

# WORLD ENERGY OUTLOOK 2012

## *World Energy Outlook 2012*

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*Bern, 11 December 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

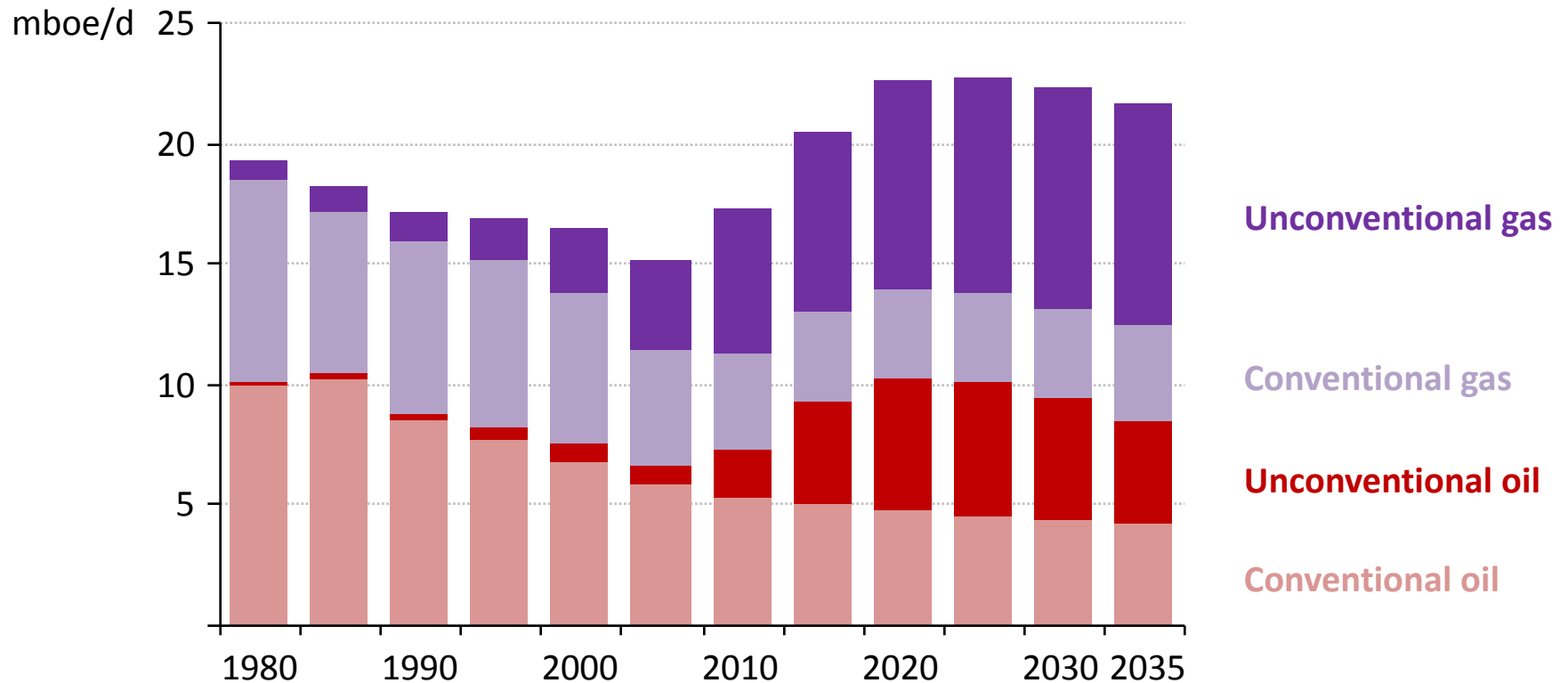
- *Fossil fuel subsidies up almost 30% to \$523 billion in 2011, led by MENA*
- *CO<sub>2</sub> emissions at record high, while renewables industry under strain*
- *Despite new international efforts, 1.3 billion people still lack electricity*
- *Water increasingly crucial for assessing the viability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



# A United States oil & gas transformation

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## US oil and gas production

