



International Gas Union



Natural Gas in a Climate Change Perspective

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24 June 2010, Moscow, Russian Federation

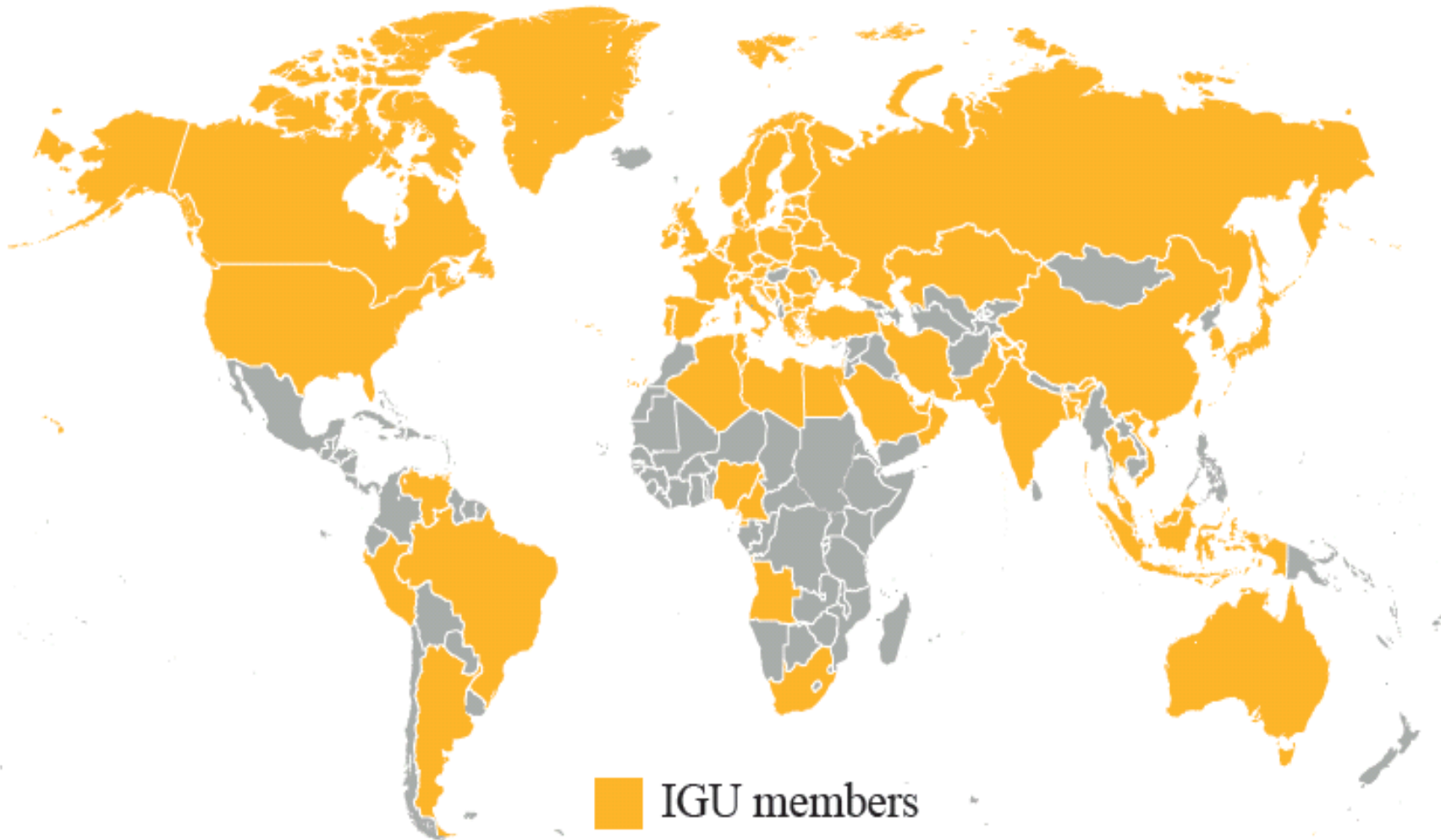




