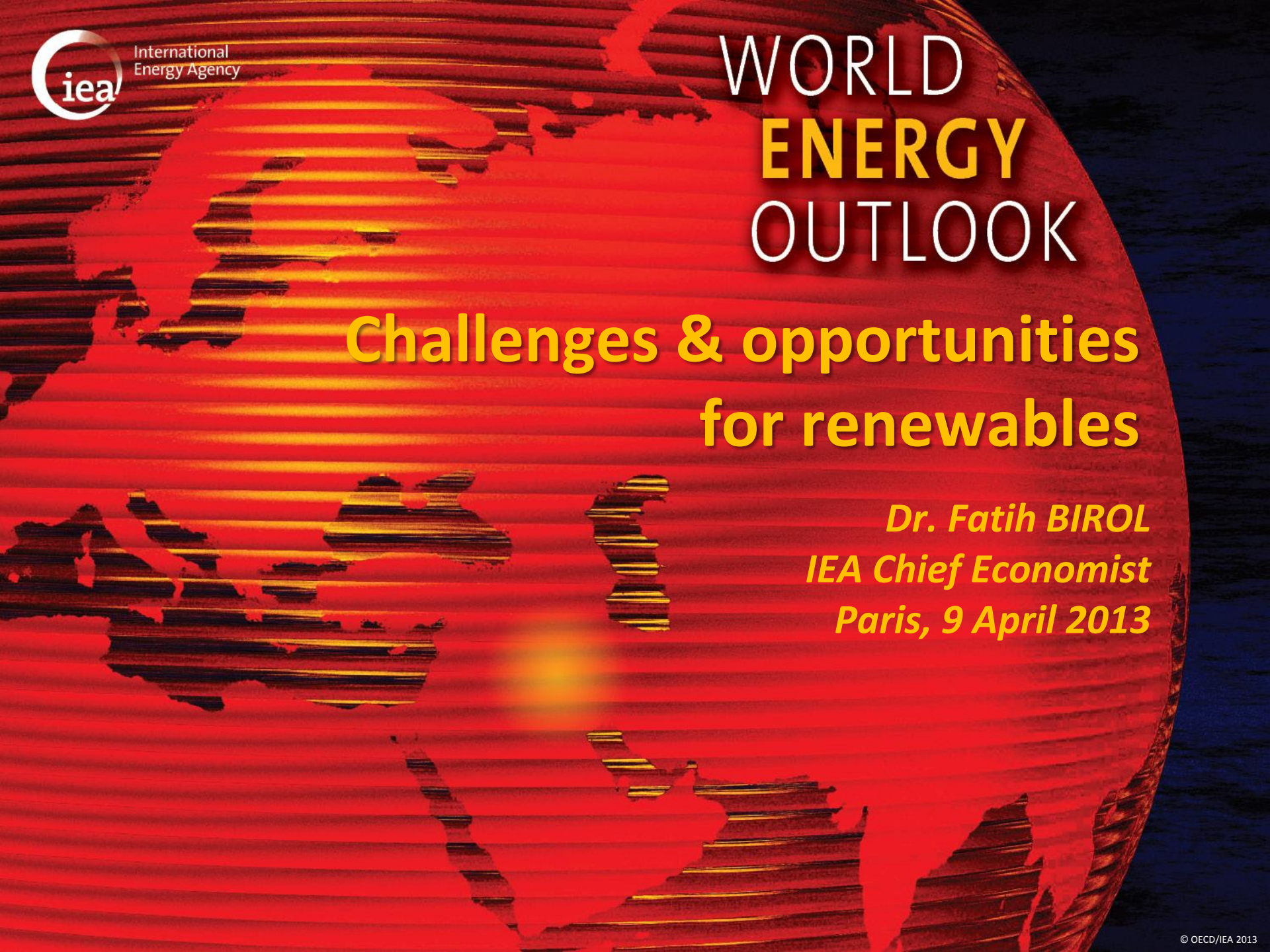


The context

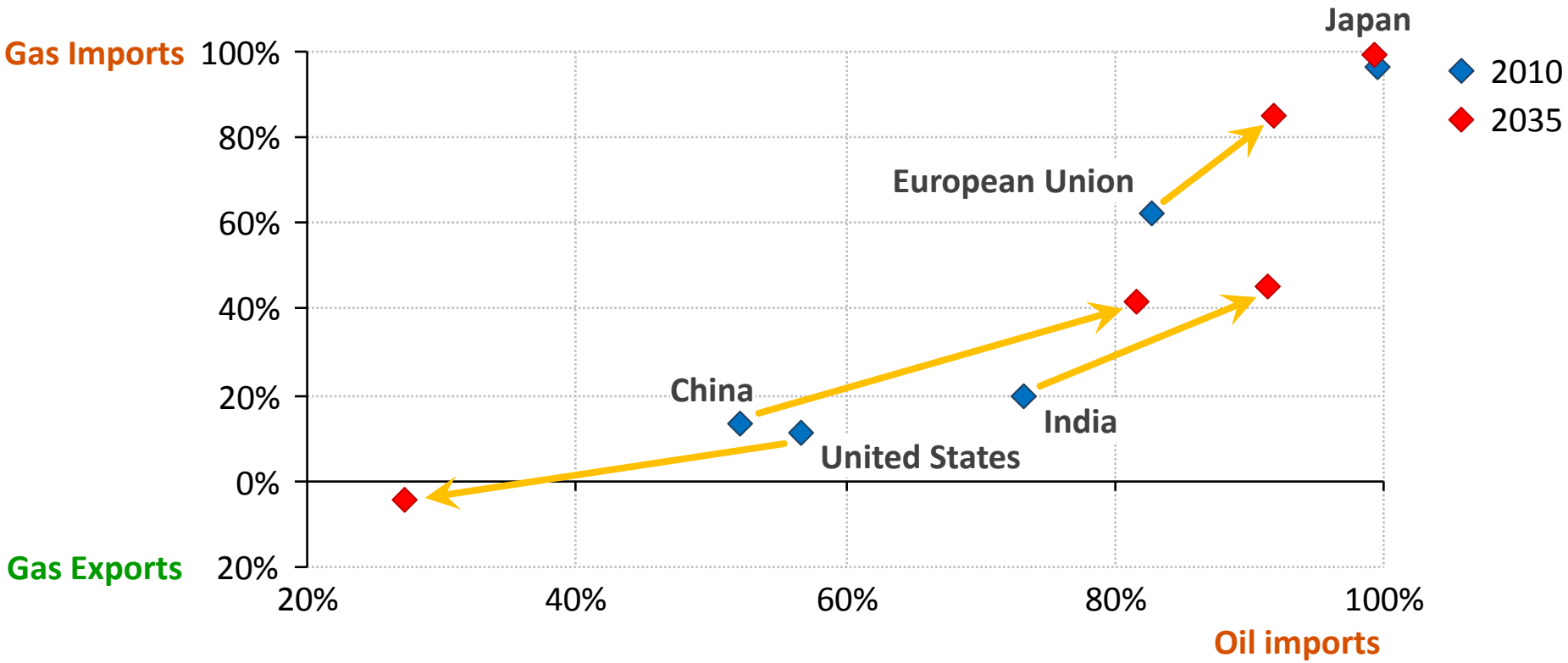
WORLD ENERGY OUTLOOK

- **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*
- **Changing global energy map likely to have significant implications for competiveness & geopolitics**
- **All-time high oil prices acting as brake on global economy**
- **Economy & energy: a delicate balancing act in the context of need for decisive & effective global climate change policy**

