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**SECURITY OF  
GAS SUPPLY  
IN OPEN  
MARKETS**

LNG AND POWER AT  
A TURNING POINT

# **Security of Gas Supply in Open Markets**

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**Working Party on Gas, 18-19 January 2005  
UN/Economic Commission for Europe**



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# Outline

- **Gas supply and demand balance at a turning point**
- **Main security of gas supply issues**
- **Role of Governments**



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# **Gas supply and demand at a turning point**

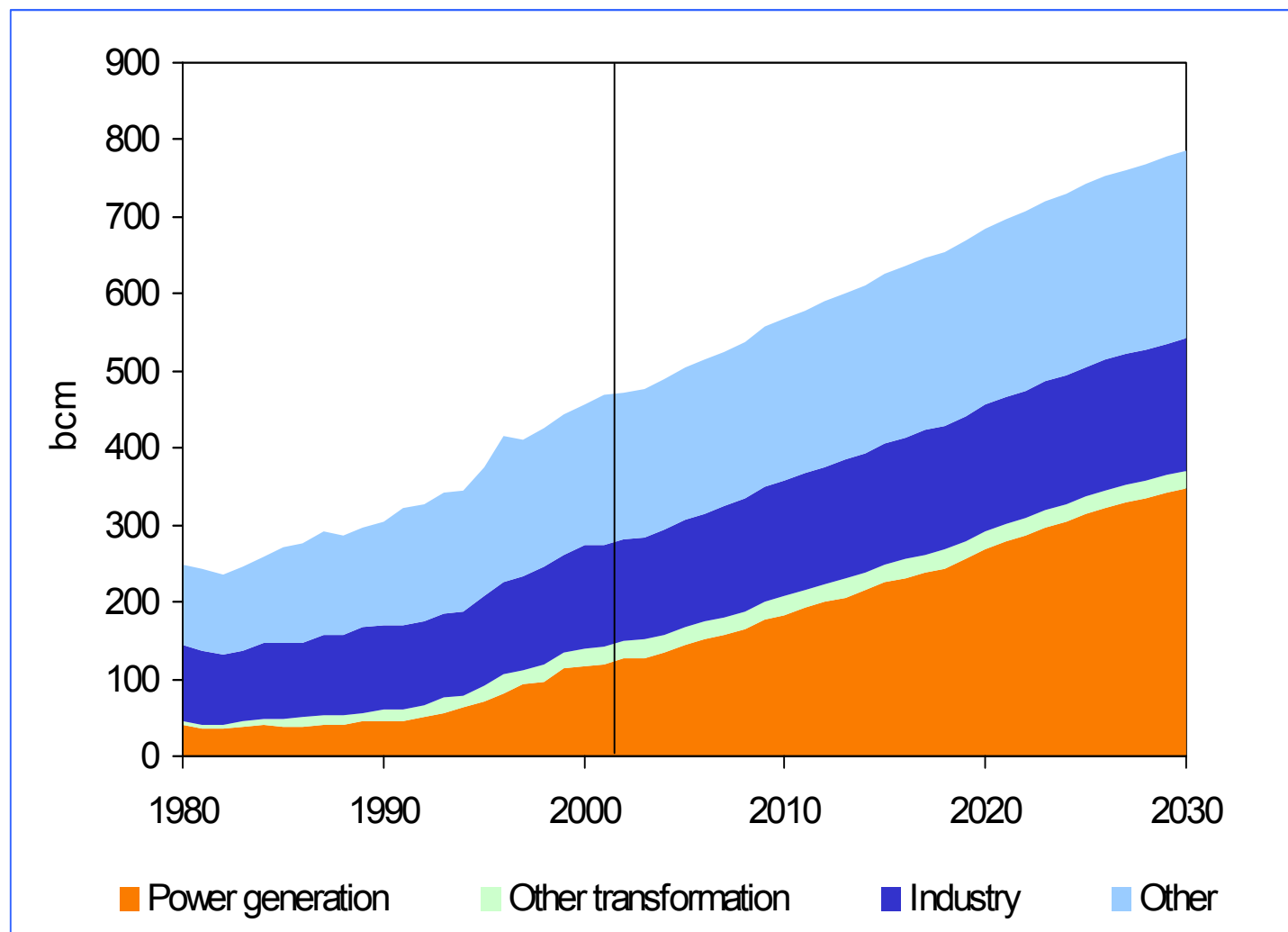


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# Gas Demand in Europe – EU 25



