International Energy Agency

# WORLD ENERGY OUTLOOK 2012

# **World Energy Outlook 2012** Dr. Fatih BIROL IEA Chief Economist Istanbul, 16 November 2012



### Foundations of global energy system shifting

- Resurgence in oil & gas production in some countries
- Retreat from nuclear in some others
- Signs of increasing policy focus on energy efficiency

## All-time high oil prices acting as brake on global economy

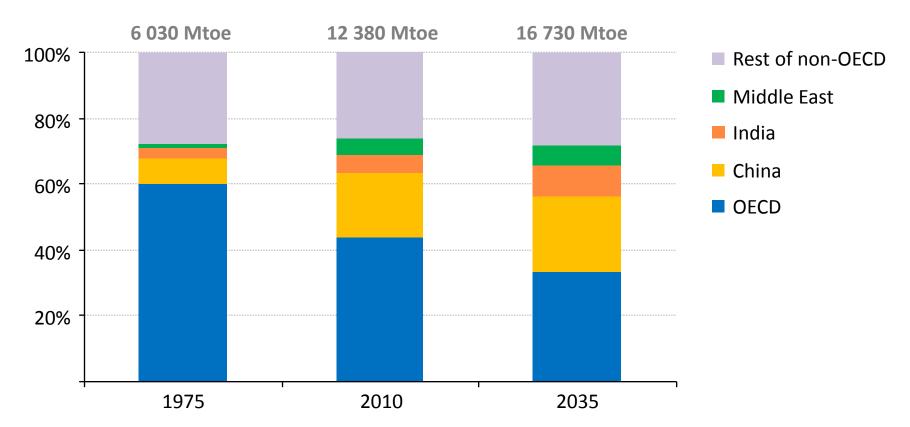
Divergence in natural gas prices affecting Europe (with prices 5-times US levels) and Asia (8-times)

### Symptoms of an unsustainable energy system persist

- > Fossil fuel subsidies up almost 30% to \$523 billion in 2011, led by MENA
- CO<sub>2</sub> emissions at record high, while renewables industry under strain
- > Despite new international efforts, 1.3 billion people still lack electricity
- > Water increasingly crucial for assessing the viability of energy projects



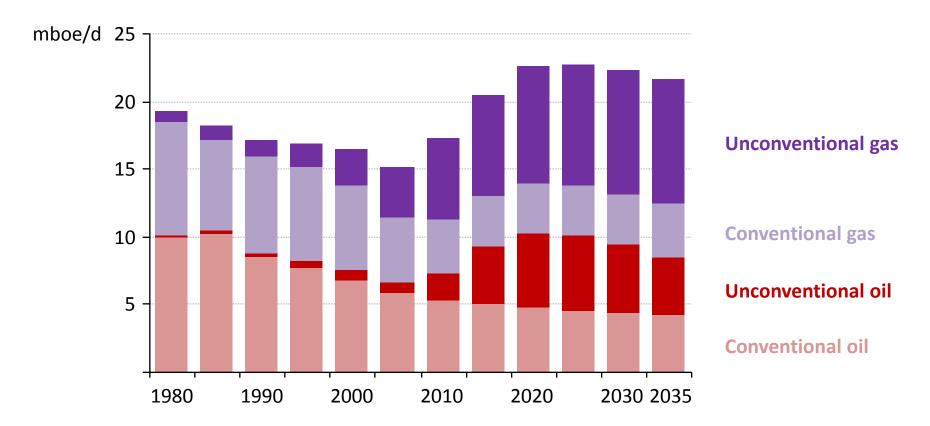
#### Share of global energy demand



Global energy demand rises by over one-third in the period to 2035, underpinned by rising living standards in China, India & the Middle East



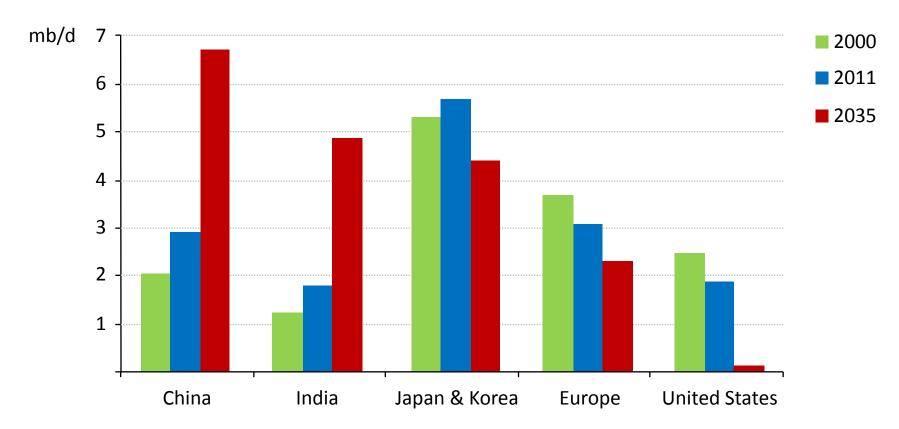
#### US oil and gas production



The surge in unconventional oil & gas production has implications well beyond the United States



