



SESSION 1:

THE TRANSFORMATION OF THE GLOBAL GAS MARKETS: NEW DYNAMICS AND COMMERCIAL DRIVERS

By:

Datuk (Dr) Abdul Rahim Hashim

President

International Gas Union (IGU),
Malaysian Gas Association (MGA)

31st October 2011
Sydney | Australia



- 1. Introduction – Brief on IGU**
- 2. World Energy Outlook in The Coming Years**
- 3. Gas/LNG Outlook: World, Asia Pacific & Australia**
- 4. Gas: Uncertainties, Issues & Challenges**
- 5. Closing Remarks**



IGU as **THE** spokesman for the gas industry

- Worldwide and non–profit organisation established in 1931
- Promotes technical and economic progress of the gas industry
- Emphasising sound environmental performance worldwide
- Increased focus on strategic, policy issues and gas advocacy
- Cooperation with IEA, United Nations, World Bank, IEF and others

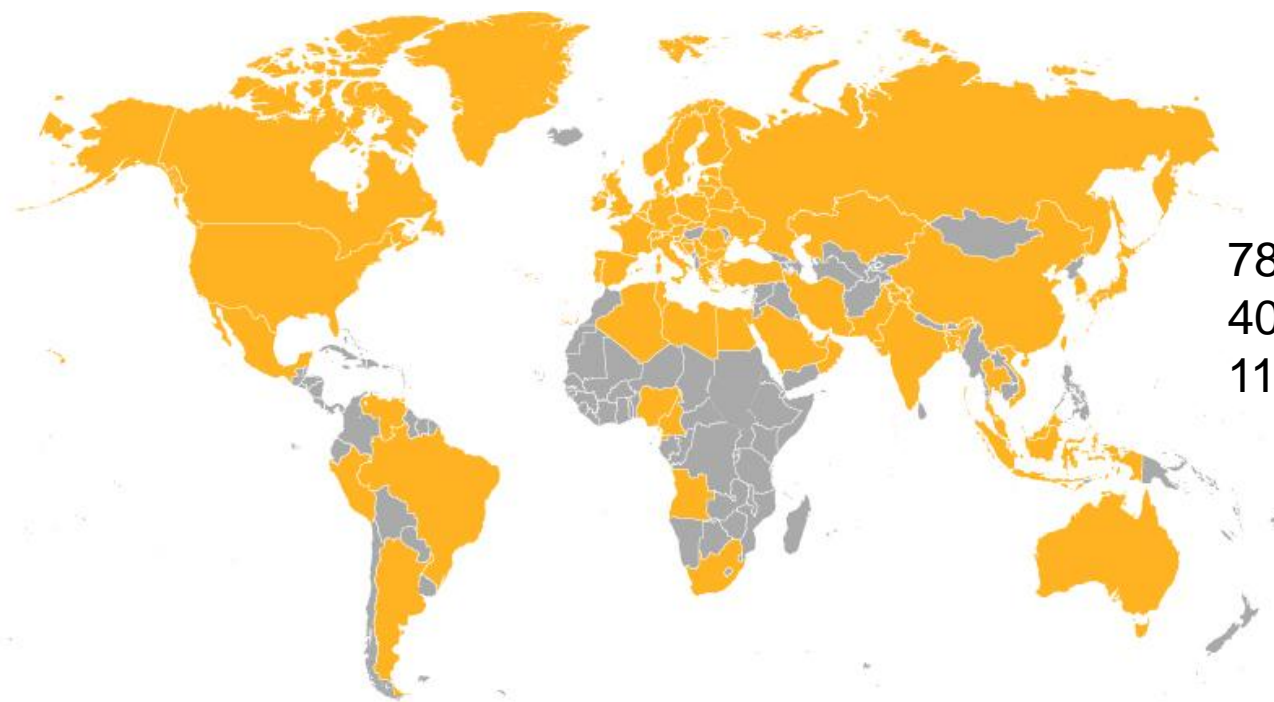


What do we do?

- Making a case for natural gas
- Engaging with stakeholders (NGOs, regulators, policy makers, etc)
- Fostering the consumer/producer dialogue
- Identifying and addressing global gas industry issues
- Promoting anti-flaring measures
- Monitoring geopolitics development and helping to develop solutions