**Source: World Energy Outlook 2004**

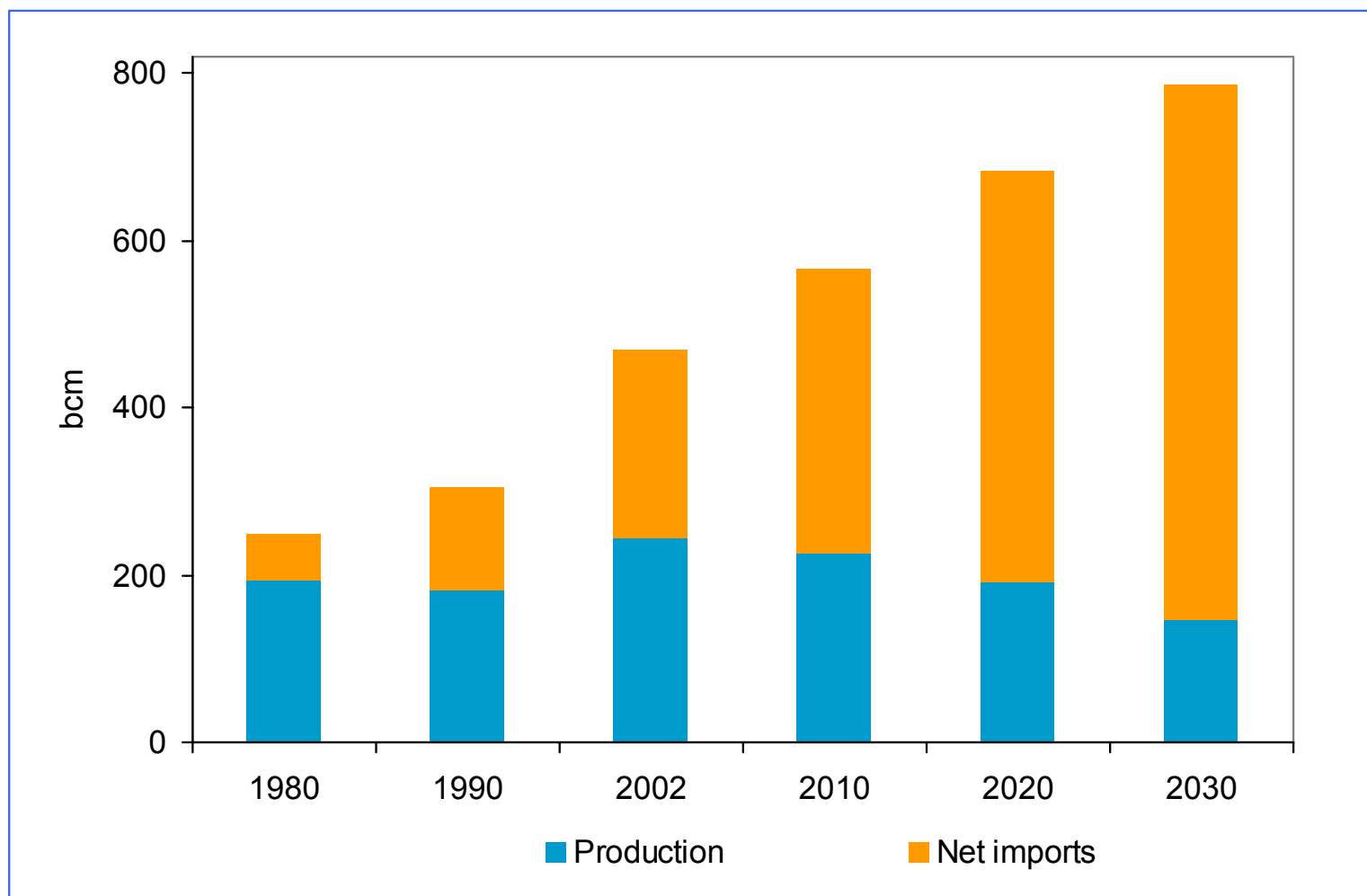


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# Gas Supply Balance – EU 25



