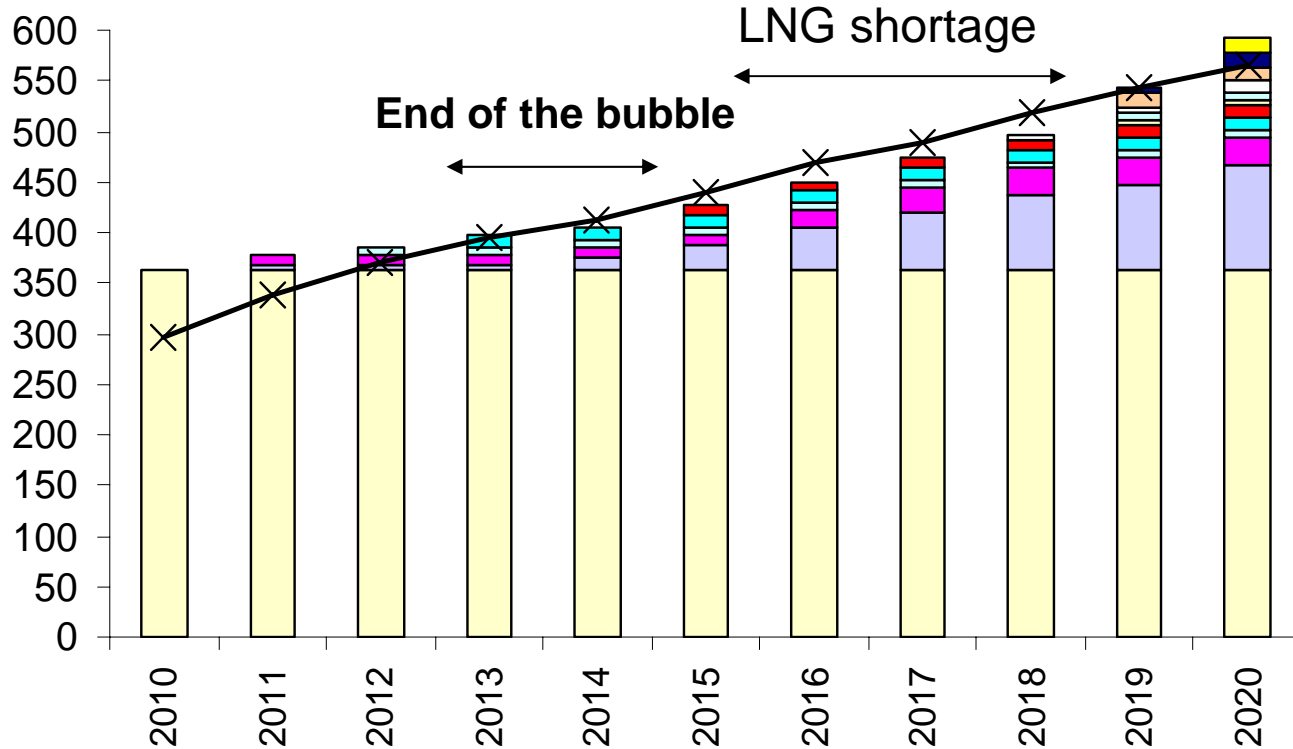
Possible Trains debottlenecking in Qatar (+12 Mt/y) by the end of the decade
No new liquefaction trains expected before 2020



How long will the LNG glut persist...?

The LNG bubble is short-lived...

