



The Sixth International Energy Week: Natural gas part of the long term solution

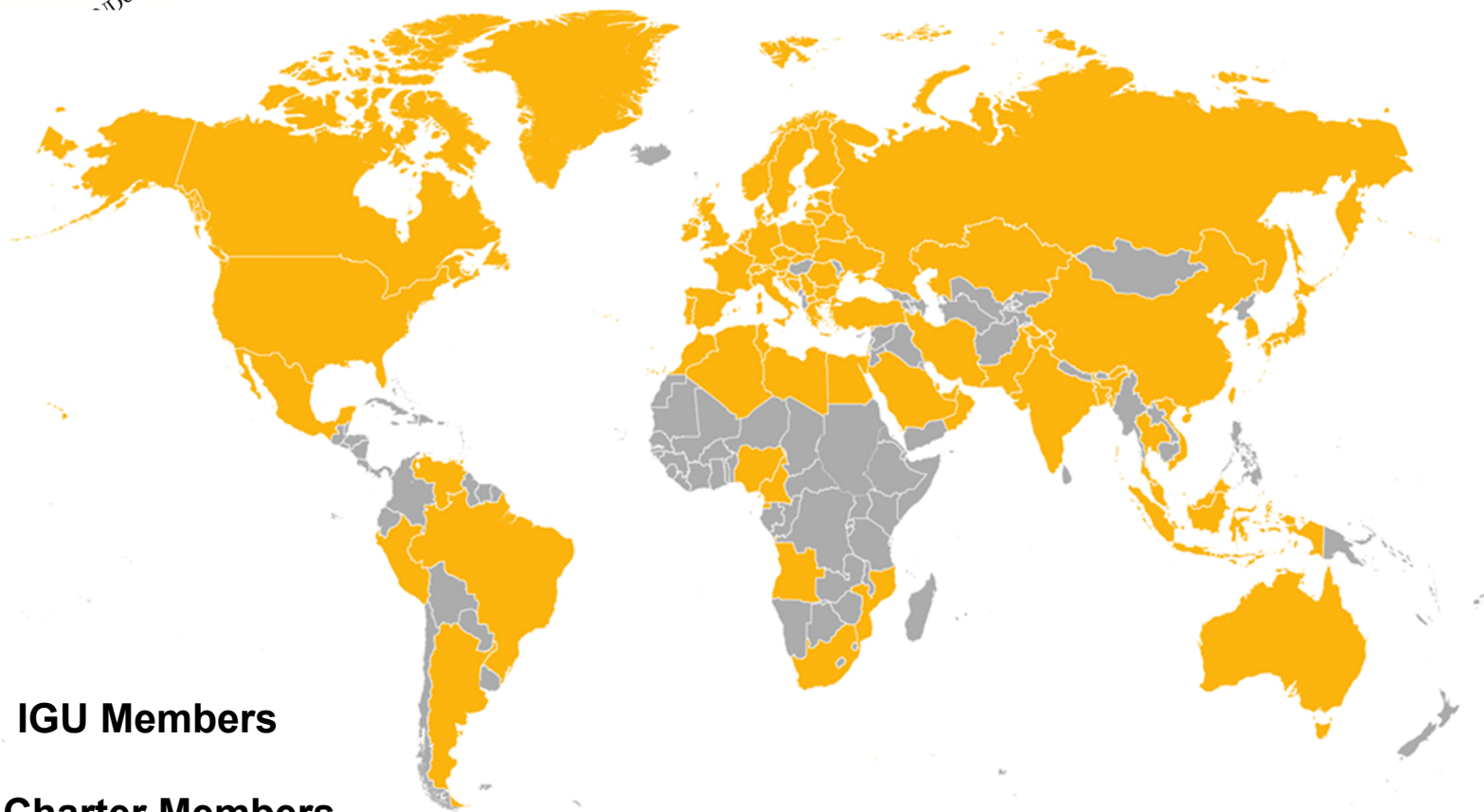
Moscow, 24 October 2011

**Hans Riddervold
Director
International Gas Union**





International Gas Union represents more than 95% of the global gas market



 **IGU Members**

78 Charter Members

40 Associate Members



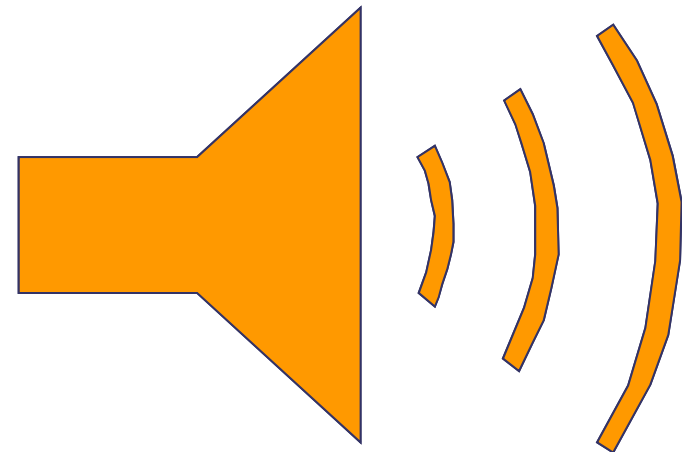


Natural Gas – the fuel with a voice!

Vision of International Gas Union:

**The most influential,
effective and
independant NGO,**

**while serving as the
spokesman for the gas
industry world-wide**





Key success factors

- **Create Trust**
- **Educate**
- **Advocate**
- **Energize**



The rational middle





Creating Trust for Gas