IGU members represent 95% global gas sales



78	Charter	members
40	Associate	members
11	Affiliated	members

 IGU Members

As of October 2011

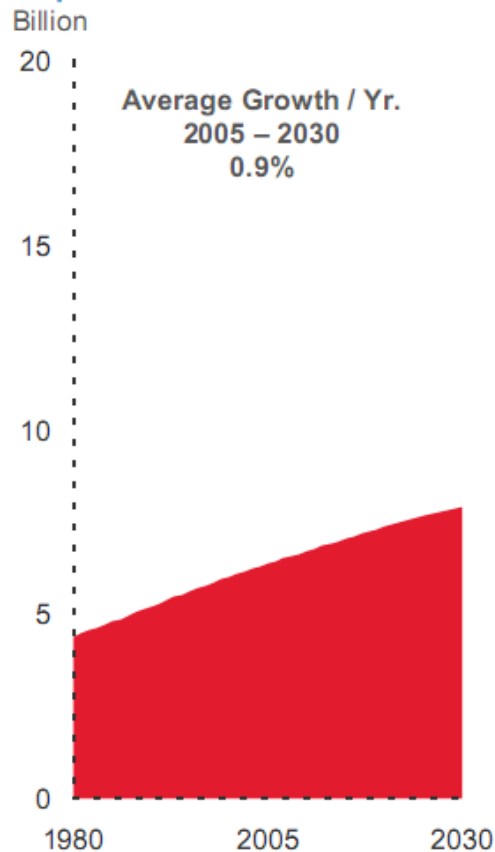


Malaysia heads the IGU in the 2009-2012 triennium

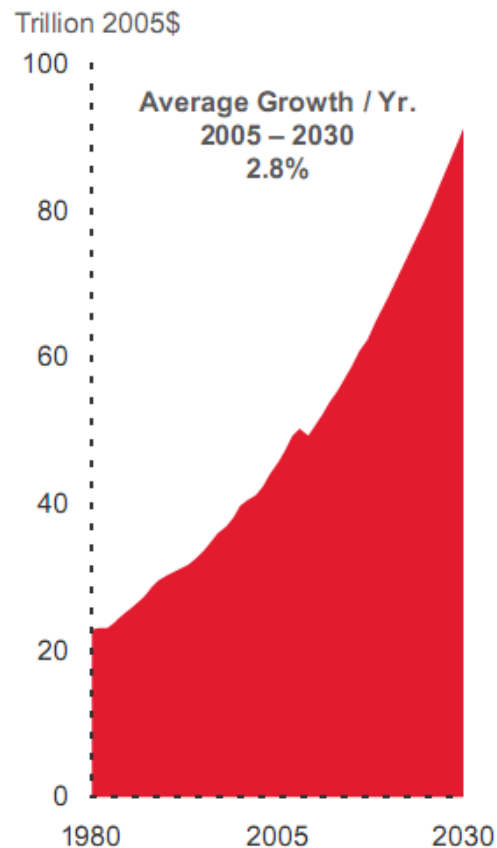


World demand for energy is increasing

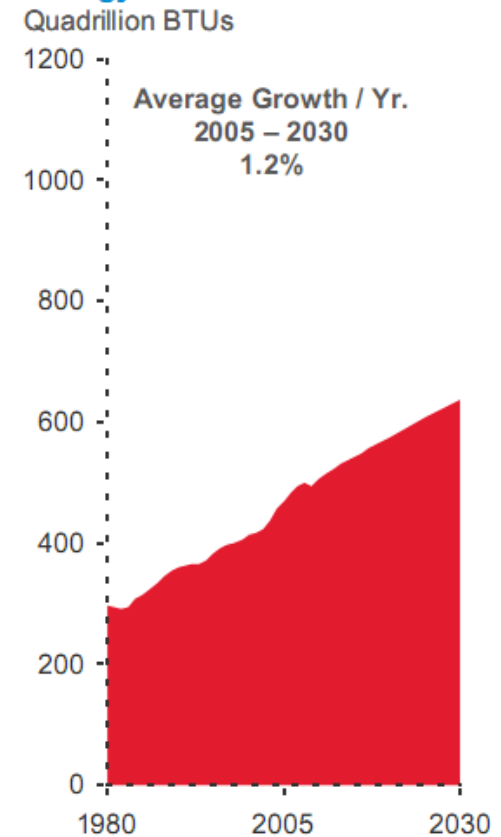
Population



GDP



Energy Demand

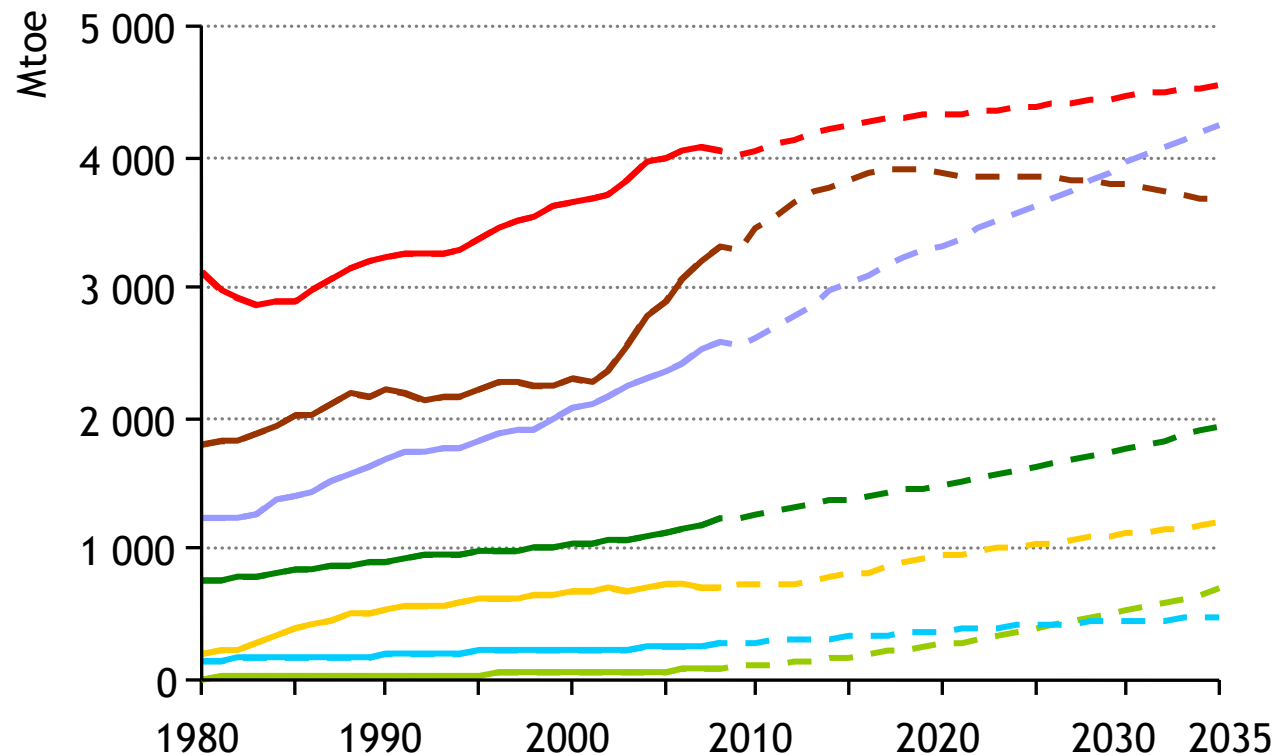


- Key drivers: population growth, economic expansion, urbanisation and individual's prosperity.
- The world faces a dual challenge of energy security and environmental issues.
- The world's energy equation becomes more complicated as sustainability takes place accordingly.



Gas grows nearly twice as fast as total energy...