bcm



European gas supply prospects

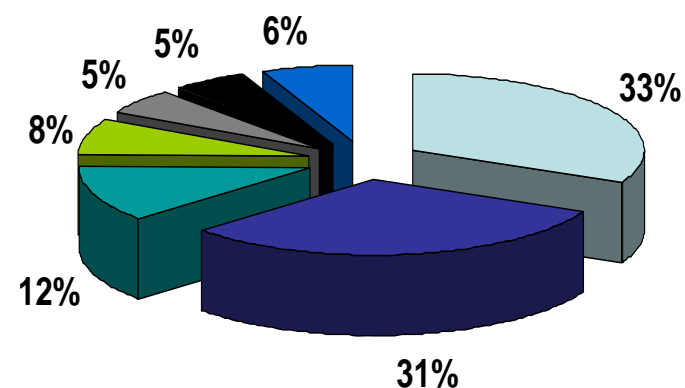
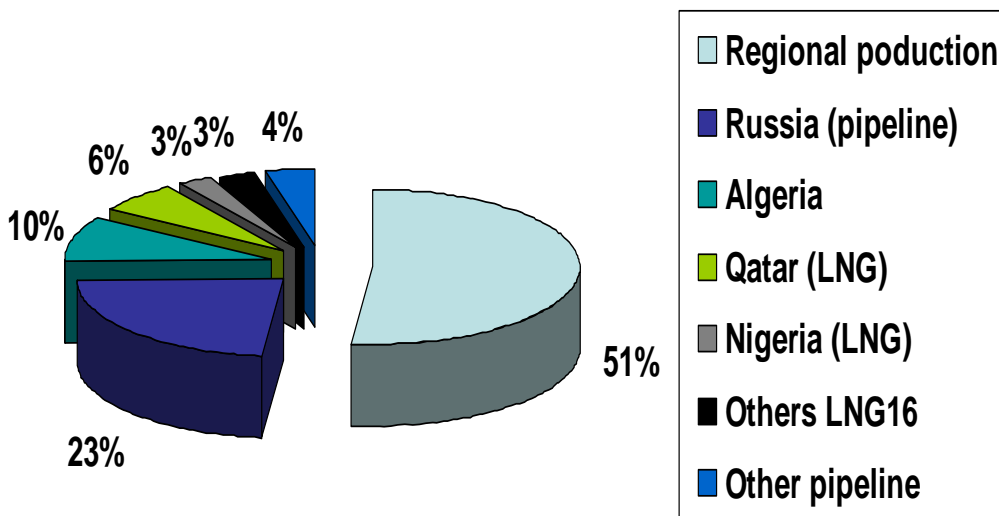


