



# International Gas Union



## Natural Gas in a Climate Change Perspective

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24 June 2010, Moscow, Russian Federation

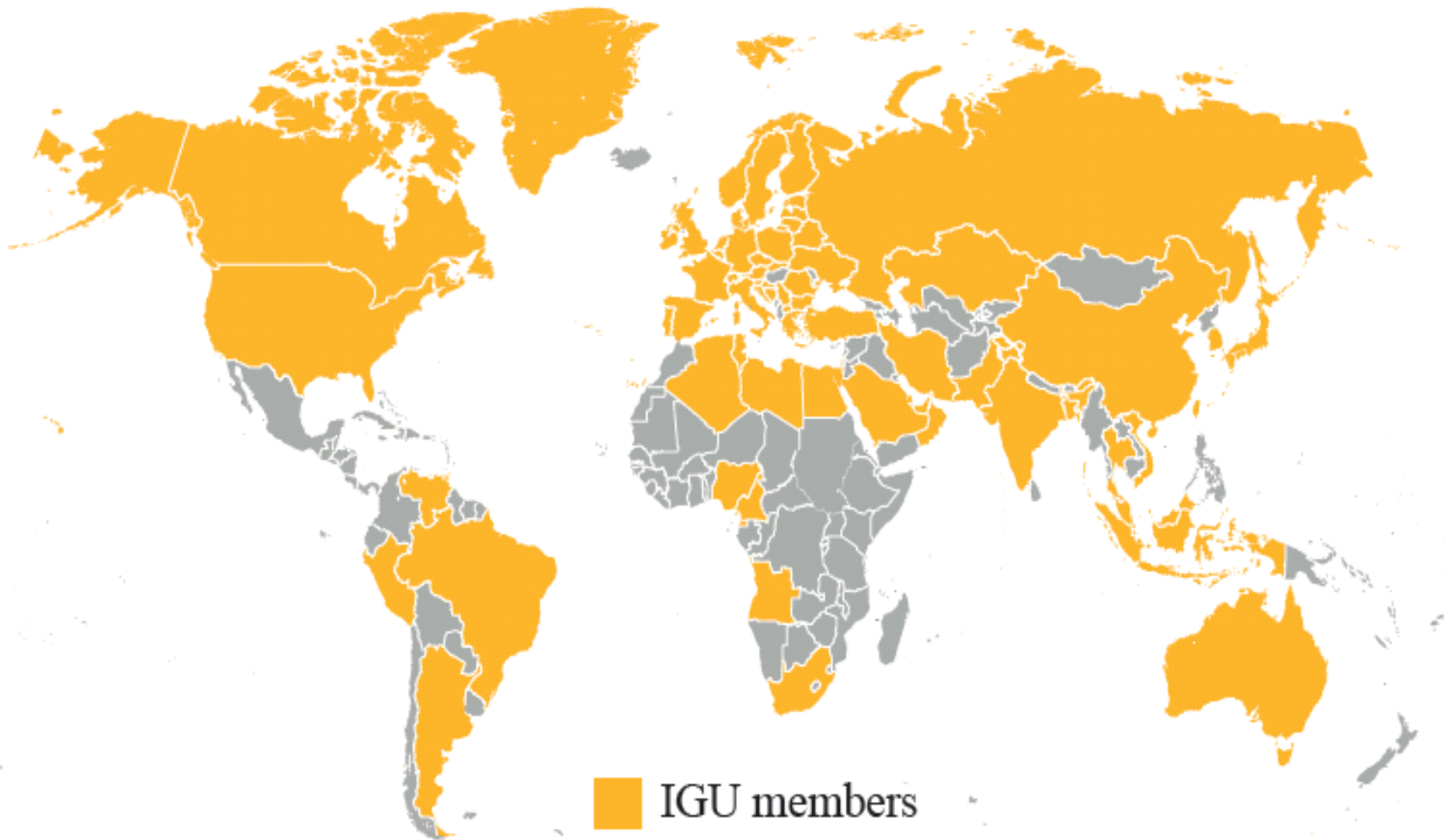