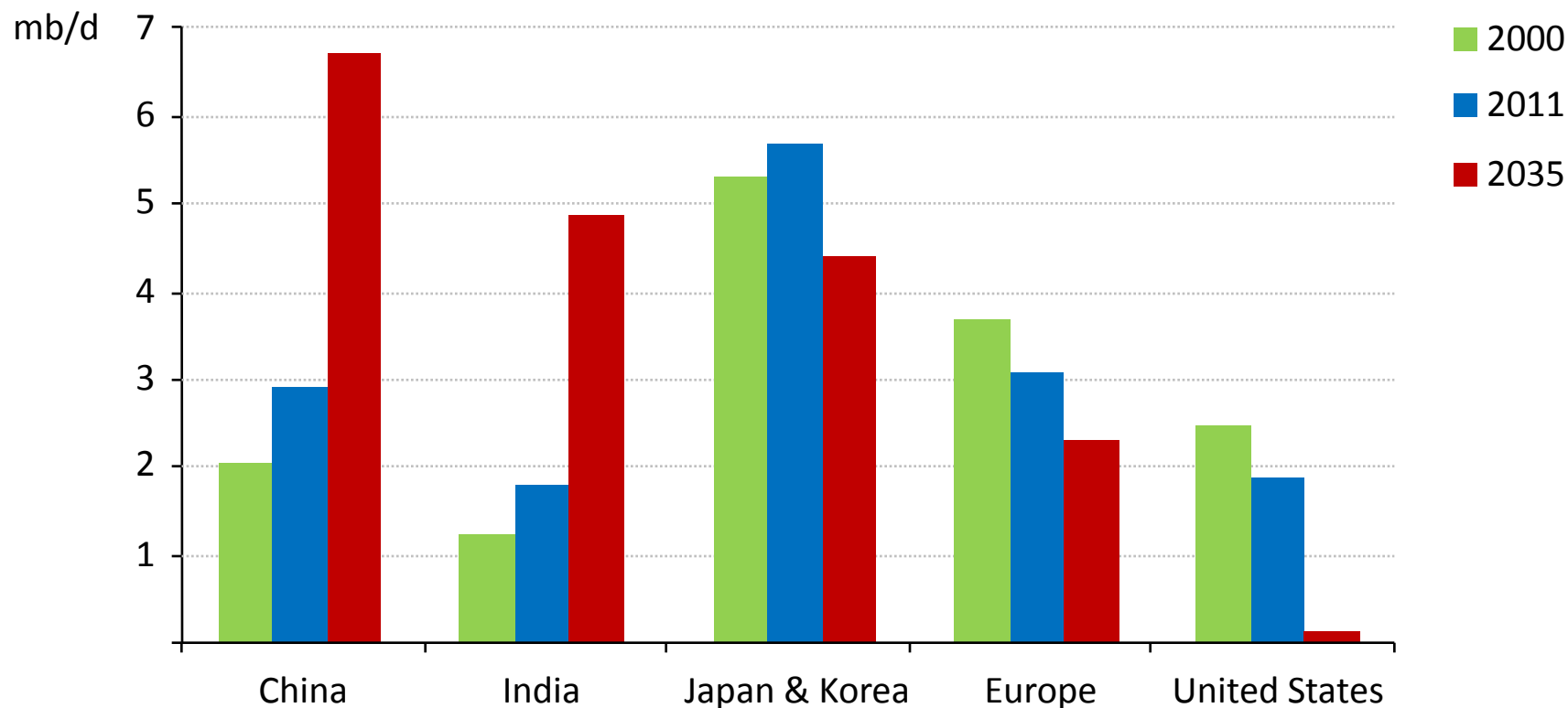


*The surge in unconventional oil & gas production has implications well beyond the United States*

# Middle East oil to Asia: a new silk road

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## Middle East oil export by destination