- **Open minded**
- **Knowledge seeking**
- **Balanced and objective**
 - Realising gas is part
 - Environment concern
- **Simple messages**
- **Clear language**
- **Humble**





Creating Trust: Energy - The World needs it all

Renewables



Nuclear

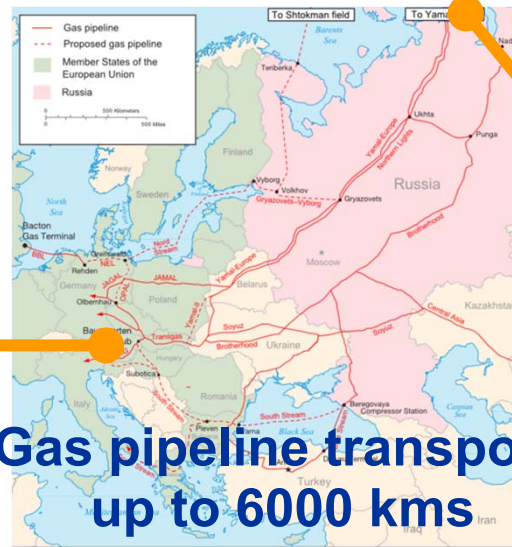


Fossil fuels





Educate: Complexity of energy supply



**Gas pipeline transport
up to 6000 kms**



**Electricity transport
up to 400 kms**





Educate: How to avoid misconception

Some people ask:

Why not use electricity to run generators to making energy for homes?

Wrong



There is an enormous need for educating the public to understanding the complexity of making energy reliable for industry and private consumption.