# IGU represents around 95% of global gas market

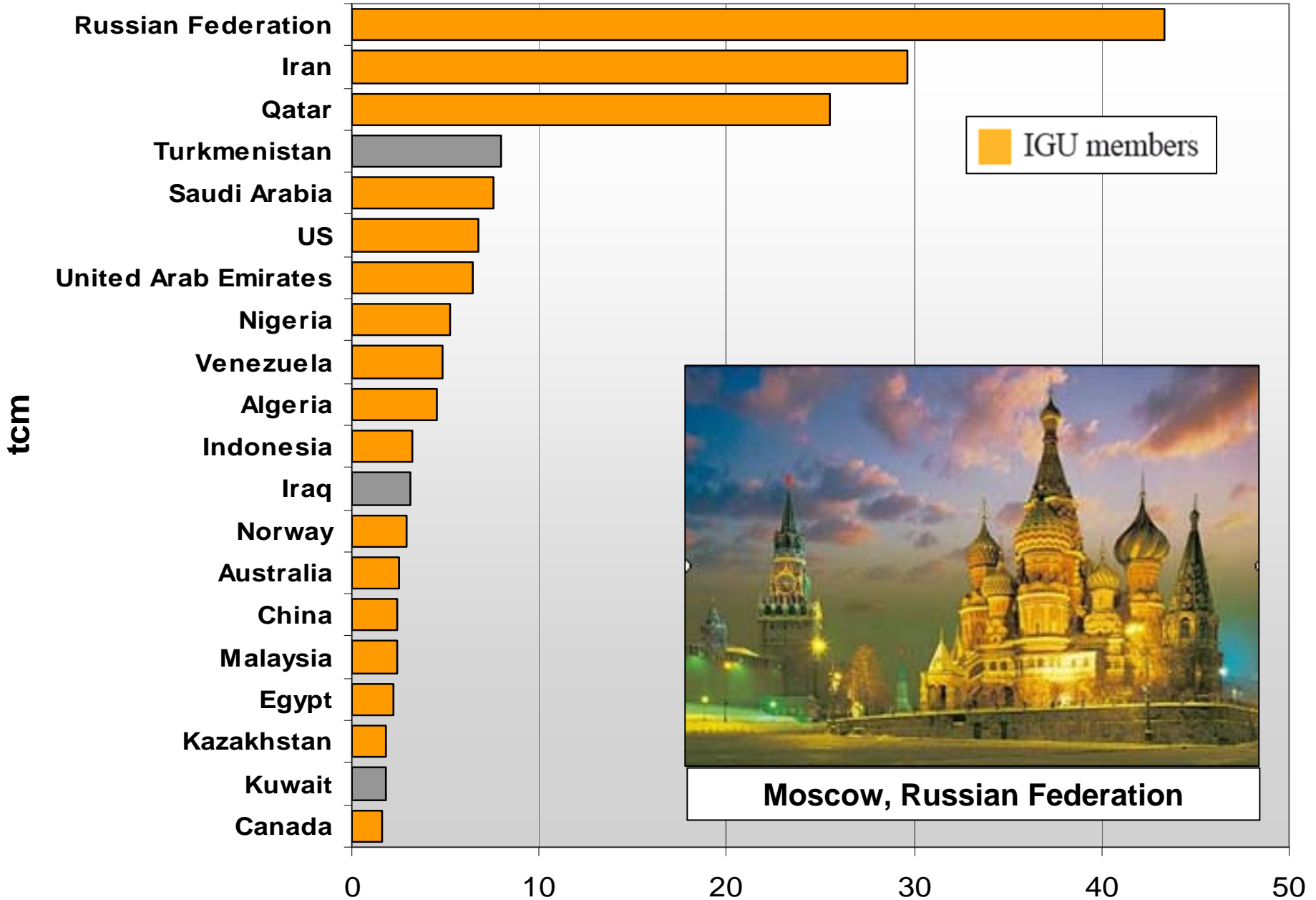


**IGU established in 1931**



# Top 20 Proven Reserves NG

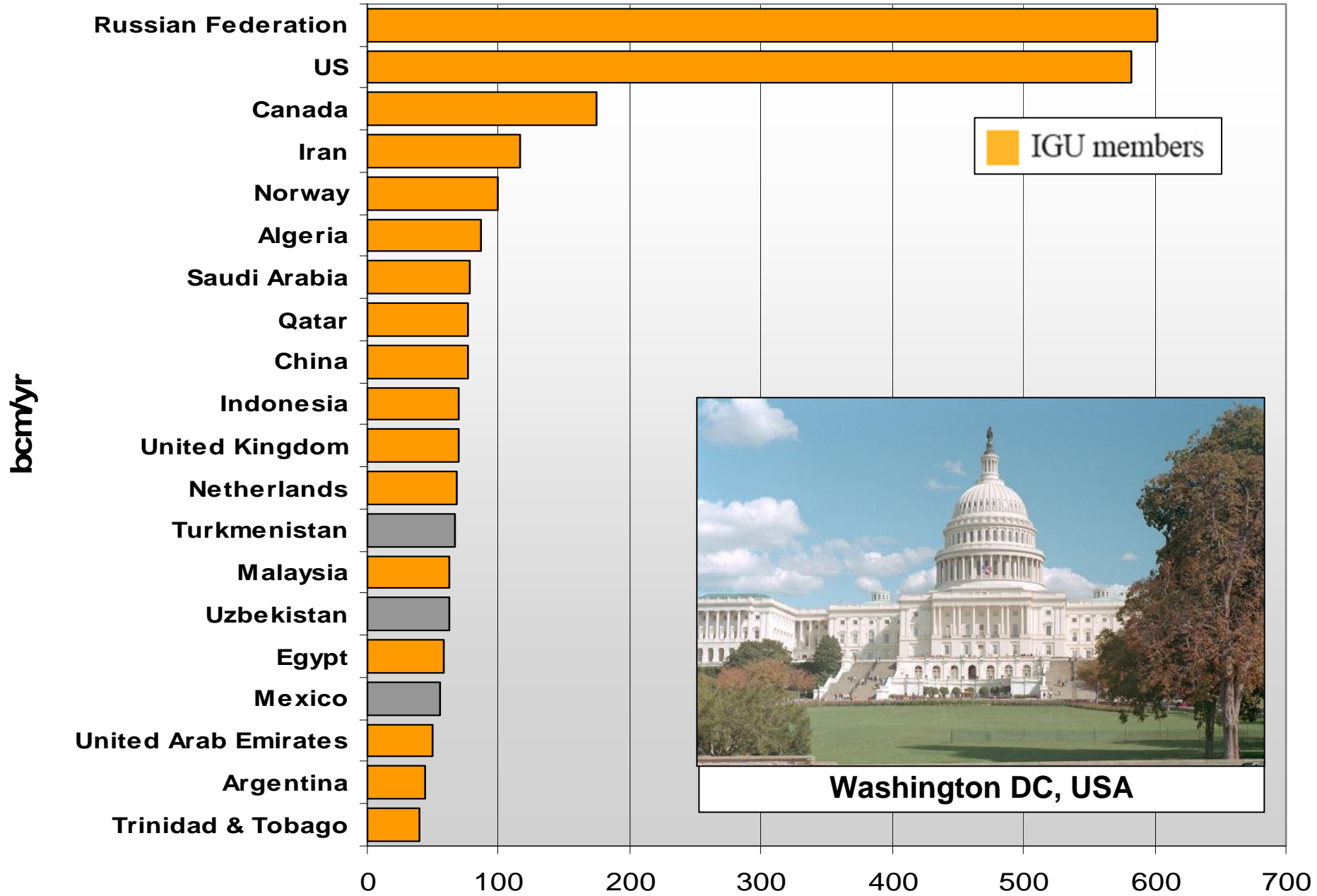
(source BP Outlook 2009)



