



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

The Future of Natural Gas Markets

Regional Update

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5 June 2012

Kuala Lumpur



Patron



Host



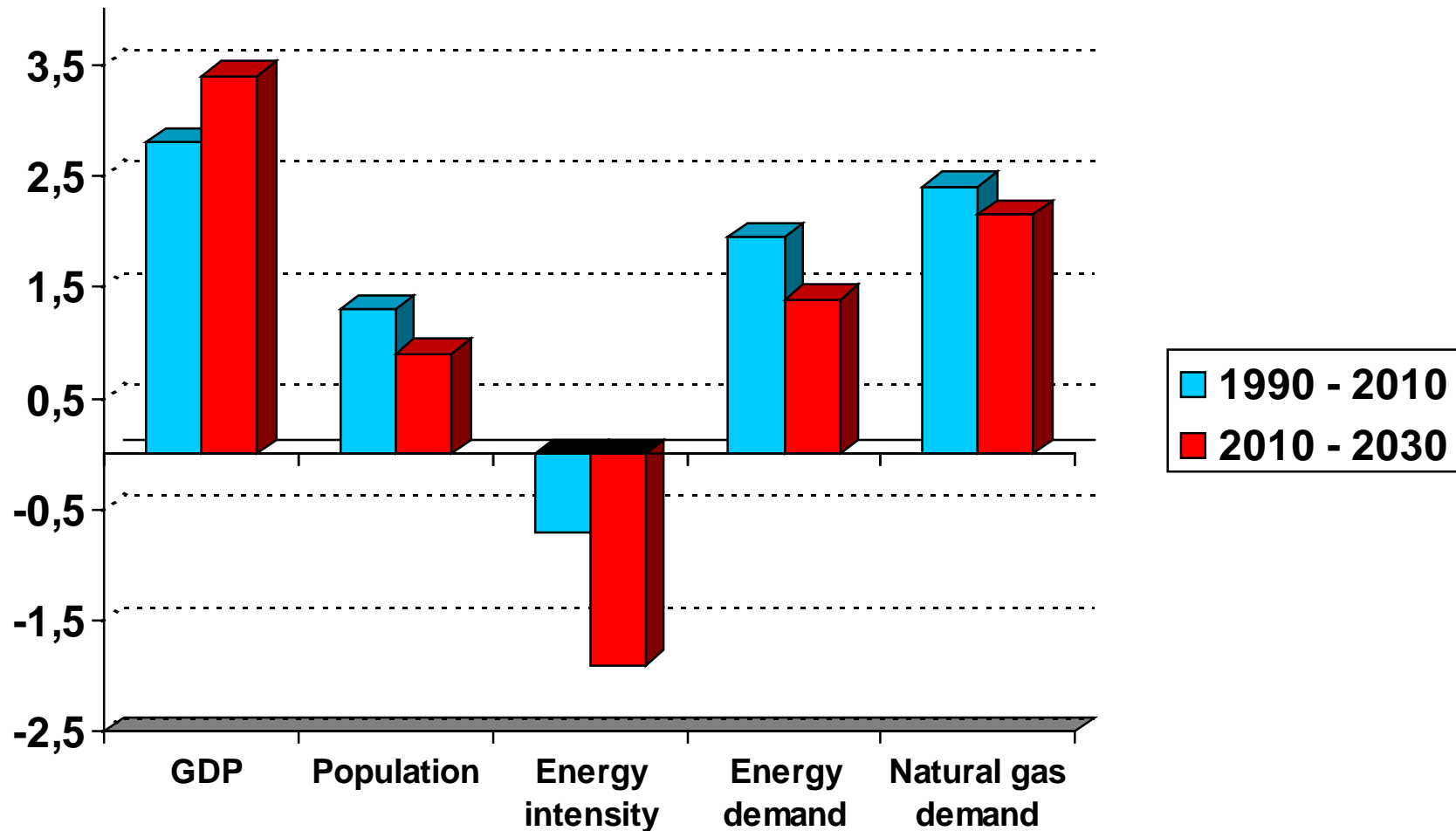
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- This *Energy Outlook* presents CEDIGAZ views on the most plausible outlook of global gas markets through 2030.
- The projections are based on a range of assumptions on the economy, energy prices, population, policy and technology, taking into account recent developments.
- CEDIGAZ Reference Scenario assumes the implementation of challenging local environmental and climate mitigation policies (cost on CO₂ emissions).
- It highlights the critical role of natural gas in the world energy mix.
- A number of future developments are uncertain and can not be foreseeable with precision.
- But this scenario provides a basis for reflection on the future decisions and actions which are needed to meet global energy challenges.