**Source: World Energy Outlook 2004**

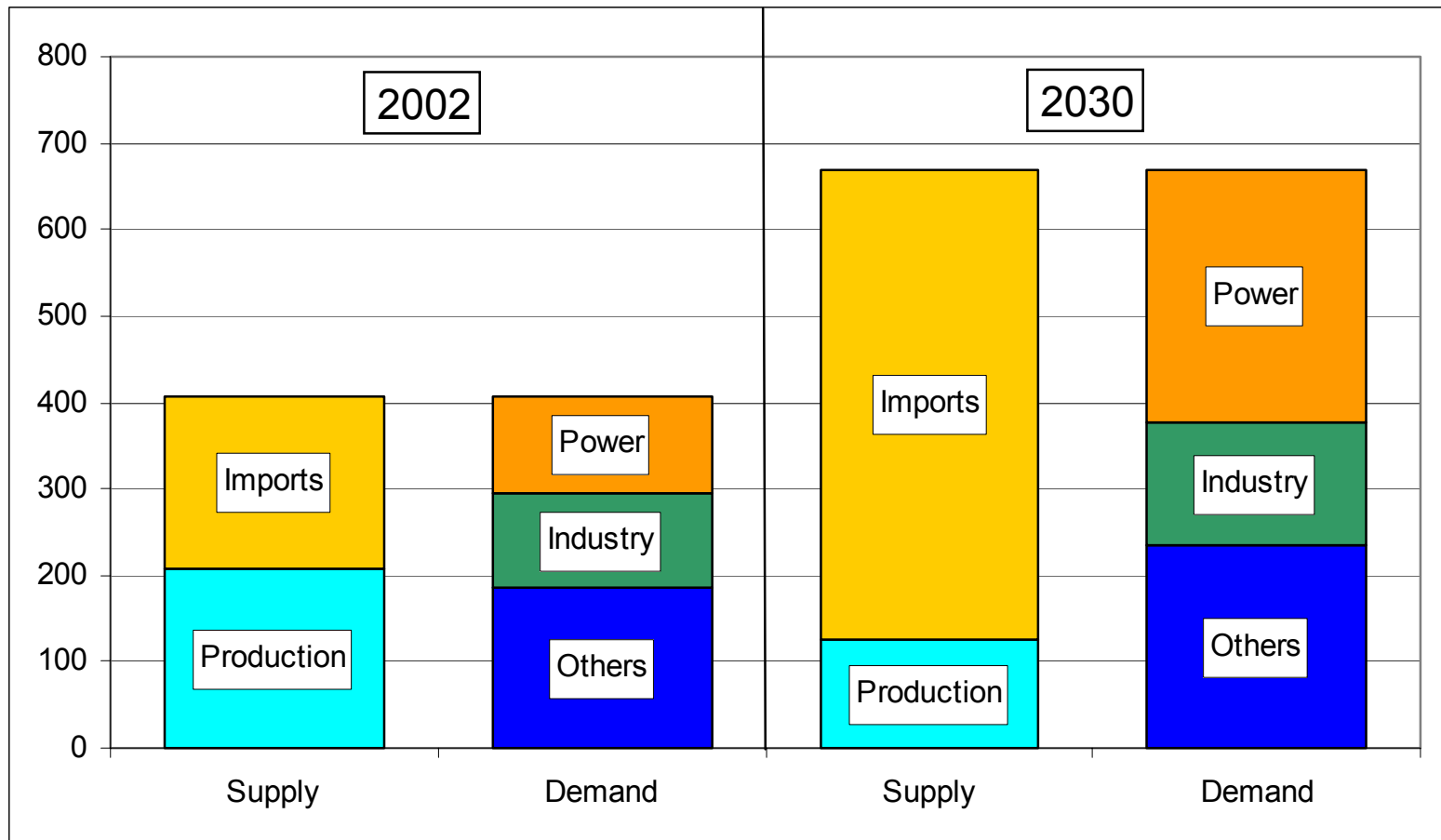


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# Imported Gas for Power – EU 25



**Source: World Energy Outlook 2004**

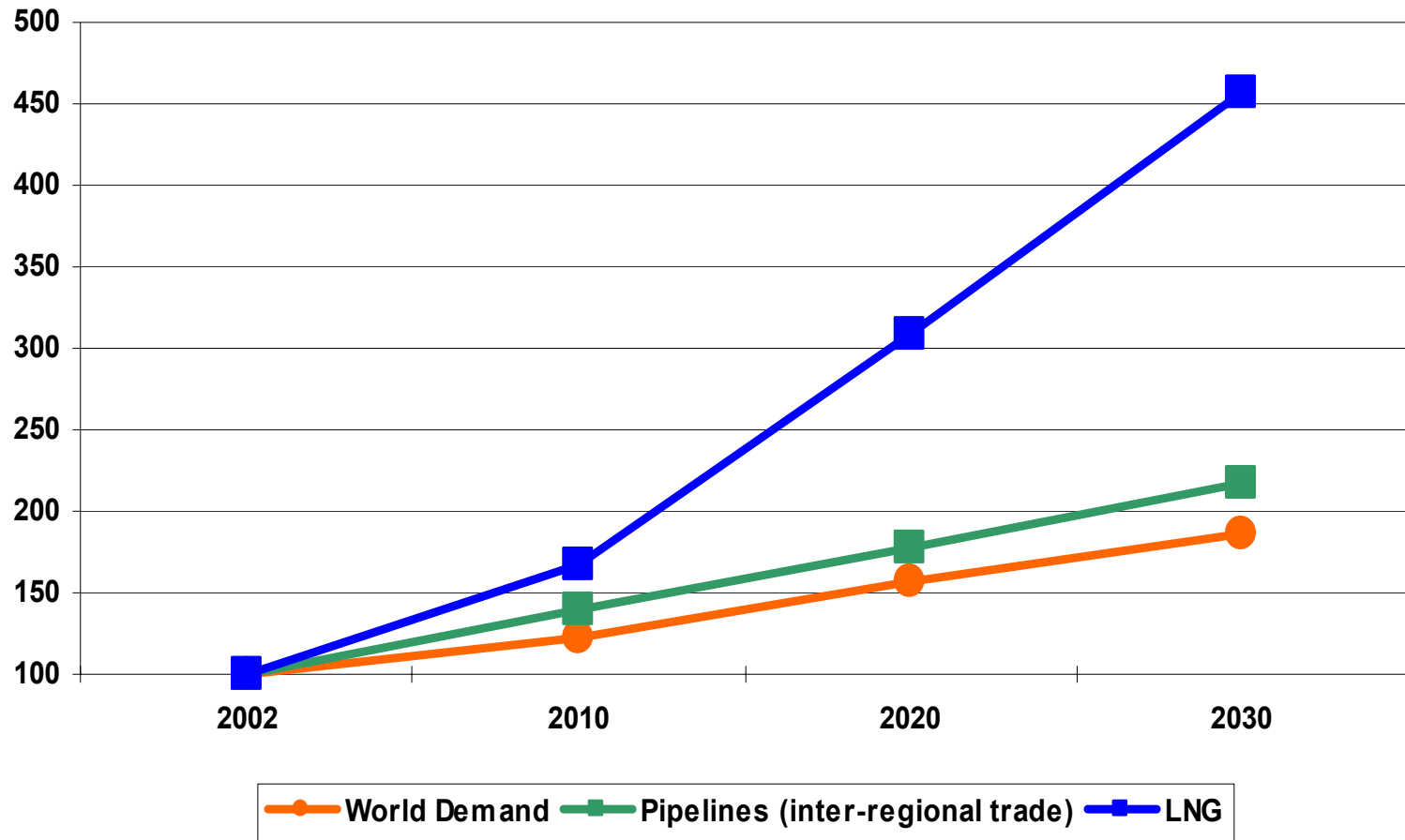


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# Major increase in Inter-regional Trade