Moscow, Russian Federation

# Top 20 NG Production 2008

(source BP Outlook 2009)



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**

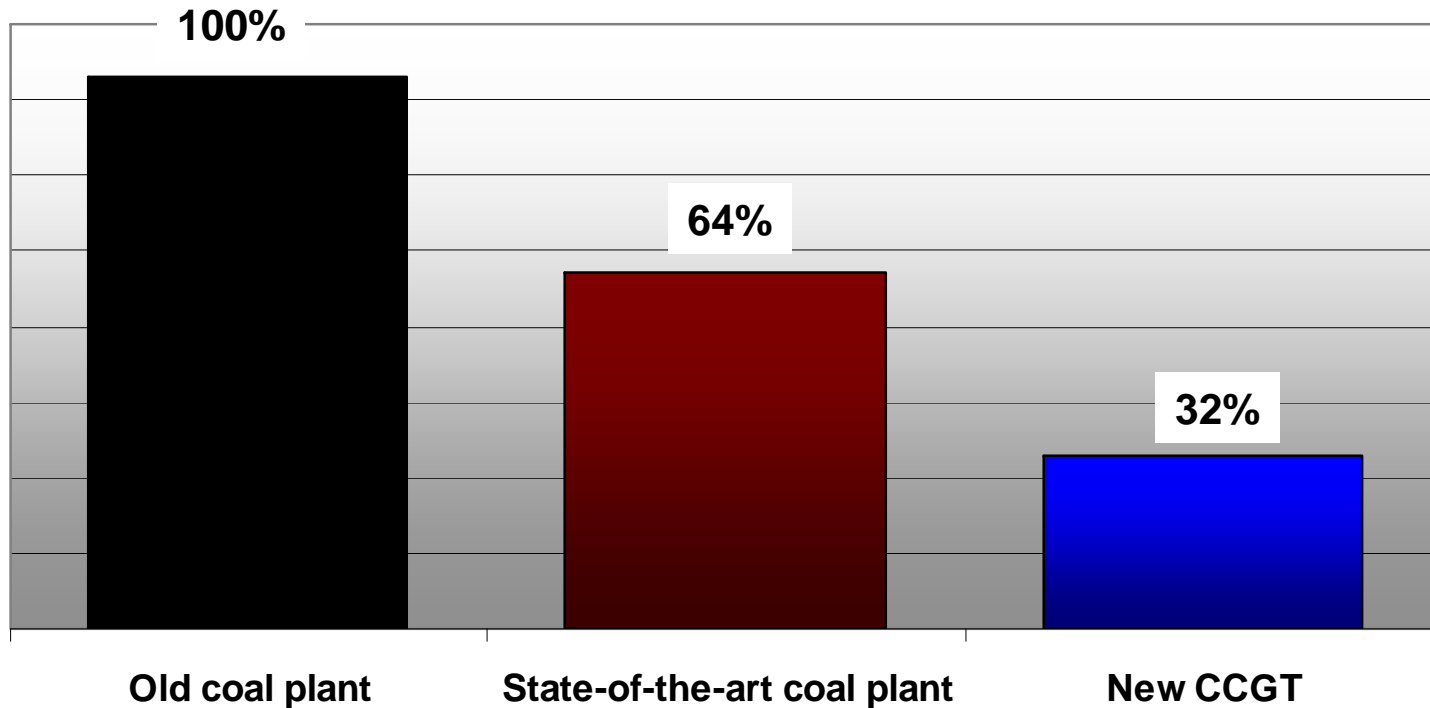
**➔ Decades before large impact on GHG emissions**