Global growth rates CEDIGAZ Reference Scenario

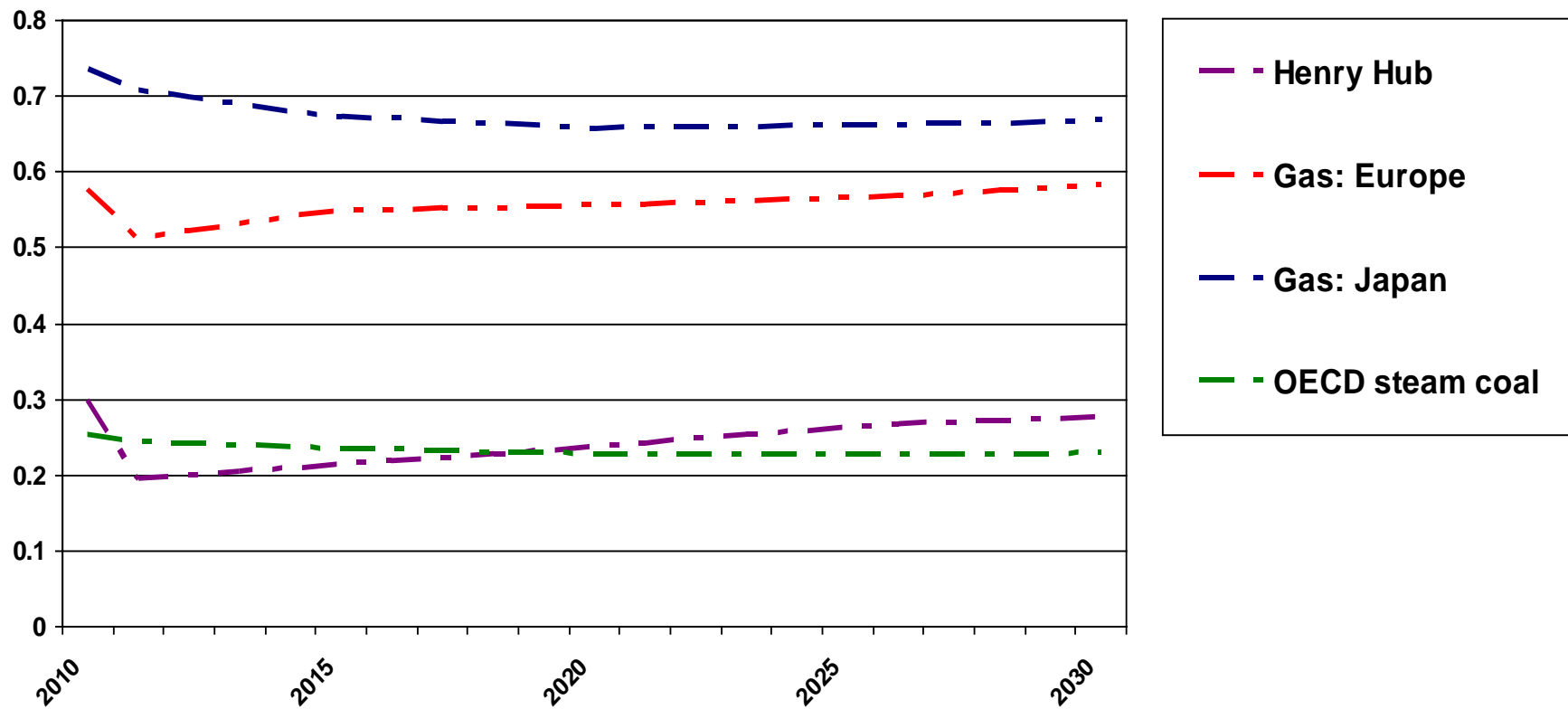
%/year



Evolution of international energy prices

CEDIGAZ Reference Scenario

Ratio of average natural gas and coal import prices to crude oil prices