IGU represents around 95% of global gas market

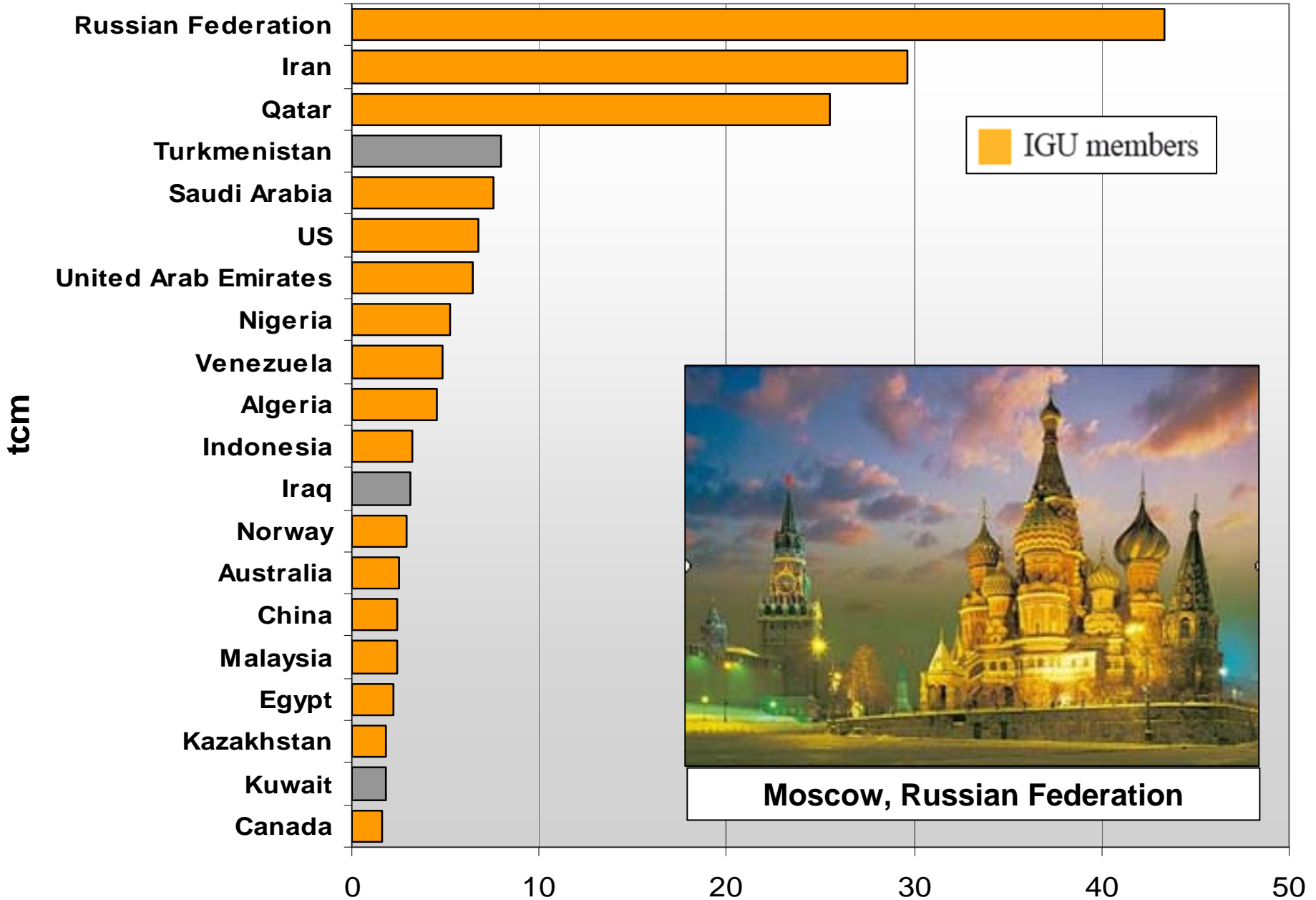


IGU established in 1931



Top 20 Proven Reserves NG

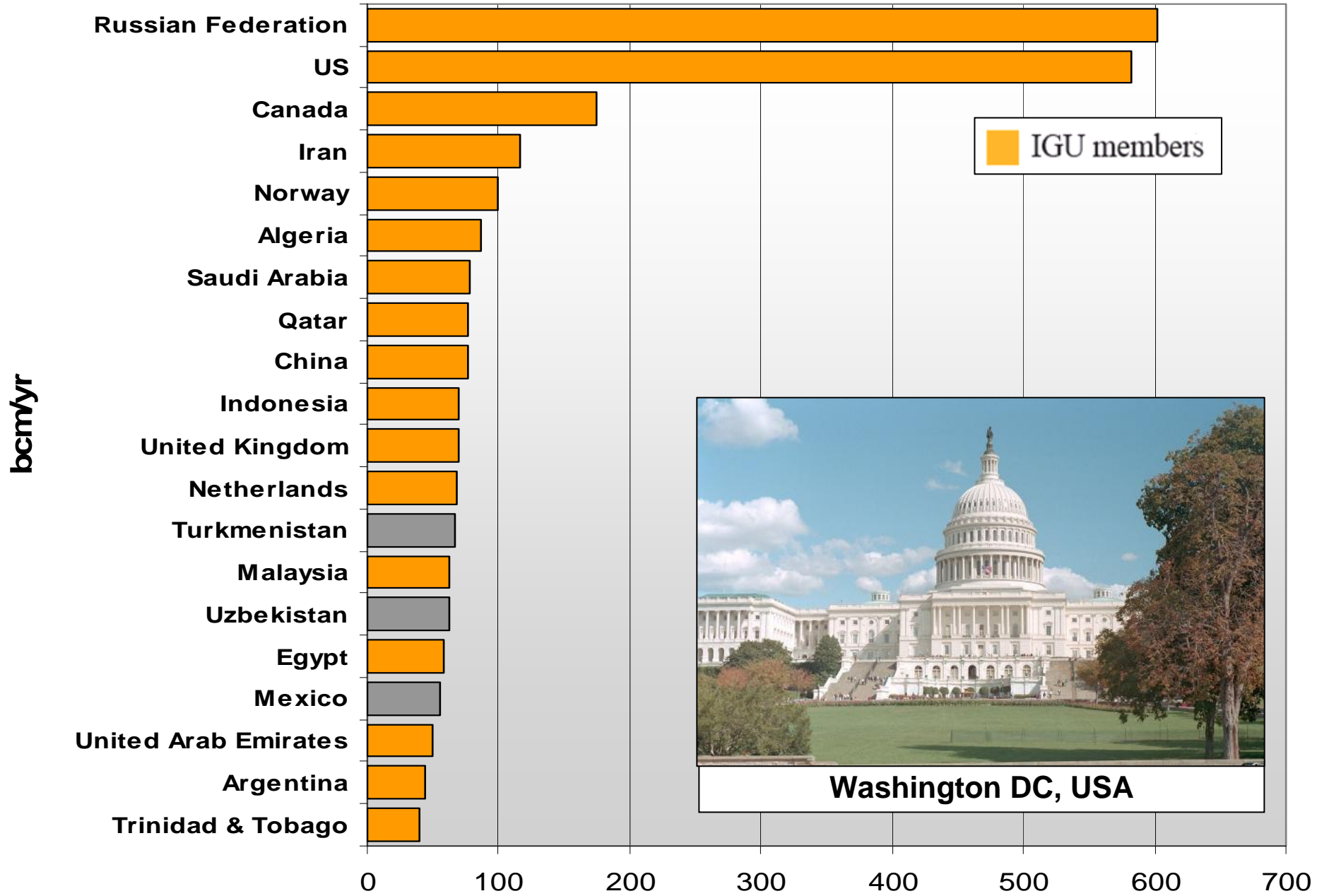
(source BP Outlook 2009)