# Natural gas in power generation - climate friendly

- Replace coal with gas
- GHG reduction potential

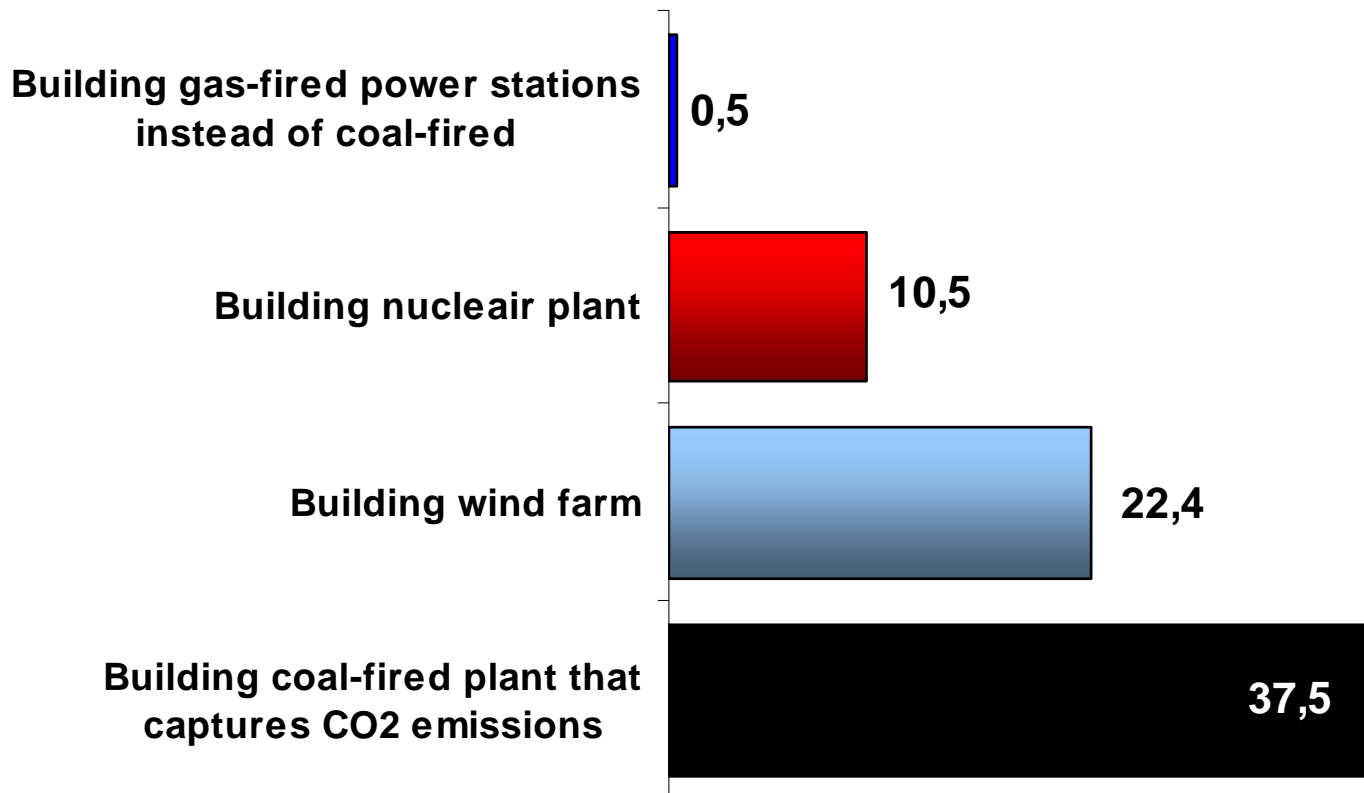
CO2 emission for different types of power generation