World primary energy demand by fuel



Oil
Gas
Coal
Biomass
Nuclear
Other renewables
Hydro

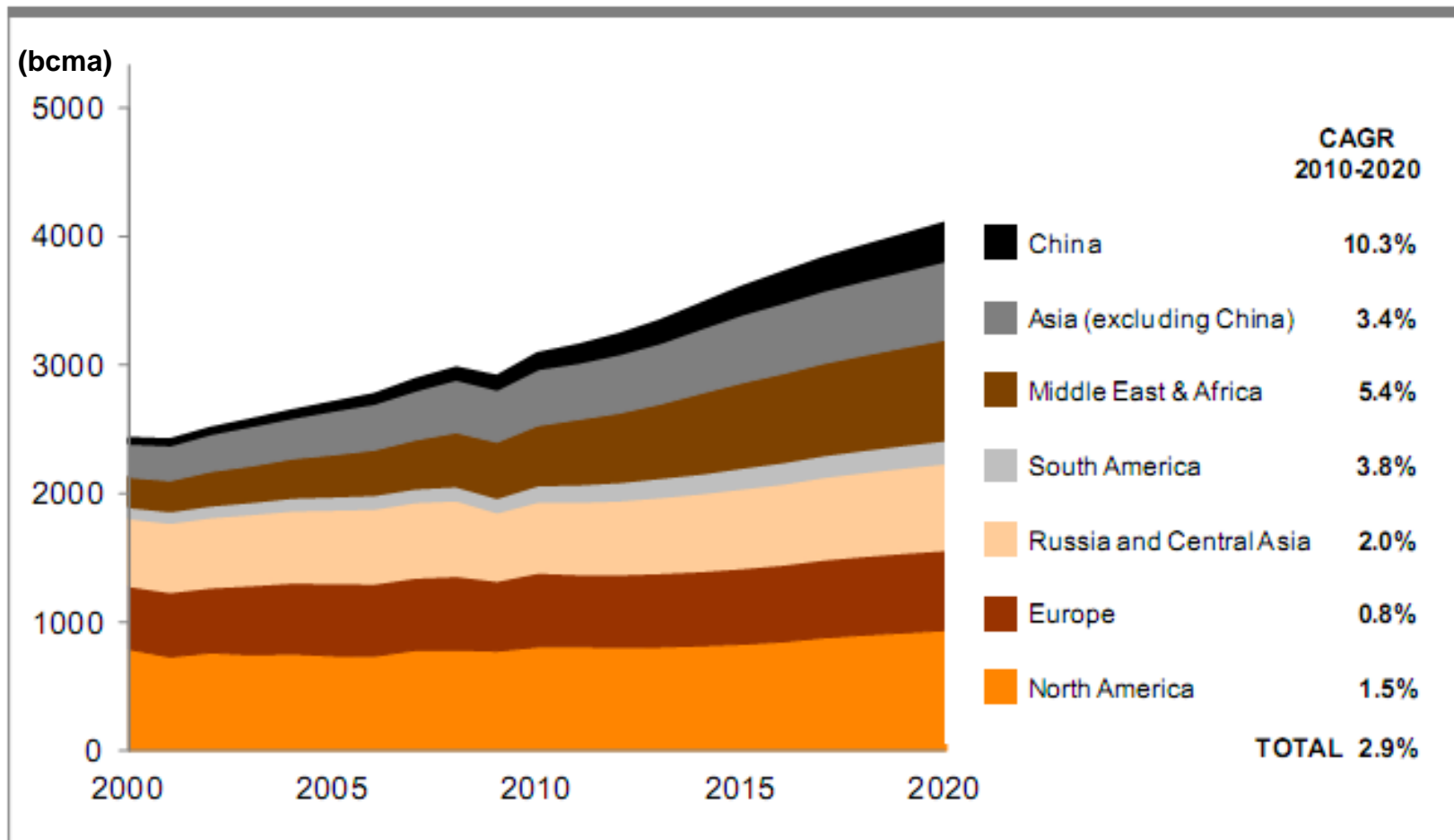
% of natural gas from total energy mix (1990-2030)

1990	22%
2005	23%
2010	23%
2030 - 2035	25% - 28%

- Gas overtakes coal before 2030 and meets one quarter of global energy demand by 2035.
- Through 2030, gas demand grows by 2% per year, compared with just 1.2% per year for total energy.



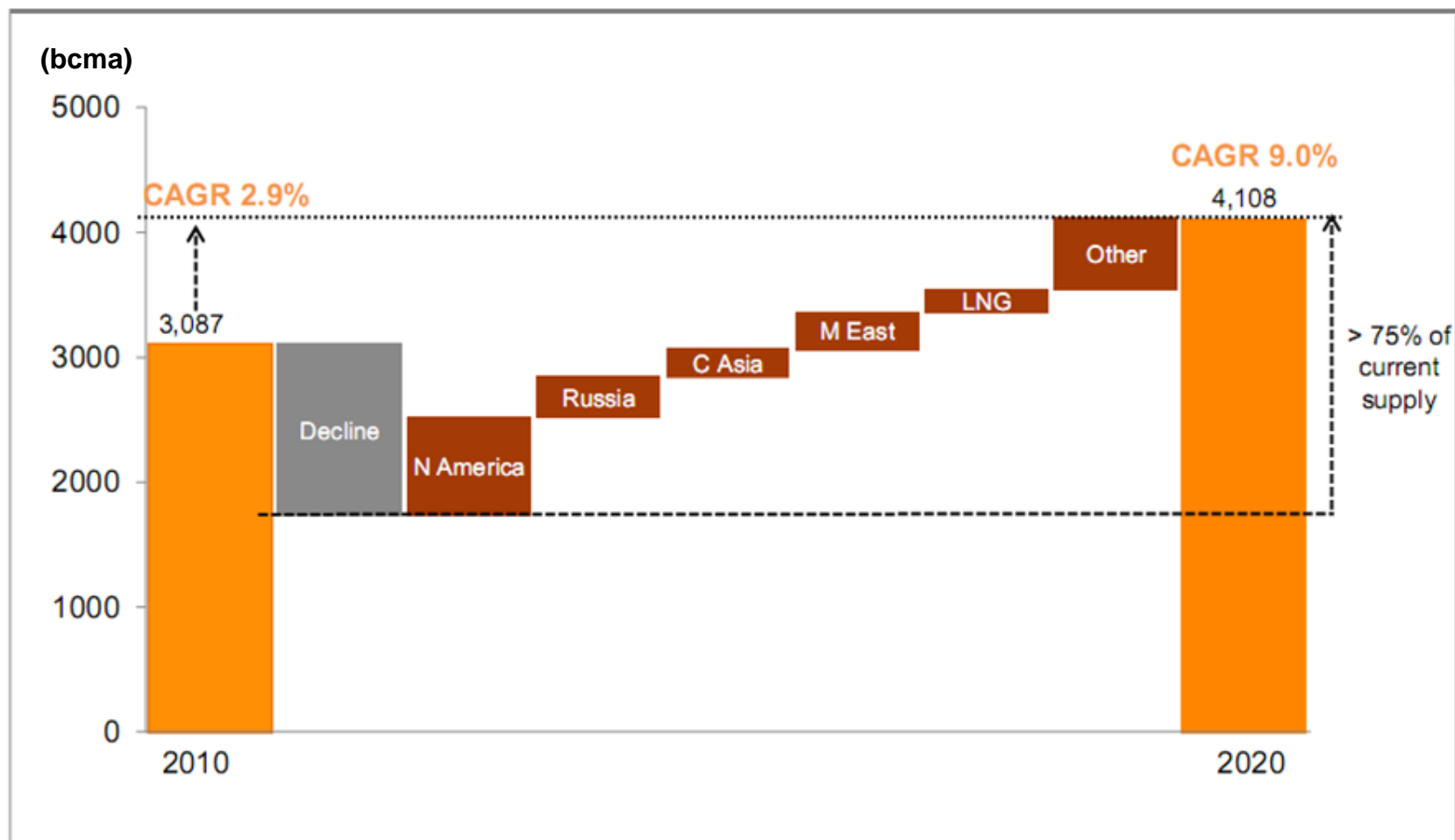
World gas demand future outlook to 2020



- Strong growth in worldwide gas demand with a CAGR of 2.9% per year through 2020



