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

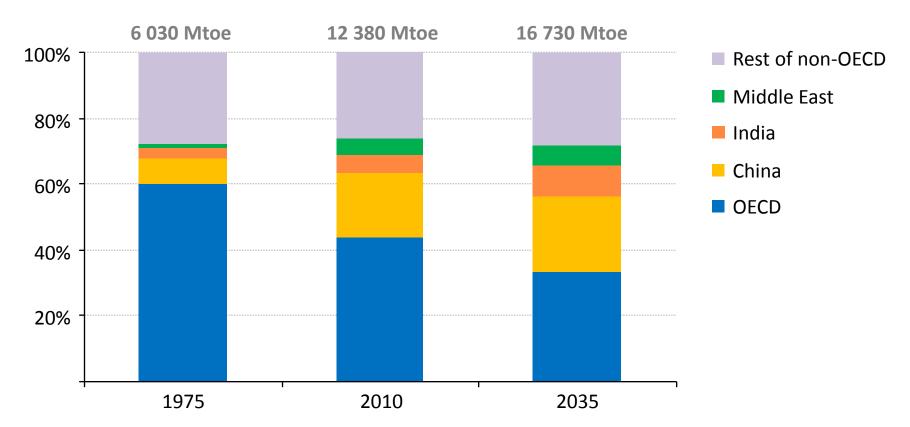
Divergence in natural gas prices affecting Europe (with prices 5-times US levels) and Asia (8-times)

Symptoms of an unsustainable energy system persist

- > Fossil fuel subsidies up almost 30% to \$523 billion in 2011, led by MENA
- CO₂ 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