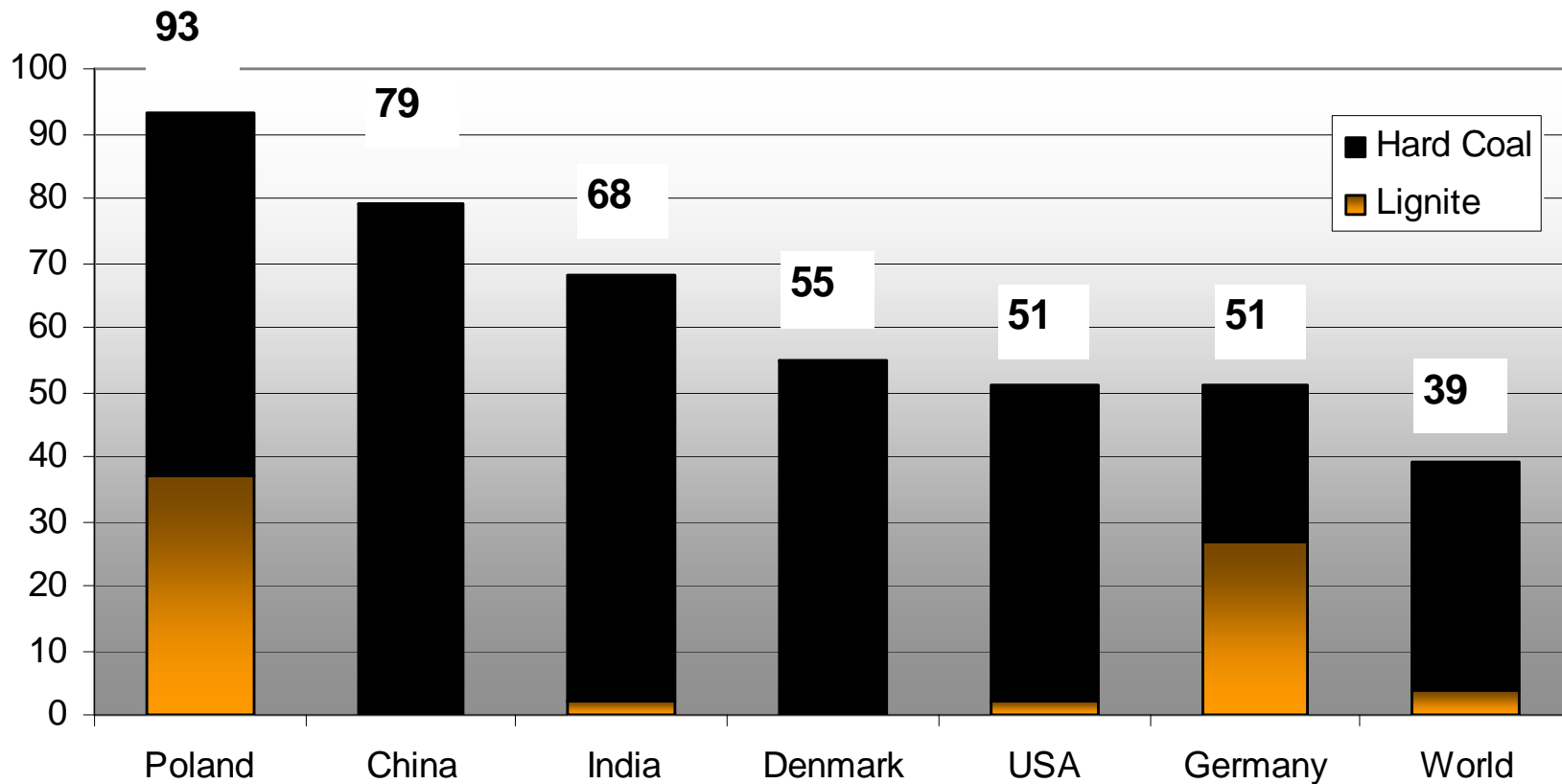


## Cost of saving carbon emissions

€ per tonne of CO2 by 2030

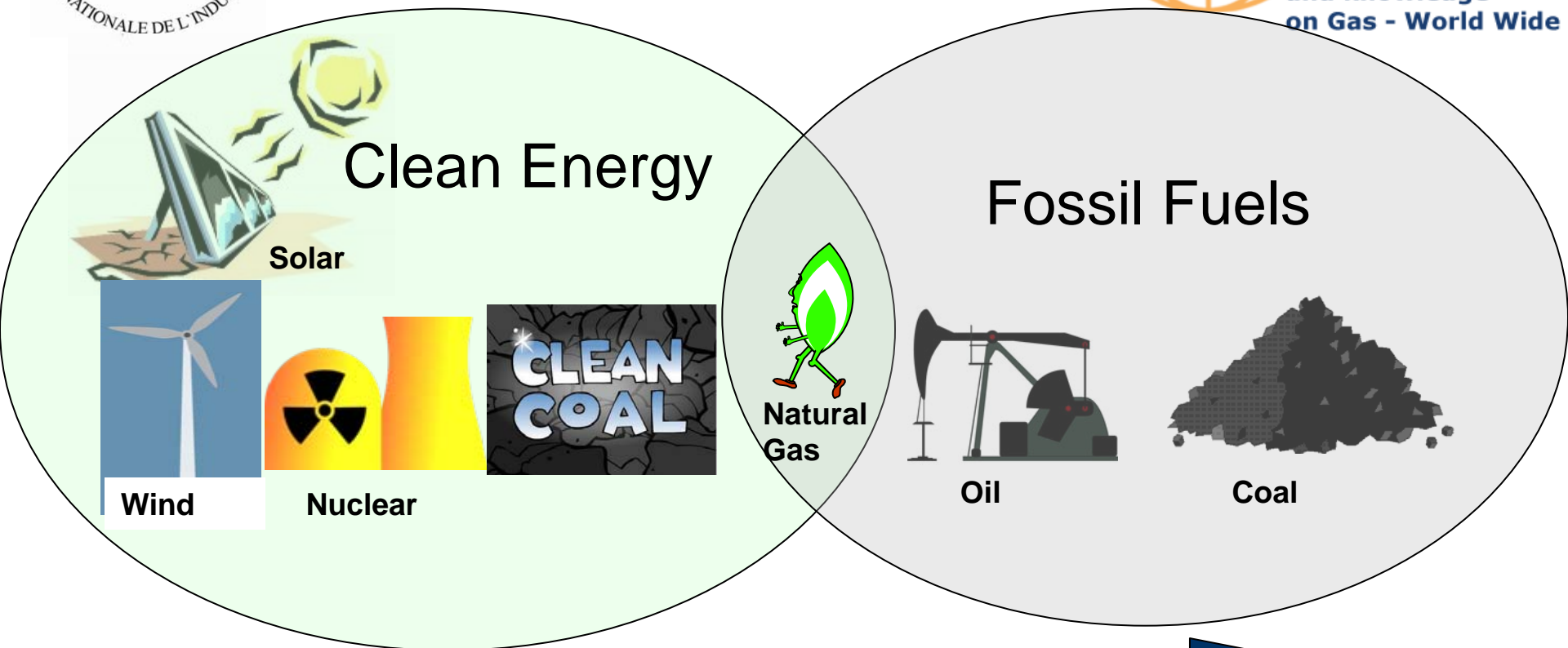


## Percentage of lignite and hard coal in power