Source: IEA World Energy Outlook 2004

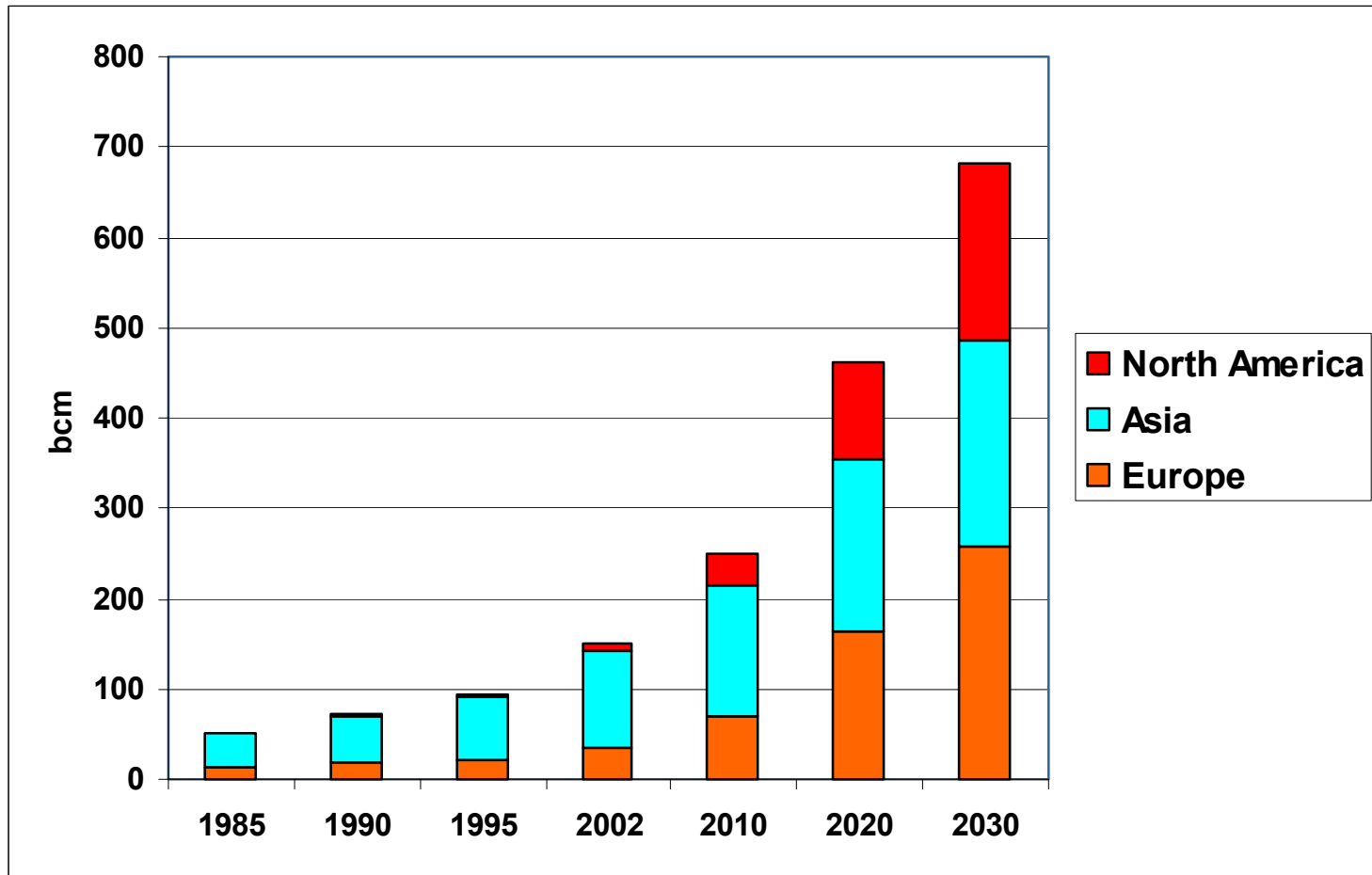


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# A Tremendous Growth in LNG Trade



Source: IEA World Energy Outlook 2004



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# Major Security of Supply Issues



