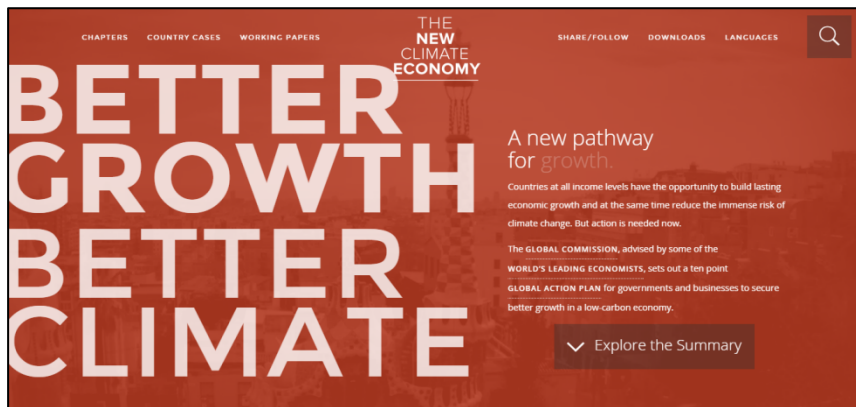
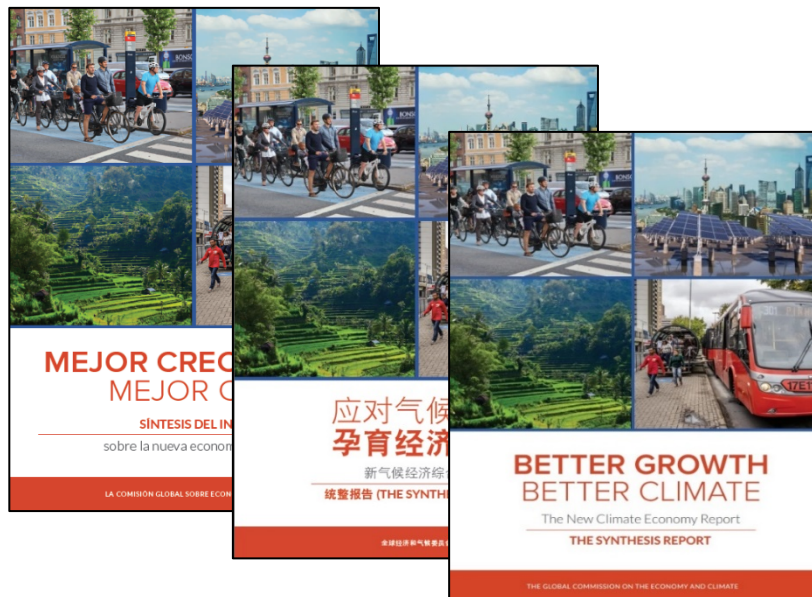


Better Growth, Better Climate: The New Climate Economy Report

Online interactive report



Synthesis report in multiple languages



Commissioned by 7 countries:

Colombia, Ethiopia, Indonesia, Norway, Sweden, South Korea, United Kingdom

Led by a Global Commission: 23 former heads of state, CEOs and heads of international institutions. Chaired by Felipe Calderon, former President of Mexico

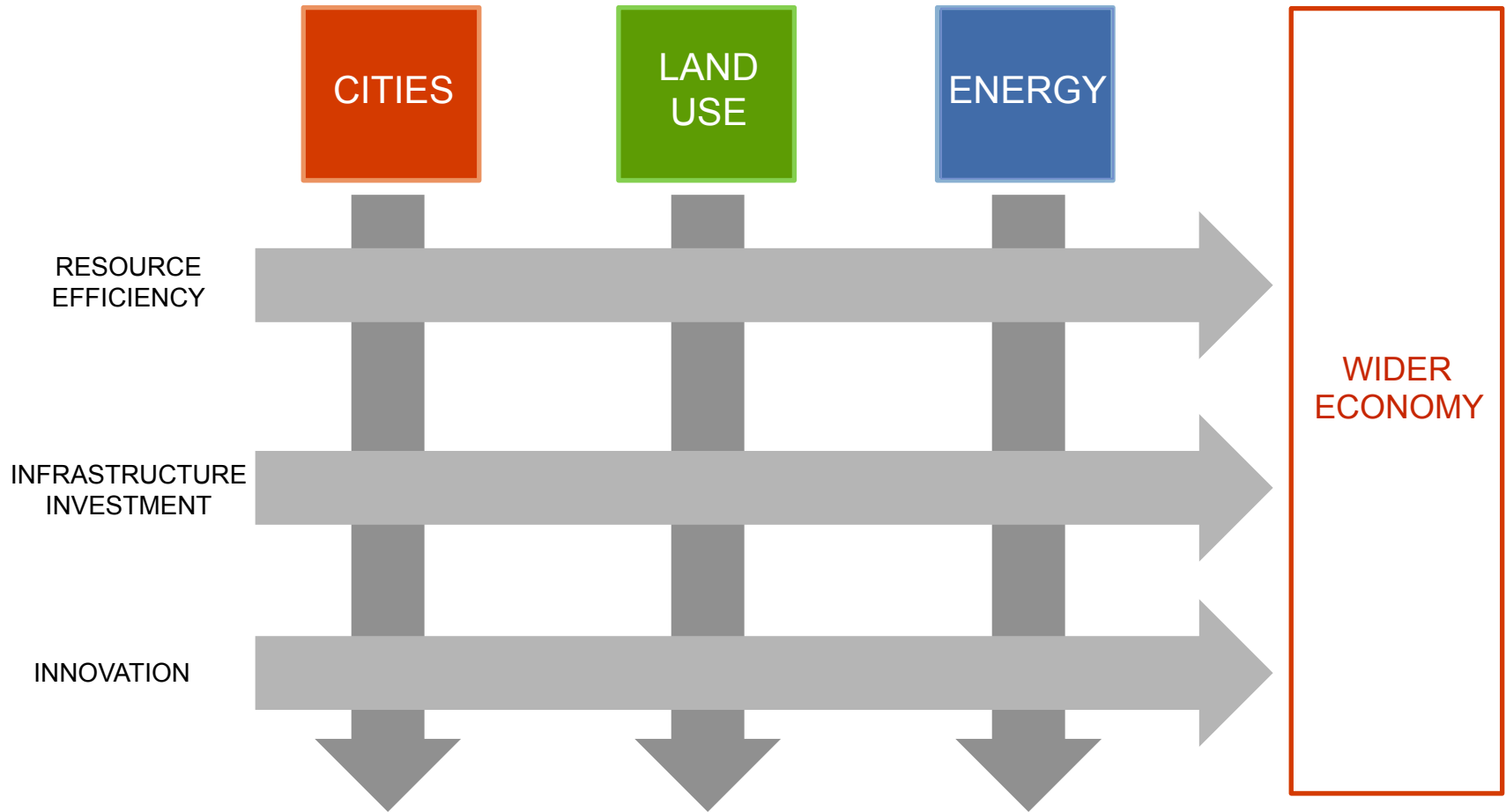
Overseen by an **Economic Advisory Panel** of 14 world leading economists, chaired by **Professor Lord Nicholas Stern**

