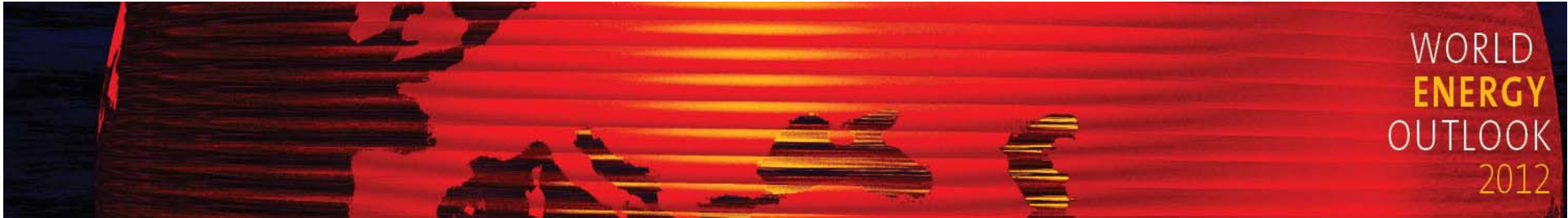


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World Energy Outlook 2012

*Maria van der Hoeven
Executive Director, IEA
Wellington*

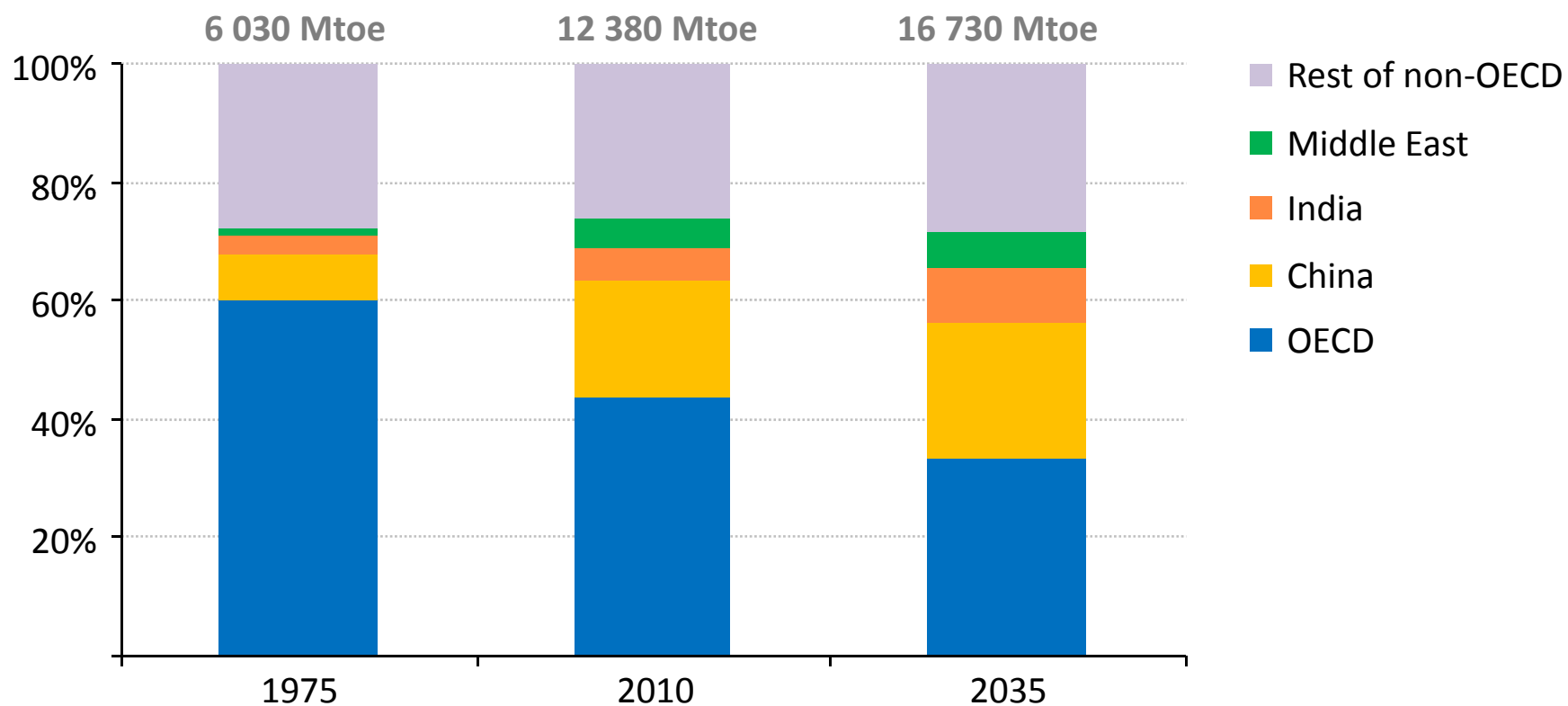


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Emerging economies steer energy markets

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Share of global energy demand