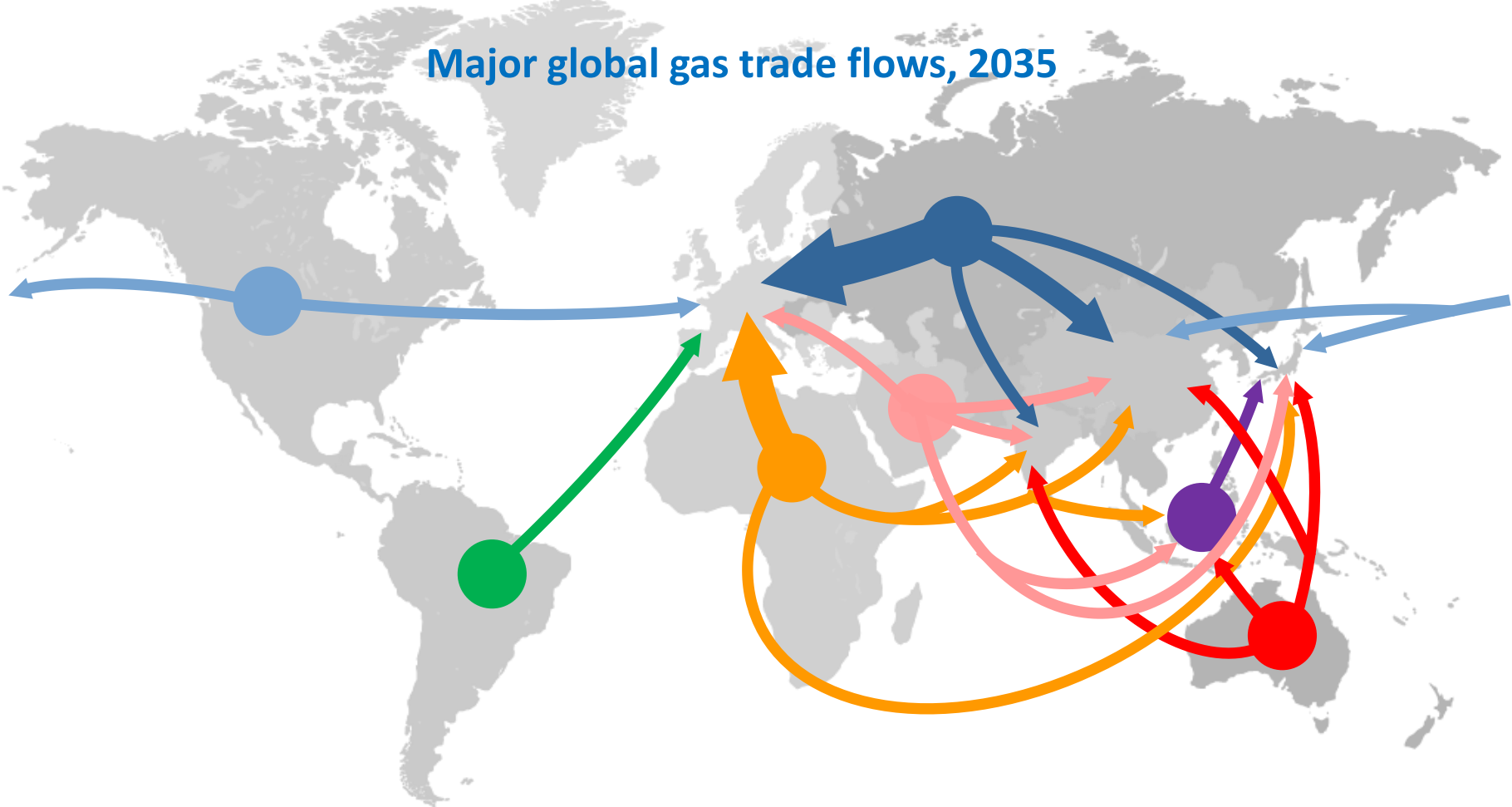


***By 2035, almost 90% of Middle Eastern oil exports go to Asia; North America's emergence as a net exporter accelerates the eastward shift in trade***

# Natural gas: towards a globalised market

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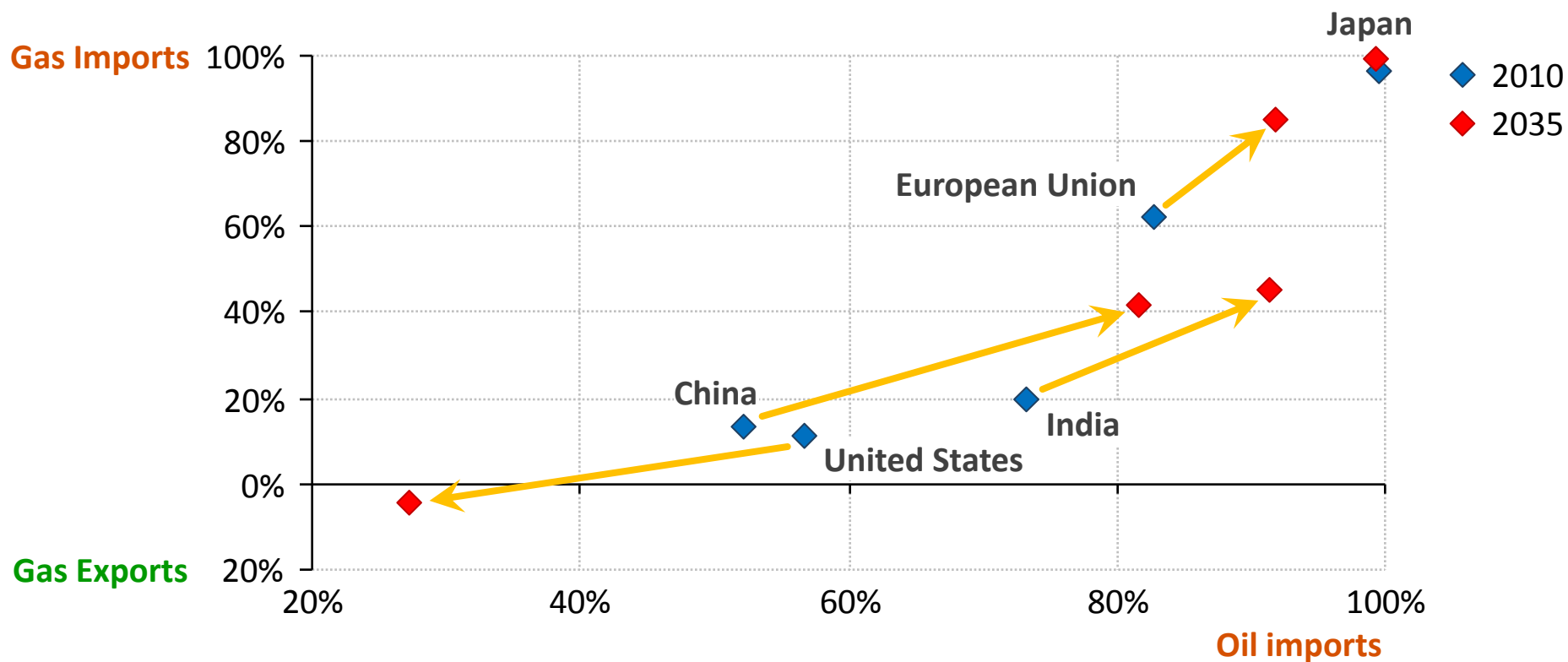
Major global gas trade flows, 2035