Delivered by 8 research institutes:



Included contributions from **120+** organisations

Key drivers of growth and climate performance

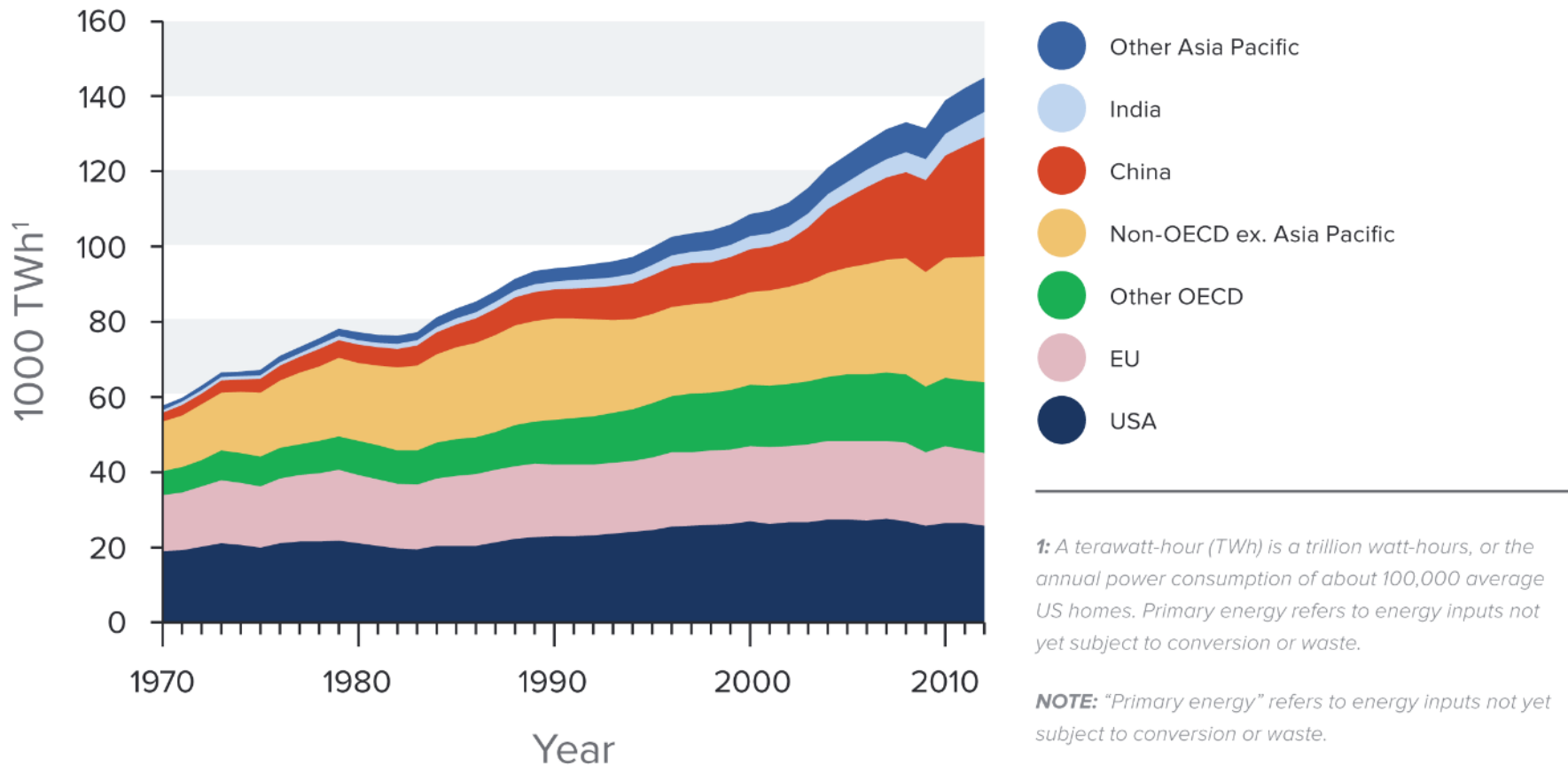


HIGH QUALITY, RESILIENT, INCLUSIVE = BETTER GROWTH

Main findings of the Commission:

- Economic growth and climate mitigation can be achieved together. We do not need to choose.
- A growing number of businesses, cities and countries are demonstrating this. Recent technological and policy developments mean that even more opportunities are available today.
- About US\$ 90 trillion in infrastructure investment is needed from 2015-2030 to meet development needs. We need to choose if it will be low-carbon and climate resilient. Making it low-carbon would not cost much more, and fuel savings could fully offset additional investment costs.
- But, if we lock in the wrong path, we risk significant economic and social impacts of climate change. We need to act urgently.
- There are multiple economic benefits of action, such as reduced health costs from air pollution, less congestion and road deaths, and enhanced energy, water and food security. In many cases, these will outweigh the costs of action.