Right

- Wind, solar
- Hydro, bio
- Nuclear
- Coal, oil, gas





Gas Supply Networks

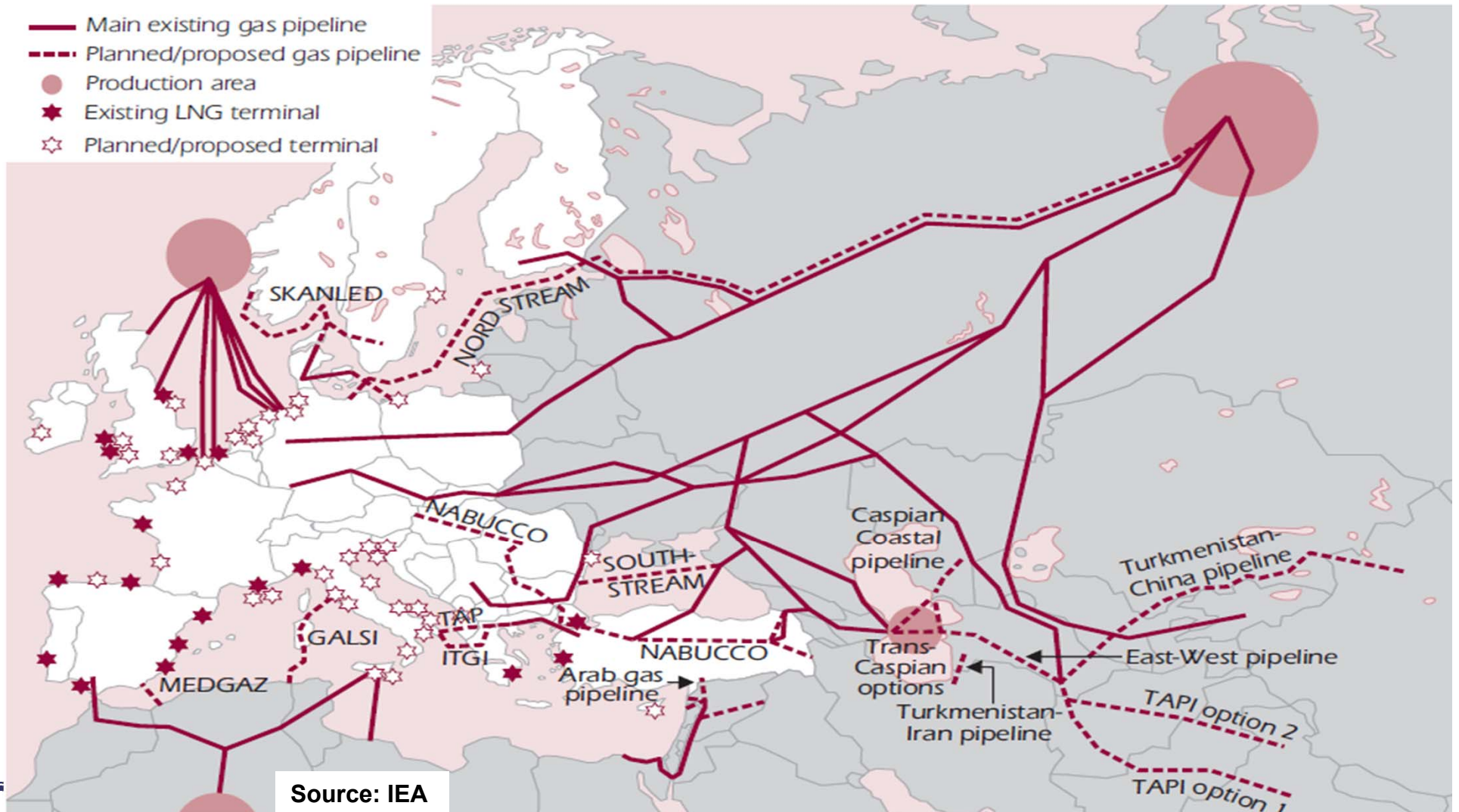
- **Physical Networks**
 - From regional to global
- **Finance Networks**
 - Predictability and Profitability
- **Political Networks**
 - Energy Security and Sustainability