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

# Different trends in oil & gas import dependency

Net oil & gas import dependency in selected countries

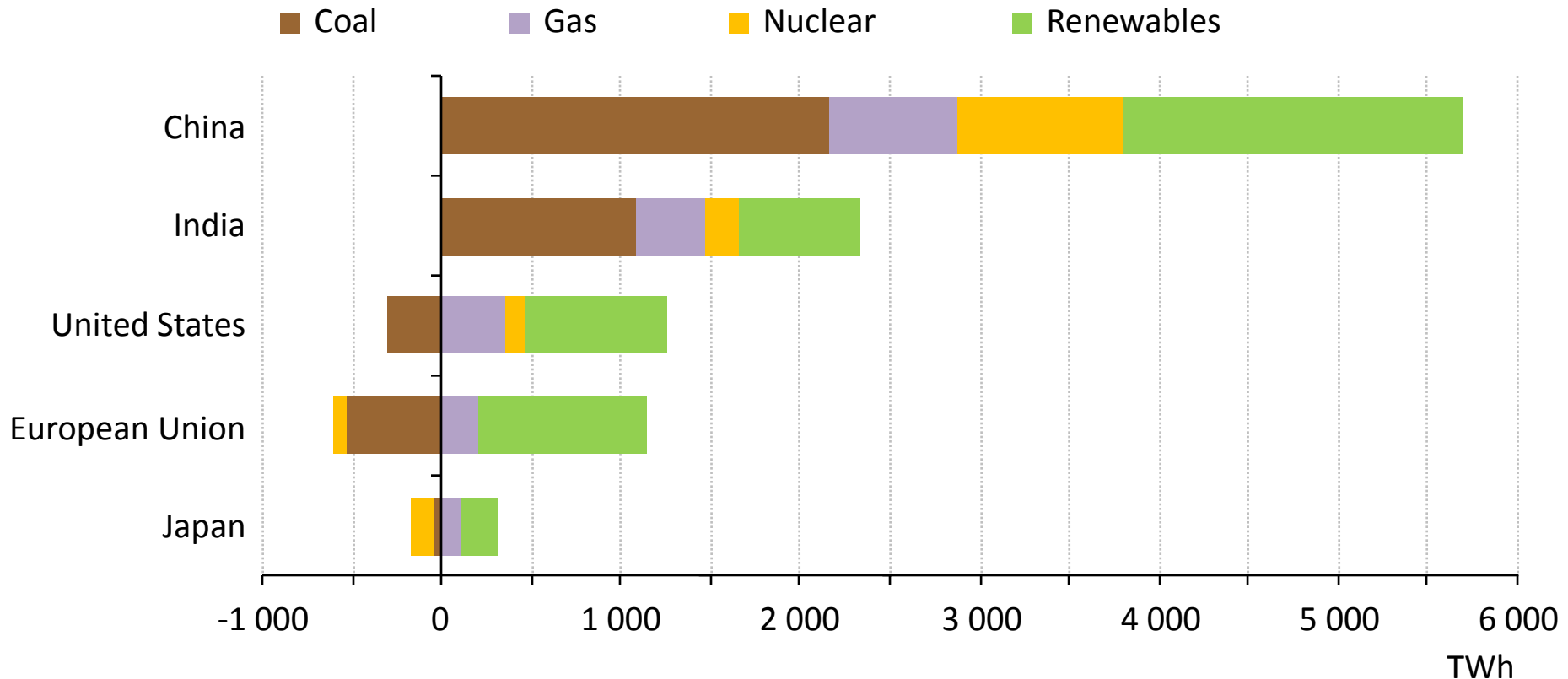


*While dependence on imported oil & gas rises in many countries, the United States swims against the tide*