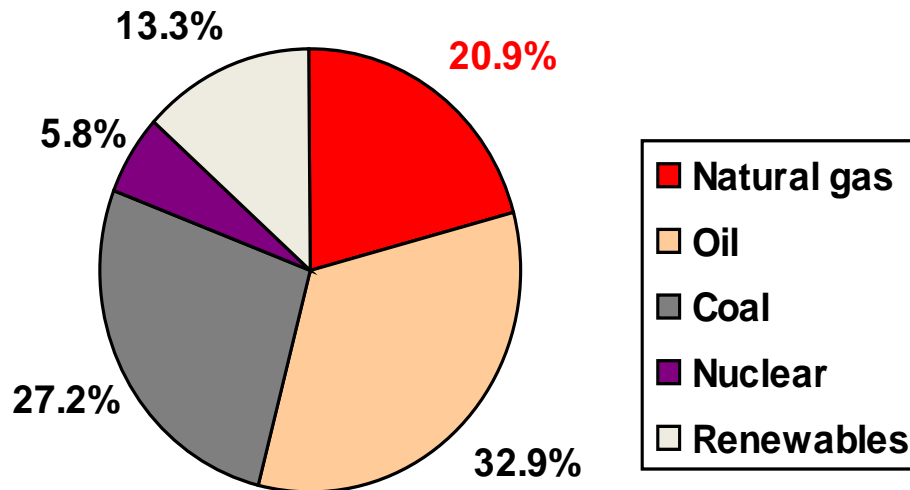


Source: CEDIGAZ Energy Outlook

Evolution of the global energy mix CEDIGAZ Reference Scenario

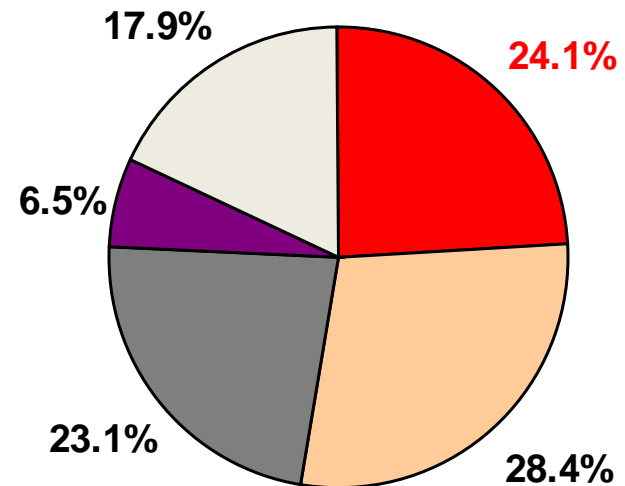
2009

Total = 12132 Mtoe



2030