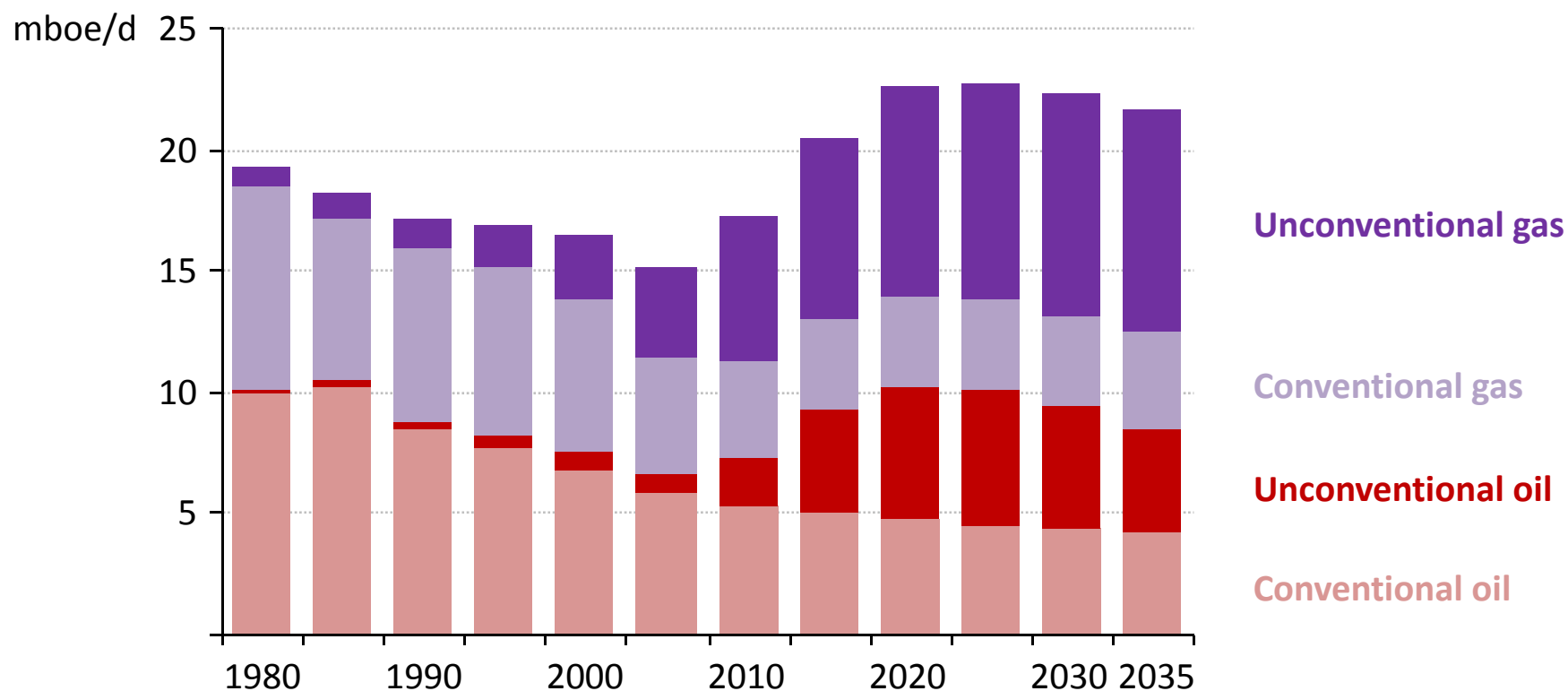


Global energy demand rises by over one-third in the period to 2035, underpinned by rising living standards in China, India & the Middle East

A US oil & gas transformation

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United States oil and gas production, 1980-2035

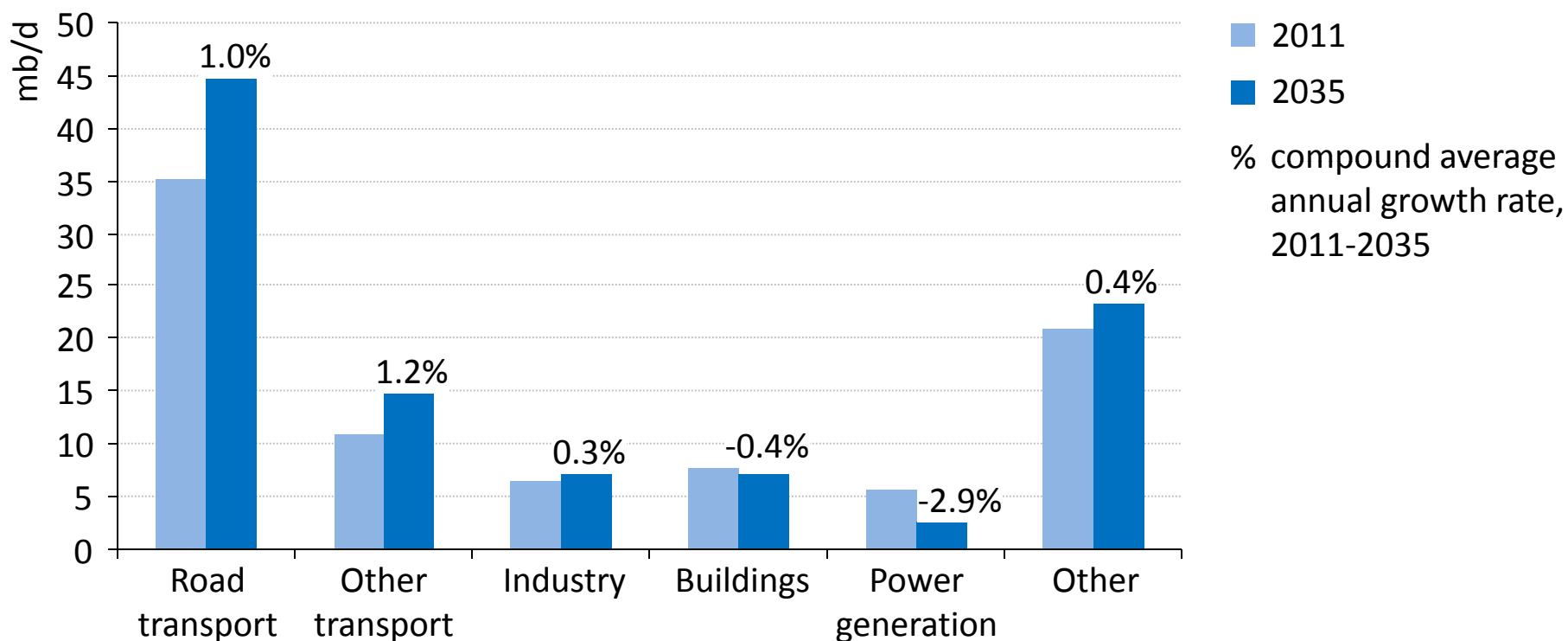


The surge in unconventional oil & gas production has implications well beyond the United States

Transport drives oil demand

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Oil demand by sector in the New Policies Scenario