Global gas supply forecast from 2010 to 2020

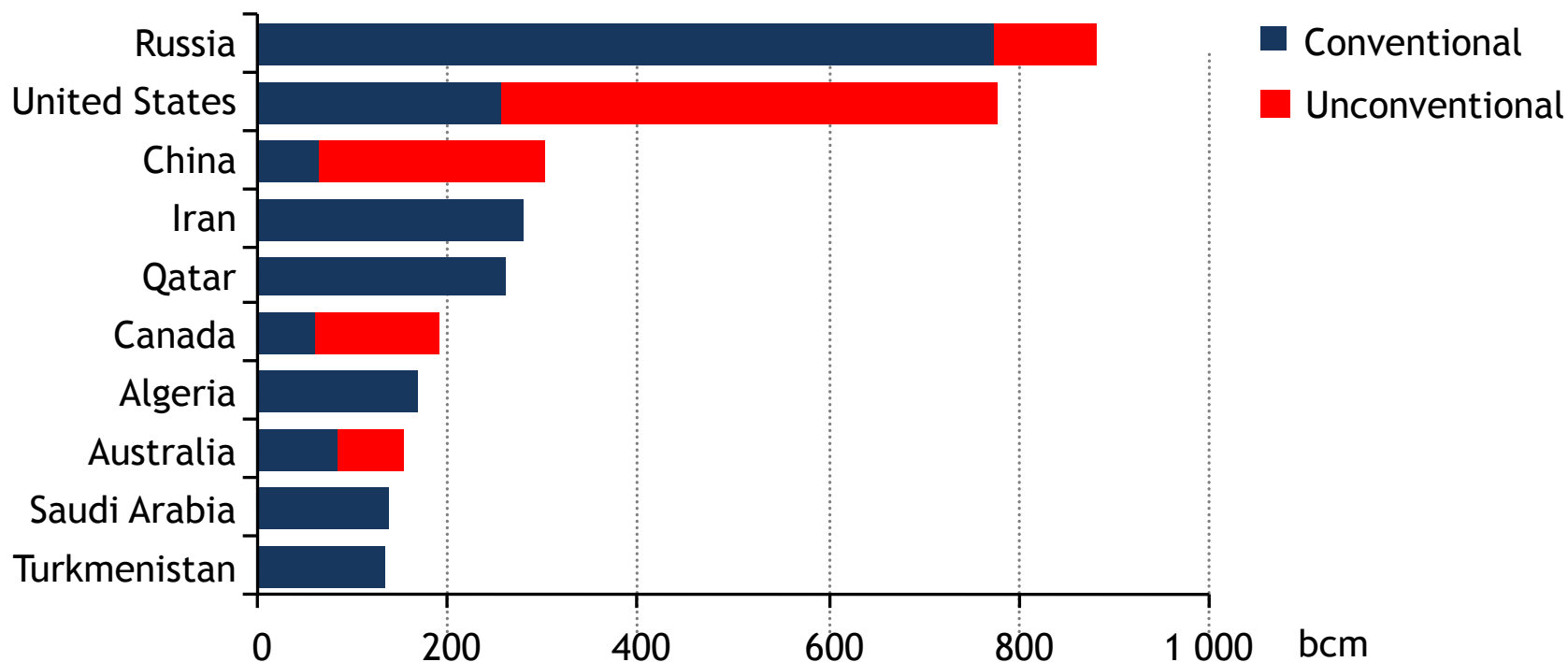


- Global gas supply outlook to 2020 looks challenging as new supplies are required that constitute for more than 75% of current supply.



Unconventional gas production becomes widespread

Largest gas producers by 2035

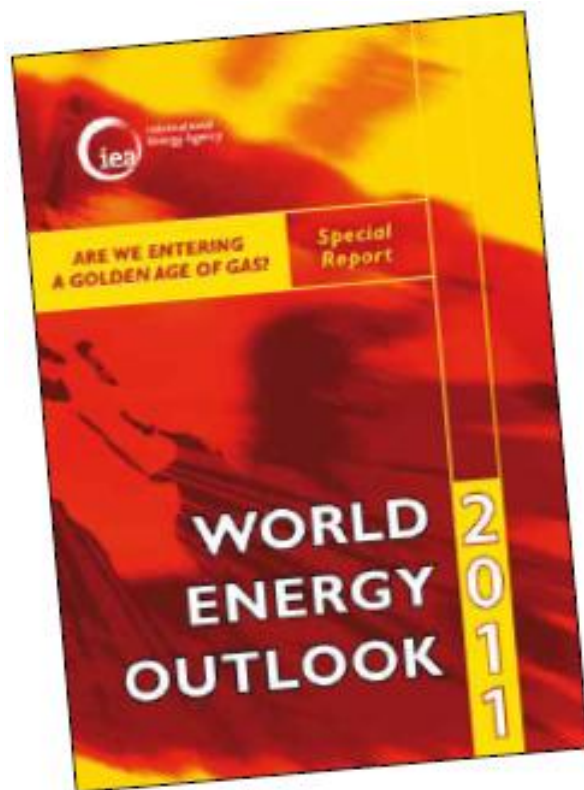


- Unconventional gas supplies 40% of the 1.8 tcm increase in total gas demand by 2035.
- Unconventional gas to be brought on-stream will constitute nearly one quarter of total gas consumption by 2035.



The IEA's special report reinforces gas advocacy

A golden age of gas?



■ Highlights:-

- Gas is growing rapidly in the next 5 to 10 years
- Gas overtakes coal before 2030 to meet ¼ of global energy demand by 2035
- Australia could be LNG leader by 2020
- Many are betting heavily on Western Australia (WA), Queensland, and New South Wales (NSW) to play a major role in this scenario

■ Key drivers include:-

- Widespread development of unconventional gas means lots more gas!
- Lower cost of production, USD 3 – 9/mmbtu
- Gas targets in the China's 12th Five-Year Plan
- Reduced growth of nuclear energy – Fukushima!
- Increased deployment of natural gas vehicles (NGVs)
- Global LNG trading is increasing
- Grabbing the opportunity requires competitiveness and collaboration

■ Message:-

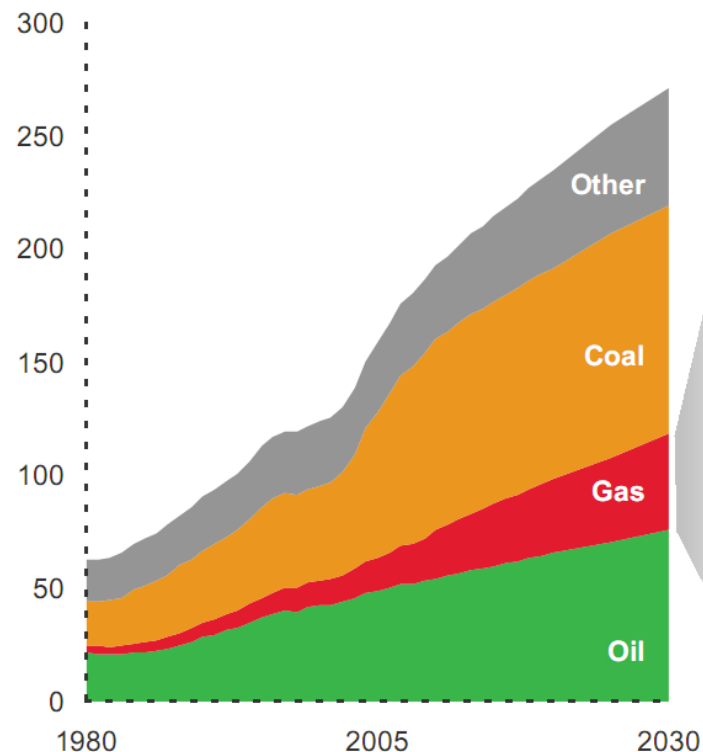
- Gas will grow at 2% per year versus 1.2% per year for total energy demand.