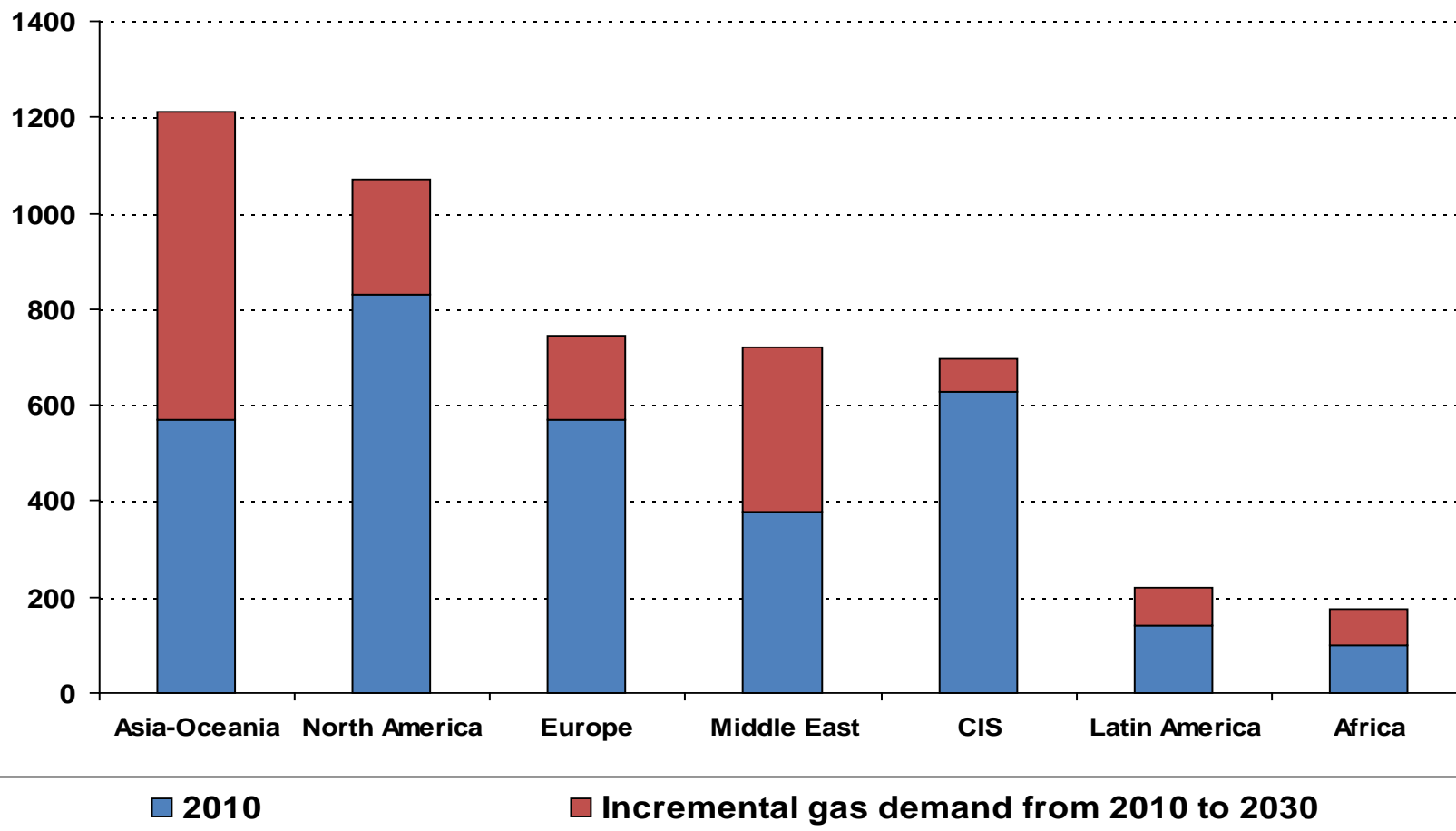
Total = 16226 Mtoe



Source: IEA (2009), CEDIGAZ Energy Outlook

Incremental natural gas demand by region 2010 - 2030

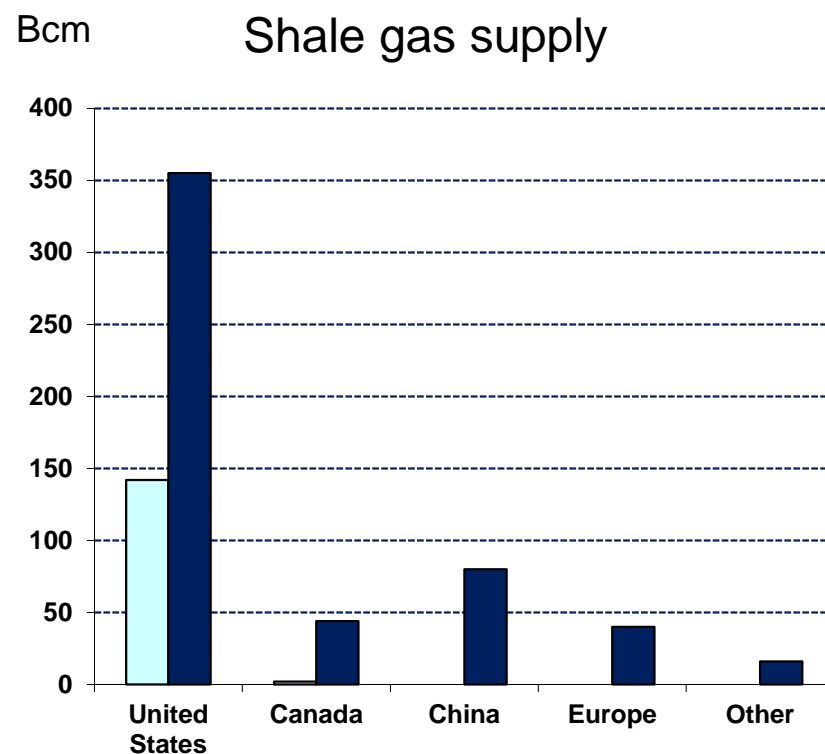
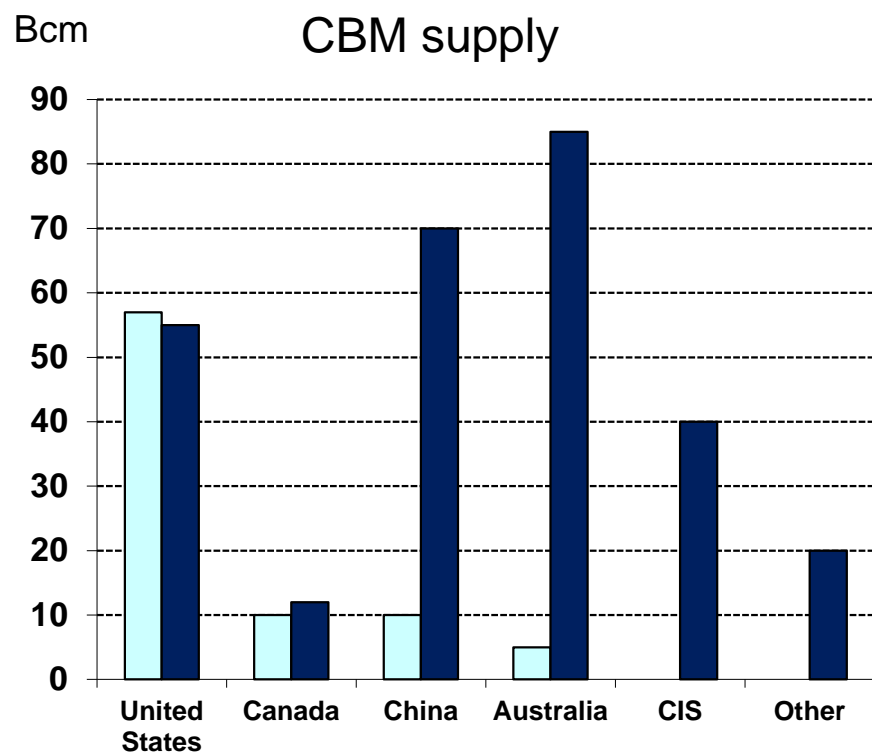
Bcm