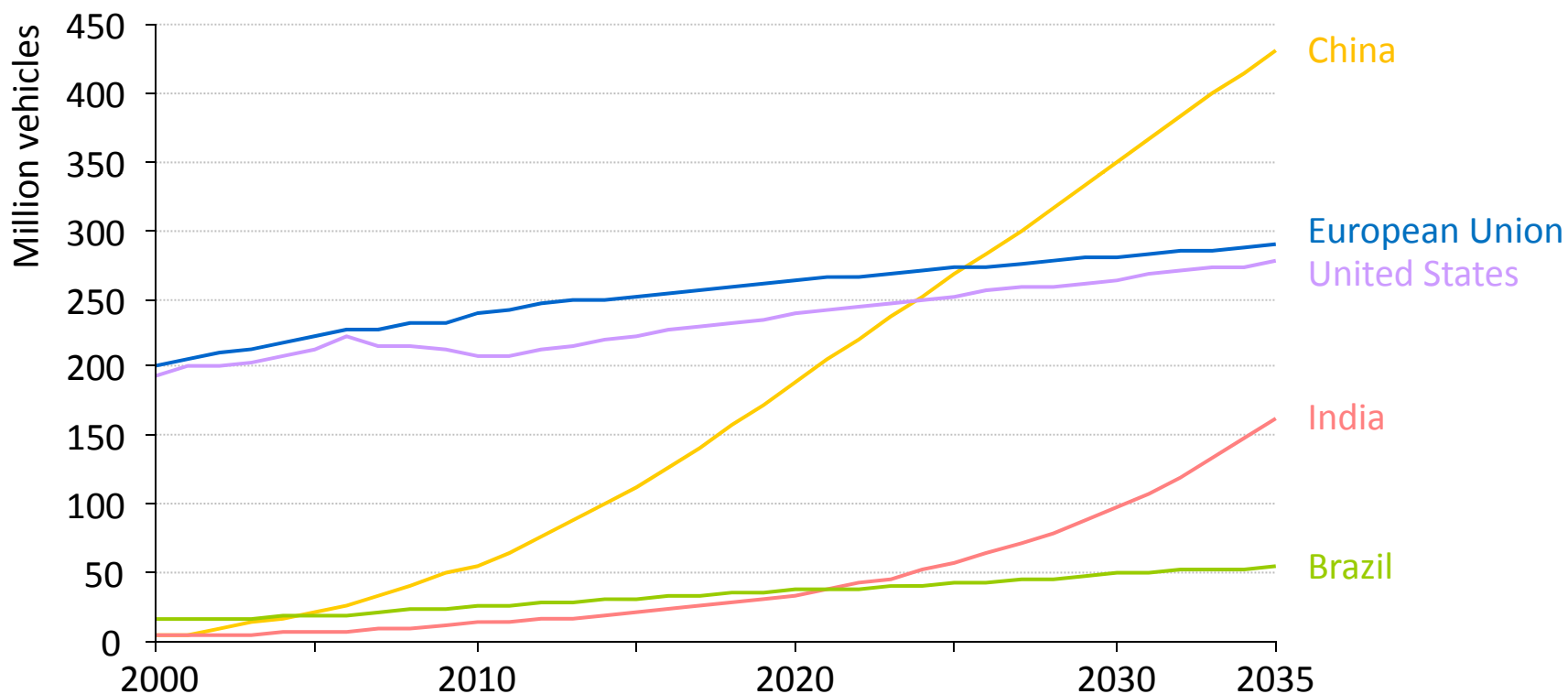


Global oil demand increases steadily to almost 100 mb/d in 2035, up from 90 mb/d today, with all of the net growth coming from transport in emerging economies.

Car ownership is soaring

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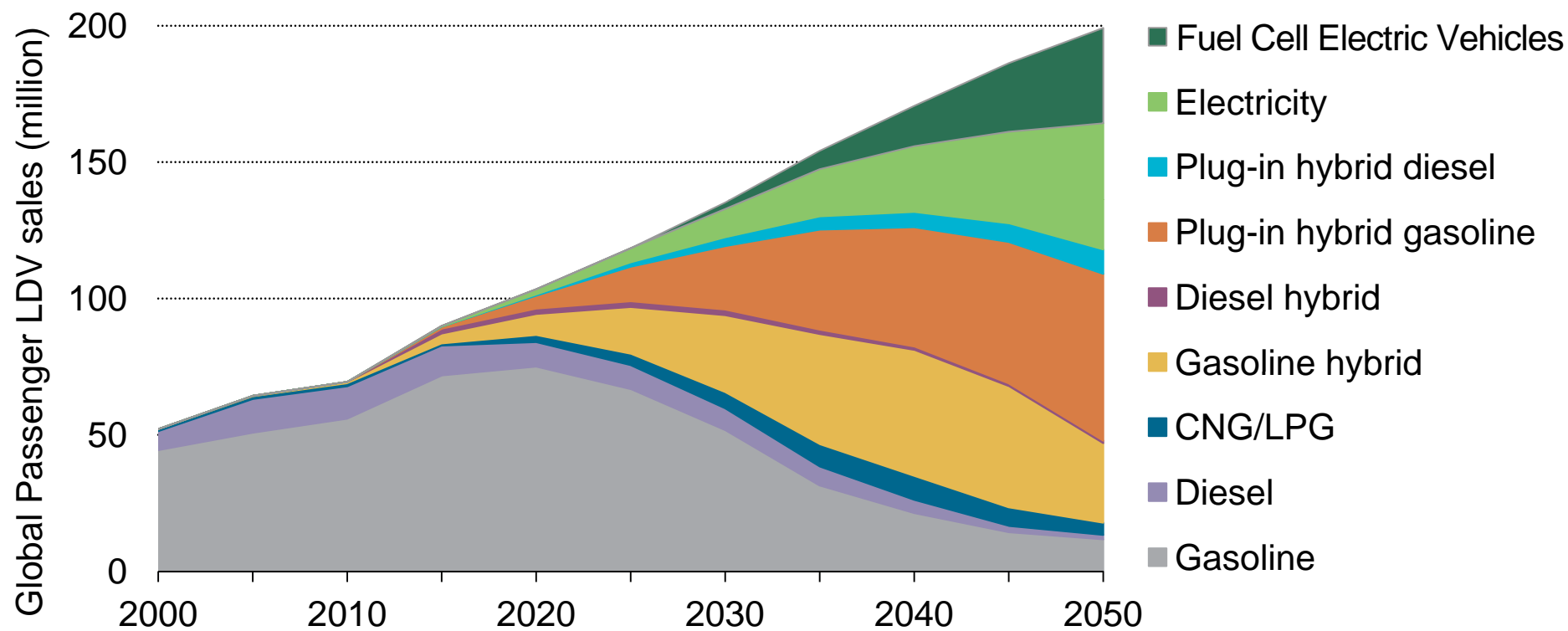
PLDV fleet in selected regions in the New Policies Scenario



The passenger vehicle fleet doubles to 1.7 billion in 2035, driven by strong growth in car ownership in non-OECD countries

Electric vehicles need to come of age

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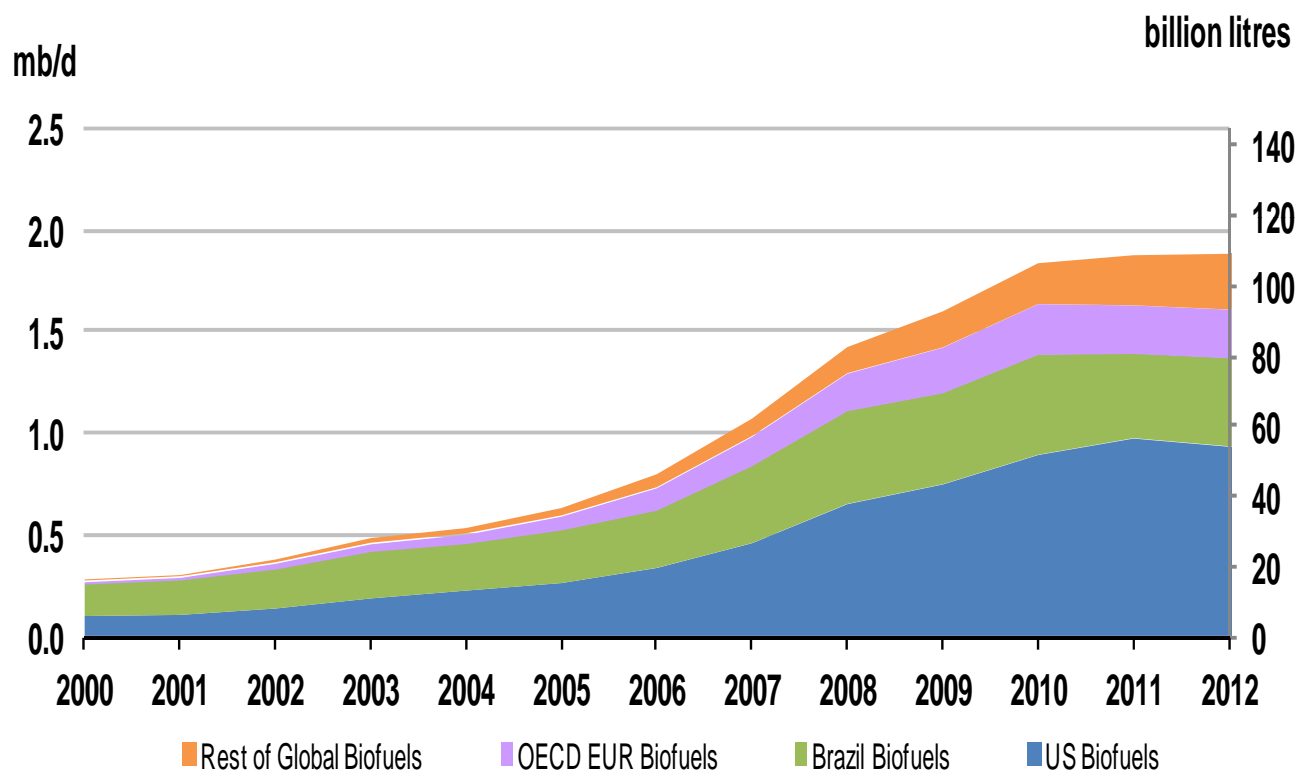