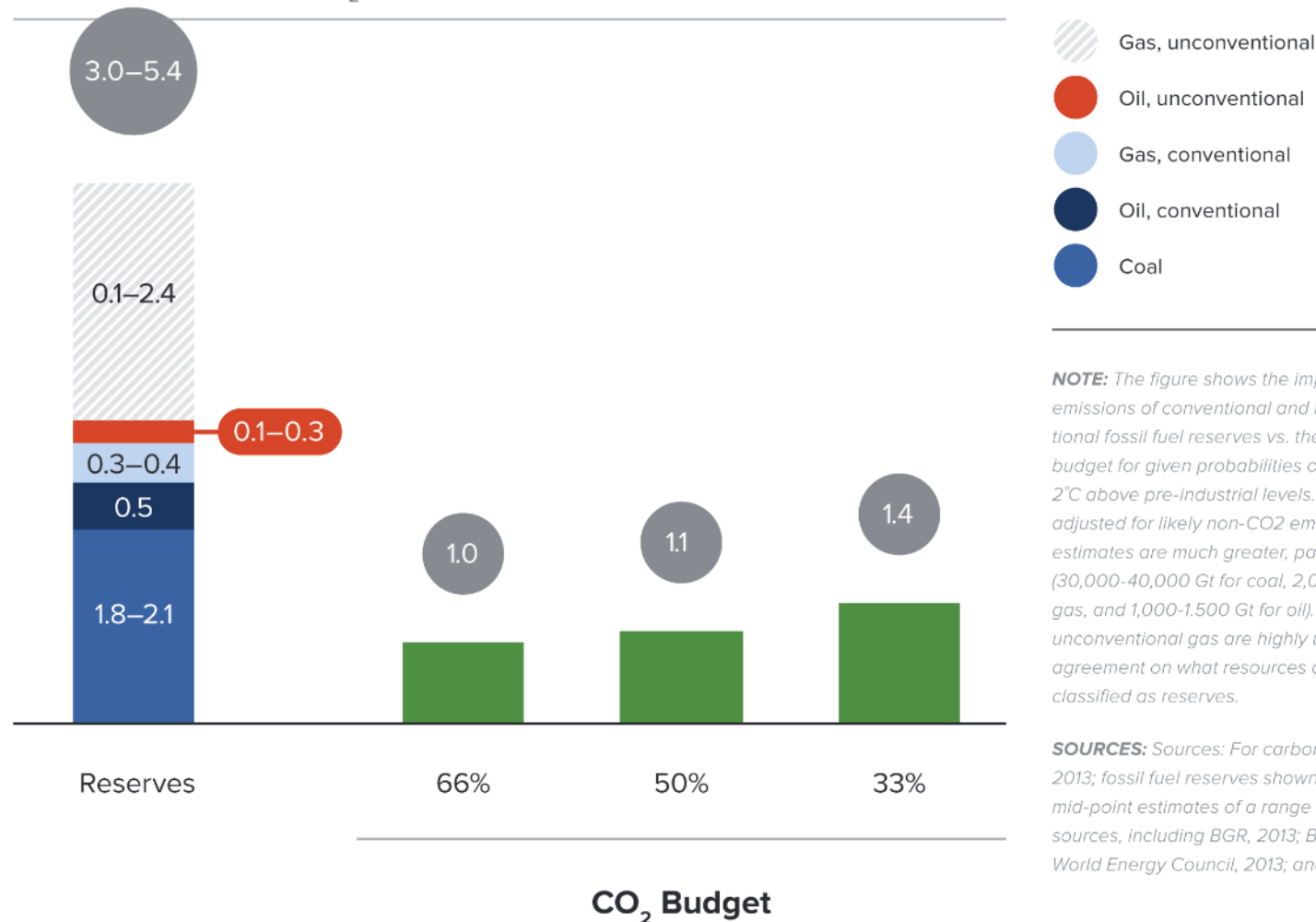
Growth in energy use has shifted to fast-growing Asian countries



Source: BP Statistical Review of World Energy 2013

Coal and unconventional fossil fuel reserves far exceed the carbon budget

1000 billion tonnes CO₂



NOTE: The figure shows the implied CO₂ emissions of conventional and likely unconventional fossil fuel reserves vs. the remaining CO₂ budget for given probabilities of staying below 2°C above pre-industrial levels. Budgets are adjusted for likely non-CO₂ emissions. Resource estimates are much greater, particularly for coal (30,000–40,000 Gt for coal, 2,000–5,000 Gt for gas, and 1,000–1,500 Gt for oil). Estimates for unconventional gas are highly uncertain, with little agreement on what resources are appropriately classified as reserves.

SOURCES: Sources: For carbon budgets: IPCC, 2013; fossil fuel reserves shown are ranges for mid-point estimates of a range of different sources, including BGR, 2013; BP, 2014; IEA, 2013; World Energy Council, 2013; and GEA, 2012.

Source: IPCC Working Group I; IIASA Global Energy Assessment 2012, BGR, 2013; BP Statistical Review of World Energy, 2014; IEA, 2013; World Energy Council, 2013

THE NEW CLIMATE ECONOMY

The Global Commission on the Economy and Climate

Wind and solar power have become cost-competitive in several markets, even without subsidies

Rooftop solar cheaper than electricity retail rates in **at least 11 countries**

Wind also reported competitive with coal in **Australia, Chile, Mexico, New Zealand, Turkey.**

U.S. southwest:

Solar plant at ~8 ¢/kWh, competitive with coal

U.S.

Wind at 5-8 ¢/kWh, cheaper than new coal

Parts of India:

Wind at 6-10 ¢/kWh, close to coal at 5-8 ¢/kWh

Chile:

First solar plant with no govt. support

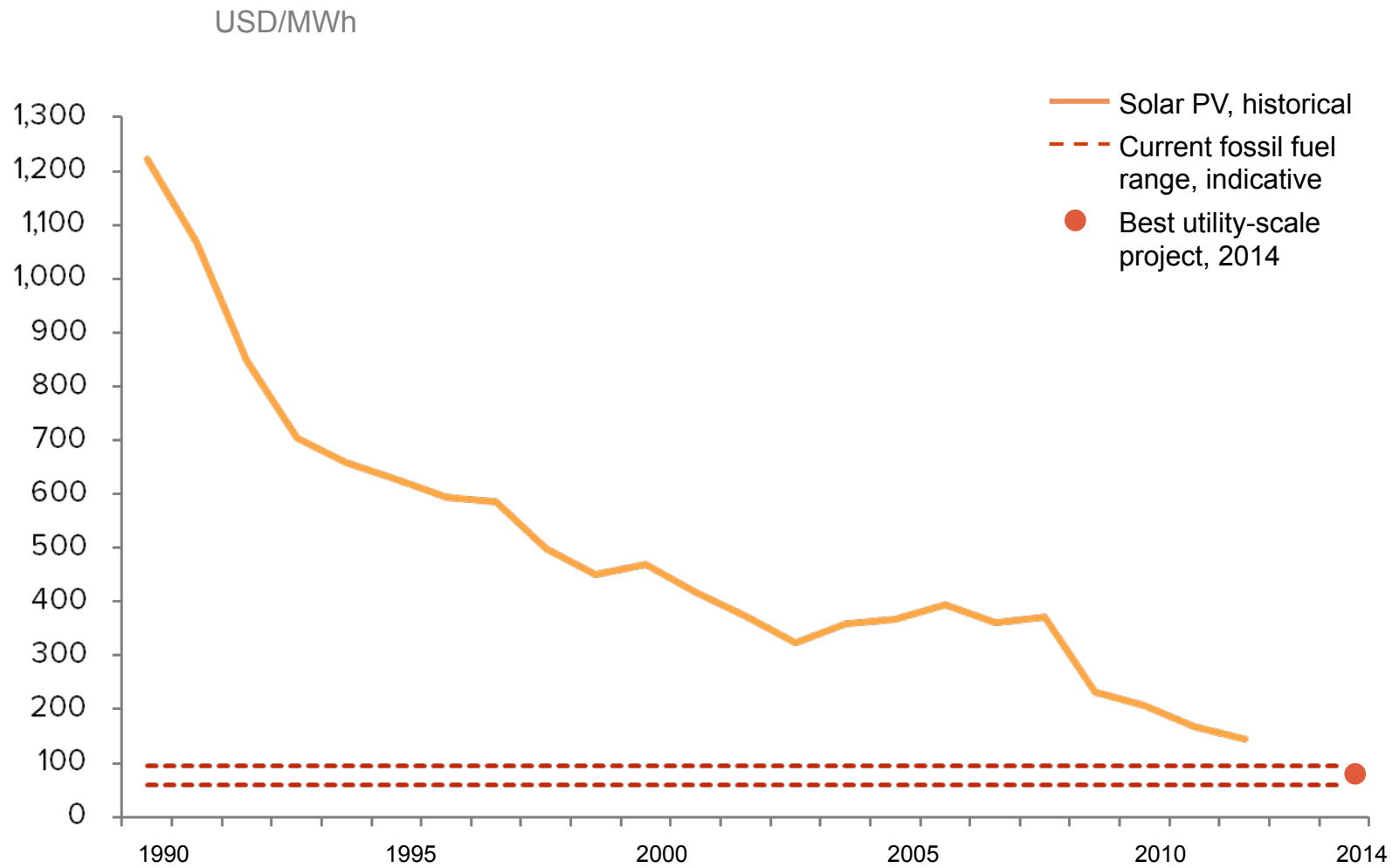
Brazil:

4.5 ¢/kWh wind, cheaper than any other source

South Africa:

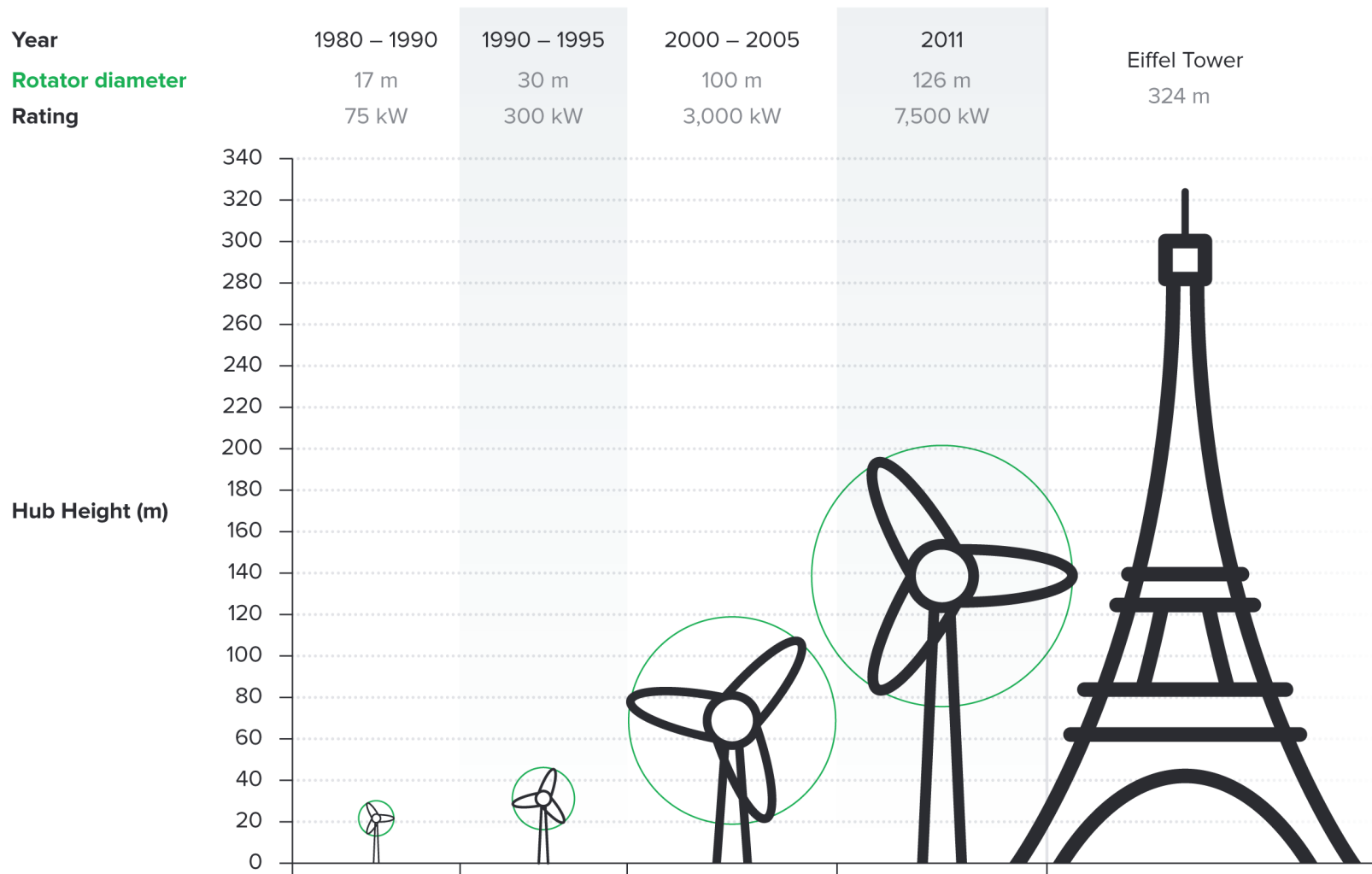
7 ¢/kWh wind, 30% cheaper than new coal

The cost of solar PV is dropping fast



Sources: Citi Research 2012; G. F Nemet, "Beyond the learning curve", Energy Policy 34, 3218-3232 (2006)