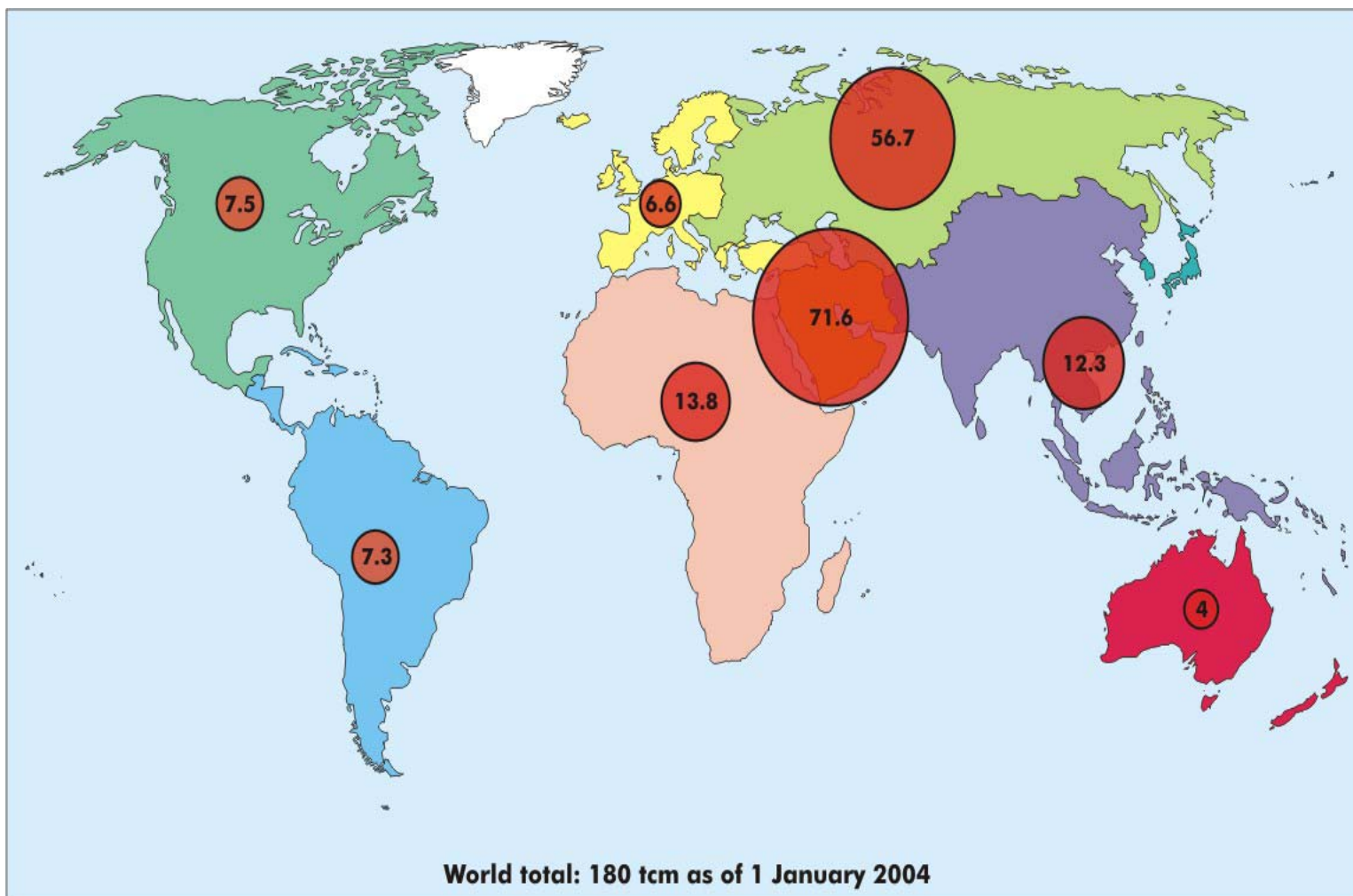
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# Adequacy of Gas Resources

## Global Gas Reserves by Regions (tcm)



Source: World Energy Outlook 2004



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# Access to Gas Resources

- **Revenue sharing:** incentives for countries to develop their resources for export
- **Incentives for investment into export infrastructure**
- **Financing and risk mitigation**
  - ◆ **Long-term contracts** - proven instruments  
Adaptation to new competitive conditions
  - ◆ **JVs/partnerships:** integration along the gas chain (physical and financial)
  - ◆ **Access to open liquid markets**