More than 90% of new light duty vehicles need to be propelled by an electric motor in 2050

Global biofuels production 2000-2012

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Global Biofuels Supply



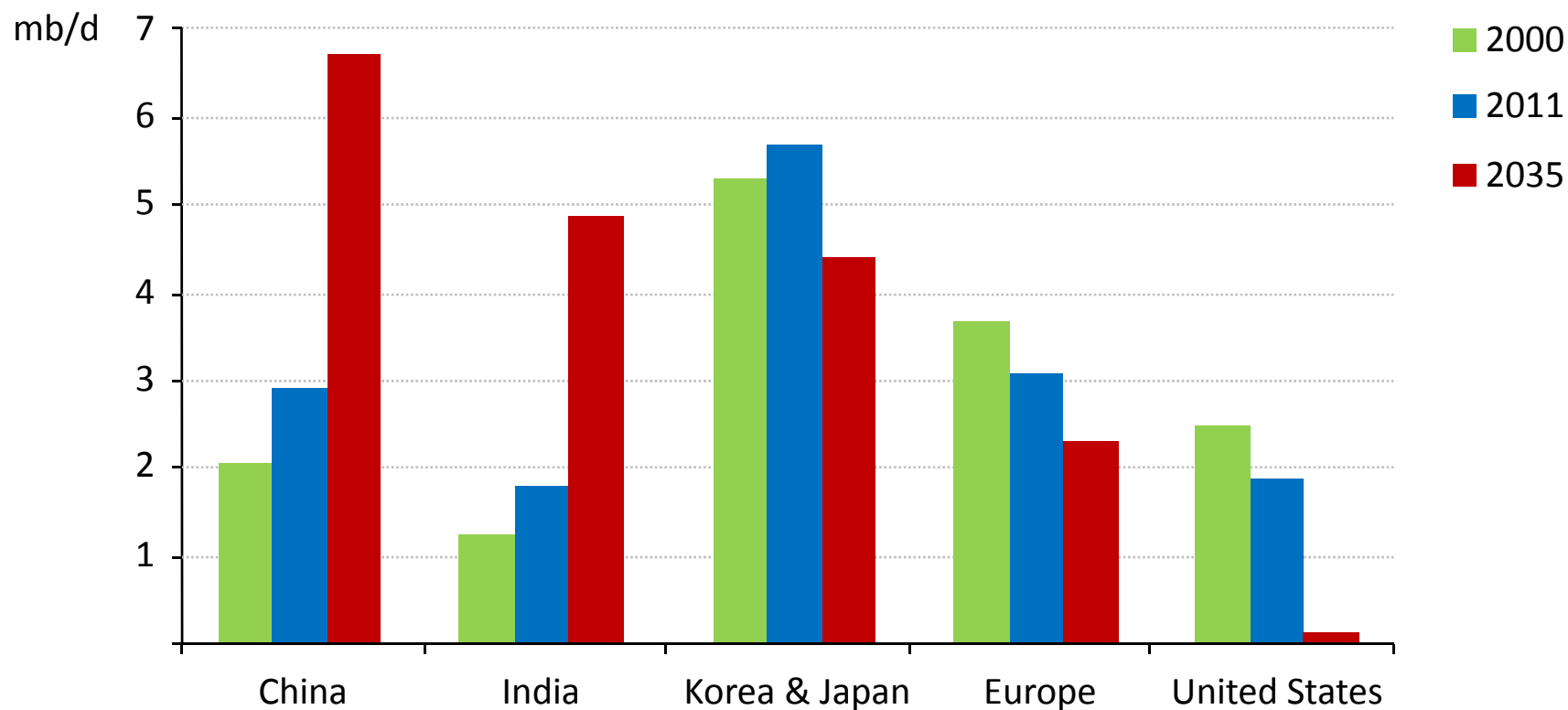
Source: Medium-term Oil Market Report 2012

Biofuels supply has been soaring.

Middle East oil to Asia: a new silk road

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Middle East oil export, by destination