# A power shift to emerging economies

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## Change in power generation, 2010-2035



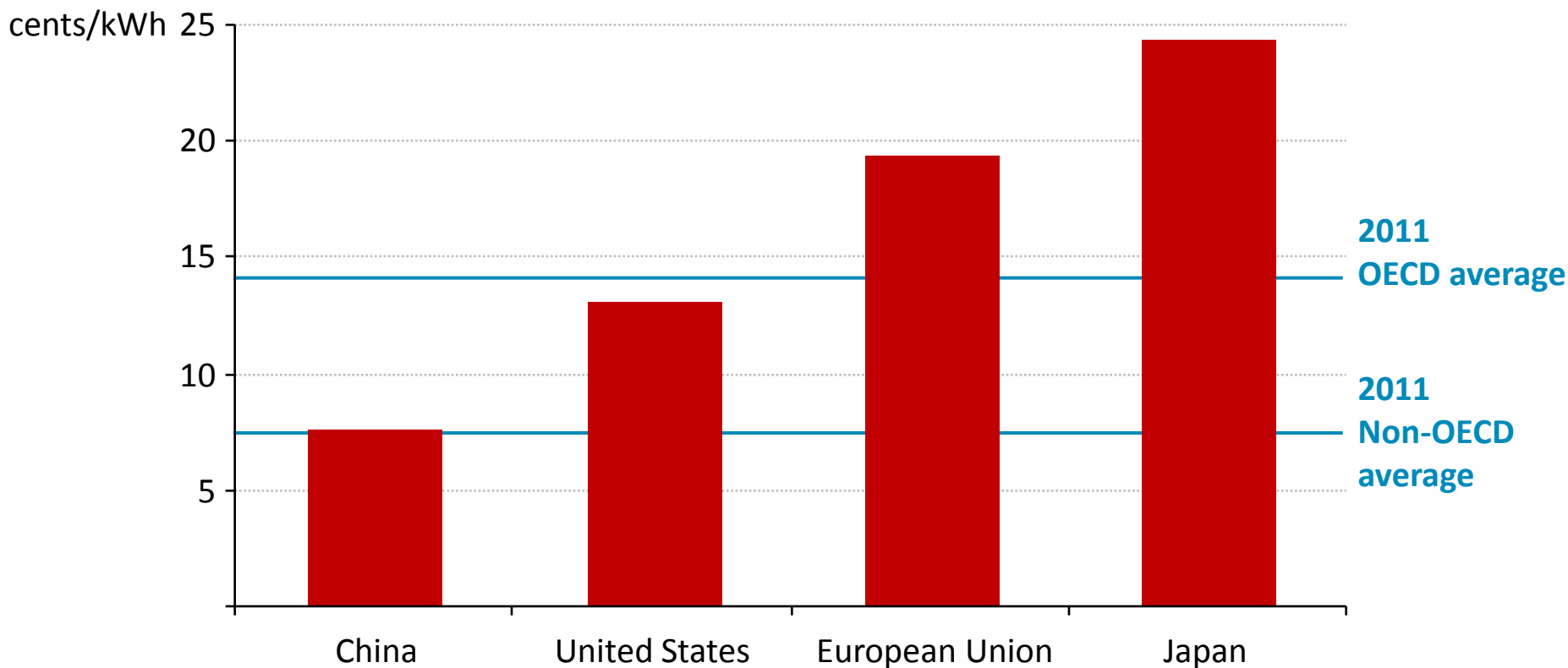
***The need for electricity in emerging economies drives a 70% increase in worldwide demand, with renewables accounting for half of new global capacity***



# Wide variations in the price of power

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## Average household electricity prices, 2035