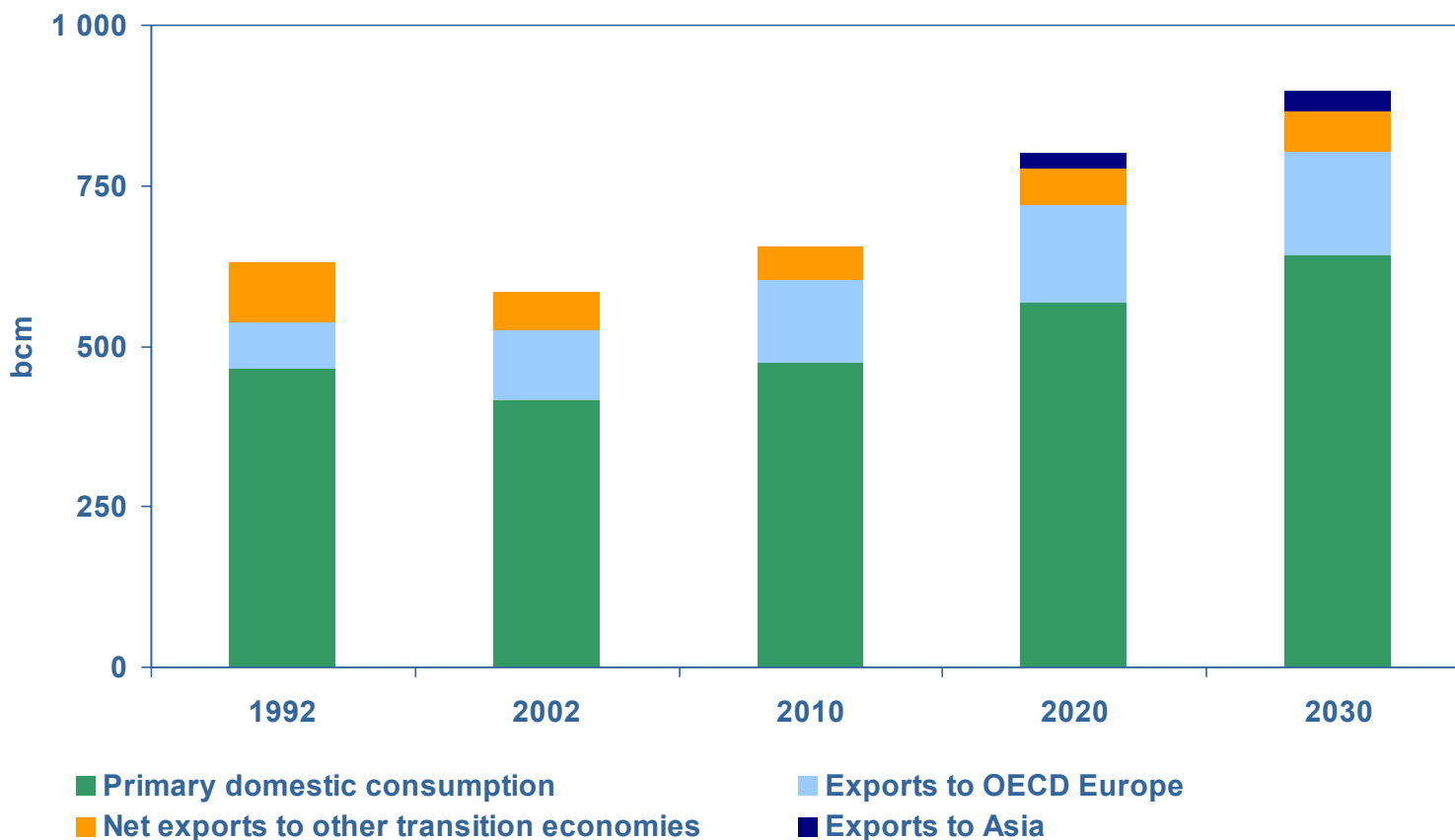


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# Russian Gas Production and Exports



***Higher Gazprom and independent production will meet both rising domestic and export demand***

**Source: IEA World Energy Outlook 2004**

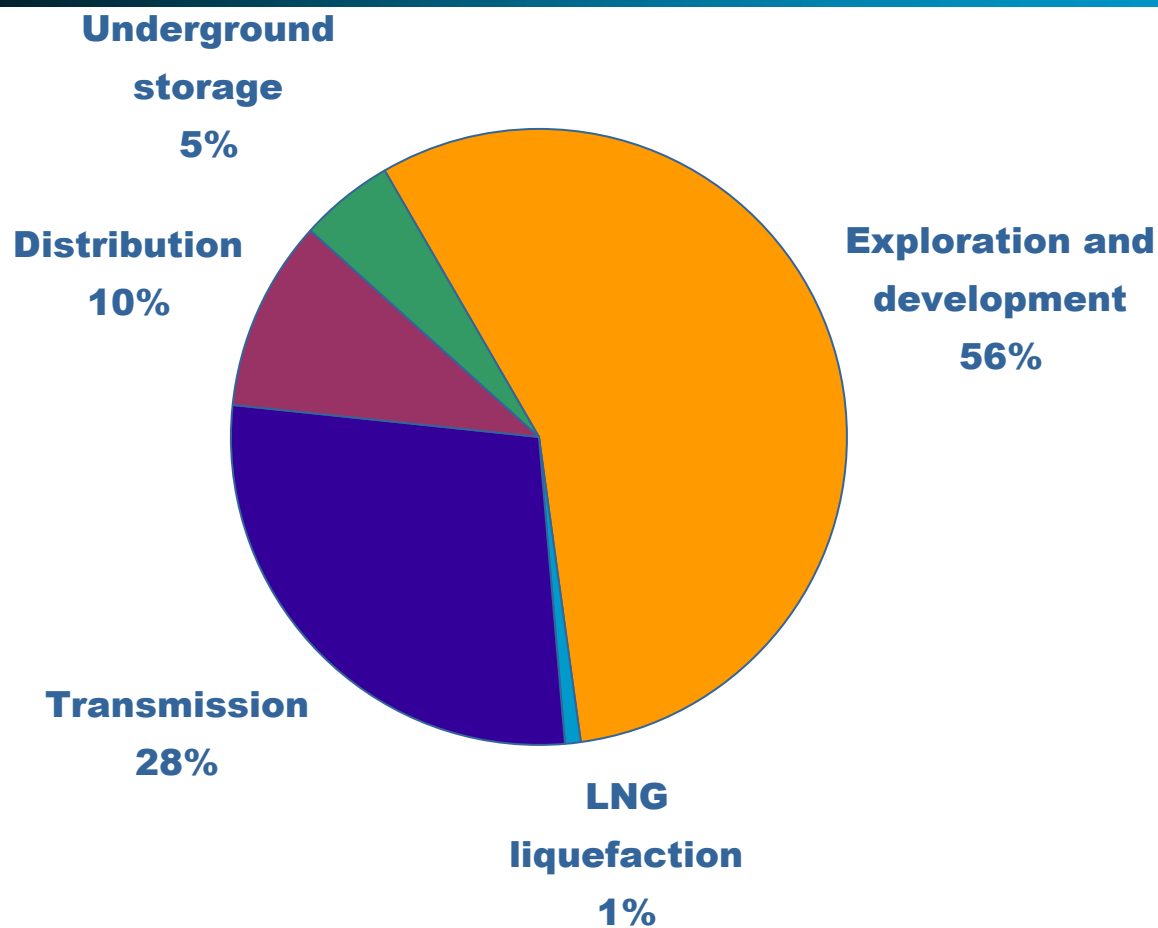


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# Russian Gas Sector Investment