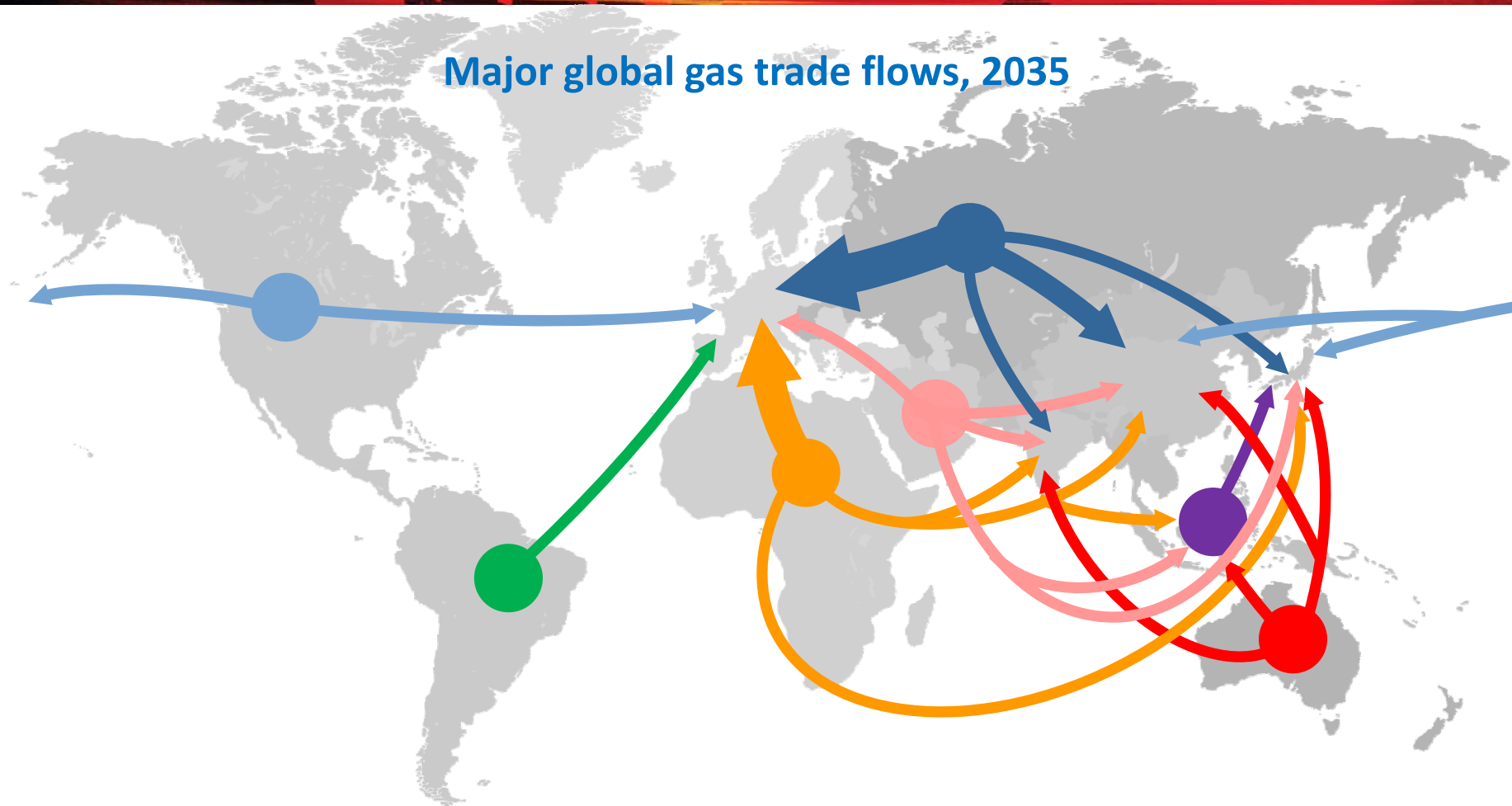


By 2035, almost 90% of Middle Eastern oil exports go to Asia; North America's emergence as a net exporter accelerates the eastward shift in trade

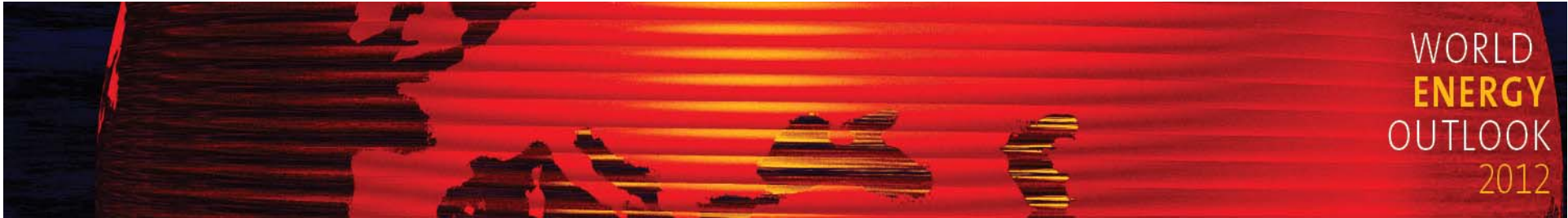
Natural gas: towards a globalised market

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Major global gas trade flows, 2035



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

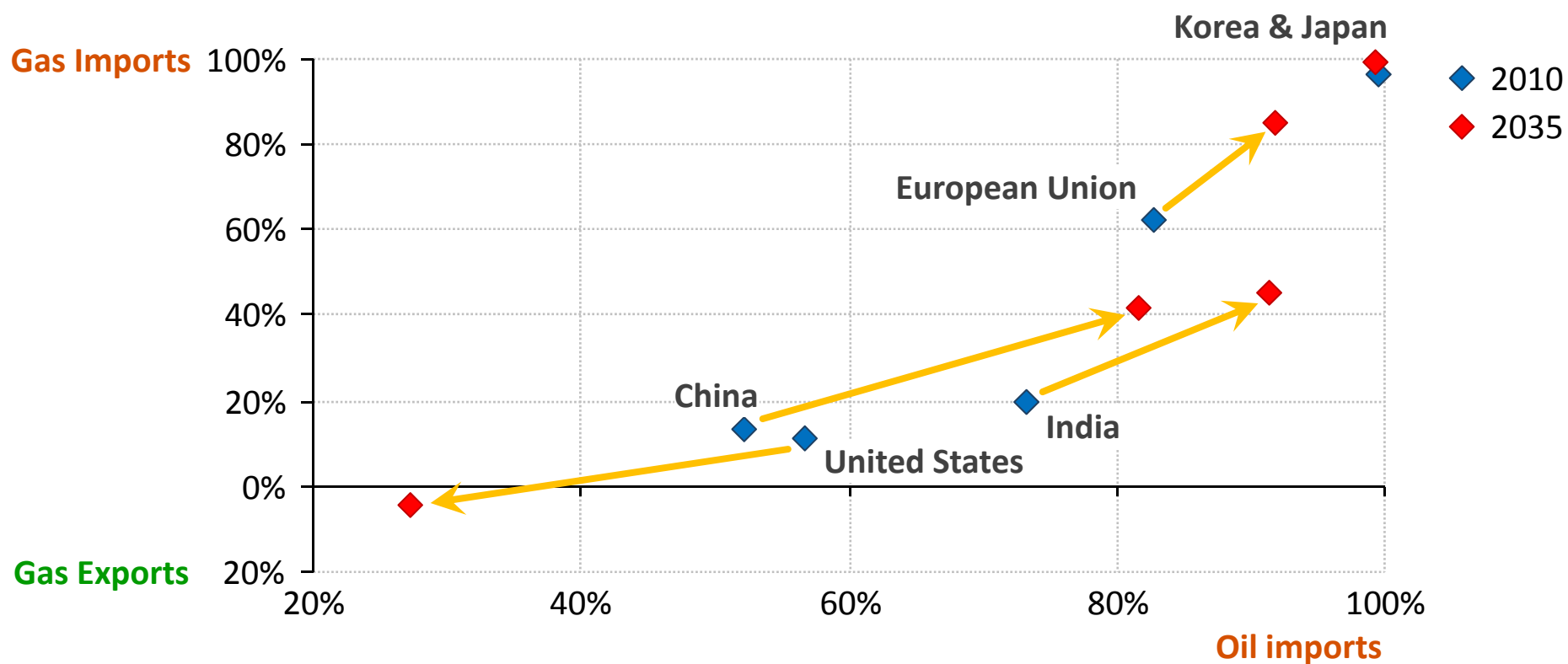


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Different trends in oil & gas import dependency

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Net oil & gas import dependency in selected countries