Source: CEDIGAZ Energy Outlook

The future of unconventional gas

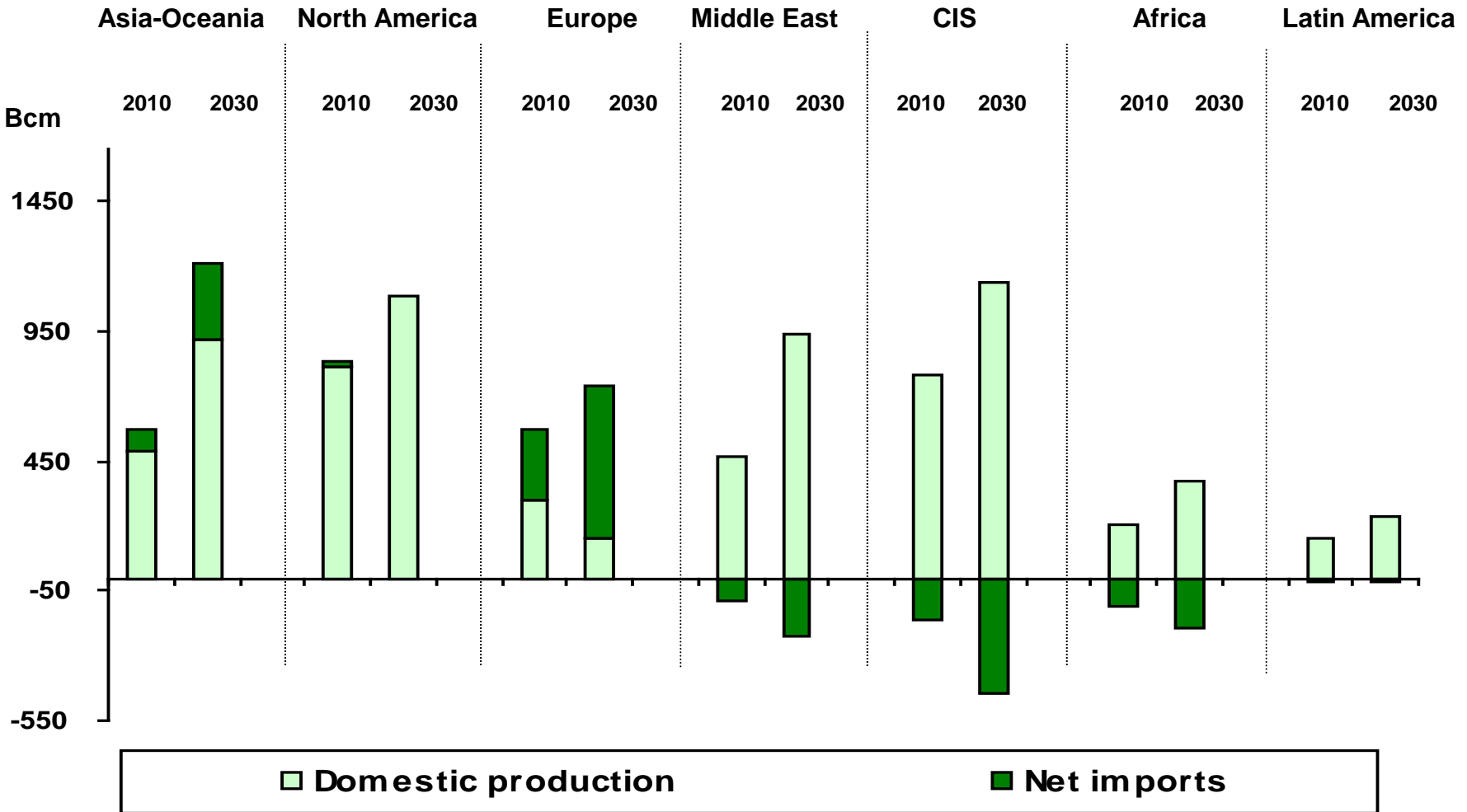
The combined share of shale gas and CBM in global production is projected to climb from 7% to 17%