Physical Network

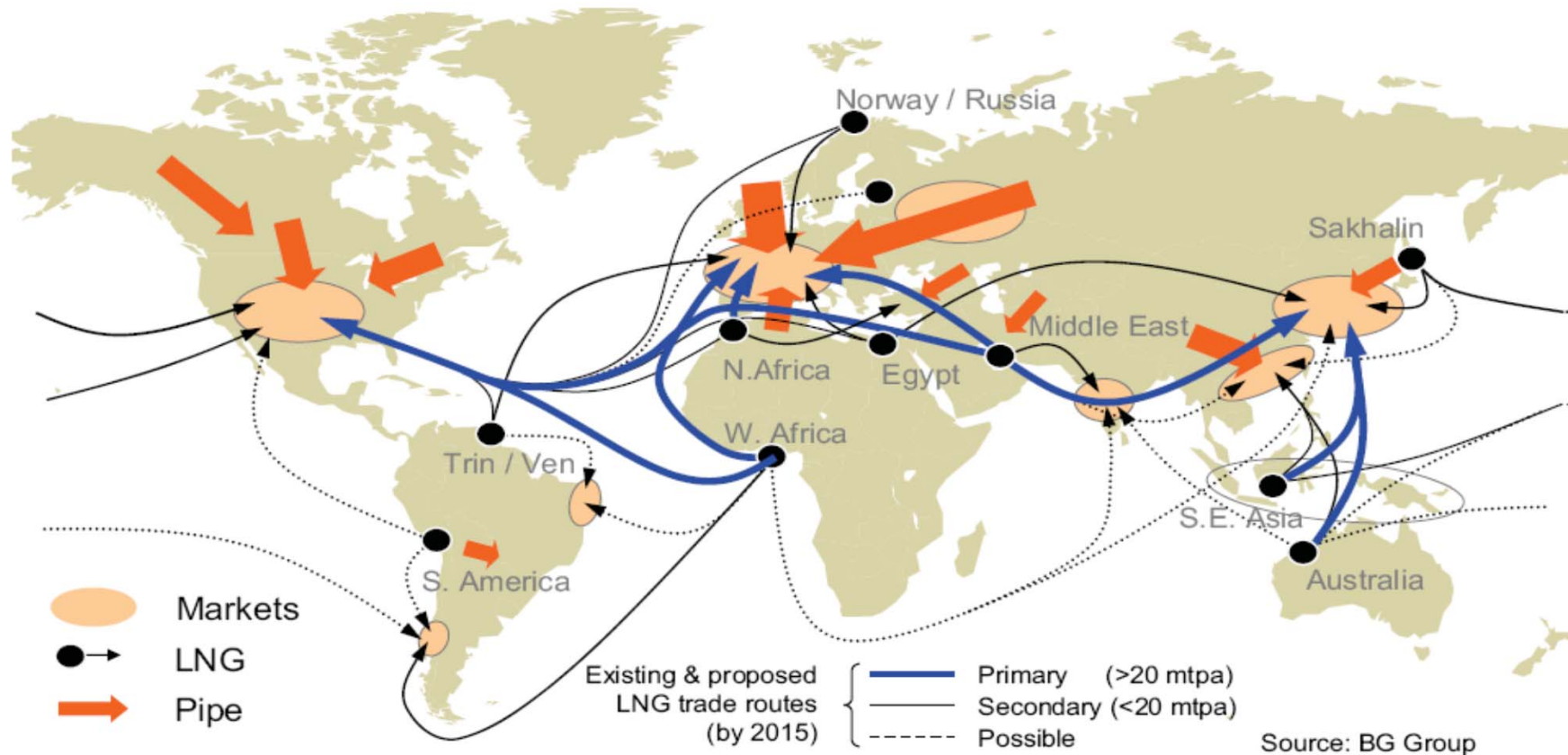
Infrastructure - key to energy security





Physical Network

LNG – the Global market Catalyst





Finance Networks

Funds for new projects are available: Critical factors are

- **Attractiveness and incentives to invest in R&D and in projects**
 - Exploration and production
 - Pipelines
 - LNG infrastructure
- **Predictable regulatory conditions**
- **Country and regional stability**
- **Acceptable rate of return**