generation





# Challenge GHG Emissions and Perceptions



**GHG Emissions**



- **Demand security**

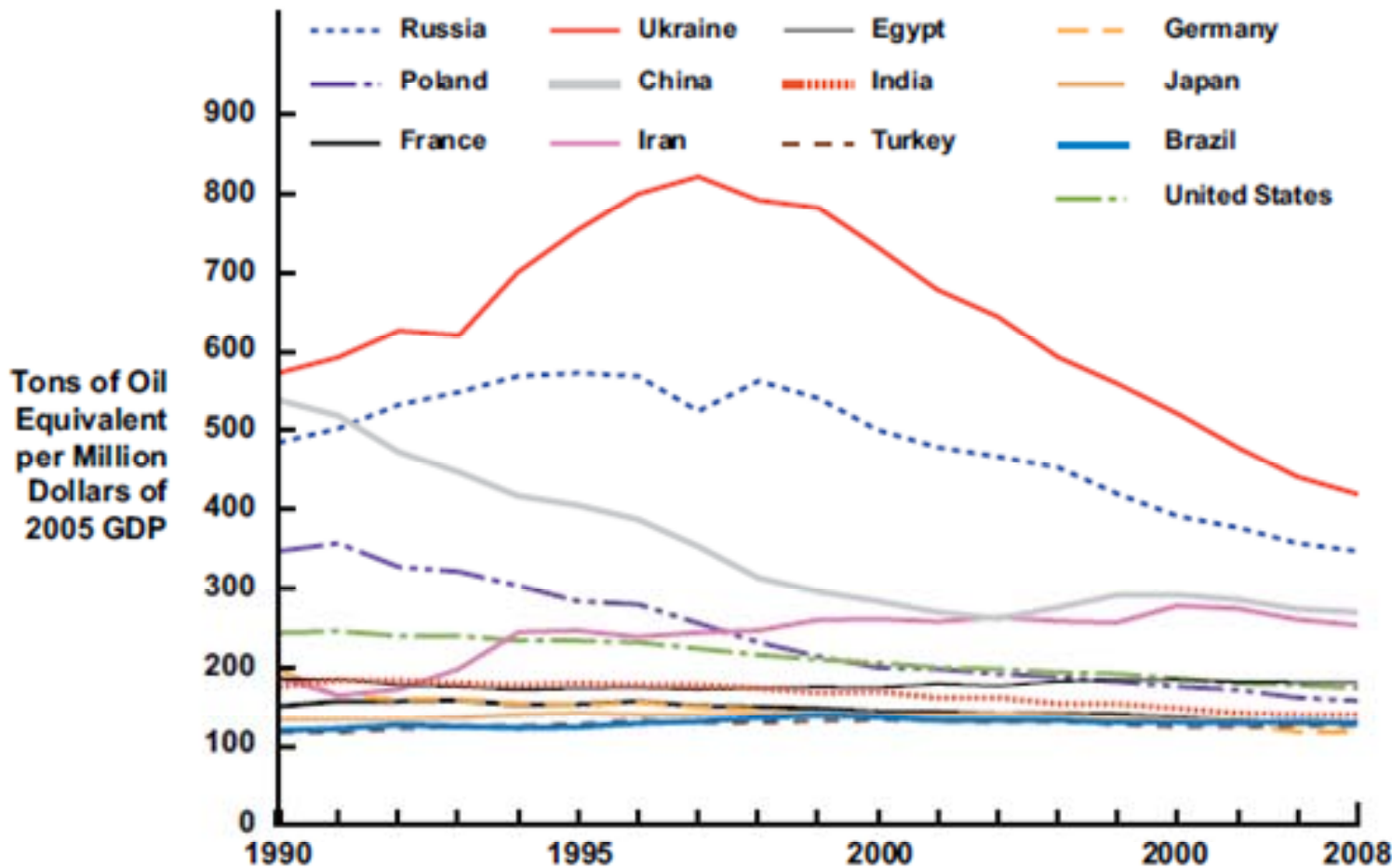
- Energy policy, climate framework
- Long term agreements