Different trends in oil & gas import dependency

WORLD ENERGY OUTLOOK

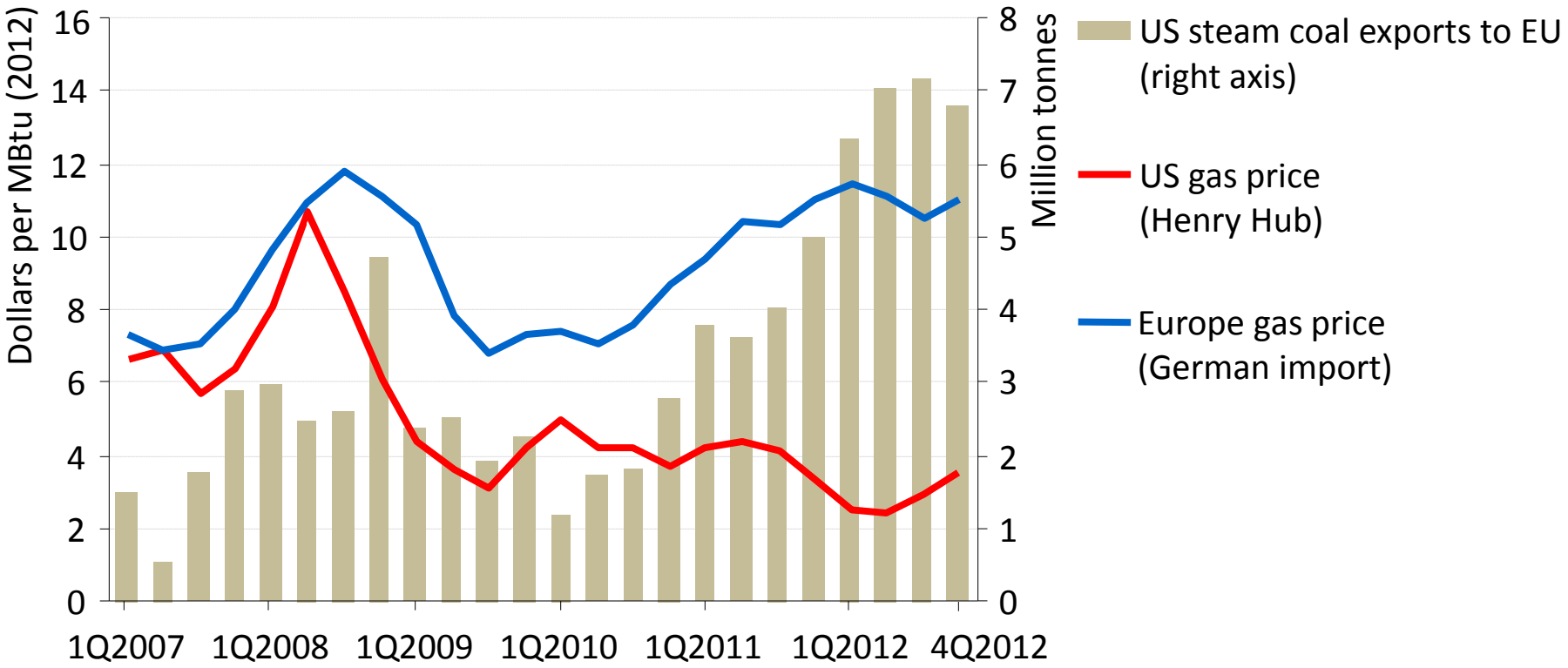
Net oil & gas import dependency in selected countries



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

Unconventional gas: implications for both energy security & economy

WORLD ENERGY OUTLOOK



At its highest level in 2012, EU gas prices traded about 5 times higher than in the US; a price decoupling stemming from oil indexation & the unconventional gas revolution

Do all roads lead to a Golden Age of Gas?