Gas demand outlook accelerates in Asia Pacific

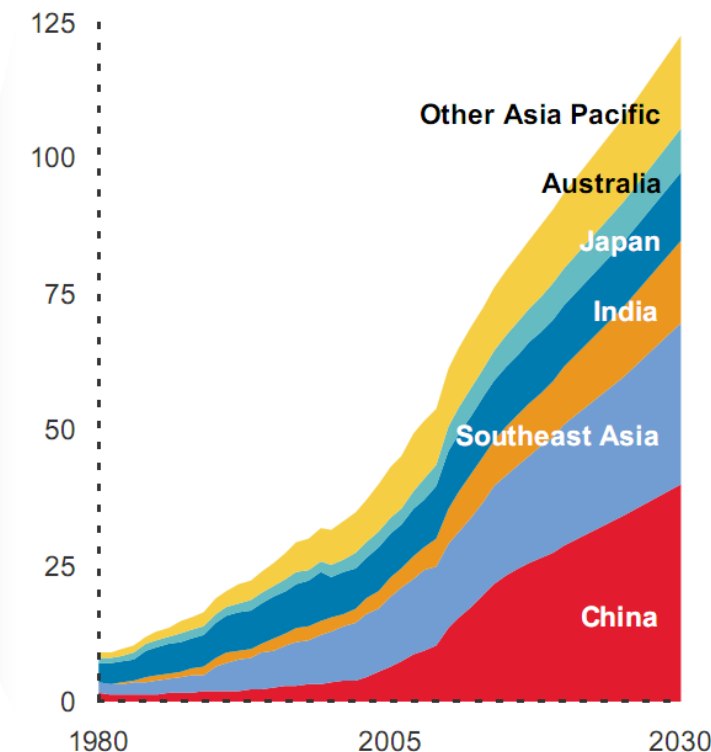
By Fuel

Quadrillion BTUs



By Region

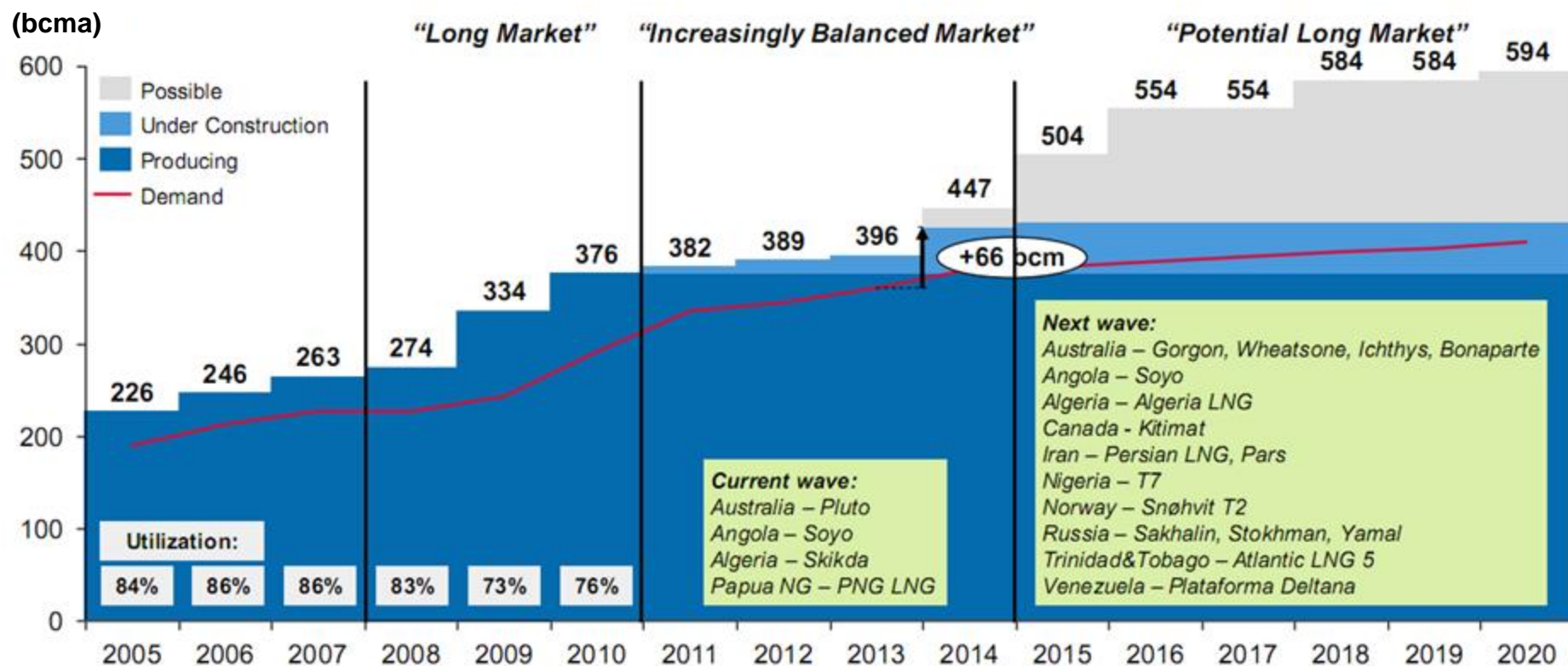
BCFD



- The share of natural gas in Asia Pacific's energy mix accounted for 10% in 2010 as compared to the global natural gas's share of 23%.
- Accelerating economies of the Asia Pacific region have sparked a ferocious appetite for energy sources. China will be the largest gas use dominator with about 35% by 2030.