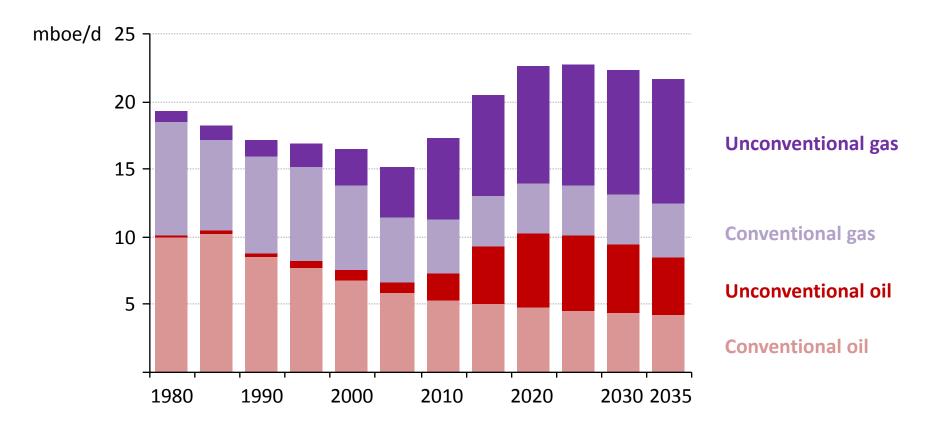
Share of global energy demand



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



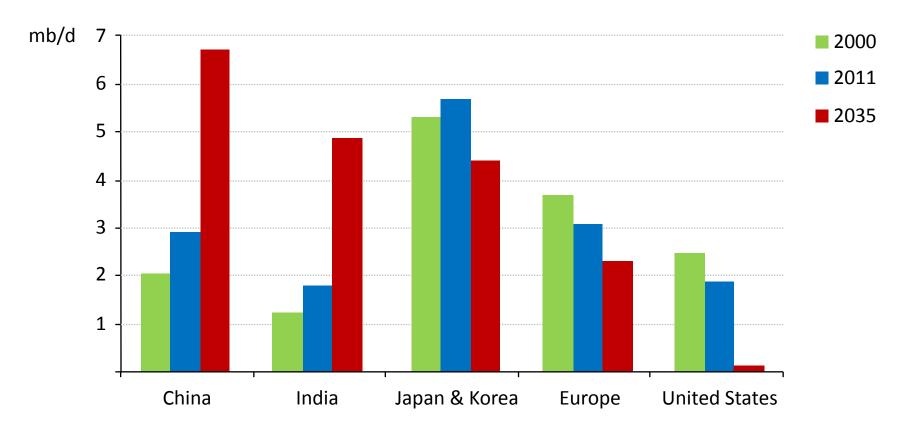
US oil and gas production



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



Middle East oil export by destination



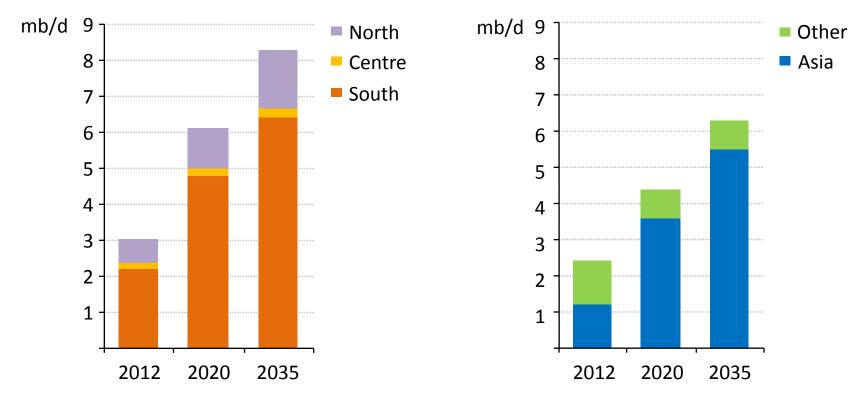
By 2035, almost 90% of Middle Eastern oil exports go to Asia; North America's emergence as a net exporter accelerates the eastward shift in trade

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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

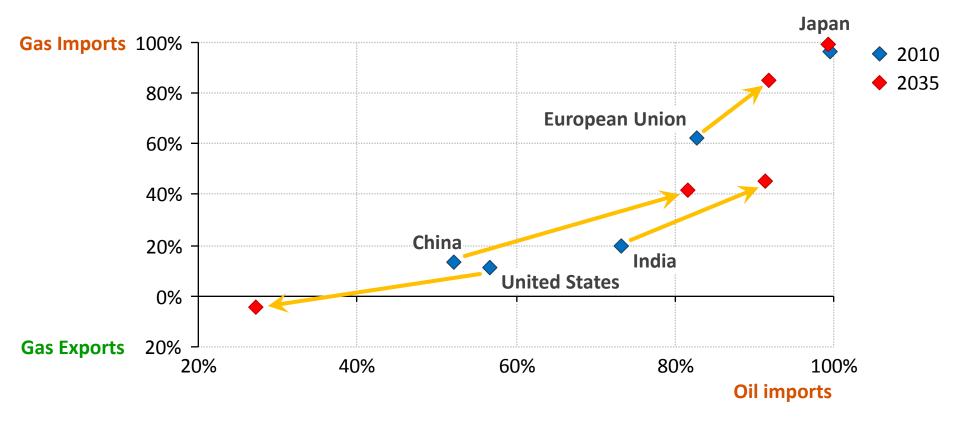
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Rising supplies of unconventional gas & LNG help to diversify trade flows, putting pressure on conventional gas suppliers & oil-linked pricing mechanisms



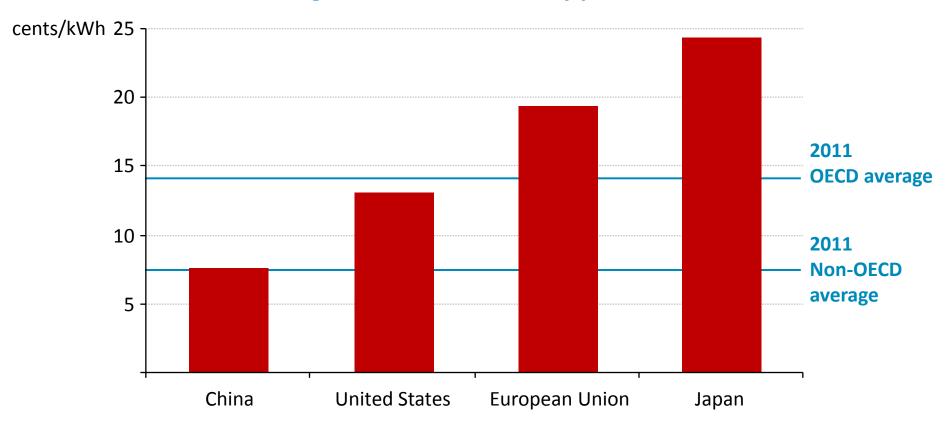
Net oil & gas import dependency in selected countries



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