Political Networks

Areas for balancing challenges

- **Security of Supply**
vs Demand (Energy security)
- **Sustainability Goals**
vs Energy Demand
- **Lifecycle Footprint Exposure**
vs Operational Footprint
- **Sources of Energy**
vs Industry and Employment
- **Regulatory Conditions**





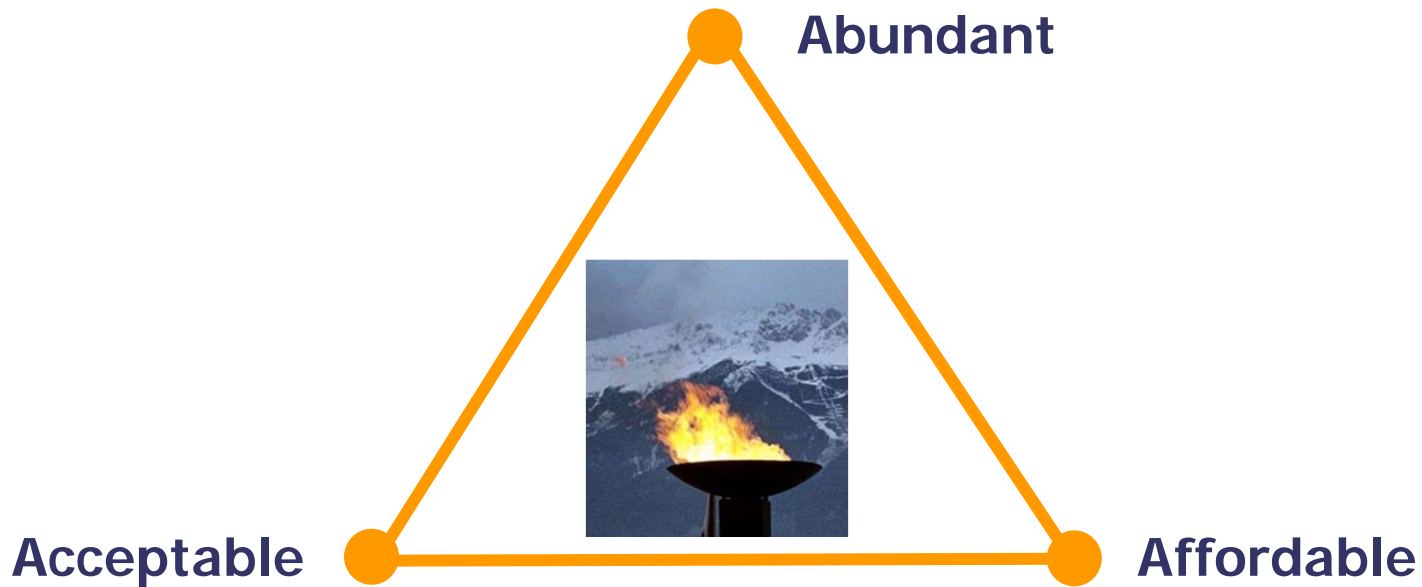
Regulatory challenges



- **Large investment risk**
vs Long term energy security
- **Historical rights**
vs Future terms
- **National policies**
vs Cross border grids/networks
- **Third party access: Negotiated**
vs Regulated terms
- **International law (EU)**
vs National legislation
- **Liberalisation**
vs Interest of national companies