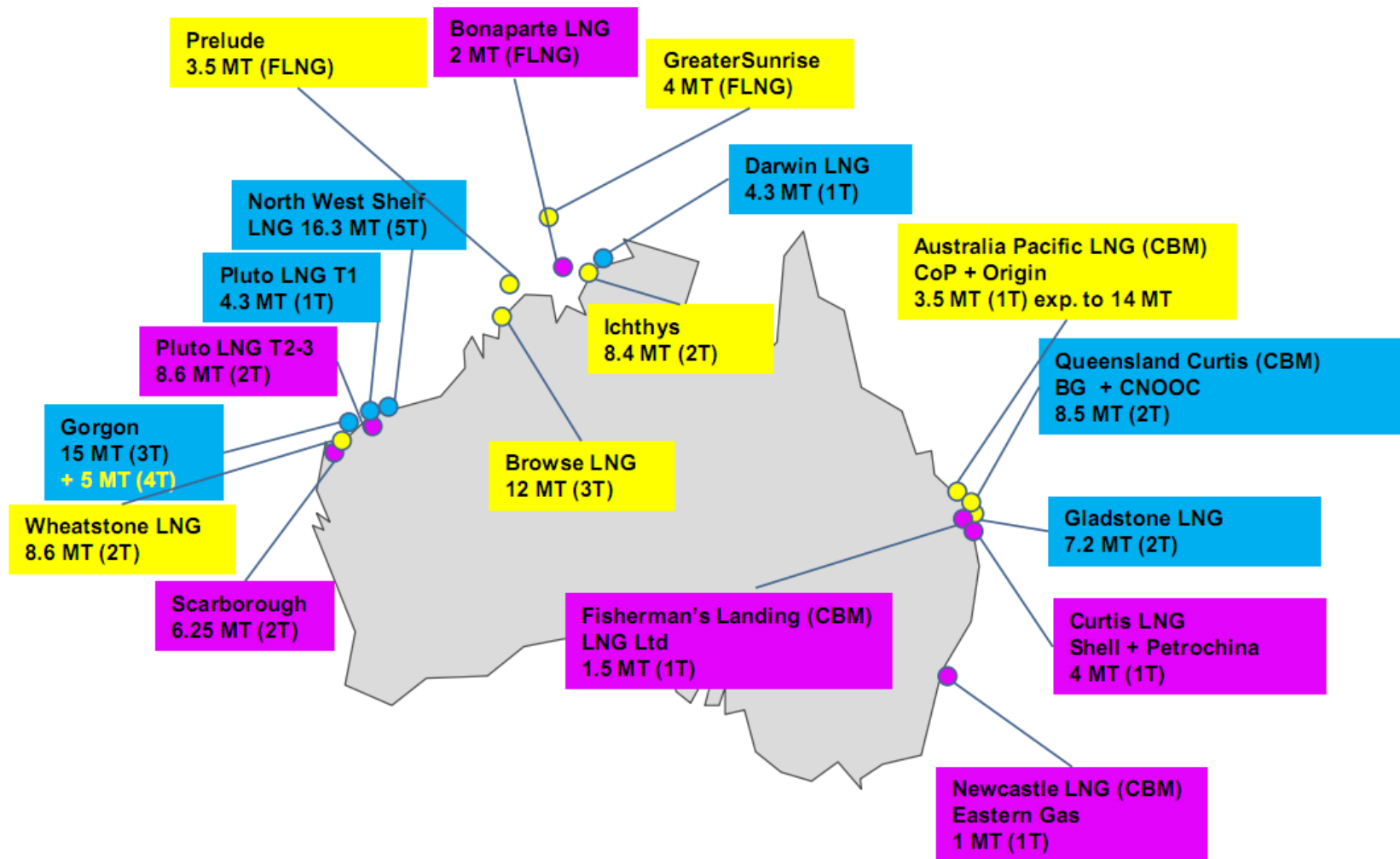
Global LNG supply-demand outlook until 2020



- Amidst current LNG overcapacity may be absorbed in the coming years, a next construction cycle seems possible from 2015 onwards.



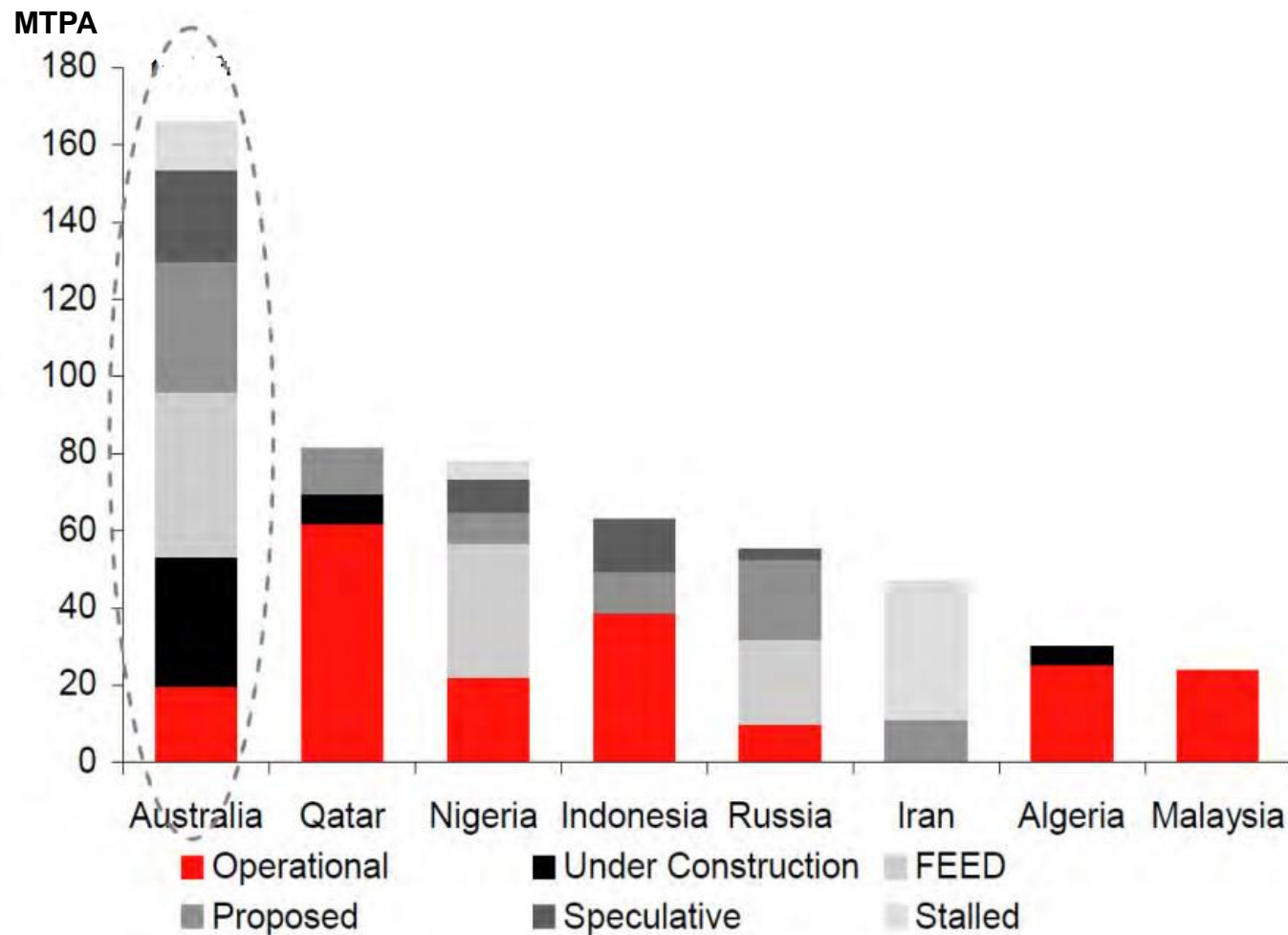
Australia is set to become the world's leading gas player