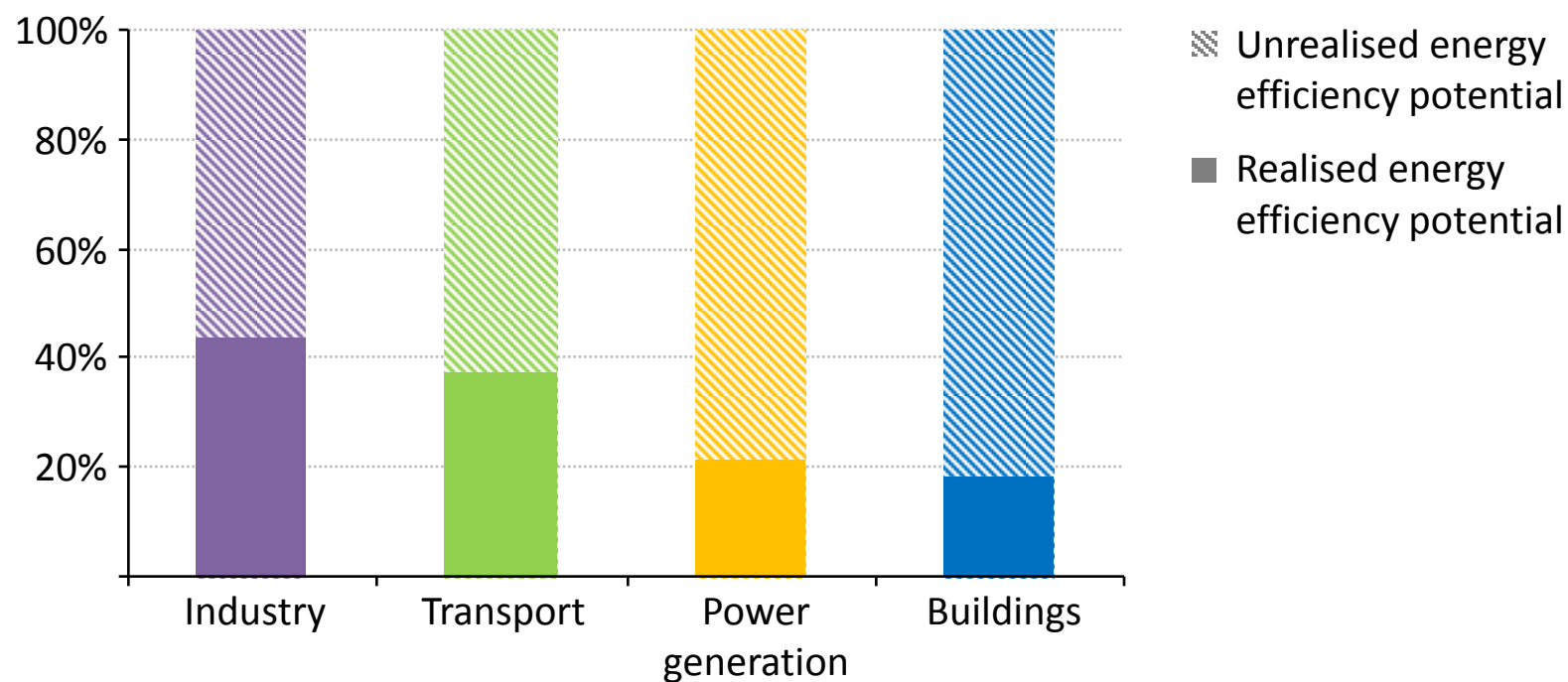
***Electricity prices are set to increase with the highest prices persisting in the European Union & Japan, well above those in China & the United States***



# Energy efficiency: a huge opportunity going unrealised

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## Energy efficiency potential used by sector in the New Policies Scenario