Advocate: Key messages



➔ Gas: Part of the long term energy solution

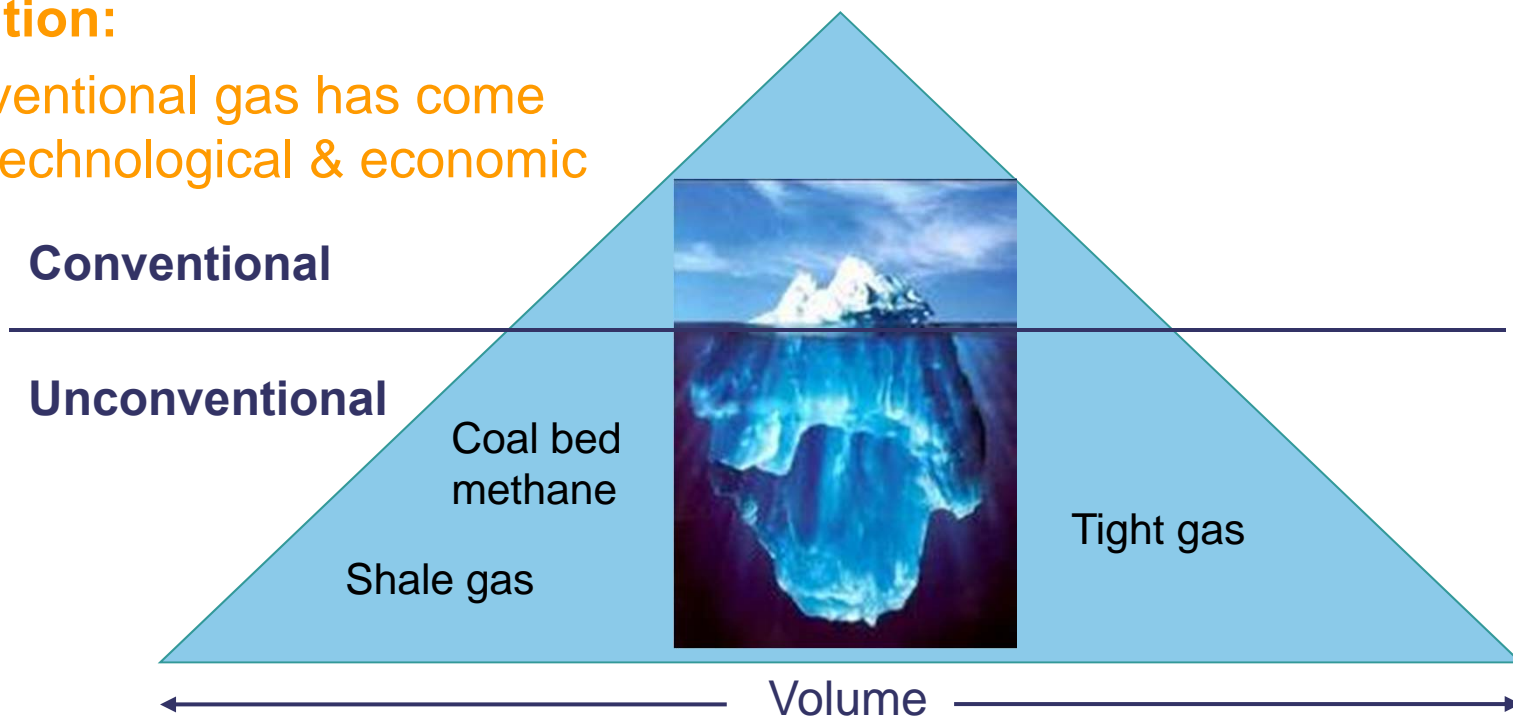


Abundant natural gas reserves

Proven conventional reserves* are growing

In addition:

Unconventional gas has come within technological & economic reach



The total long-term recoverable gas resource base is more than 850 tcm, only 66 tcm has already been produced.