- Australia's new LNG supplies to come on-stream: +70 MTPA by 2020 (+23 MTPA thereafter)



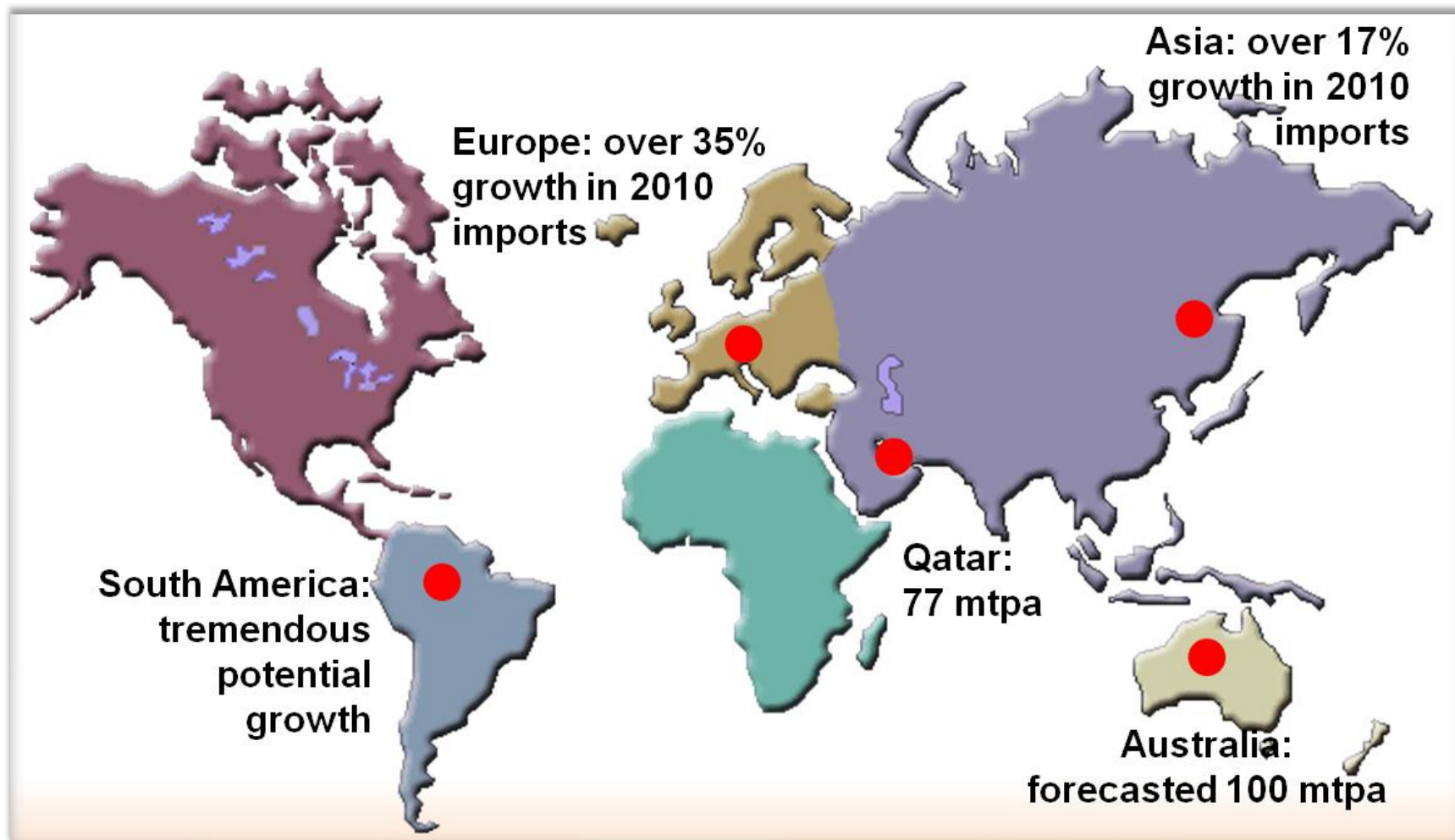
Global LNG capacity: Outlook to 2020



- Australia holds the key to new supply in Asia Pacific.



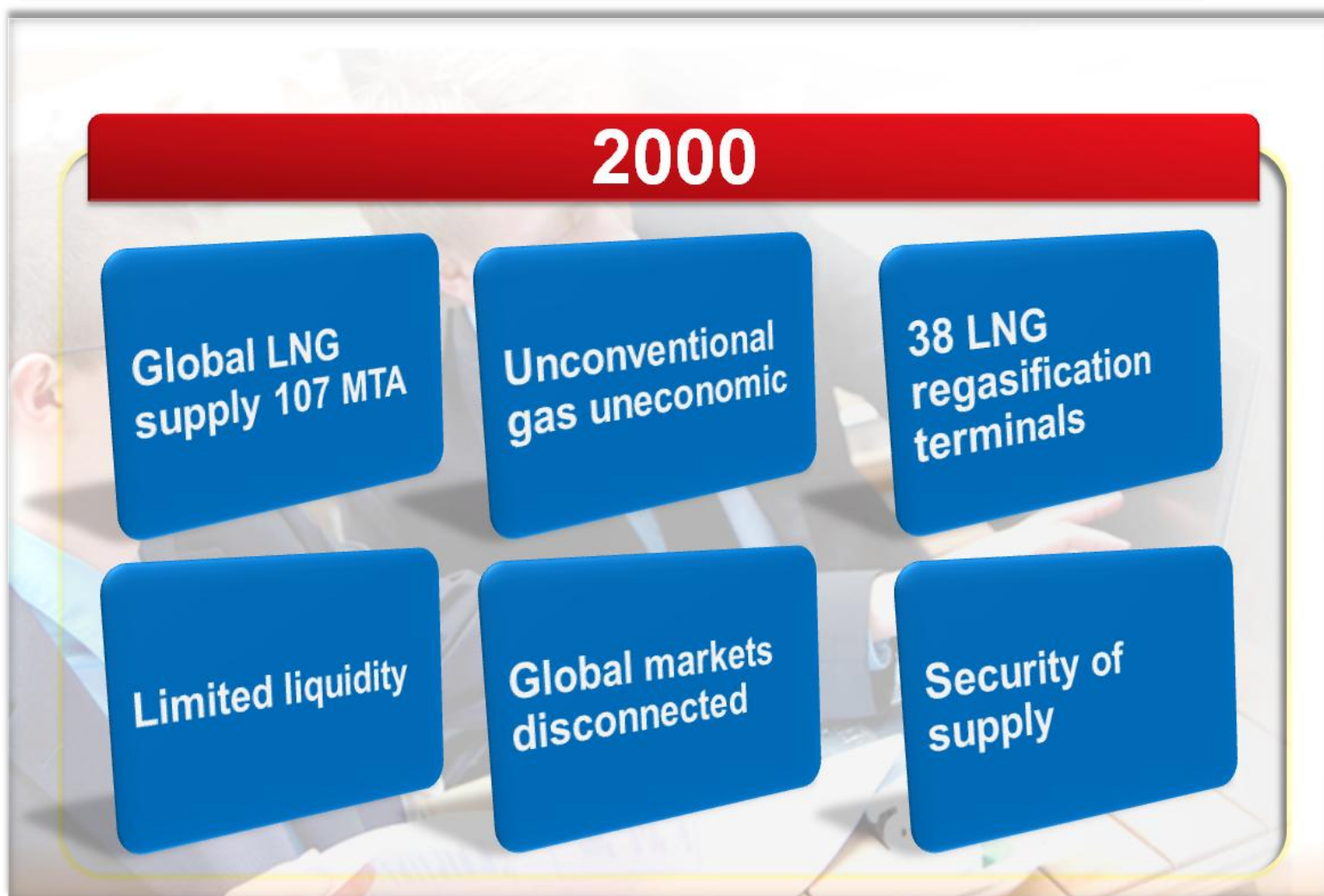
The global LNG industry is growing dramatically