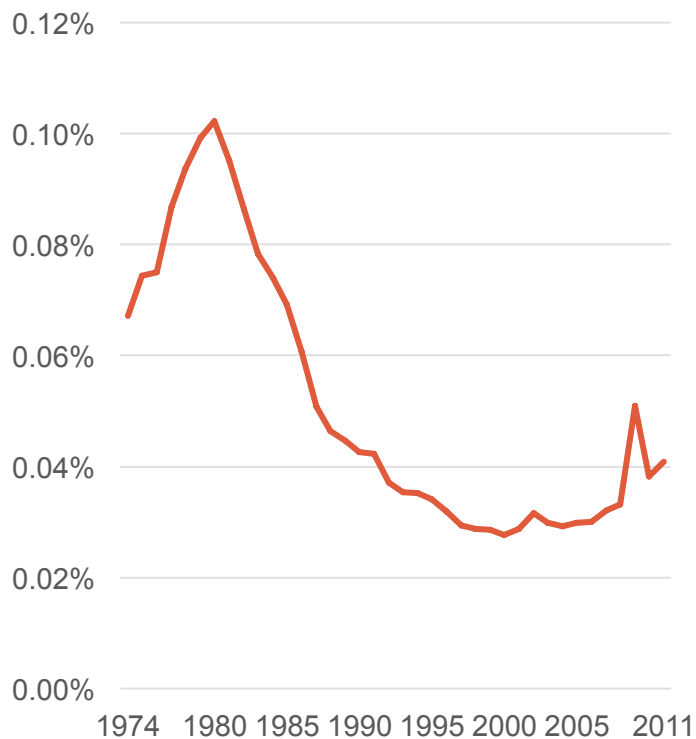
Wind turbines have evolved to have 100 times more power generation capabilities than 30 years ago



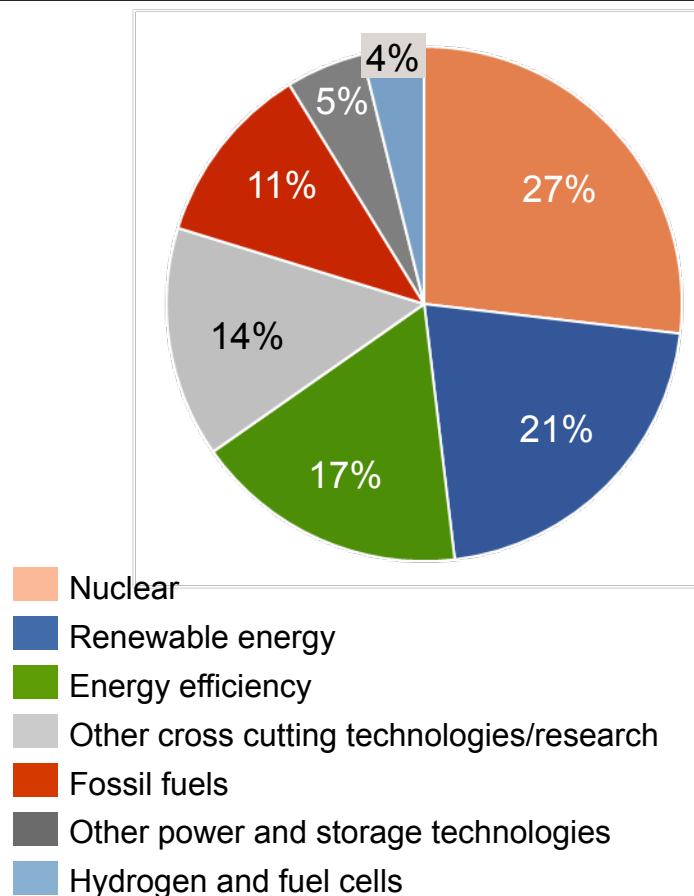
Sources: Adapted from the European Wind Energy Association

Energy R&D as a percent of GDP has been falling in most developed countries since the 1980s

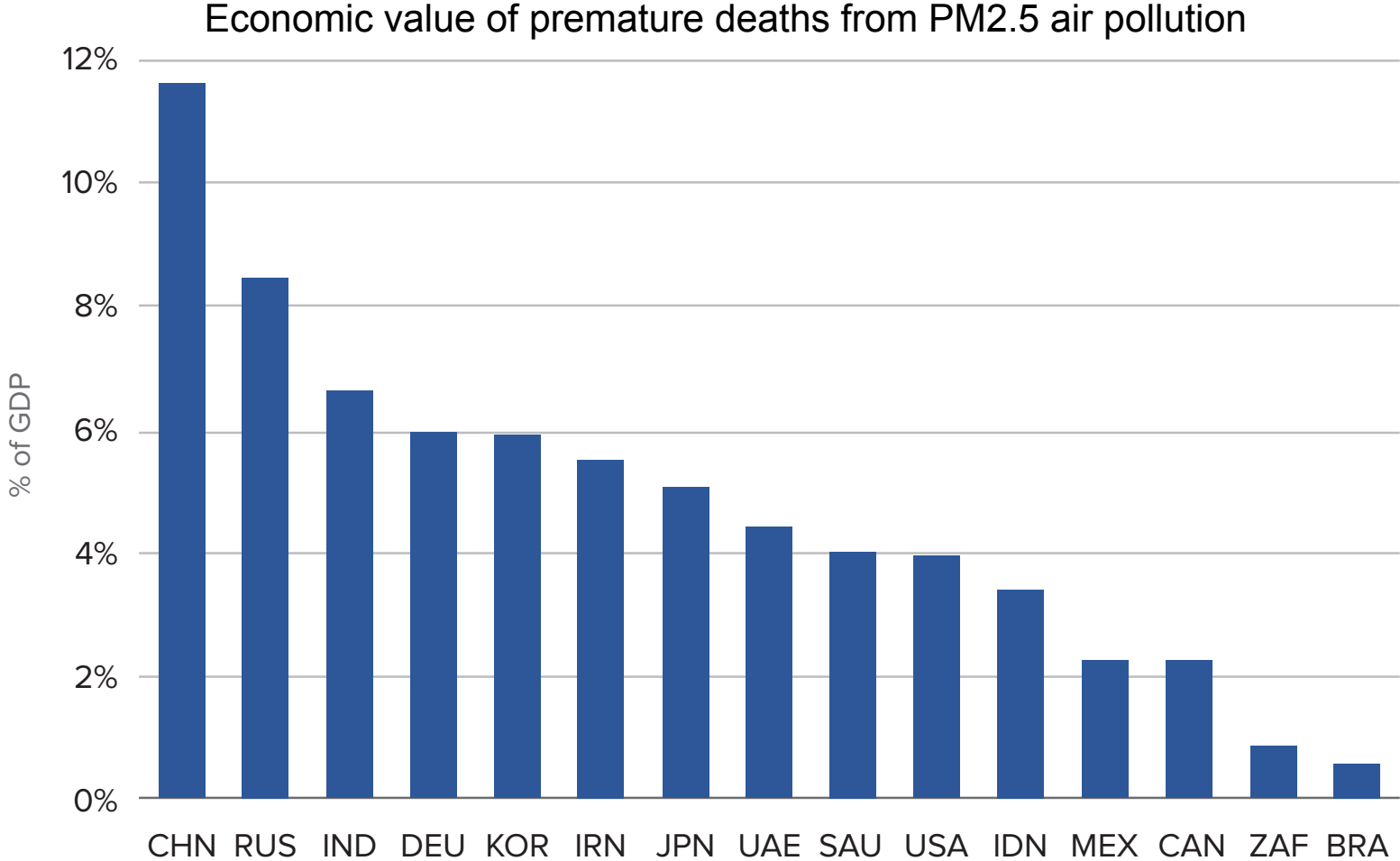
Energy R&D as % of GDP in IEA member countries¹