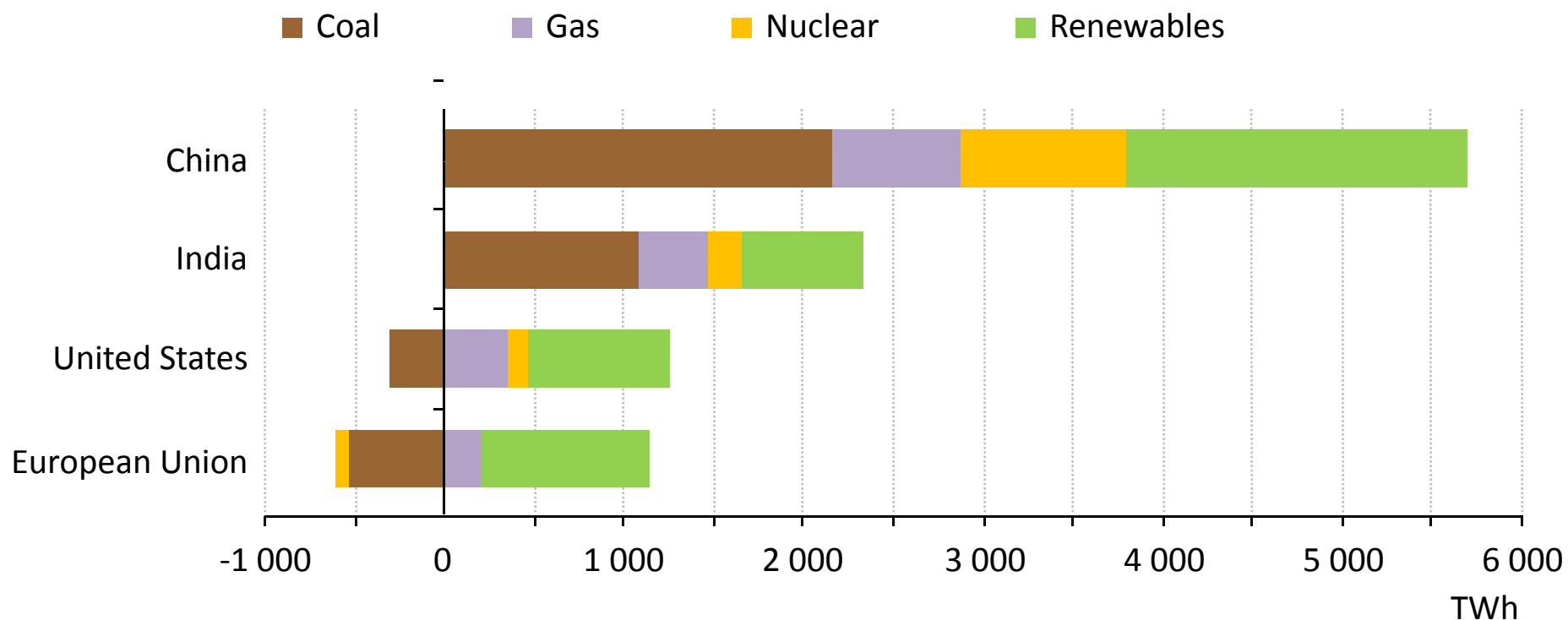


While dependence on imported oil & gas rises in many countries, the United States swims against the tide

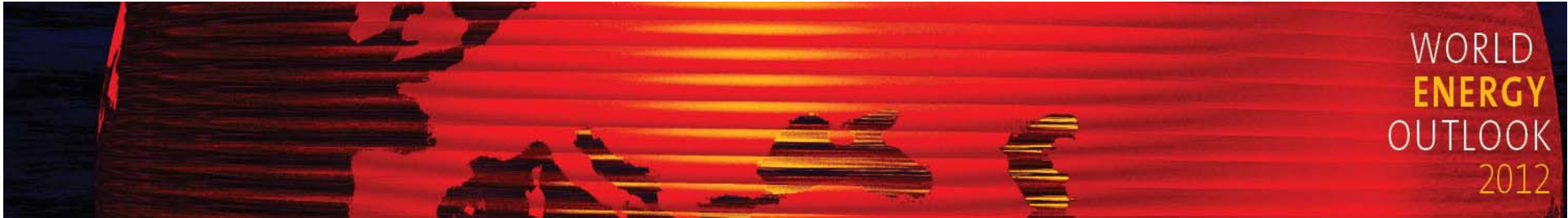
A power shift to emerging economies

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Change in power generation, 2010-2035



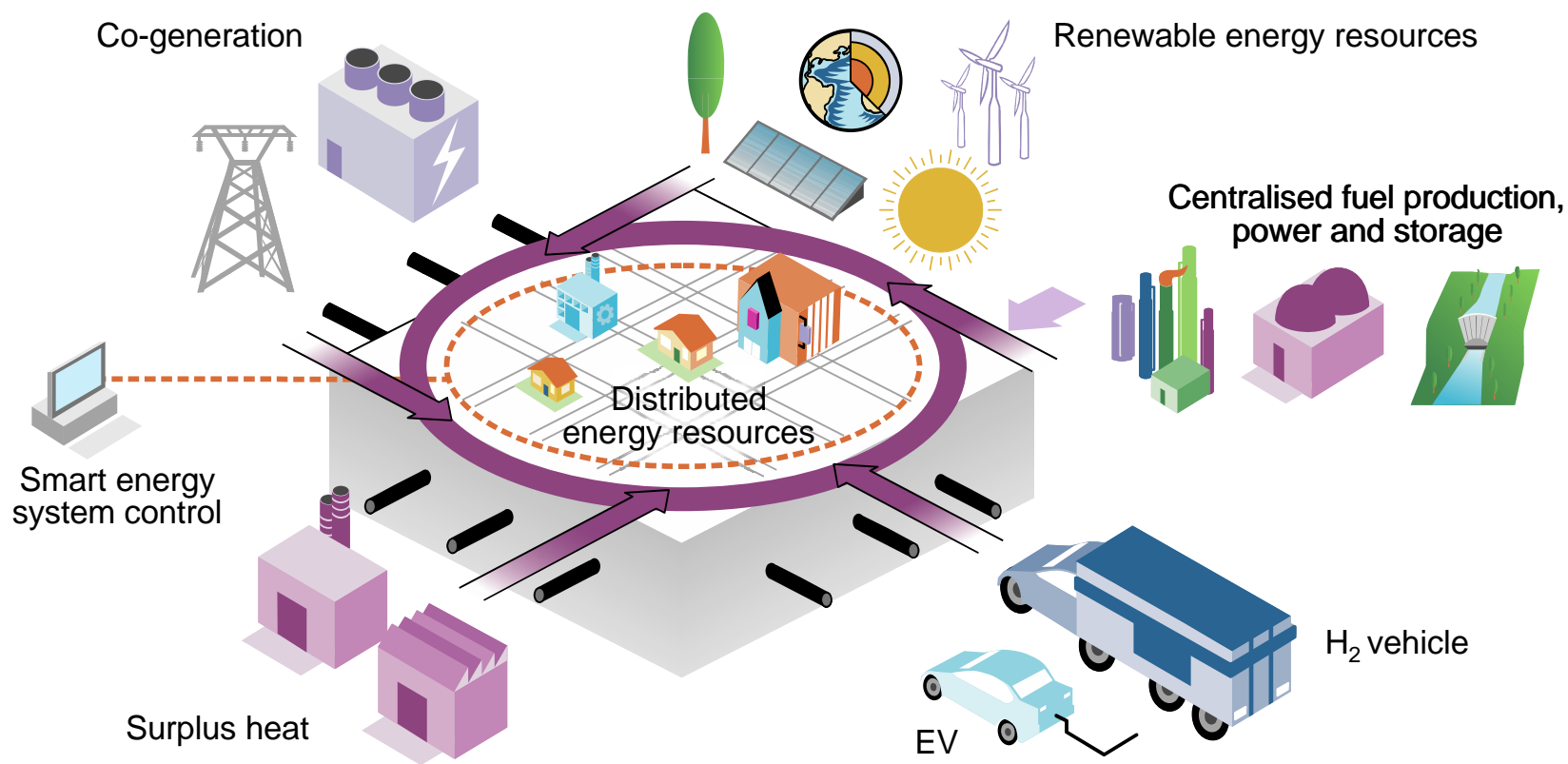
The need for electricity in emerging economies drives a 70% increase in worldwide demand, with renewables accounting for half of new global capacity