- Global LNG trade is up 300% in the last 20 years



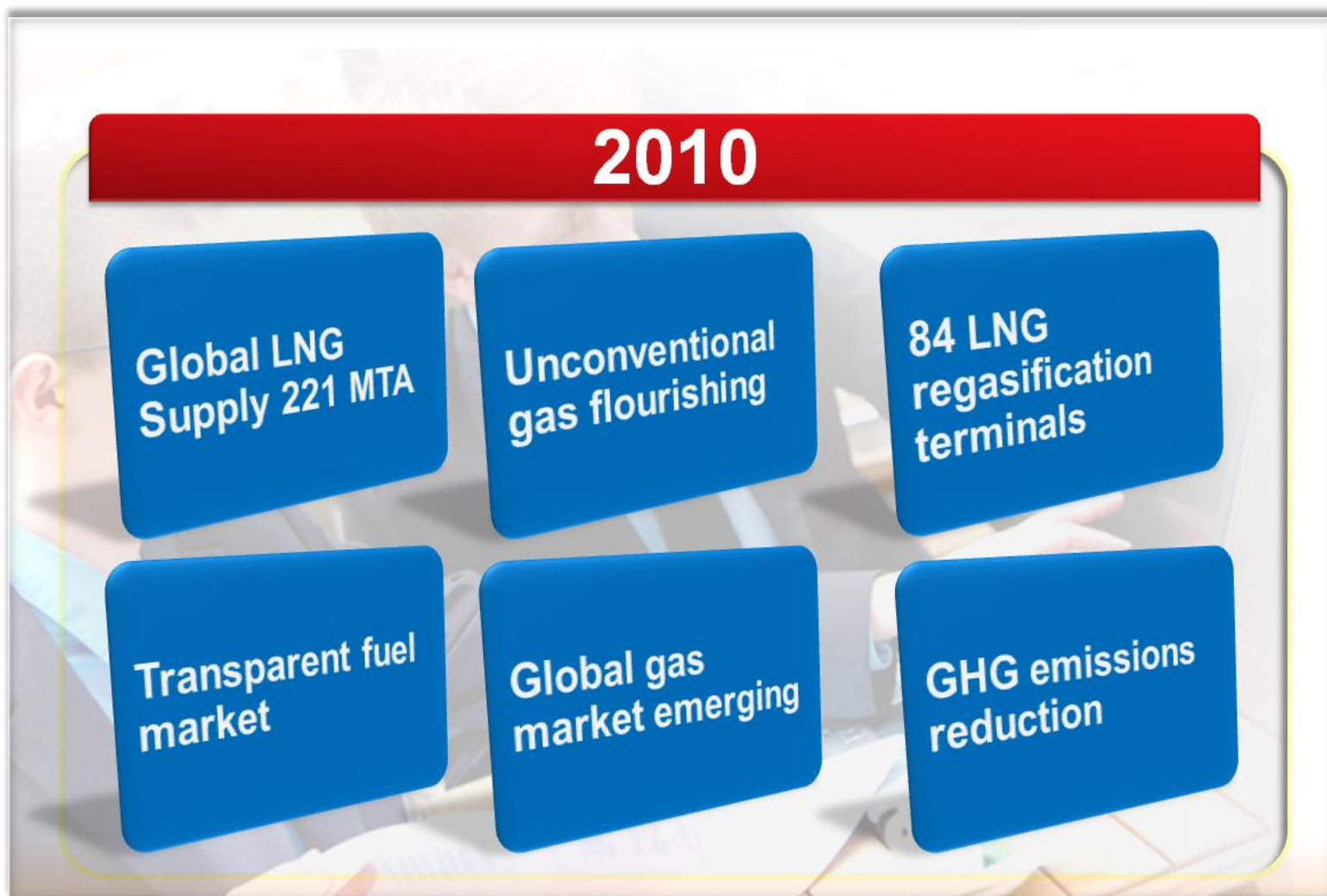
What did the year 2000 tell us?



- 2000 marked a modest year



What about the year 2010?



- A decade of change demonstrates natural gas will fuel the future energy needs



What is it now & why?

2011

April Fukushima
tragedy

May DOE
approval for US
LNG exports

June decision by
Chancellor
Merkel regarding
nuclear energy in
Germany

June publication
of IEA study on
“Golden Era of
Gas”

June vote in Italy
regarding the
future of nuclear
energy

What's Next??

- Recent events reflect the increasing globalisation of the gas industry



Some uncertainties for gas in the future

1. Ambitious Chinese demand for gas
2. Uncertainty of Chinese unconventional gas resources
3. Prices and pricing mechanism – disparity across regions , volatility and subsidy
4. Ongoing nuclear debate
5. Use of gas for national development versus export
6. Overcoming perception for unconventional gas



Some key issues for gas going forward

Issues

- Gas does not solve greenhouse gas (GHG) concerns
- Environmental worry on unconventional gas production

Mitigation

- Need key technology to reduce GHG CO₂ emissions
- Decarbonise gas
- Further enhance efficiency

What do we need to do?

- Get our story right with the right message
- Have our own roadmap up to 2050
- Advocate for gas



Challenges for gas advocacy

- Need to get natural gas on the agenda of policy and decision makers
- Convincing all stakeholders
- Need for continuous attention for advocacy
- Ensure transparency on Safety and environmental performance



 ***“Golden era for Gas”***



IGU Message on Natural Gas

- It is abundant, affordable and acceptable
- Clean, efficient, versatile and environmental friendly fuel
- Continue to play a substantial role in global energy demand
- Basis for a sustainable economic growth



Natural gas
– major part of the long term energy solution



The 25th World Gas Conference (25th WGC)



**“GAS : SUSTAINING FUTURE
GLOBAL GROWTH”**

**Kuala Lumpur Convention Centre
4 to 8 June, 2012**

www.wgc2012.com/, www.igu.org/



THANK YOU FOR YOUR KIND ATTENTION !