2010

Total = 570 bcm

2020

Total = 670 bcm



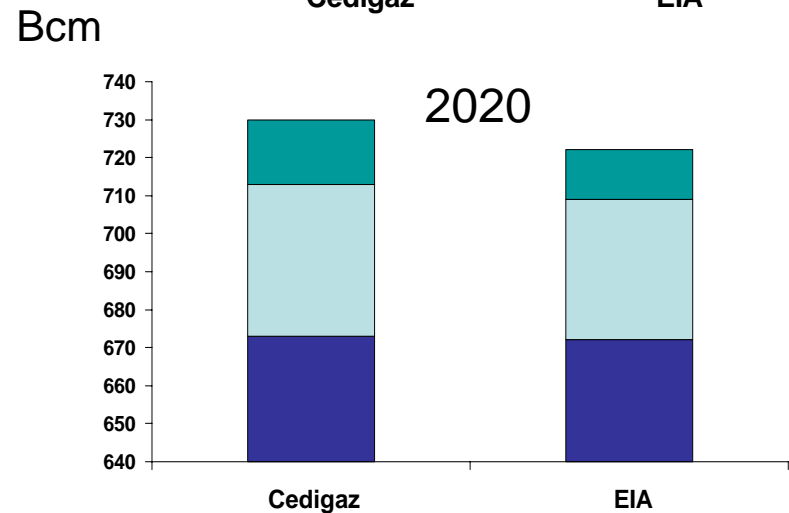
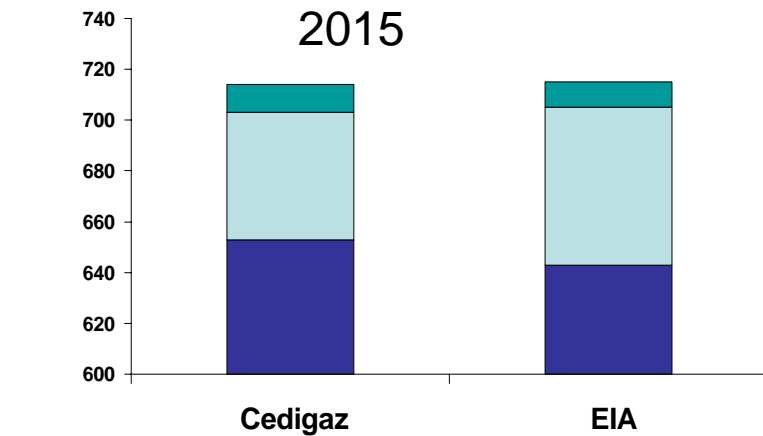
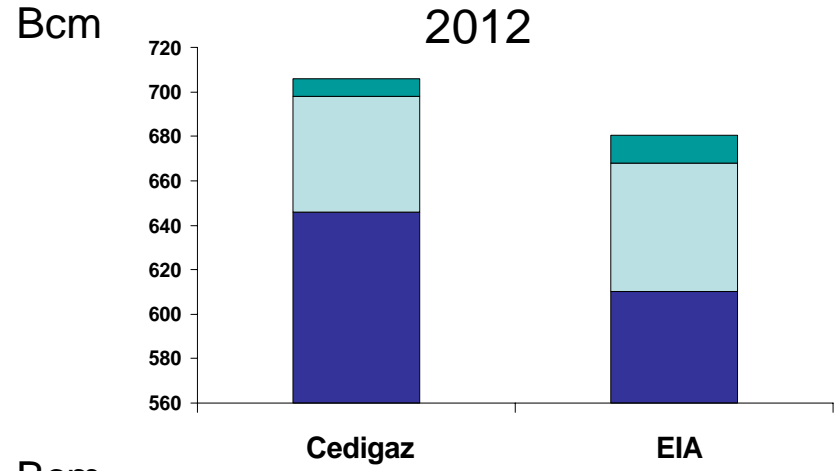
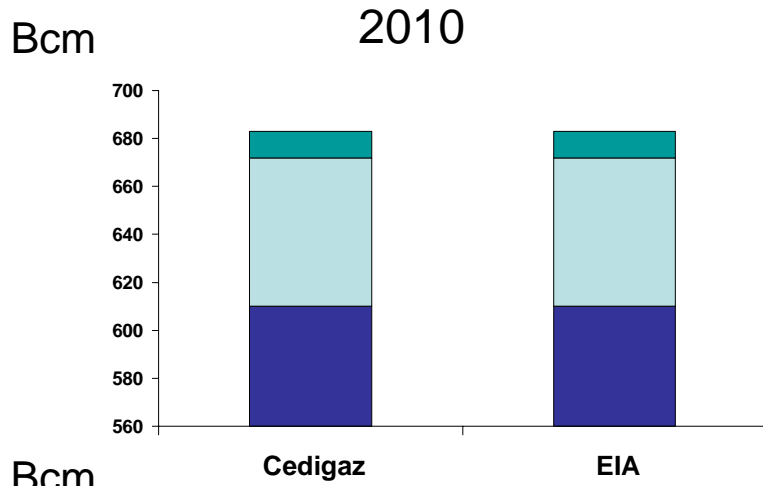
LNG share: 15%