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A smart, sustainable energy system

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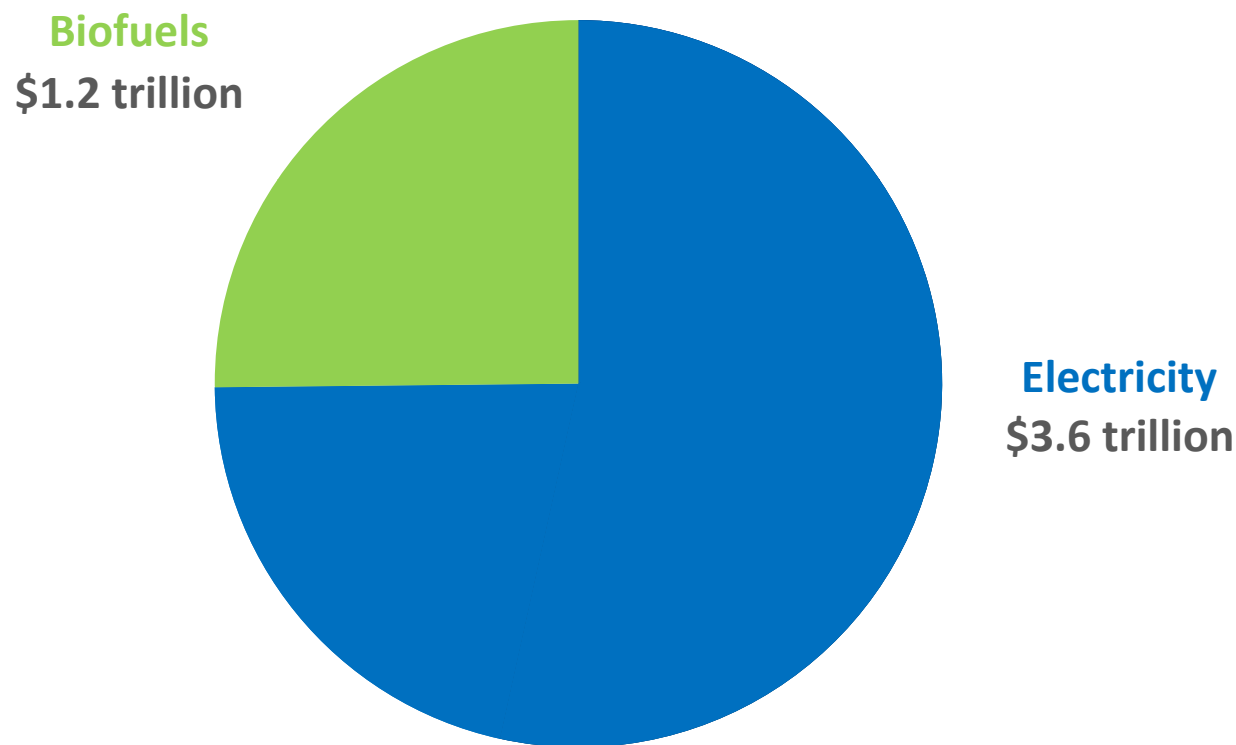


A sustainable energy system is a smarter, more unified and integrated energy system

The multiple benefits of renewables come at a cost

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Global renewable energy subsidies of \$4.8 trillion, 2011-2035

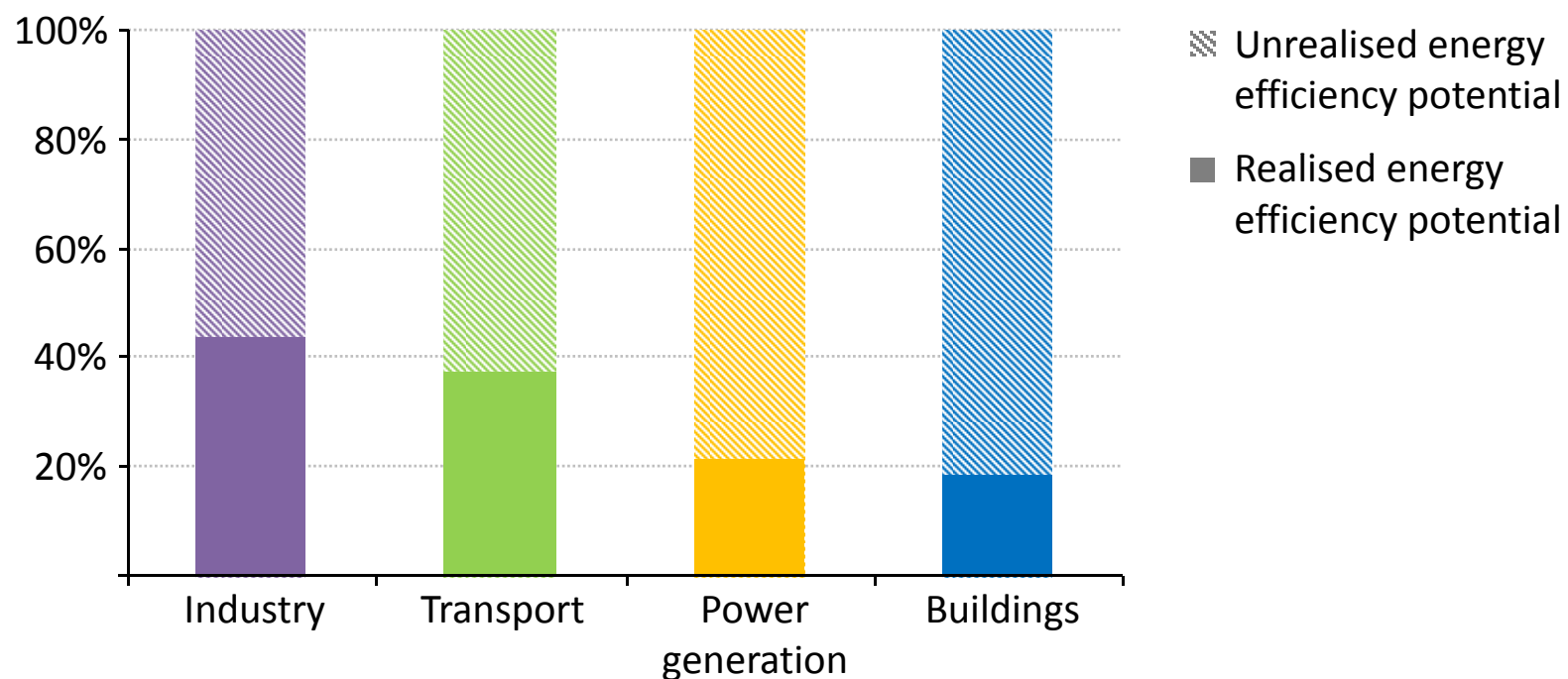


Renewable subsidies were \$88 billion in 2011; over half the subsidies required to 2035 has been committed to existing projects or is needed to meet 2020 targets