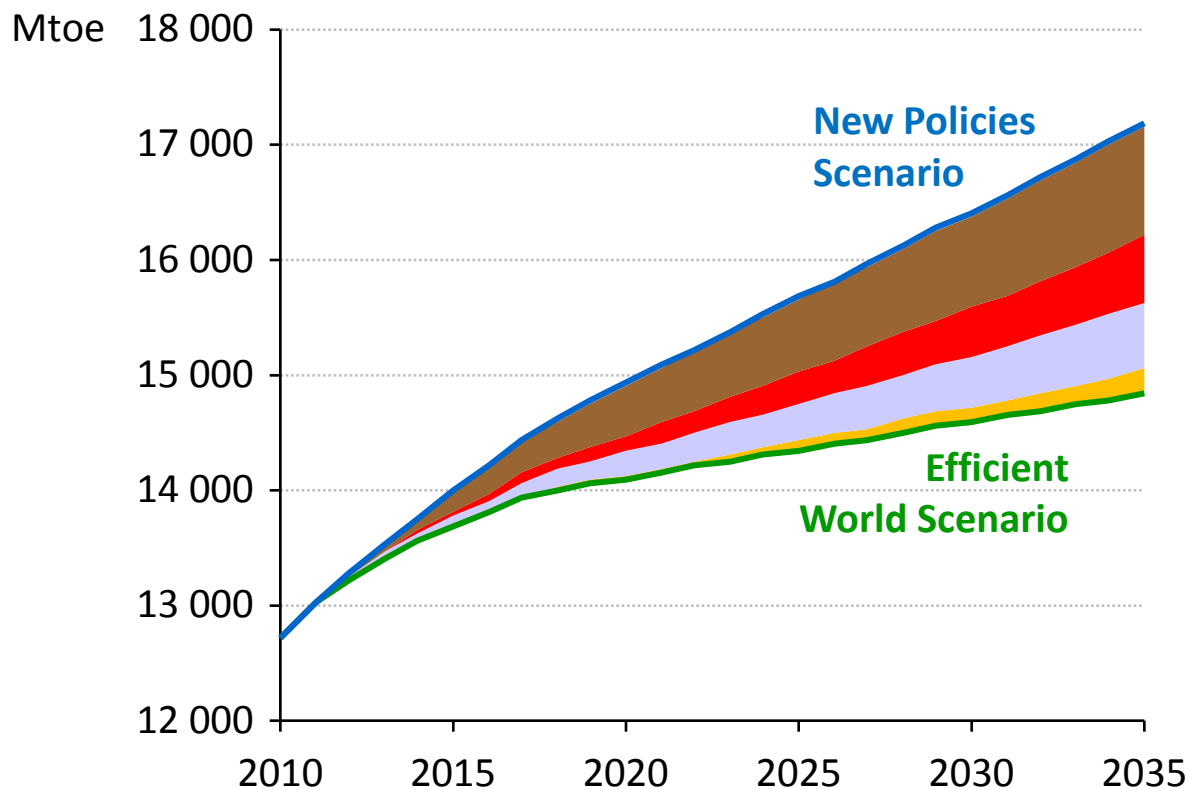


***Two-thirds of the economic potential to improve energy efficiency remains untapped in the period to 2035***

# The Efficient World Scenario: a blueprint for an efficient world

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## Total primary energy demand



### Reduction in 2035

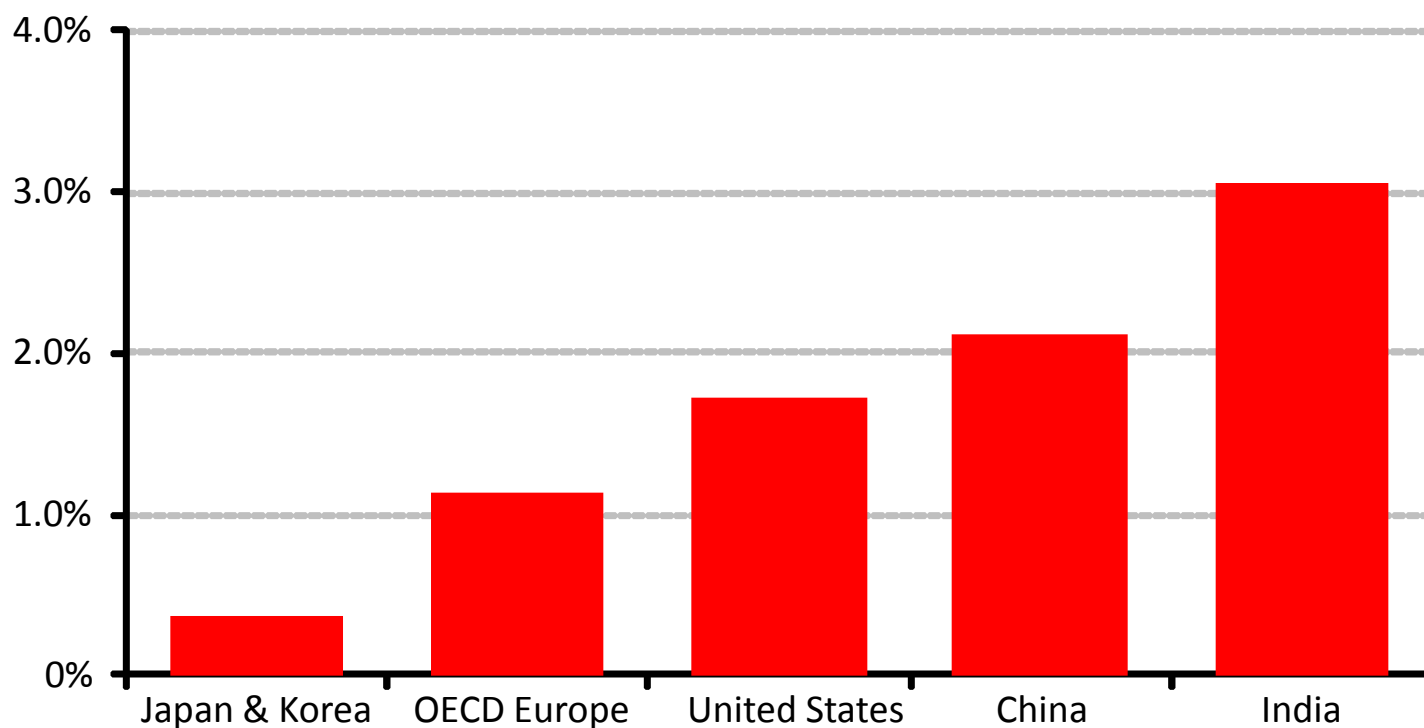
Coal	1 350 Mtce
Oil	12.7 mb/d
Gas	680 bcm
Others	250 Mtoe