LNG share: 24%



US gas supply prospects

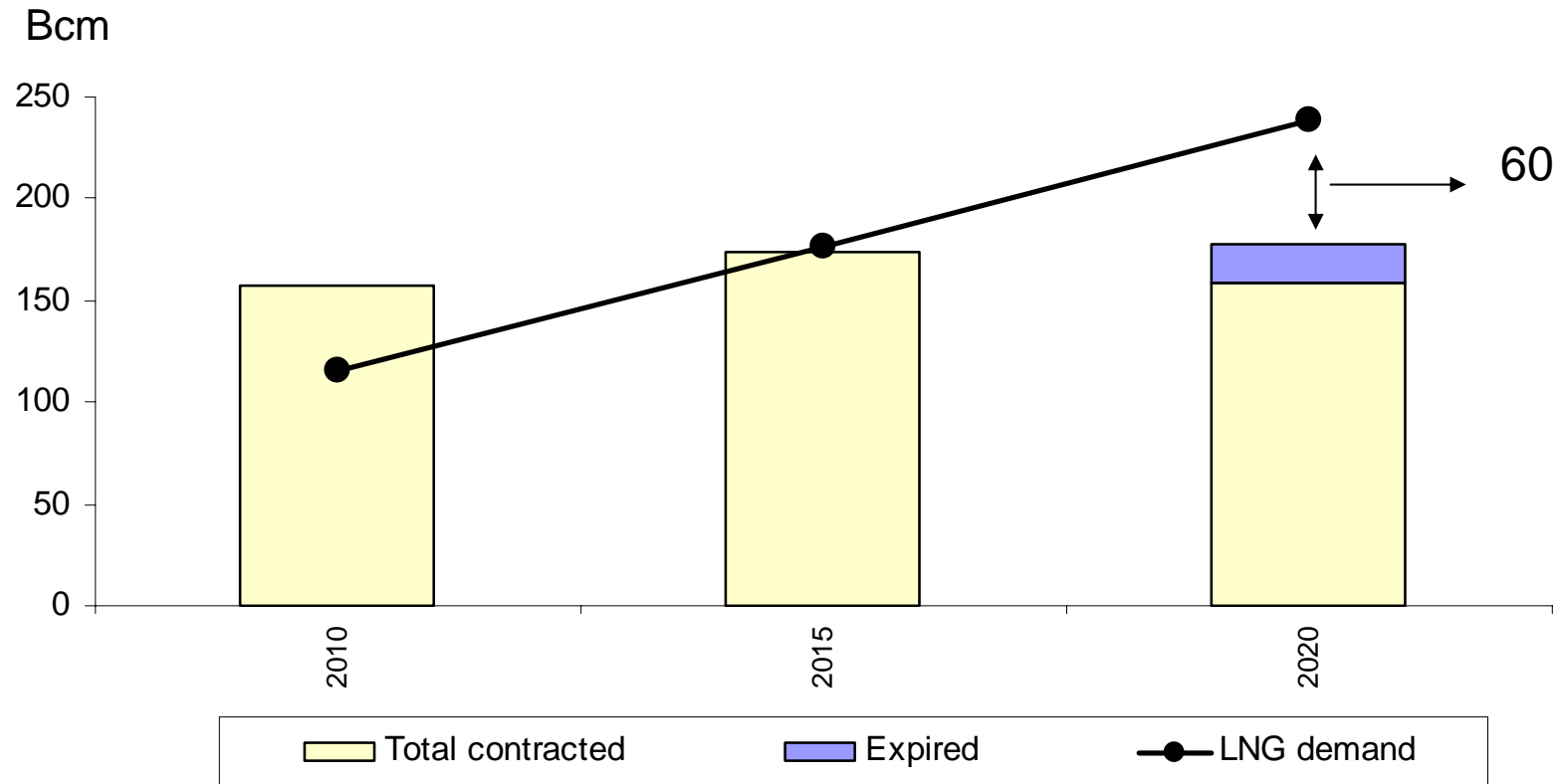
Cedigaz forecasts versus EIA (AEO 2011)



Net pipeline imports
 Production
 Net LNG imports

Contracted LNG versus future demand

Atlantic Basin



→ Expansion of intra-regional spot trade in the short-term (US re-exports)