- IEA-WEO2009 -

* 185 tcm in 2008

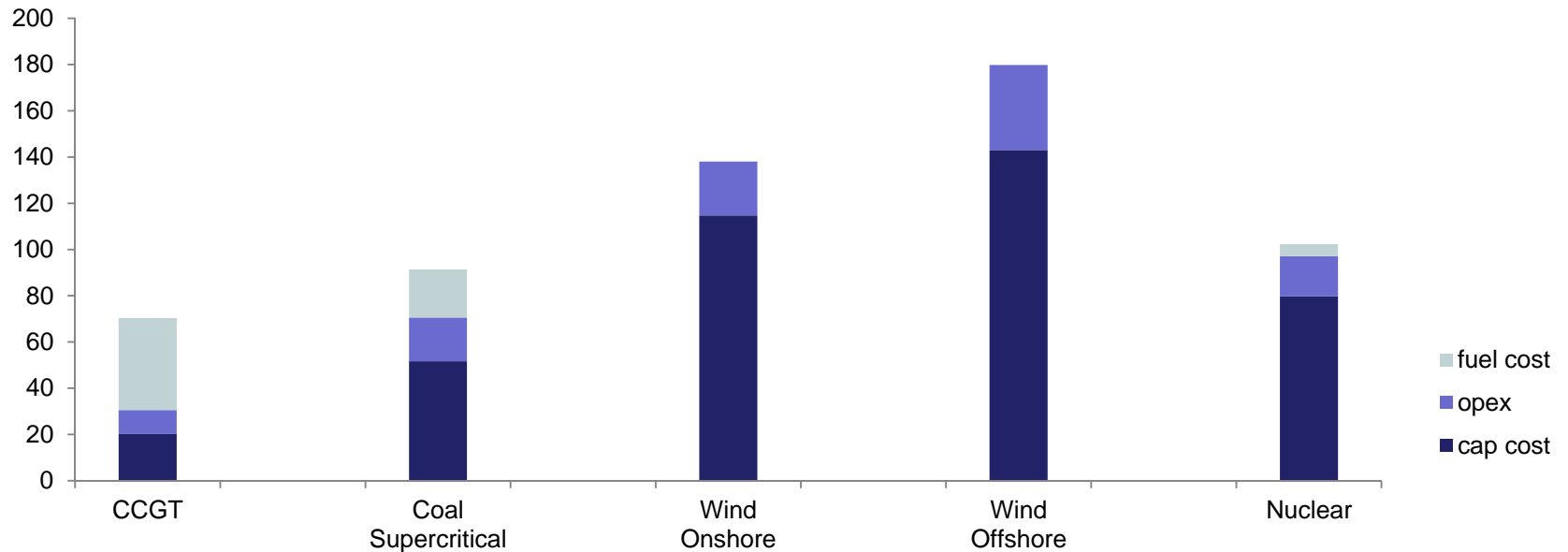


Affordable: Competitive option for new generation

Low All-in Unit Costs per kwh produced

Based on 7000 hrs operation for gas and coal

\$/MWh



Prices (at plant inlet)