***Economically viable efficiency measures can halve energy demand growth to 2035;  
oil prices are \$15 per barrel lower by 2035 due to oil demand savings***

# *Energy efficiency can help drive economic prosperity*

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## GDP in Efficient World Scenario versus New Policies Scenario, 2035

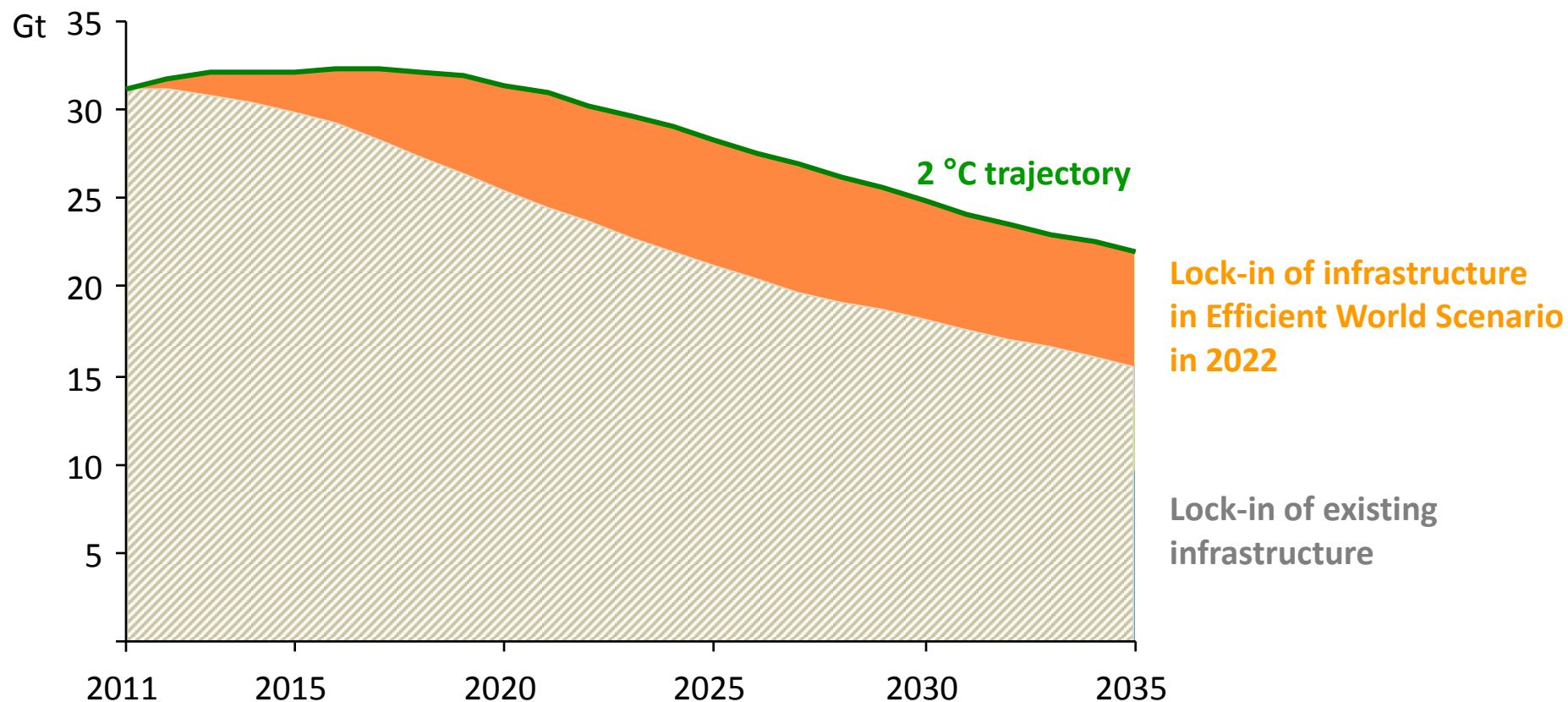


*Cumulative investments in energy efficiency of \$12 trillion are more than offset by fuel savings & trigger economic growth of a cumulative \$18 trillion*



# *The Efficient World Scenario delays carbon lock-in*

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***Energy efficiency can delay “lock-in” of CO<sub>2</sub> emissions permitted under a 2 °C trajectory – which is set to happen in 2017 – until 2022, buying five extra years***

# ***Foundations of energy system shifting***

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- 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