 2010  2030

Source: CEDIGAZ Energy Outlook

Natural gas supply by region 2010 - 2030

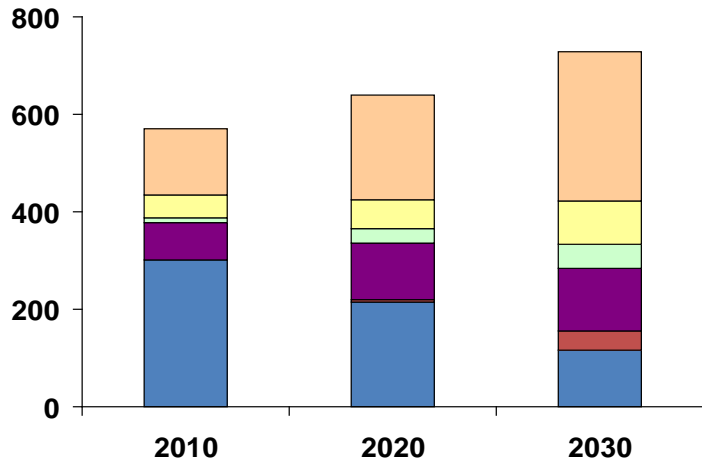


Source: CEDIGAZ Energy Outlook

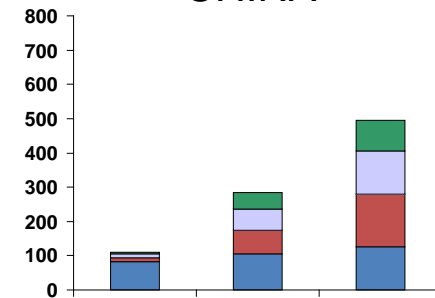
Sources of gas supply, by region

CEDIGAZ Reference Scenario

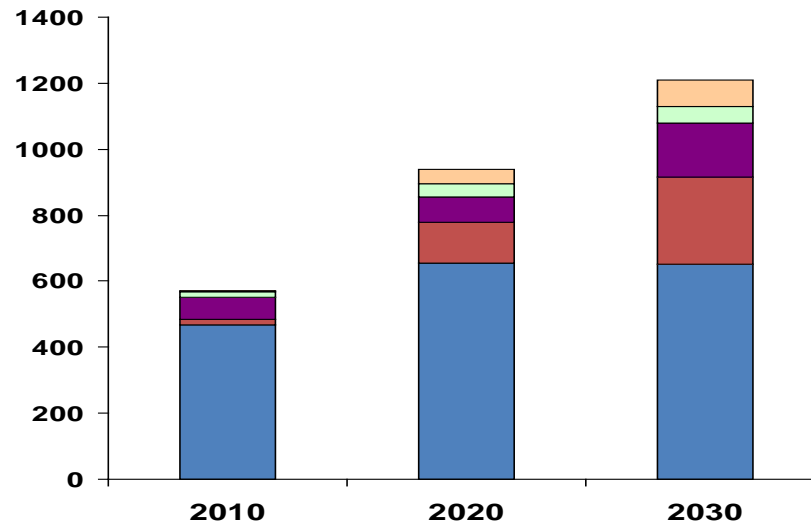