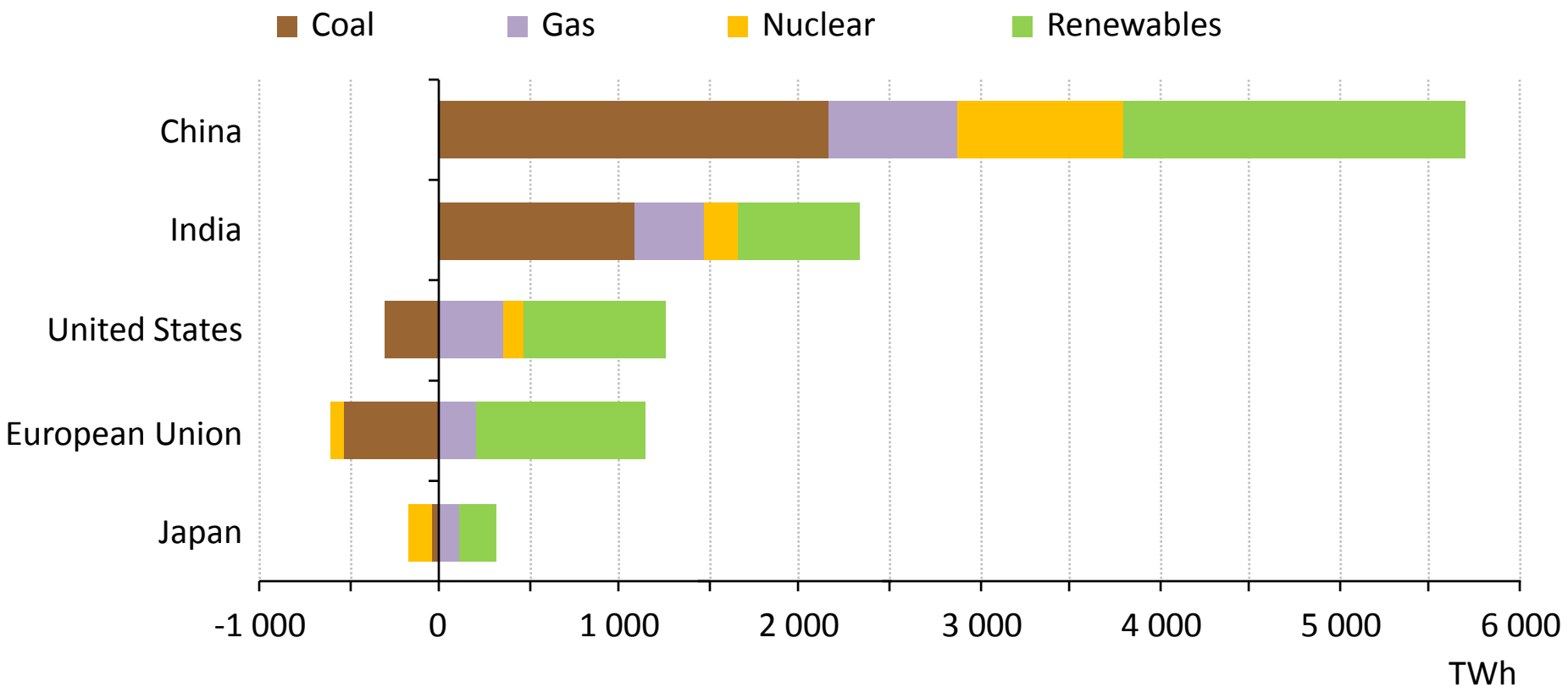
WORLD ENERGY OUTLOOK

- Continuous drive needed from governments & industry to earn & maintain a "social license" to produce unconventional gas
- What was a silent revolution in North America, is likely to be a longer & challenging campaign in other parts of the globe
- The relative economics of gas versus coal use will remain an important determinant of future natural gas growth
- Gas relative to coal can markedly decarbonise the energy system, but increased use of gas in itself will not let us reach the 2°C goal