- **Supply security**

- Production and transmission infrastructure
- Gas storage and LNG terminals



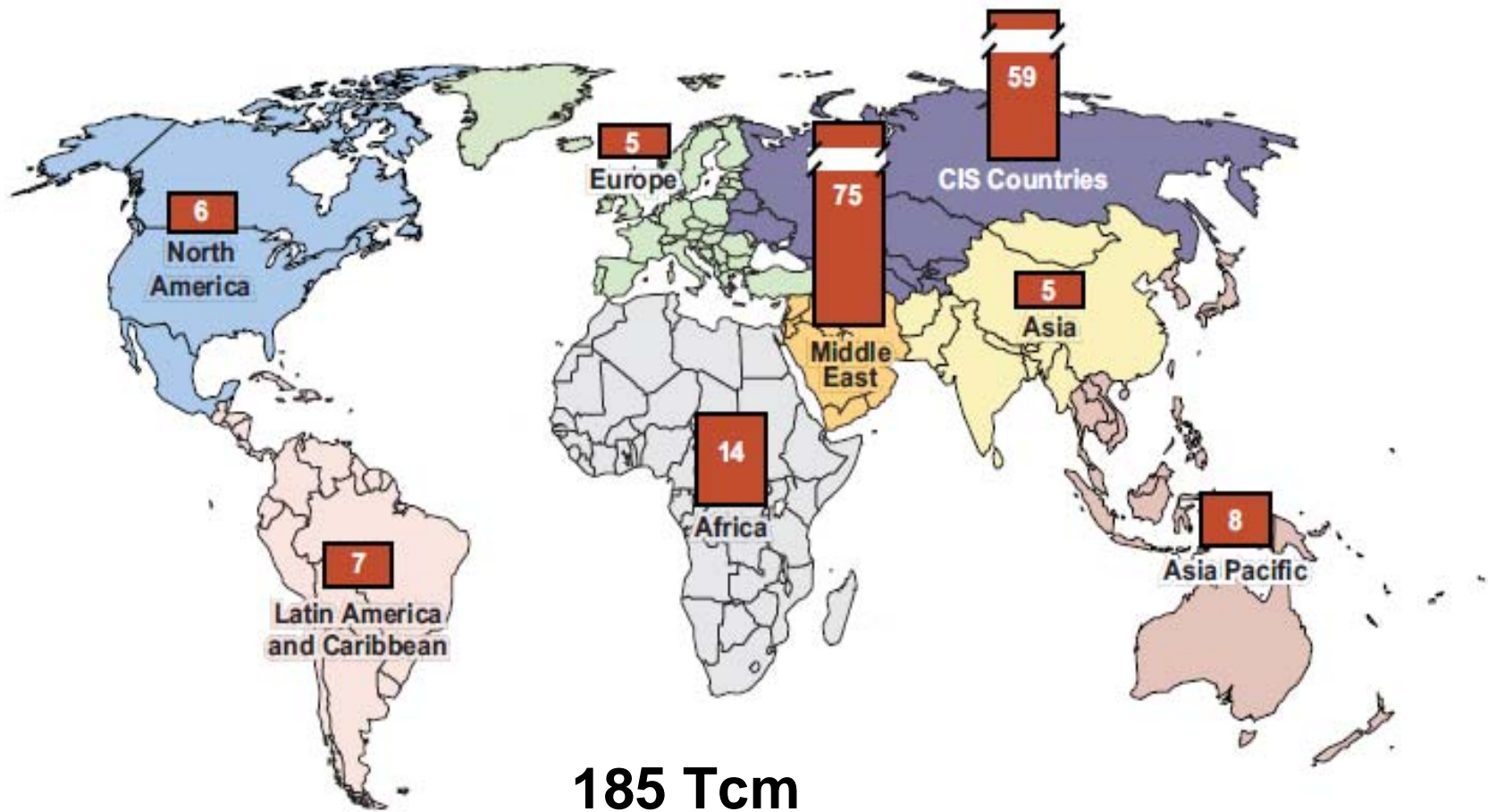
# Energy intensity trends...



Source: IHS Cambridge Energy Research Associates.