Energy R&D split in 2011



Health impacts from air pollution are 6.5% of India's GDP

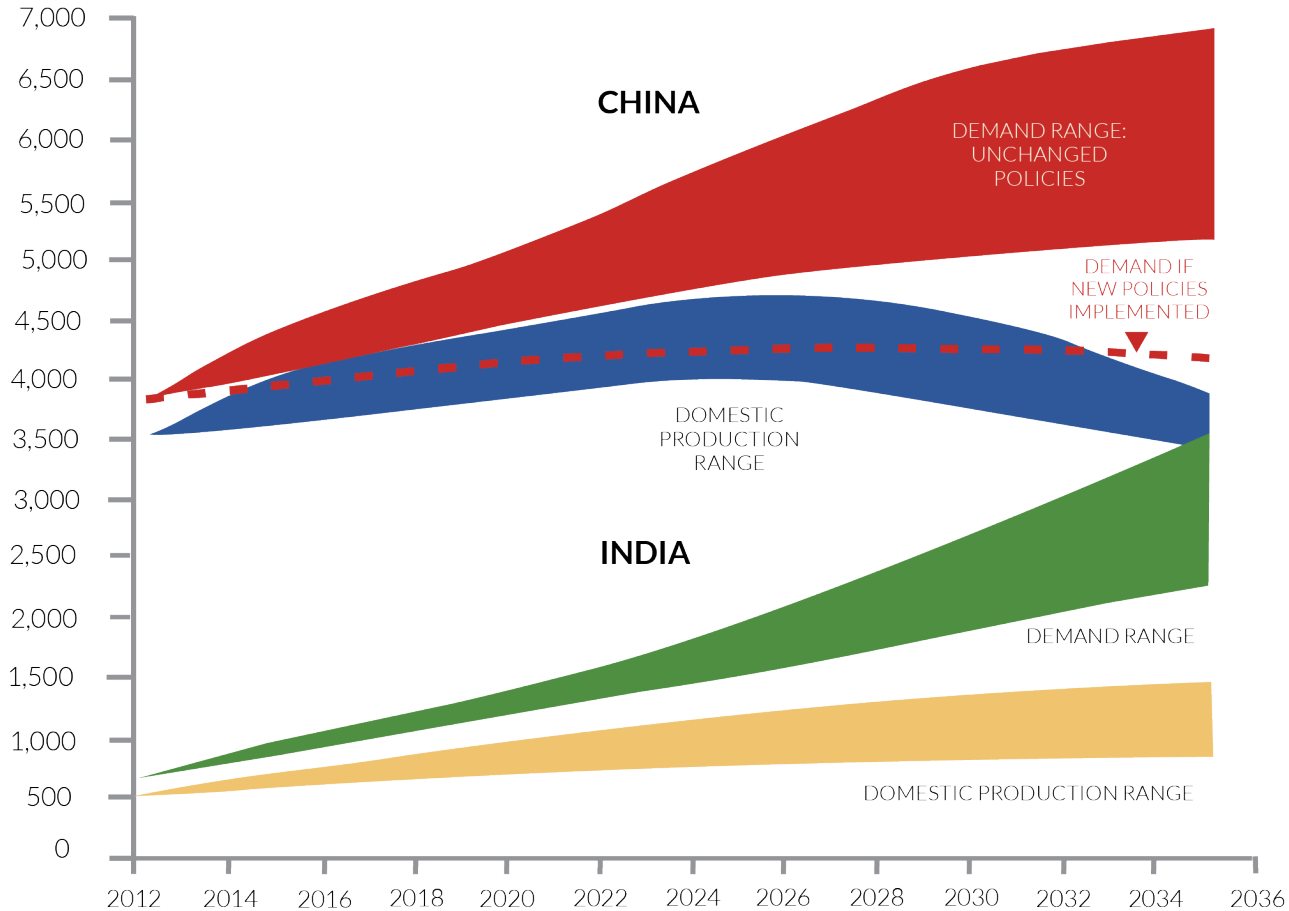


Source: NCE estimate, based on WHO mortality data

Ranges for domestic coal production and coal demand

SCENARIOS FOR COAL DEMAND AND DOMESTIC PRODUCTION IN CHINA AND INDIA

Million tonnes of coal

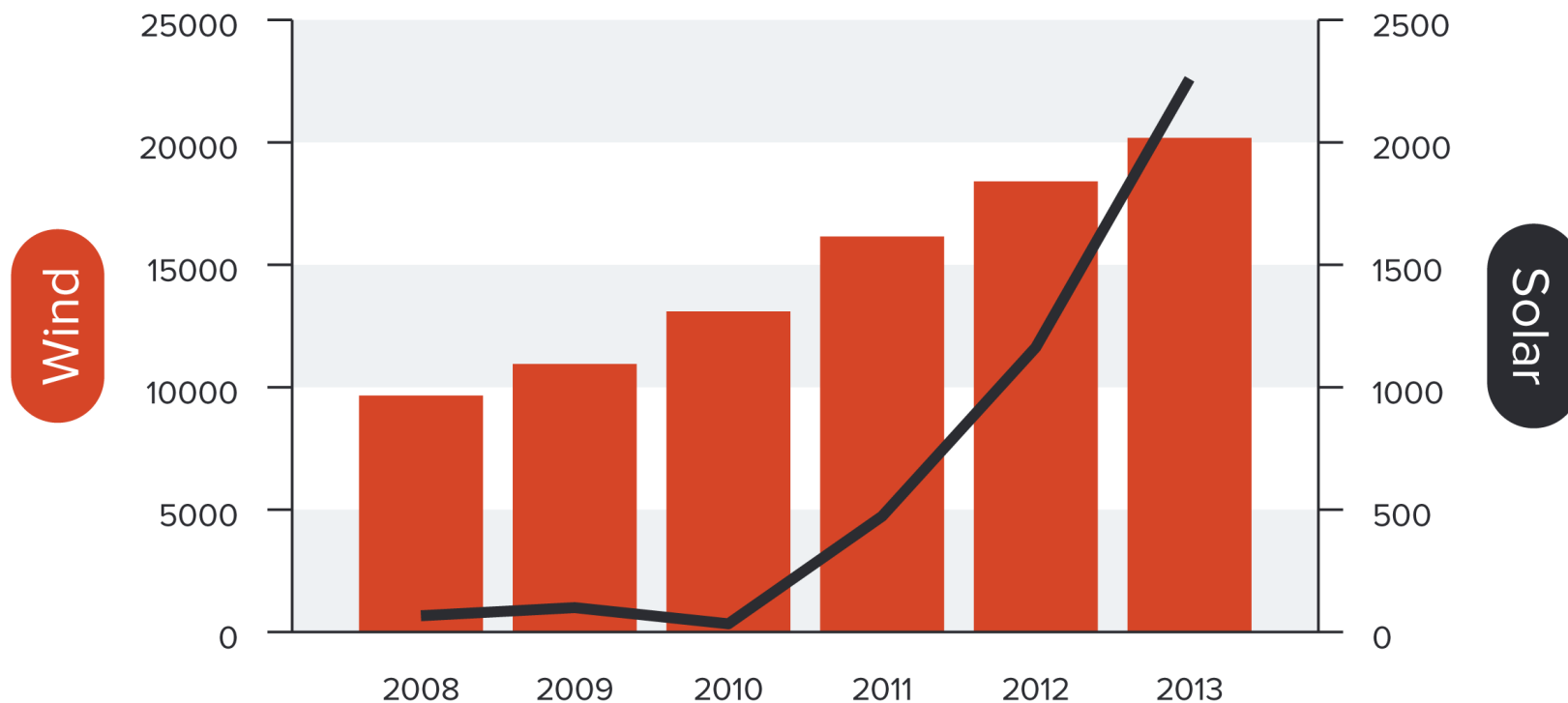


Sources: International Energy Agency; Planning Commission of the Government of India; Feng, L.Q.; Wood Mackenzie.