A power shift to emerging economies

WORLD ENERGY OUTLOOK

Change in power generation, 2010-2035

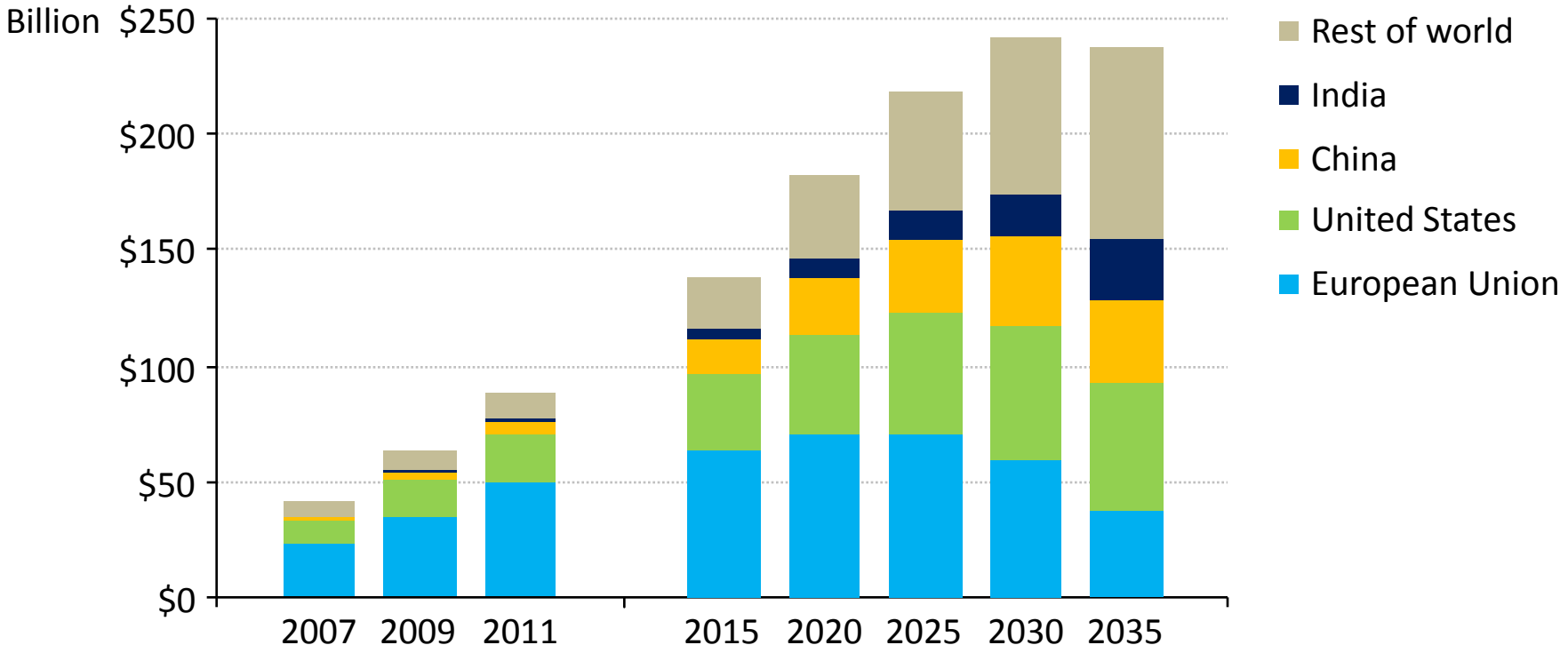


The need for electricity in emerging economies drives a 70% increase in worldwide demand, with renewables accounting for half of new global capacity