***Russian gas sector investment is expected to total \$300 billion,  
or an average of \$11 billion a year***

**Source: IEA World Energy Outlook 2004**



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## Transit/Facility concentration

- 80% of Russian gas production from three fields (Urengoi, Yamburg and Medvezhye)
- The Yamal-Nenets corridor transports 90% of Russian gas
- Ukraine transits 80% of Russian gas exports to central and western Europe
- Transmed (Algeria/Italy) transports 33% of Italian consumption
- GME (Algeria/Spain) transports 30% of Spanish consumption
- More than half of Norwegian production and exports from Troll and associated pipelines (Norway).
- LNG: 11 regasification terminals in Europe



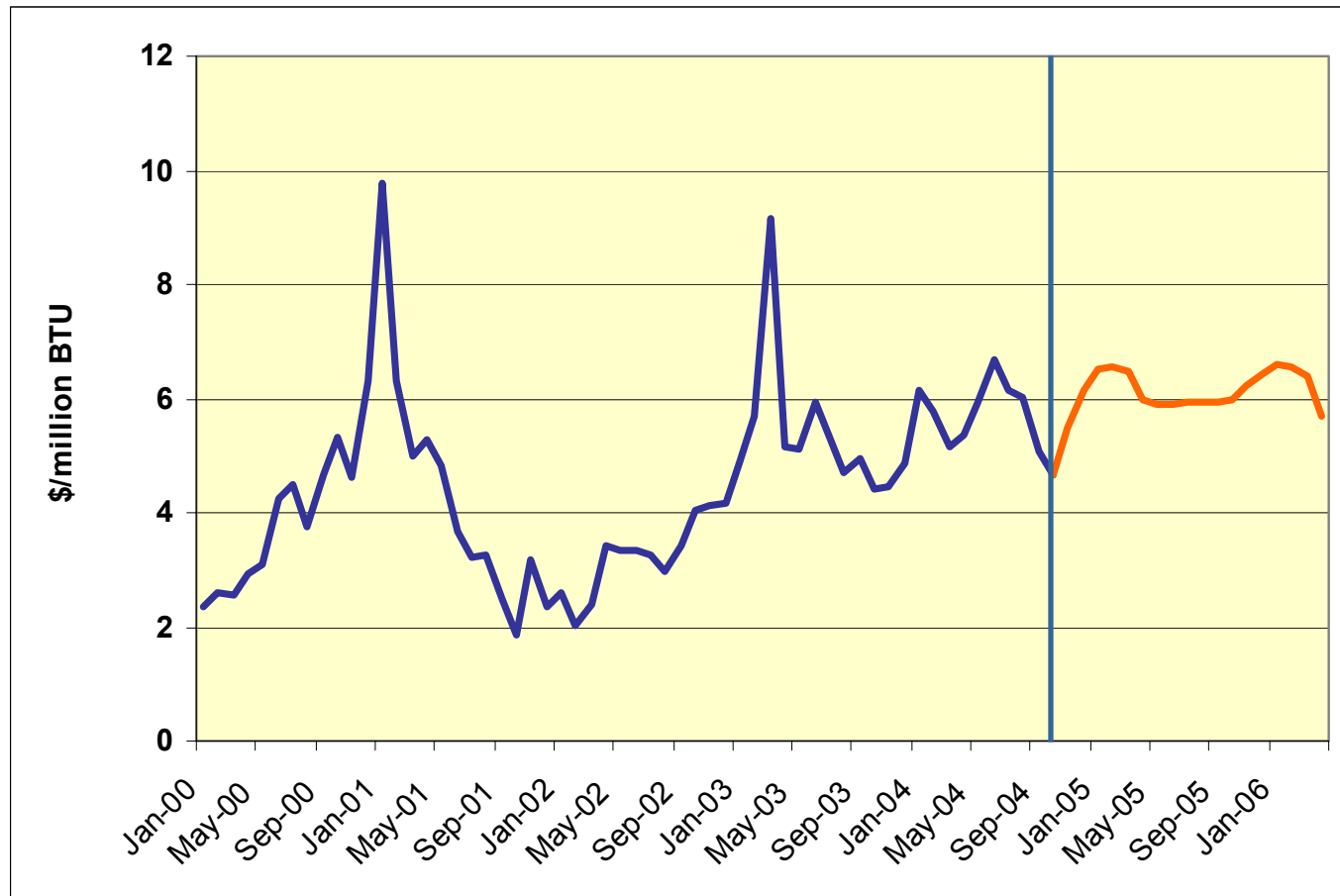
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# Price Signals in Open Markets