India has begun to capitalize on its renewable energy potential

India: Installed wind and solar capacity

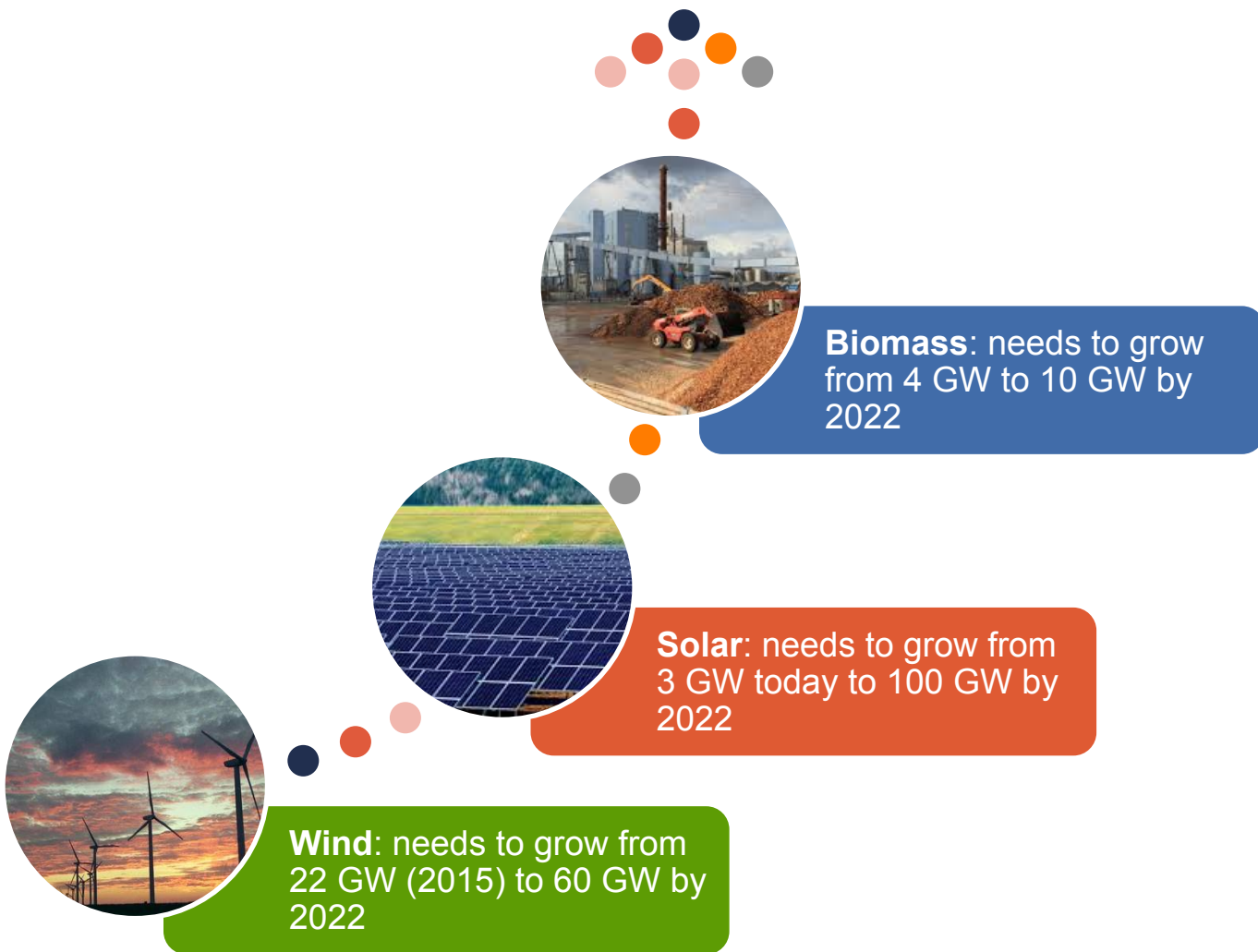
(MW) 2008 – 2013



Installed capacity in 2013 remains less than 1% of physical potential

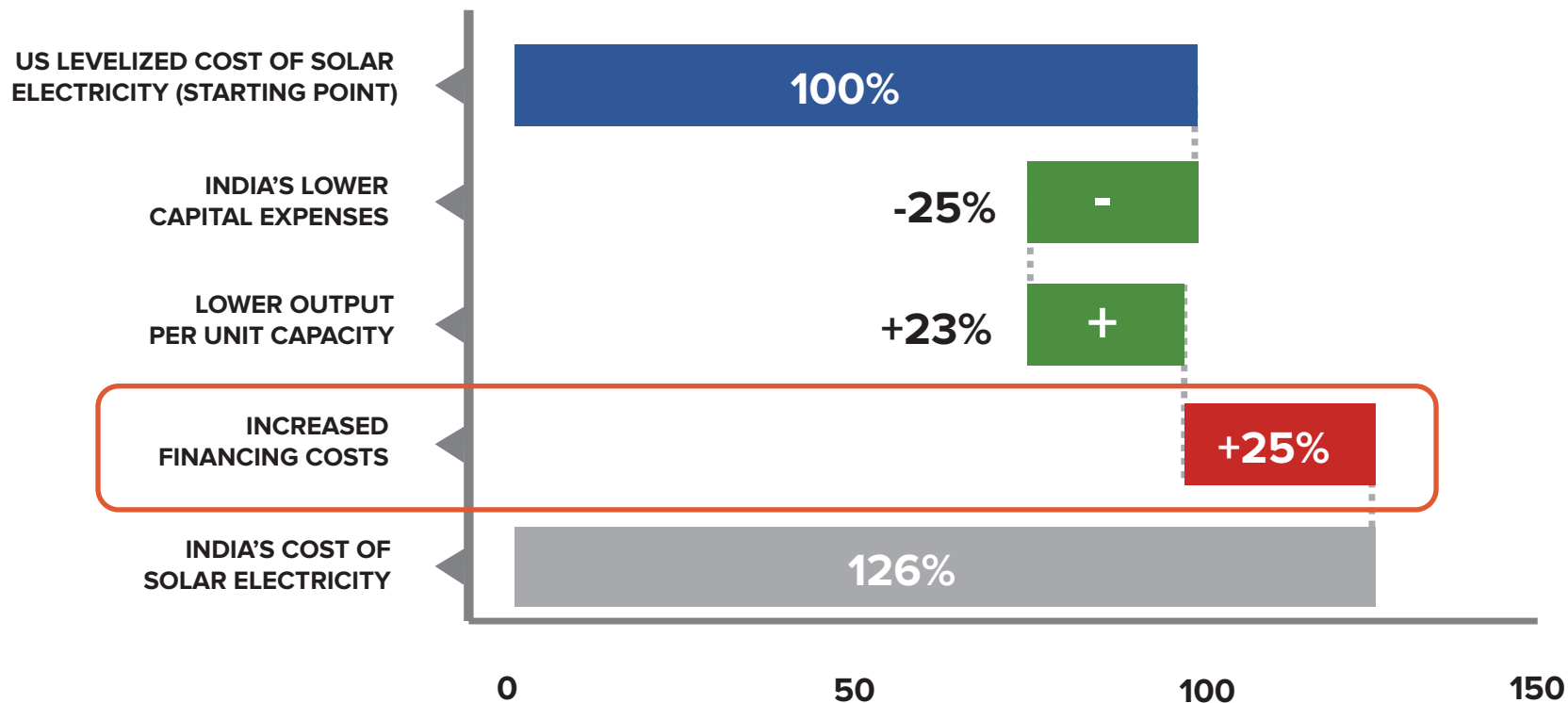
Source: BP 2014; India Ministry of New and Renewable Energy 2014; Lawrence Berkeley National Laboratory

RE targets by 2022 for India, with 90% of the investment expected from private sector



Financing costs for solar power eliminate natural cost advantages in India

LEVELISED COST OF SOLAR POWER, US INDEXED AT 100



Source: Climate Policy Initiative, 2012. *Meeting India's Renewable Energy Targets: The Financing Challenge*. Available from: <http://climatepolicyinitiative.org/publication/meeting-indias-renewable-energy-targets-the-financing-challenge/>