EUROPE



CHINA





ASIA OCEANIA



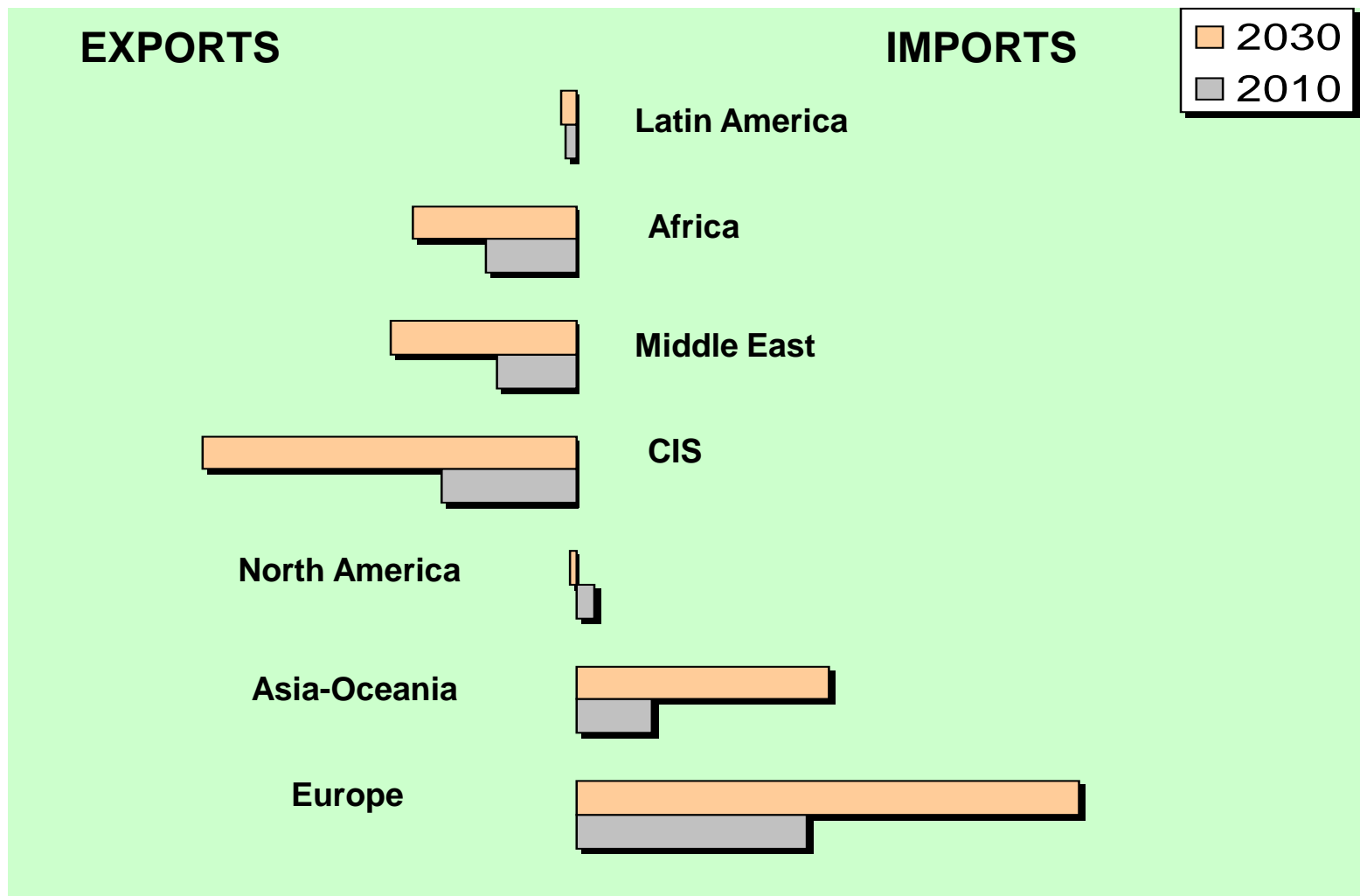
ASIA - EUROPE

-  Conventional production
-  Unconventional production
-  LNG imports from Middle East/Africa
-  Other LNG imports
-  Pipeline imports from Middle East/Africa
-  Pipeline imports from Russia/Central Asia