Moscow, Russian Federation

Top 20 NG Production 2008

(source BP Outlook 2009)



IGU members



Washington DC, USA

The global energy future

- **Rising population – from 6 to 9 billion in 2050**
- **Human strive for a better life**
- **Technological progress**
- **Climate change concerns**



- **Cleanest fossil fuel**
- **Developed and easily transferable technology**
- **Affordable – No large subsidies required**
- **Mitigate CO2 emissions at low cost**
- **Enables wind and solar**

 ***Gas - part of the climate solution***





Renewable energy and Carbon Capture and Storage (CCS)



- **CCS, solar and wind power require huge subsidies**
- **Technology needs further development**
- **Solar and wind power only works part time**

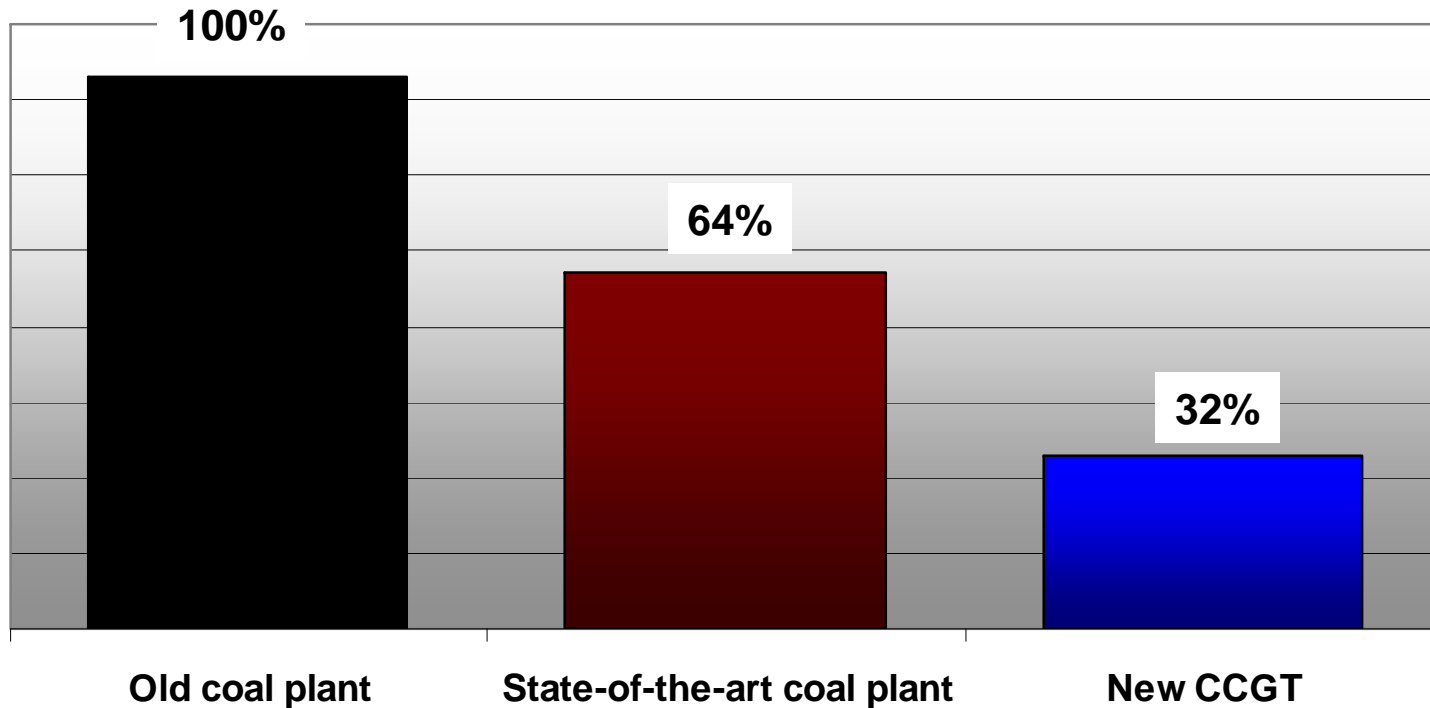
➔ Decades before large impact on GHG emissions