#### Middle East oil export by destination



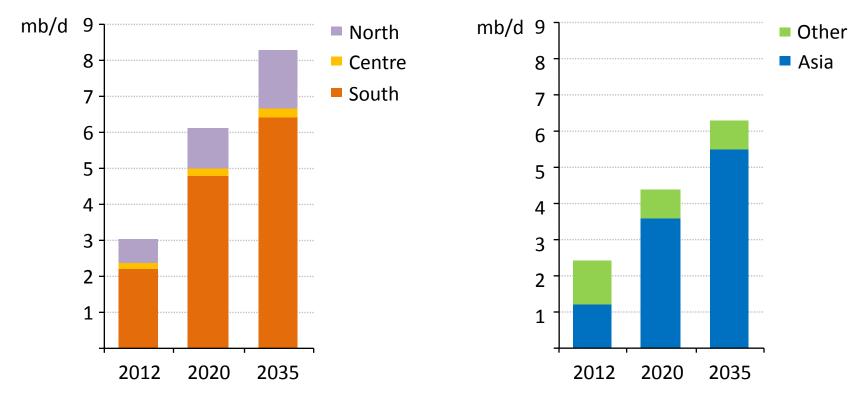
By 2035, almost 90% of Middle Eastern oil exports go to Asia; North America's emergence as a net exporter accelerates the eastward shift in trade

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Iraq oil exports

#### Iraq oil production



Iraq accounts for 45% of the growth in global production to 2035; by the 2030s it becomes the second-largest global oil exporter, overtaking Russia

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# Natural gas: towards a globalised market

Major global gas trade flows, 2035

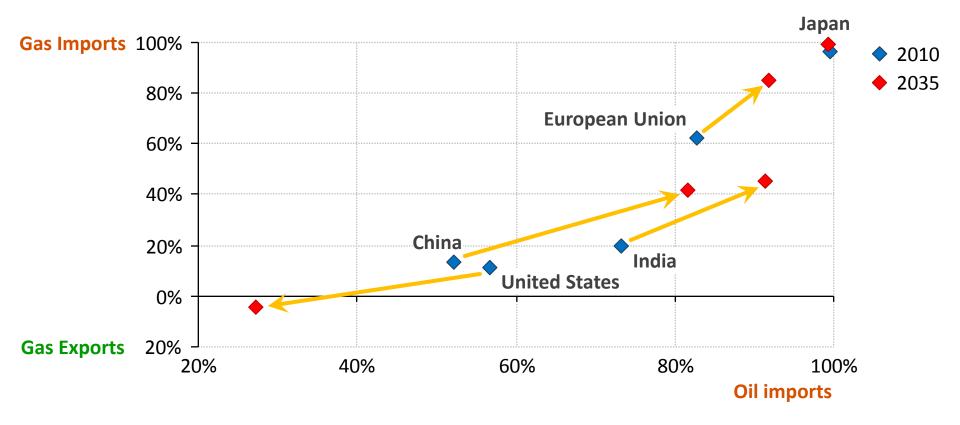
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Rising supplies of unconventional gas & LNG help to diversify trade flows, putting pressure on conventional gas suppliers & oil-linked pricing mechanisms



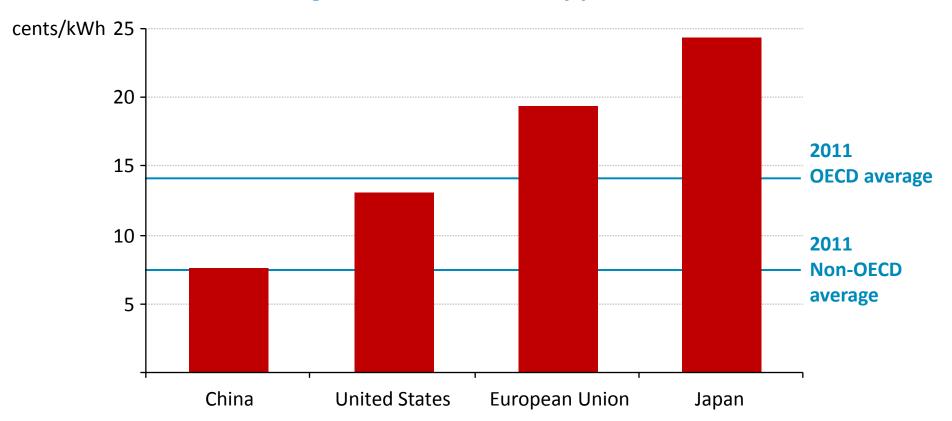
#### Net oil & gas import dependency in selected countries



While dependence on imported oil & gas rises in many countries, the United States swims against the tide



#### Average household electricity prices, 2035



*Electricity prices are set to increase with the highest prices persisting in the European Union & Japan, well above those in China & the United States* 



- Policy makers face critical choices in reconciling energy, environmental & economic objectives
- Changing outlook for energy production & use may redefine global economic & geopolitical balances
- Iraq set to play a pivotal role in global oil markets
- As climate change slips off policy radar, the "lock-in" point moves closer & the costs of inaction rise
- The gains promised by energy efficiency are within reach & are essential to underpin a more secure & sustainable energy system