# Distribution of proven gas reserves (est 2008)

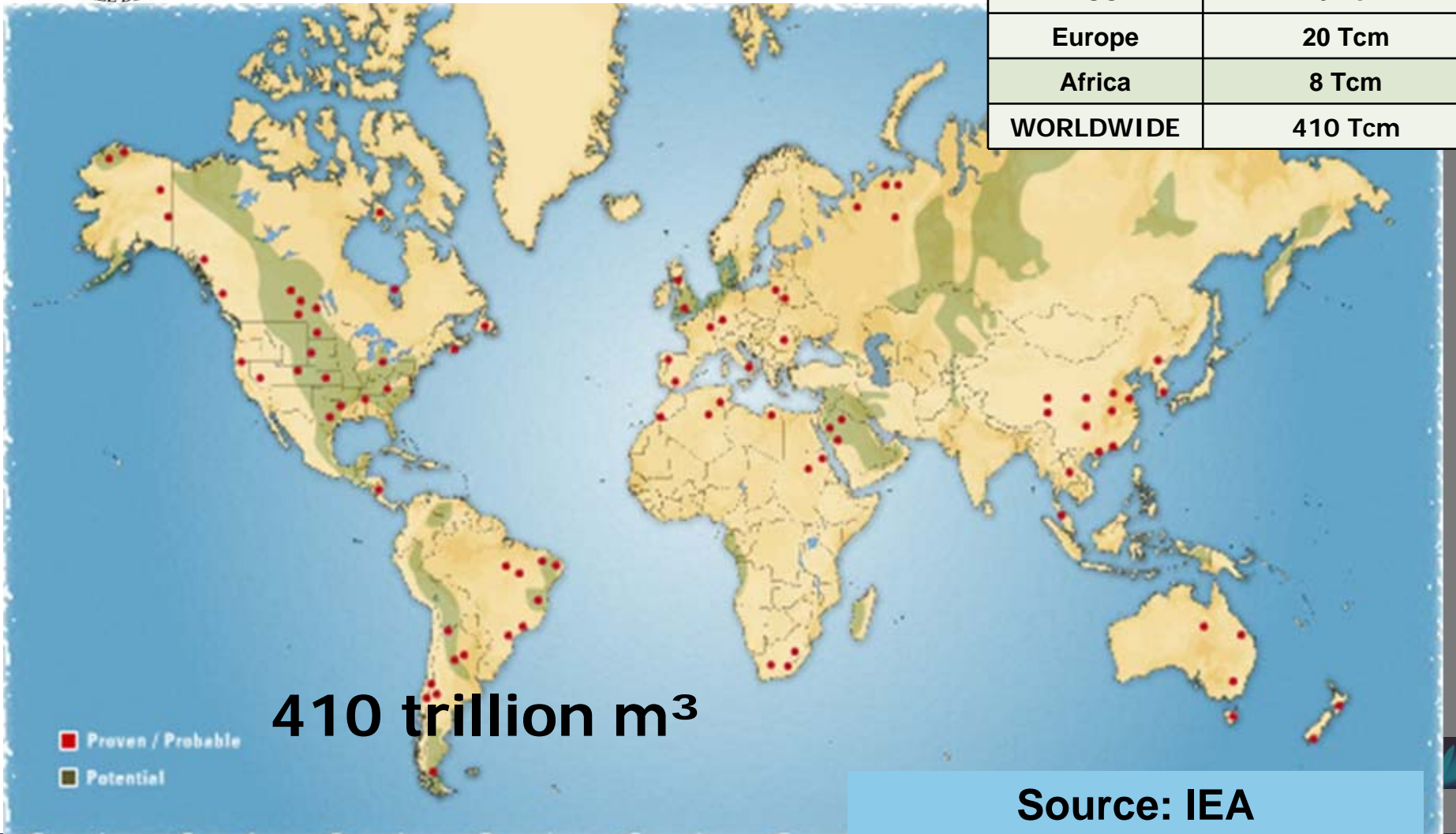






# Shale gas reserves

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

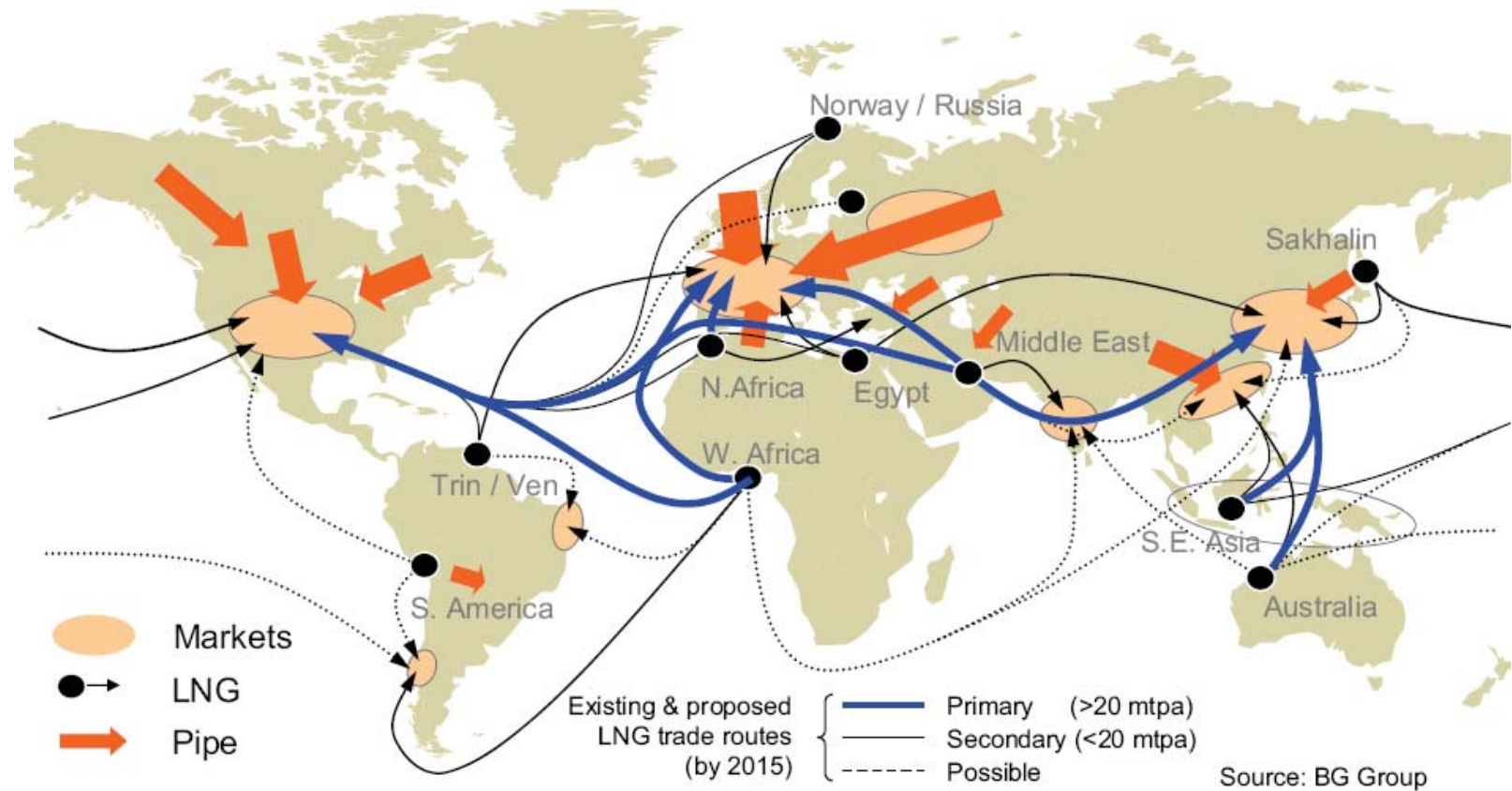


Source: IEA





# 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....



## ***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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and knowledge  
on Gas - World Wide