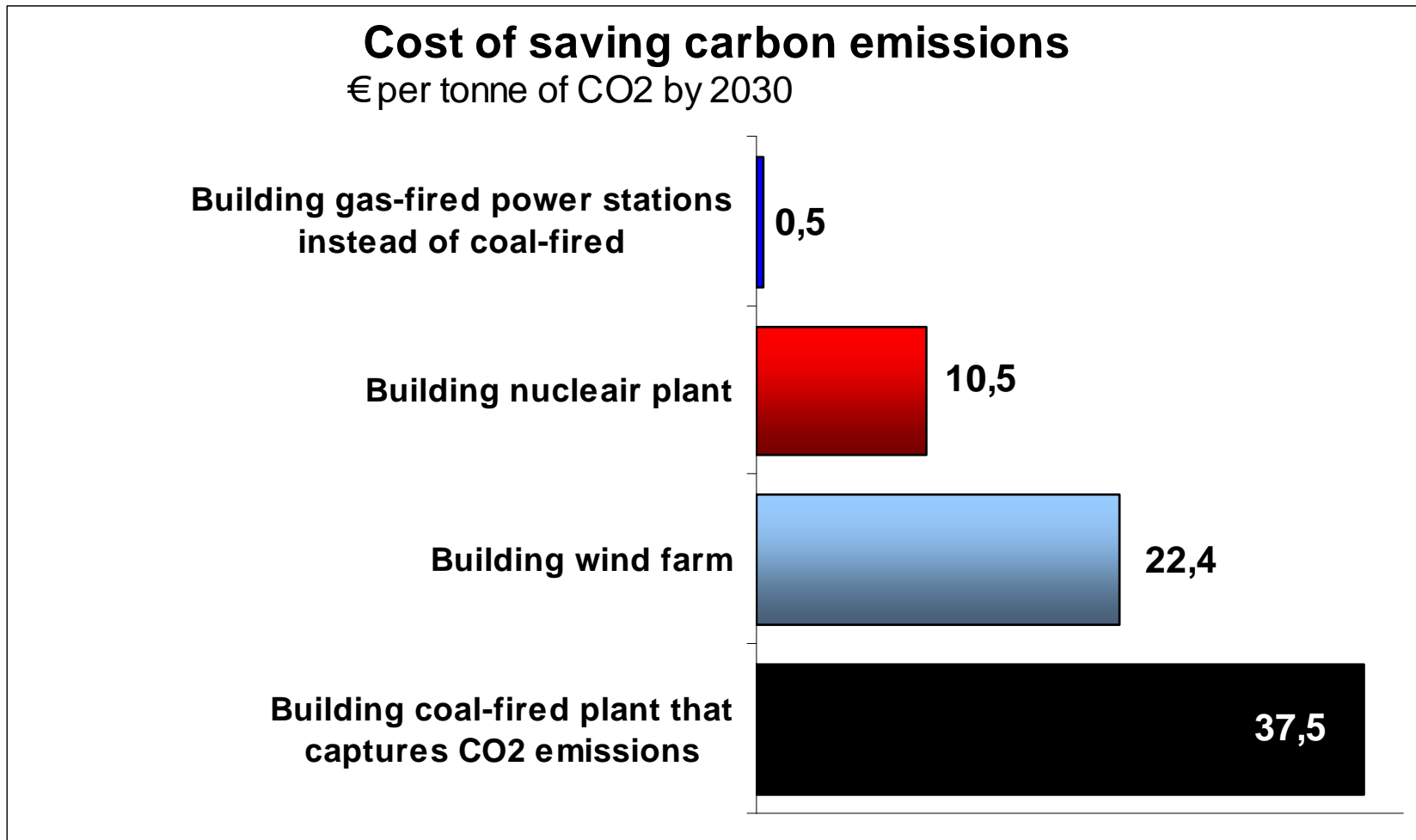


Natural gas in power generation - climate friendly

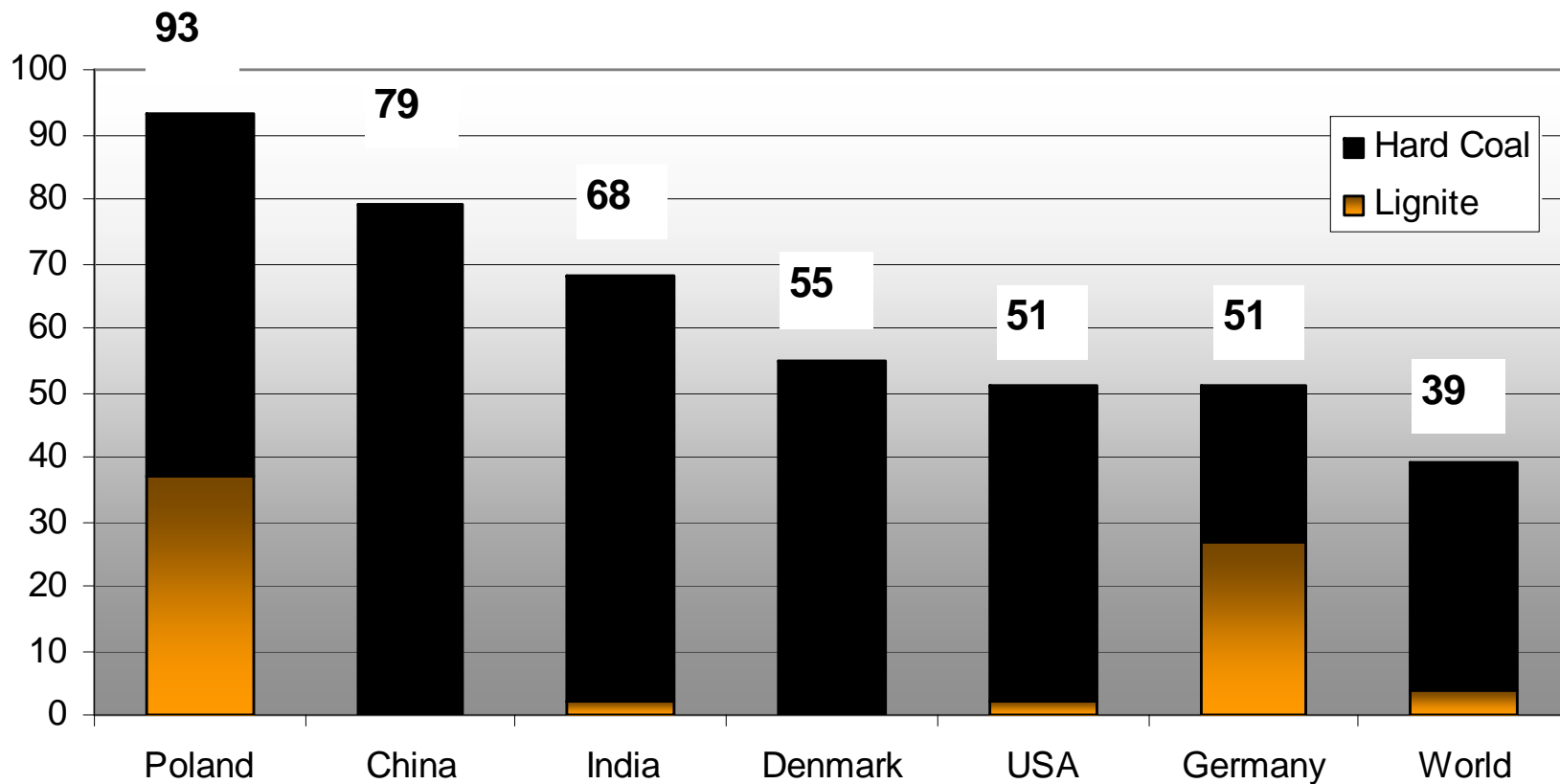
- Replace coal with gas
- GHG reduction potential