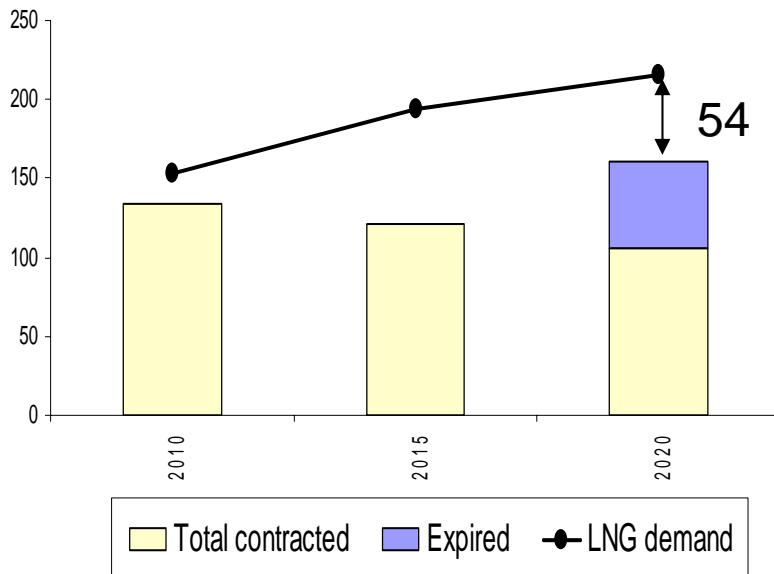


Contracted LNG versus demand

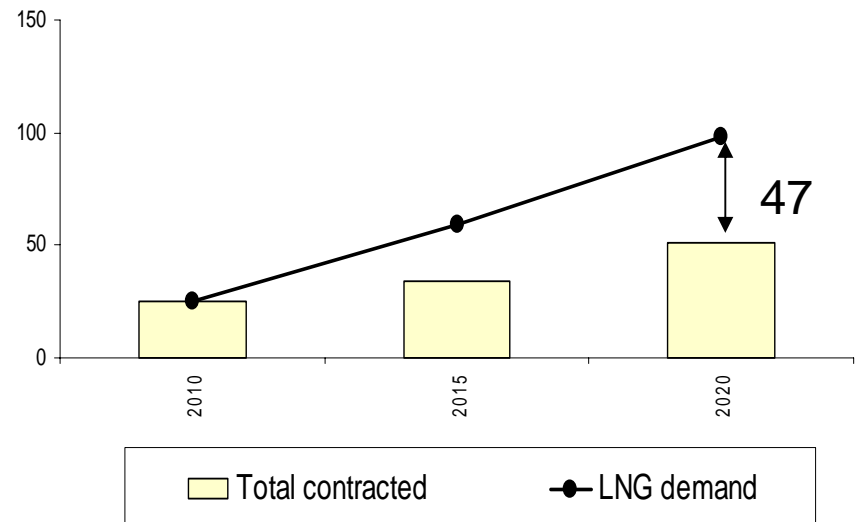
Asia



Established markets



Emerging markets



Total gap by 2020 = 100 bcm. Substantial needs for additional contracted supplies

Fast-growing spot purchases from the Atlantic Basin in the short-term



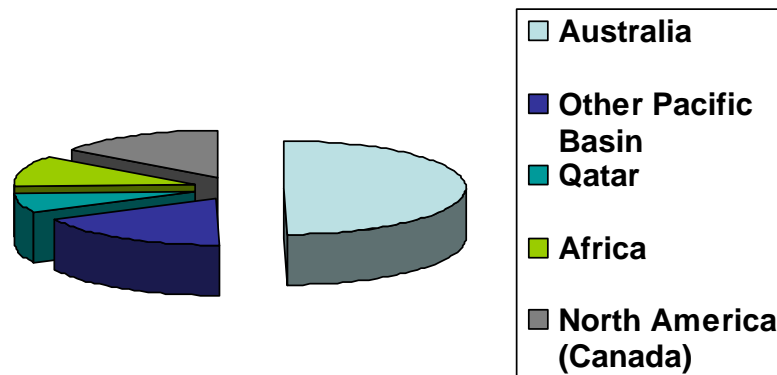
New future projects to meet the gap...

Which markets must new future LNG projects serve...?