CHINA

-  LNG imports
-  Pipeline imports

Inter-regional gas trade: + 4.4%/year Cedigaz Reference Scenario

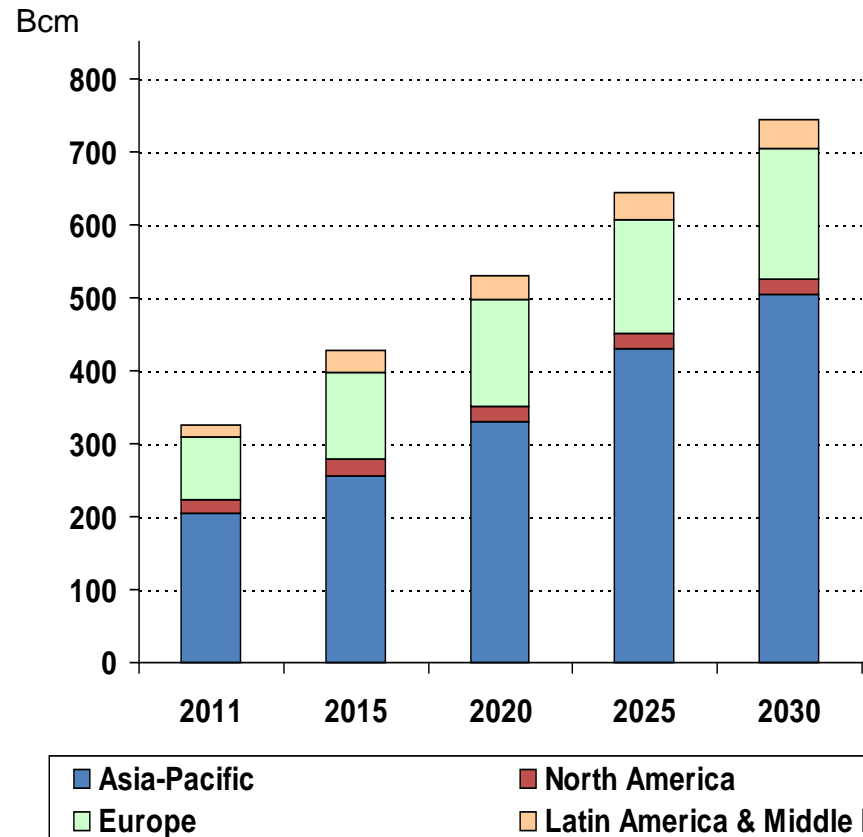
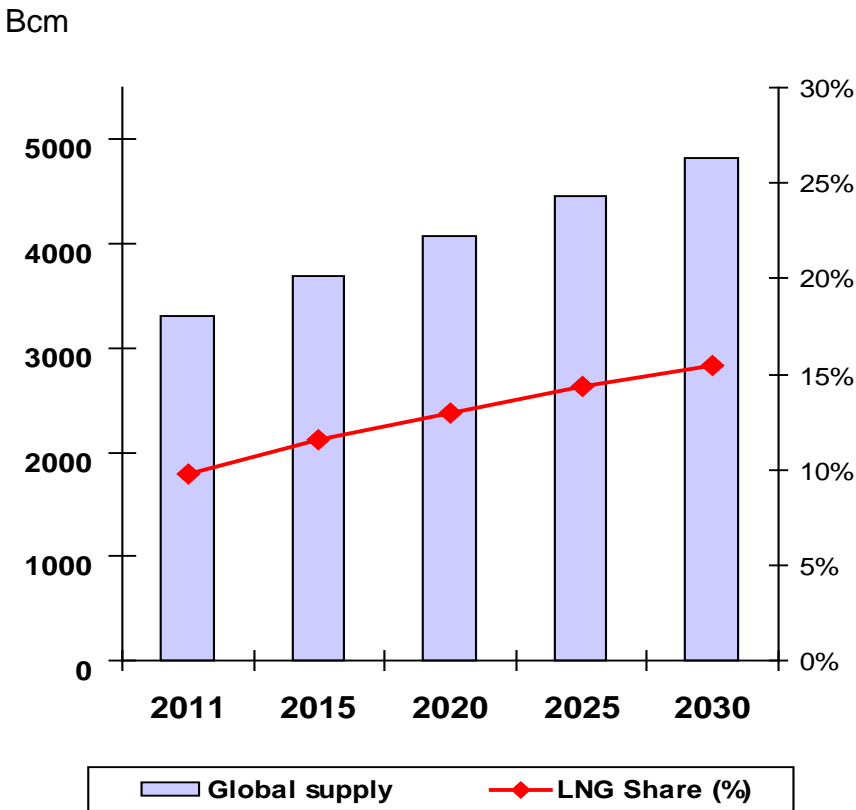


Source: CEDIGAZ Energy Outlook

LNG represents a growing component of gas supply

Role of LNG in global gas supply

Evolution of global LNG demand



Source: CEDIGAZ Energy Outlook

Challenges and uncertainties

- Changes in priorities of energy policies in emerging countries (China, India).
- Evolution of environmental policies (price of CO₂ emissions in OECD countries).
- Unpredictable future advances in technology and their impact on energy efficiency.
- Unexpected political and geopolitical events.
- Rising production costs and low domestic gas prices in some producing countries.
- Uncertain regulatory and investment climate (alignment between private and public investments, economy and availability of finance).
- Environmental risks of unconventional gas development.

CONCLUSION

- Many factors point to a growing contribution of natural gas to ensure a future secure, affordable, low-carbon and efficient energy mix.
- CEDIGAZ Reference Scenario shows that natural gas is an essential ingredient of the energy transition in both the medium and long-term.
- But the future of natural gas should not be taken for granted.
- International agreements and actions are needed to prevent geopolitical risks.
- The implementation of an appropriate policy and regulatory framework is required for gas to play its crucial and full potential role in the transition toward a sustainable energy system.