CO2 emission for different types of power generation





Percentage of lignite and hard coal in power generation

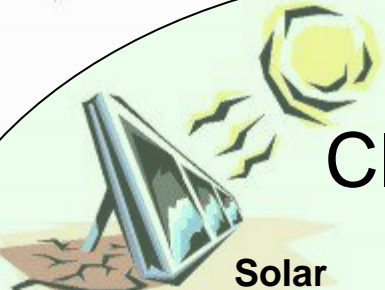





Challenge GHG Emissions and Perceptions



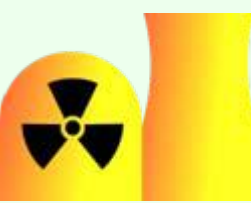
Clean Energy




Solar



Wind




Nuclear




CLEAN COAL


Fossil Fuels



Natural Gas



Oil



Coal

GHG Emissions



- **Demand security**

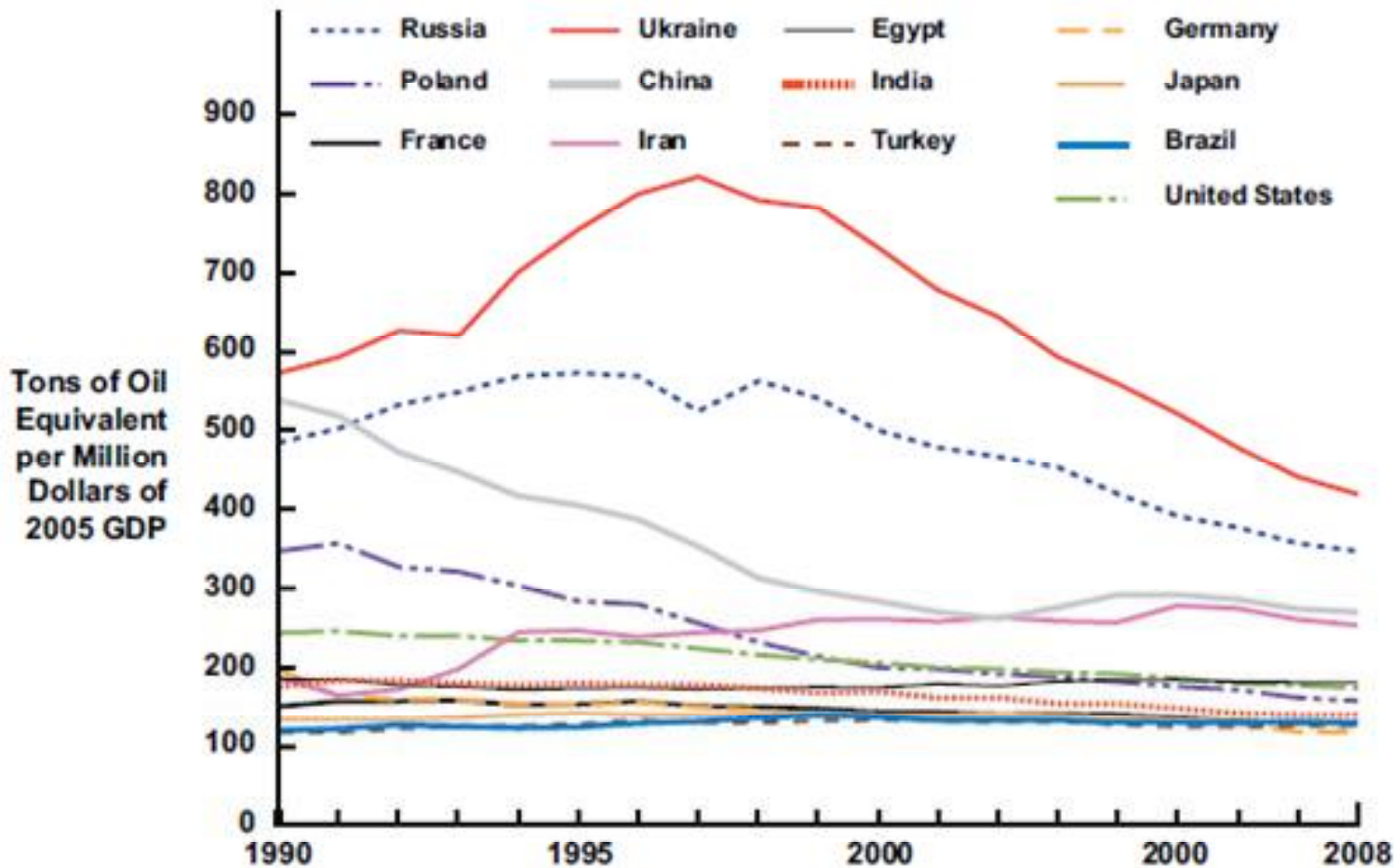
- Energy policy, climate framework
- Long term agreements

- **Supply security**

- Production and transmission infrastructure
- Gas storage and LNG terminals



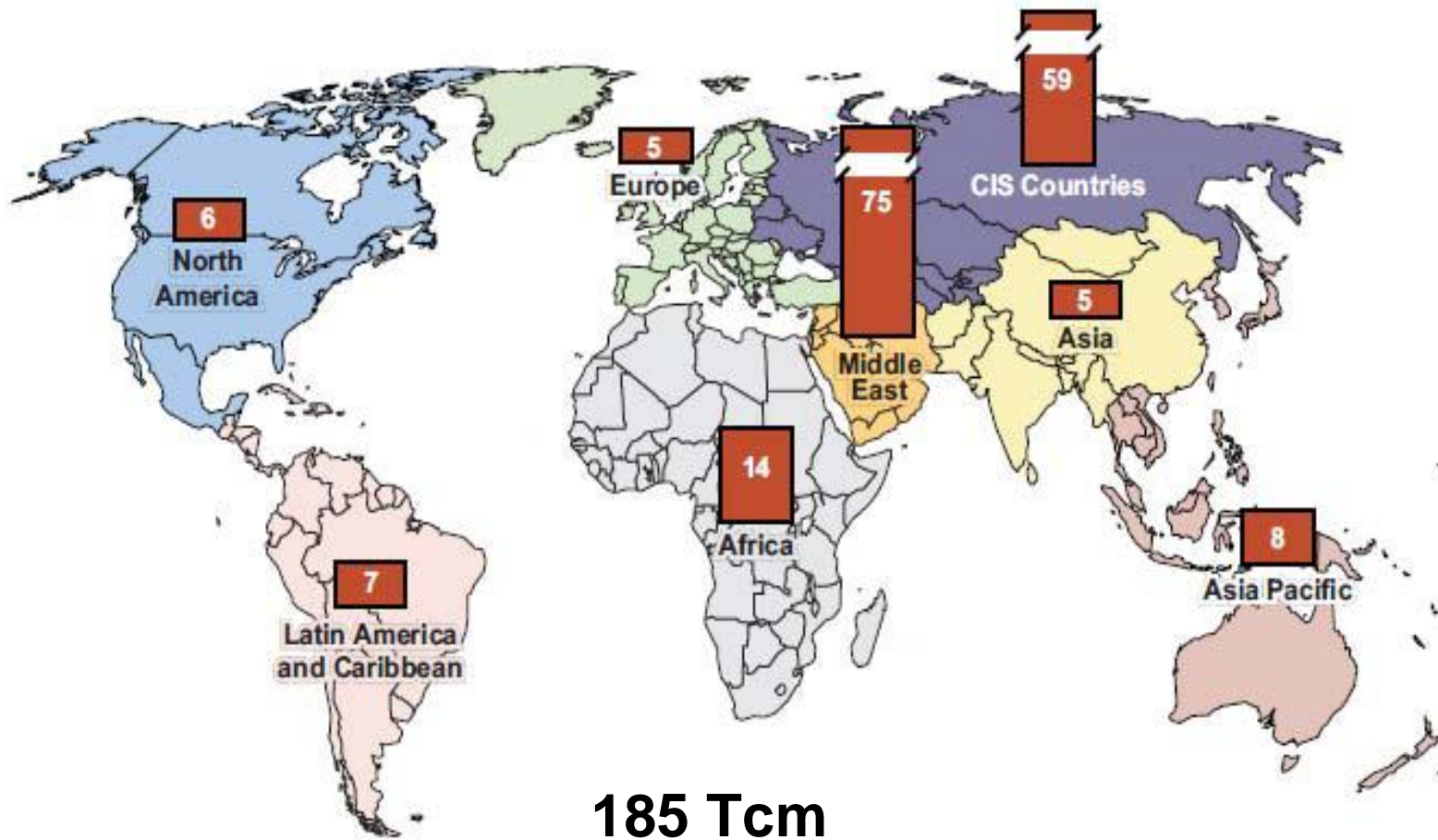
Energy intensity trends...