## US Spot and Forward Prices – Henry Hub



Source: Energy Intelligence

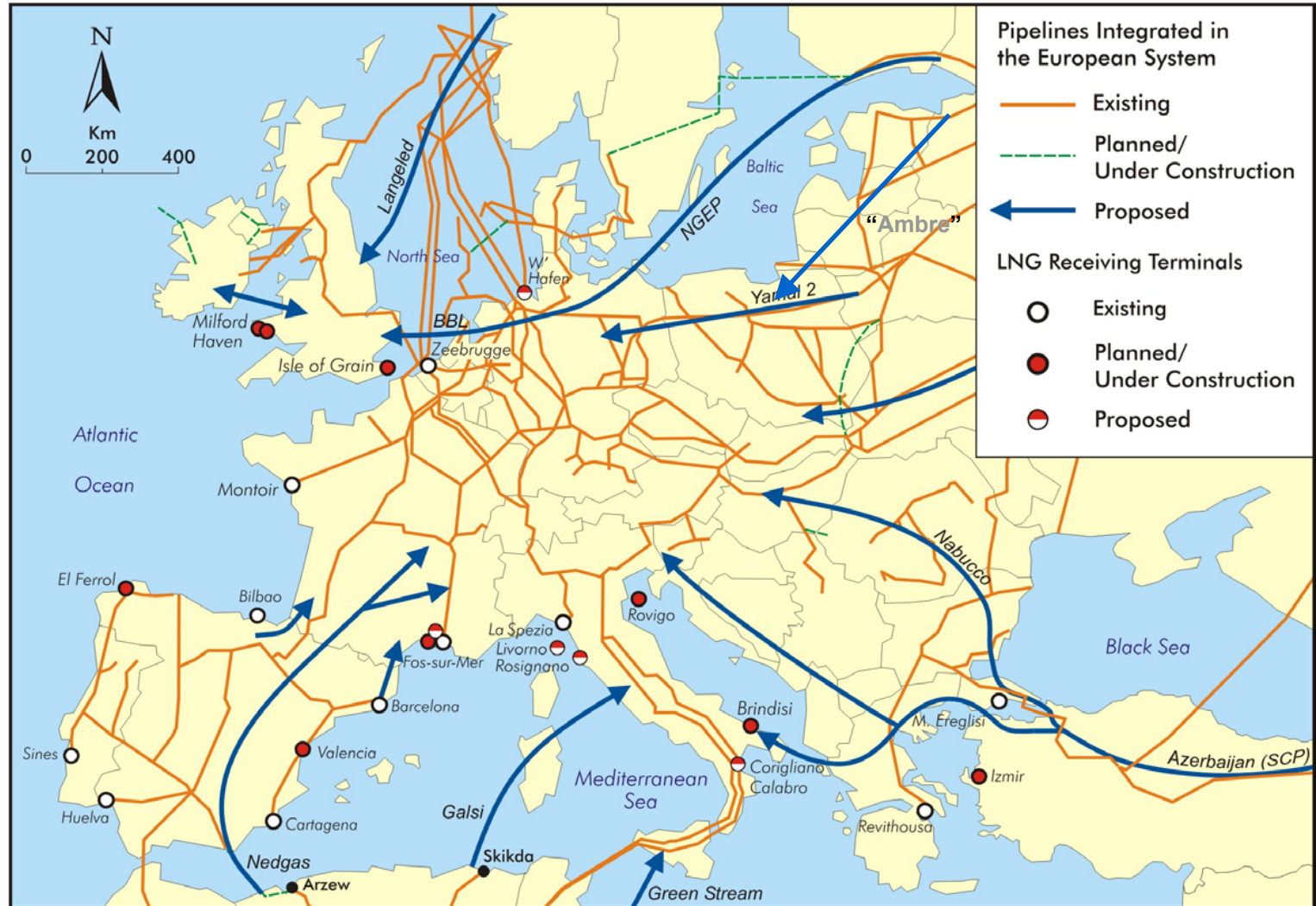


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# Main new infrastructure projects in Europe (pipelines and regas terminals)





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# Challenges for Investment in Open Gas Markets

- Do not regulate when competition works
  - ◆ US Hackberry decision: LNG terminals not subject to TPA
  - ◆ UK: LNG terminals/BBL exempted from TPA
- When regulated, make sure the rate of return is competitive
- Do not exclude
  - ◆ long-term contracts
  - ◆ auctions for capacity



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# Unbundling of Functions/ Responsibilities

Multiple players, longer chains, more interfaces  
Unbundling between infrastructure and supply

## Unbundling of responsibility

- ◆ Main responsibility *vis-à-vis* customers AND shareholders
- ◆ Responsibility for own customers, not the whole market
- ◆ Coordination of responsibility along the chain

## Unbundling of investment decisions

- ◆ Transportation capacity to fit future supplies
- ◆ Investment incentives for a regulated private business
- ◆ Investment in insurance assets (for low-probability/high-impact events)



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## Conclusions

- **European gas supply and demand at a turning point**
- **Security of gas supply is high again on the agenda of policy makers**
  - ◆ **Define clear policy objectives**
  - ◆ **Define clear responsibility**
  - ◆ **Ensure the regulatory framework is consistent with policy objectives**
- **Diversification is key**
- **Dialogue between producing, transit and consuming countries**

# Major IEA publications related to gas





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[www.iea.org](http://www.iea.org)