Gas : 8 \$/MMBtu

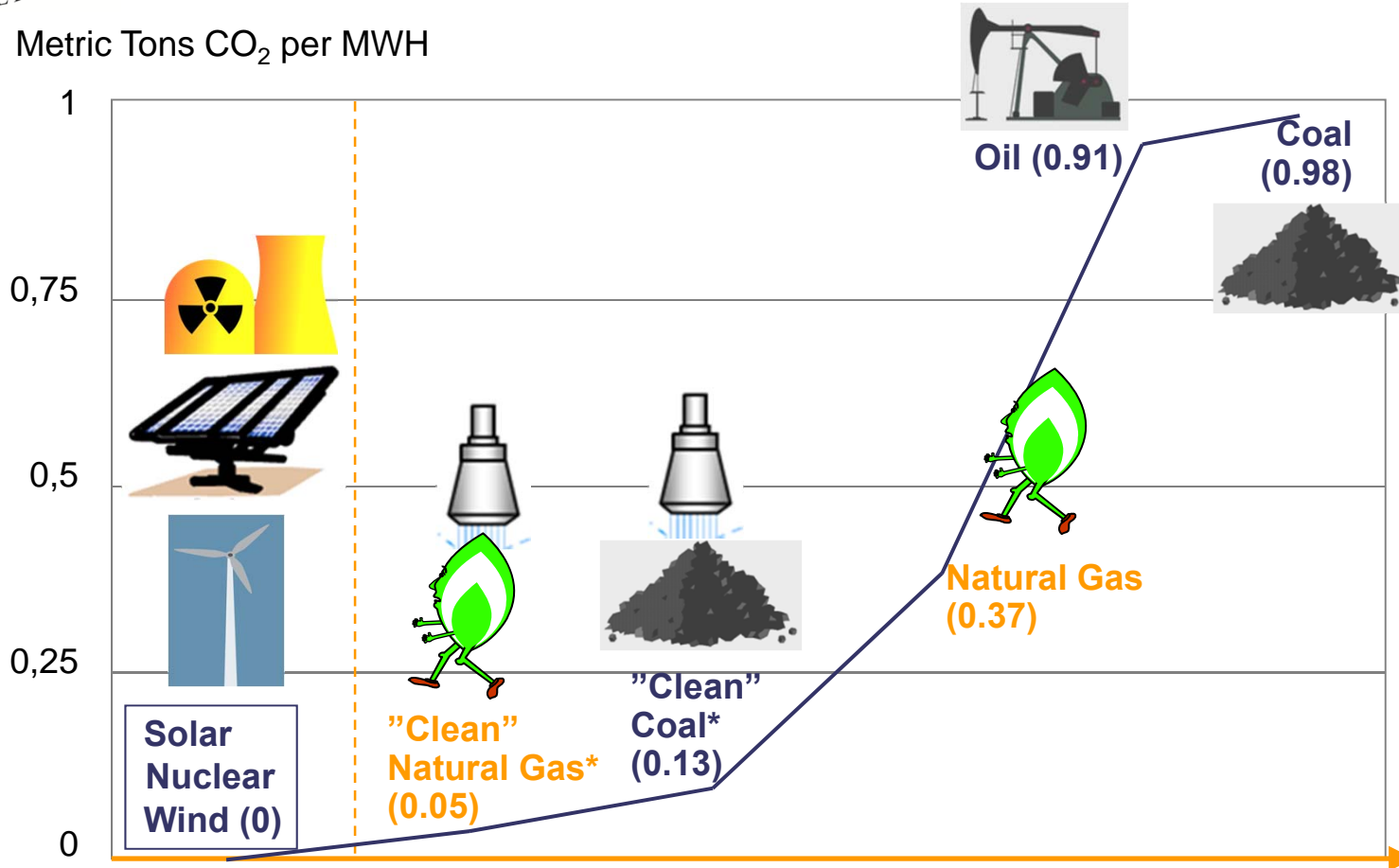
Coal: 80 \$/t

Source MMD

Capital costs of options may vary considerably in absolute terms, but very little in relative terms



Natural Gas with or w/o CCS is the cleanest fossil fuel



* With CCS

GHG Emissions

Source: IHS Cera/IGU



Gas fired power



47% lower GHG emission on life cycle basis than coal





Gas for pairing with renewables

Fabulous renewable resources:

- Windpower needs wind
- Solar power needs sun

Ideal pairing resource

- Gas quickly in operation when sun and wind temporarily is gone





Energizing

- **Gas is abundant, affordable and acceptable**
- **Gas is more than a bridge to a sustainable energy future**
- **Existing gas infrastructure is huge and catalysing**
- **Policy shapers instrumental in securing beneficial framework for investments**
- **Predictable frame conditions and regulatory regimes create growth**
- **Our message must reach the common community**



The role of Natural Gas must be better reflected in policy papers





Energizing: Some rules are still valid...

It's not the strongest of the species that survive,
nor the most intelligent, but the ones most
responsive to change



Charles Darwin



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**Большое спасибо за
внимание!**

The next highlight: Kuala Lumpur, Malaysia

**25rd World Gas Conference and
Exhibition**

4 – 8 June 2011