Source: IHS Cambridge Energy Research Associates.



Distribution of proven gas reserves (est 2008)



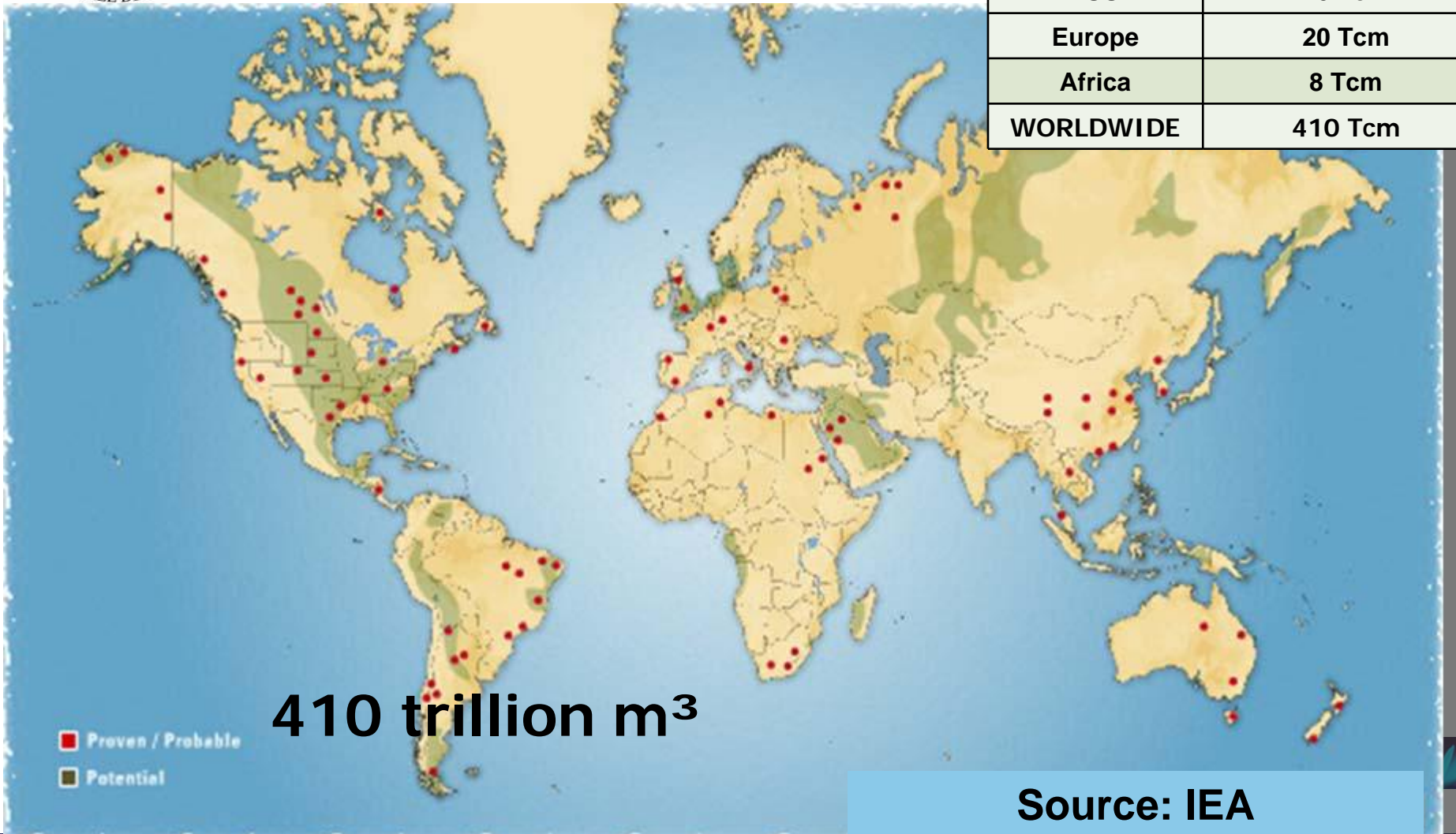
185 Tcm





Shale gas reserves

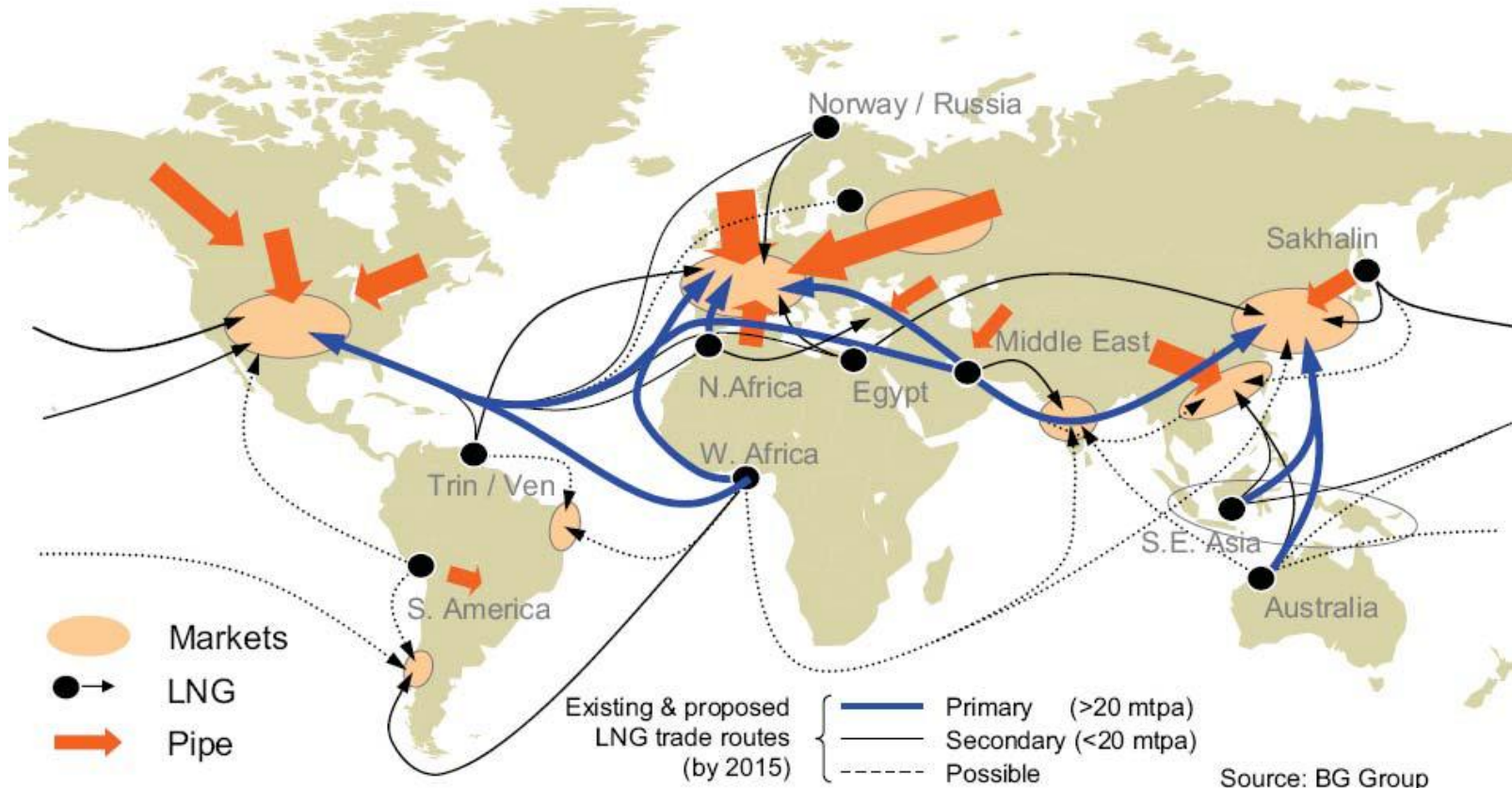
REGION	SHALE RESERVES
Asia Pacific	120 Tcm
Middle East	71 Tcm
South America	59 Tcm
North America	110 Tcm
FSU	20 Tcm
Europe	20 Tcm
Africa	8 Tcm
WORLDWIDE	410 Tcm



Source: IEA



Global gas trade enhancing energy security



Natural Gas for a Sustainable Energy Future

- promote switching to natural gas in power and industry
- encourage use of natural gas in transportation
- improving efficiency and best practices
- implement relevant policies and regulations enabling the development of gas infrastructure





IGU is creating arenas for....



News, Views
and knowledge
on Gas - World Wide

Networking - Knowledge - Dialogue

- **The IGU World Gas Conference**
Buenos Aires 2009
Kuala Lumpur 2012

KUALA LUMPUR
2012
WORLD GAS CONFERENCE



- **Co-sponsor of LNG Conferences**
LNG 16 in Oran, Algeria, April 2010
LNG 17 in Houston, USA, April 2013



- **Ministerial Gas Forums**
2nd IEF – IGU Ministerial Gas Forum, Doha, Qatar, 30 Nov 2010

- **The IGU Research Conference**
IGRC 2011 in Seoul, Korea, October 2011





The IEF-IGU Ministerial Gas Forum



News, Views
Knowledge
- World Wide

**Second Ministerial
Gas Forum**
Doha, Qatar - 30 November, 2010
“The Role of Natural Gas
in a Sustainable Energy Future”





COP 15 Copenhagen, IGU Event



International Gas Union (IGU)



The Contribution of Natural Gas Towards a Sustainable Energy Future

COP15 Gas Event organised by the IGU

Sunday 13 December 2009, 1500-1830 hrs



- **Policy documents to reflect role of natural gas**
- **Regulations to support infrastructure investments**



Gas: Green, abundant, affordable, secure



Gas: Part of the long term energy solution





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