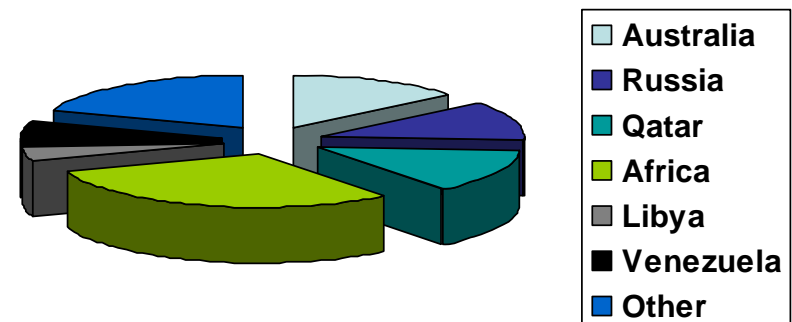
Asia-Pacific

2020 gap = 100 bcm



Atlantic Basin + Middle East

2020 gap = 70 bcm



Australia: future core LNG supply source in the Pacific Basin

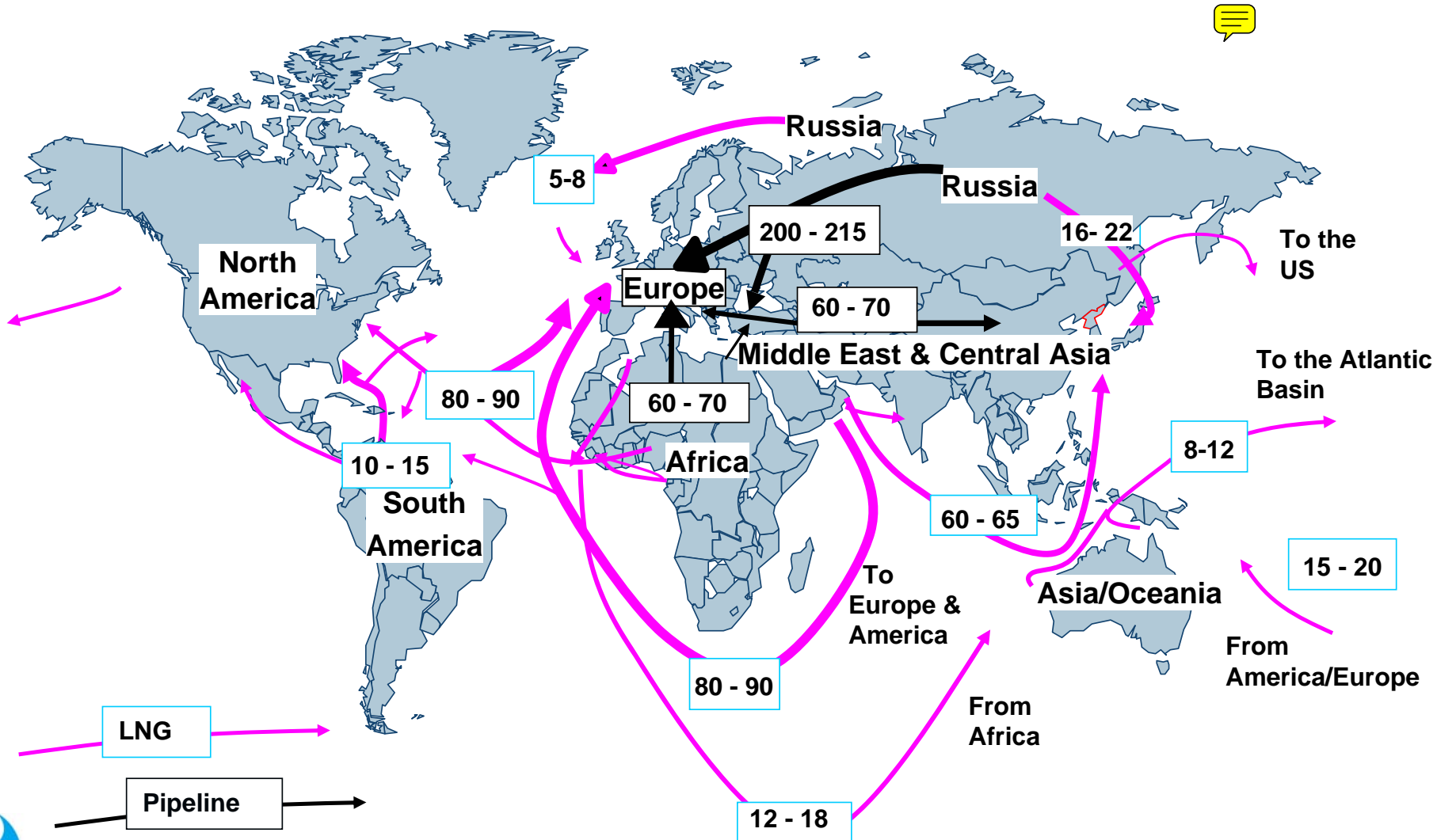
A substantial part of future supply in Russia/Africa/Canada to be destined for Asia

More diversified LNG supply portfolio in the Atlantic Basin



The growing role of international trade

Inter regional flows = 605 Bm³ (75% for Europe) by 2020



Source: CEDIGAZ



Conclusion

- Despite the growing importance of inter-regional flows, LNG markets will not be totally globalised by 2020 (shale gas in the US, declining import dependence of Asia-Oceania)
- The concentration of world LNG supply will persist by 2020 (50% of LNG supply in the hands of three producing countries)
- Major importance of big projects like Shtokman/Yamal, Brass LNG and Canada's Kitimat for supply to both the Atlantic and Pacific Basin
- In addition to LNG, growing needs for pipeline imports in emerging markets (Latin America, Middle East, China), exacerbated by future LNG shortage
- From the perspective of booming gas demand and LNG supply challenges, unconventional gas and LNG may not be in competition