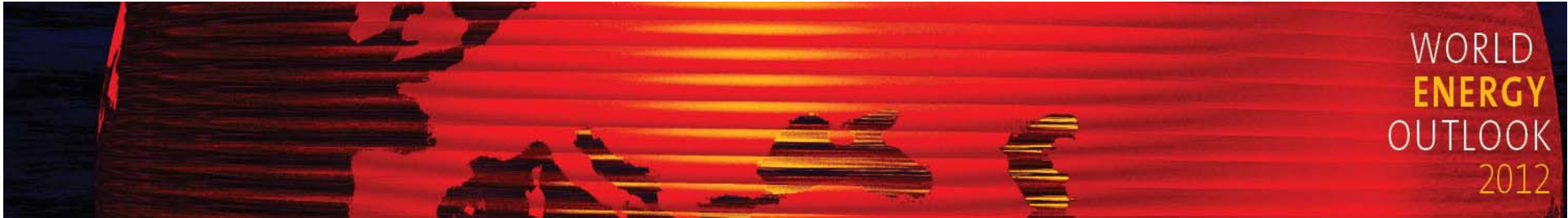
Energy efficiency: a huge opportunity going unrealised

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Energy efficiency potential used by sector in the New Policies Scenario



Two-thirds of the economic potential to improve energy efficiency remains untapped in the period to 2035

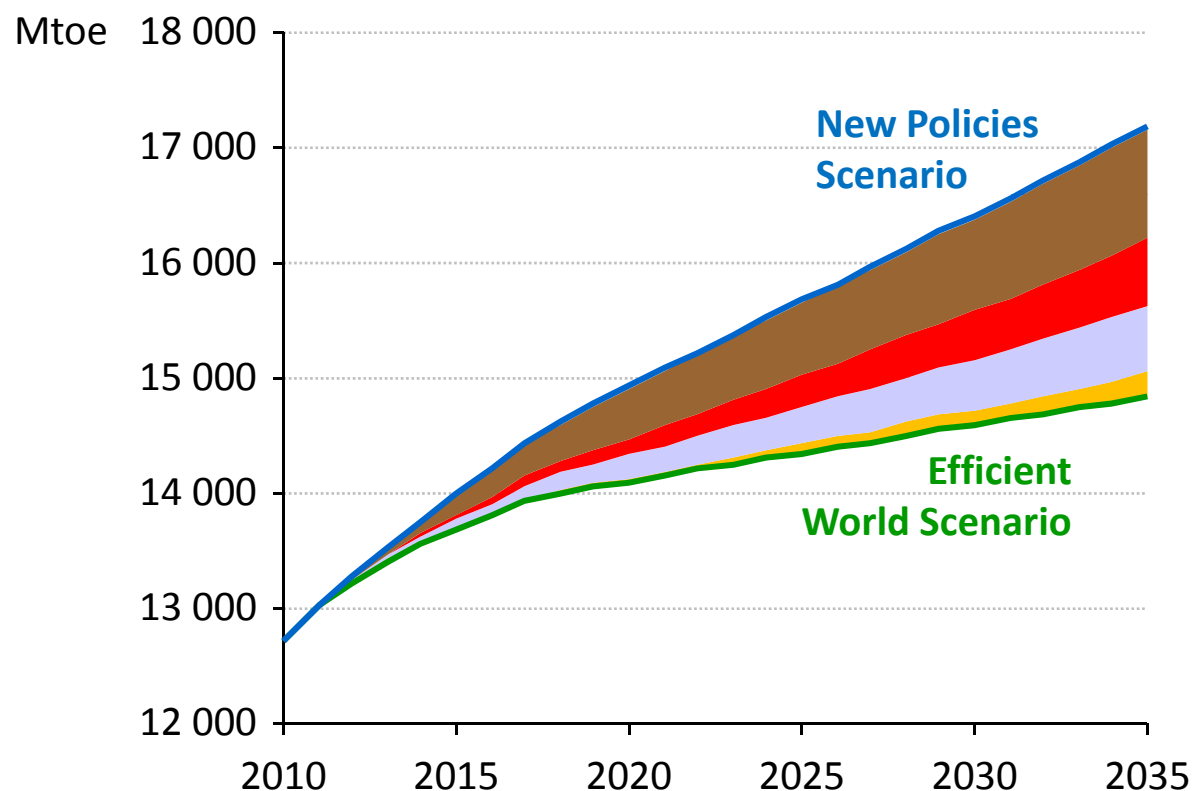


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The Efficient World Scenario: a blueprint for an efficient world

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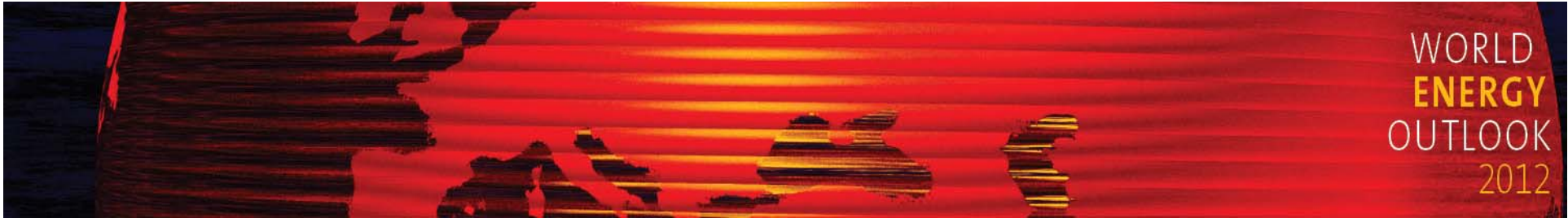
Total primary energy demand by scenario



Reduction in 2035

Coal	1350 Mtce
Oil	12.7 mb/d
Gas	680 bcm
Others	250 Mtoe

***Economically viable efficiency measures can halve energy demand growth to 2035;
oil demand savings equal the current production of Russia & Norway***

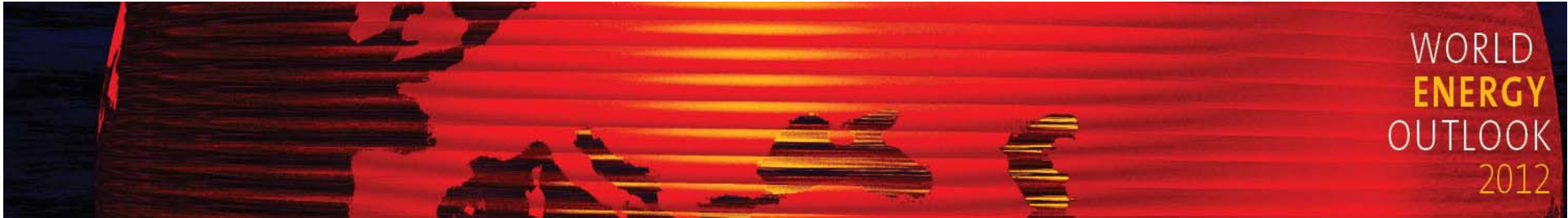


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Foundations of energy system shifting: Implications for New Zealand

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- **Natural gas will play a central role in meeting global energy needs – NZ must remain attractive to upstream investors**
- **Shift to low-carbon technologies has started to happen – NZ must maintain investment levels in energy infrastructure to ease this transition**
- **The greatest potential for emissions abatement in the region – and the most cost-effective – lies in energy efficiency measures, particularly in transport, industry and buildings**



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