The multiple benefits of renewables come at a cost

WORLD ENERGY OUTLOOK

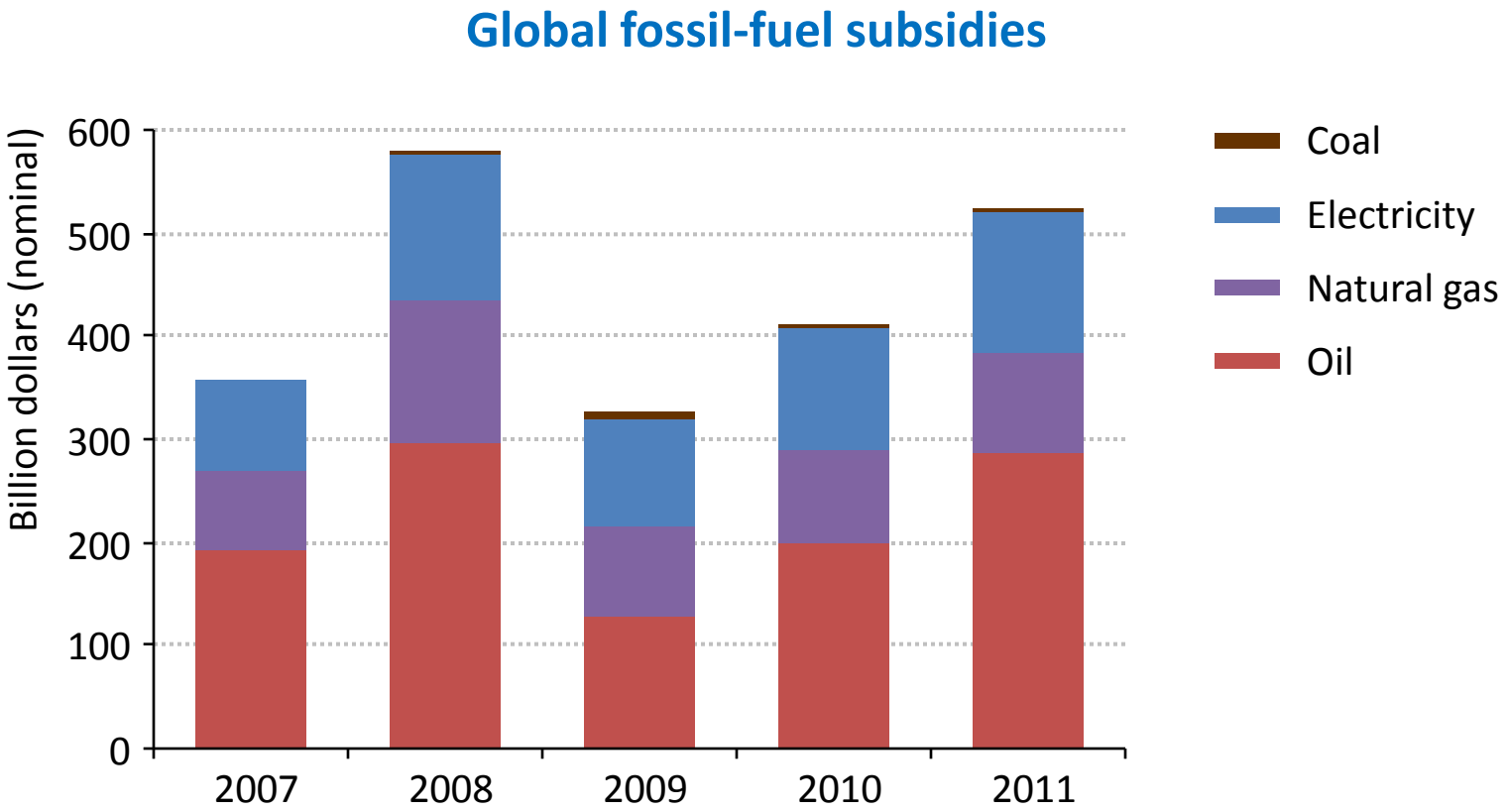
Global renewable subsidies by region



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

Getting rid of fossil-fuel subsidies is a triple-win solution

WORLD ENERGY OUTLOOK

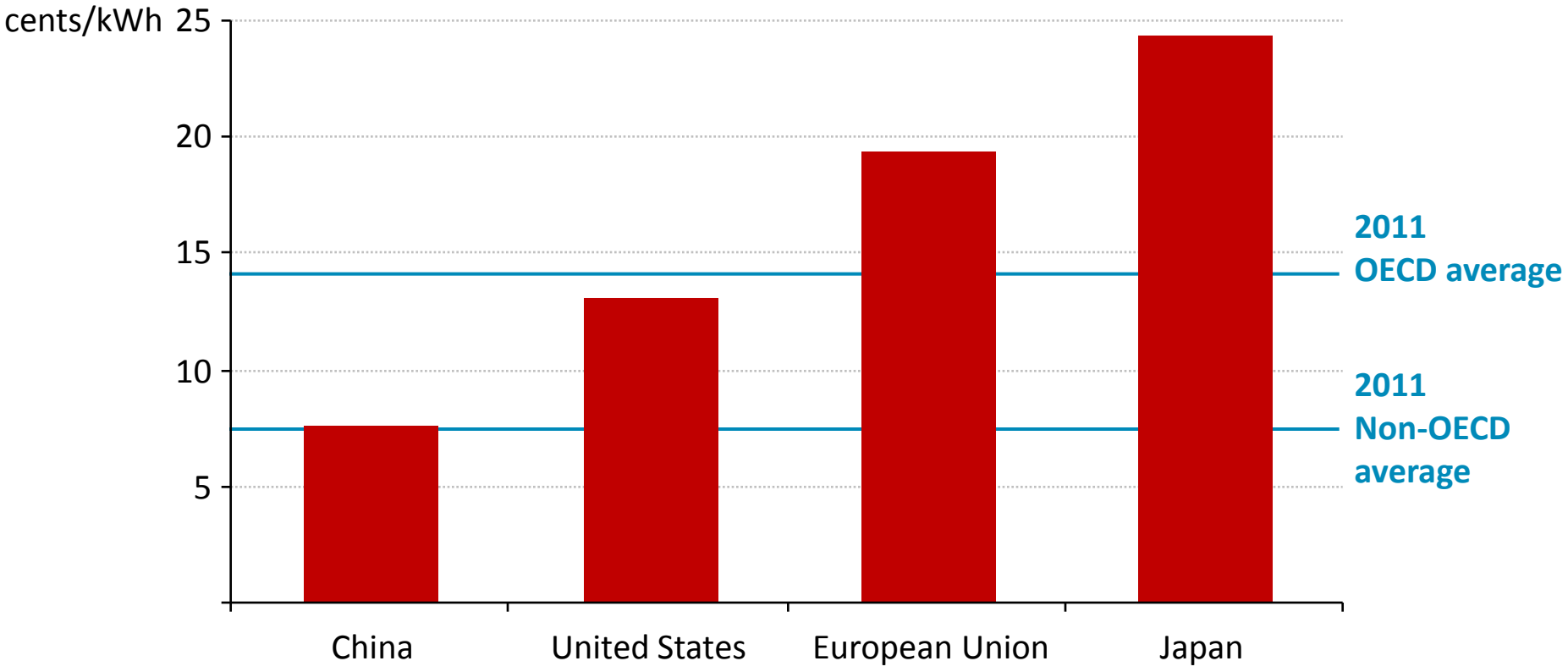


Global fossil-fuel subsidies, which jumped to $523 billion in 2011, are providing an incentive to emit CO_2 that is equivalent to $110 per ton

Wide variations in the price of power

WORLD ENERGY OUTLOOK

Average household electricity prices, 2035

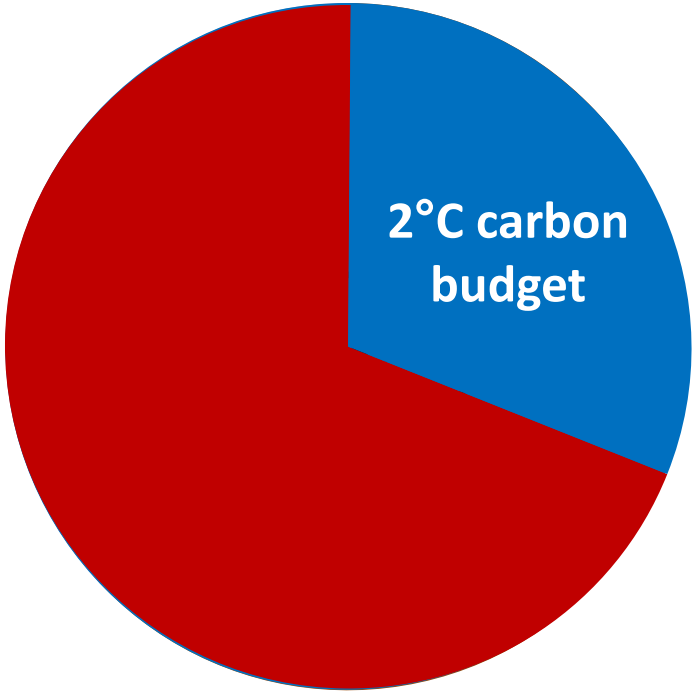


Electricity prices are set to increase with the highest prices persisting in the European Union & Japan, well above those in China & the United States

Staying within a 2°C world

WORLD ENERGY OUTLOOK

CO_2 equivalent of today's fossil fuel reserves



In a 2°C world, more than two-thirds of current fossil fuel reserves <u>cannot</u> be consumed before 2050 unless CCS is widely deployed

Foundations of energy system shifting

WORLD ENERGY OUTLOOK

- Policy makers face critical choices in reconciling energy, environmental & economic objectives
- Changing outlook for energy production & use may redefine energy pricing, economic competiveness & geopolitical balances
- Schemes to support renewables need to be carefully designed, while their integration brings new challenges
- The gains promised by energy efficiency are within reach & are essential to underpin a more secure & sustainable energy system
- *WEO-2013* special report to examine how to keep the 2°C target alive: '*Redrawing the energy-climate map*' - release 10 June 2013