Green Power Market Development Group



Georgia-Pacific

Interface



GPMDG founded in 2000

Supported over 1,000 MW of RE projects in the US

Launched in Bangalore in January

- Collaborative solar purchase
- Long-term contracting with wind
- Improve regulation for RE purchasing



POWERED BY INTELLECT
DRIVEN BY VALUE



Cognizant



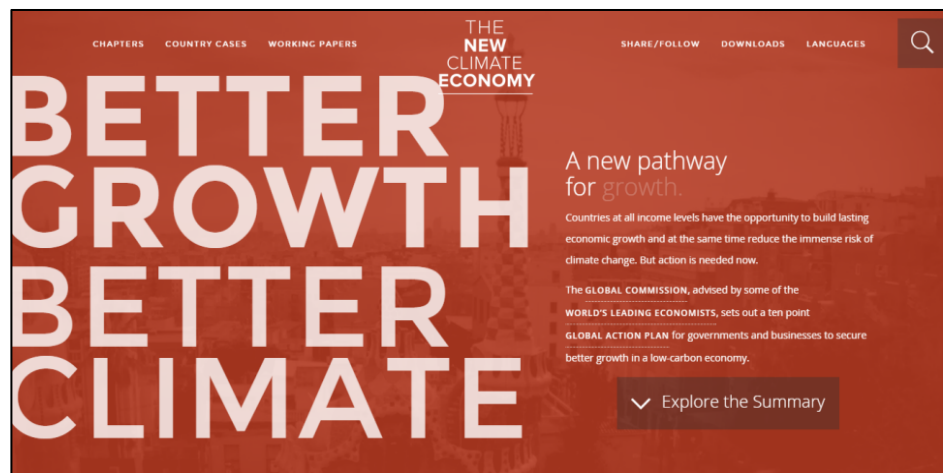
accenture

High performance. Delivered.

Thank you!

Please visit www.newclimateeconomy.report to read the *Better Growth, Better Climate* report, and our contributing working papers and country case studies.

Follow us on Twitter at: @NewClimateEcon



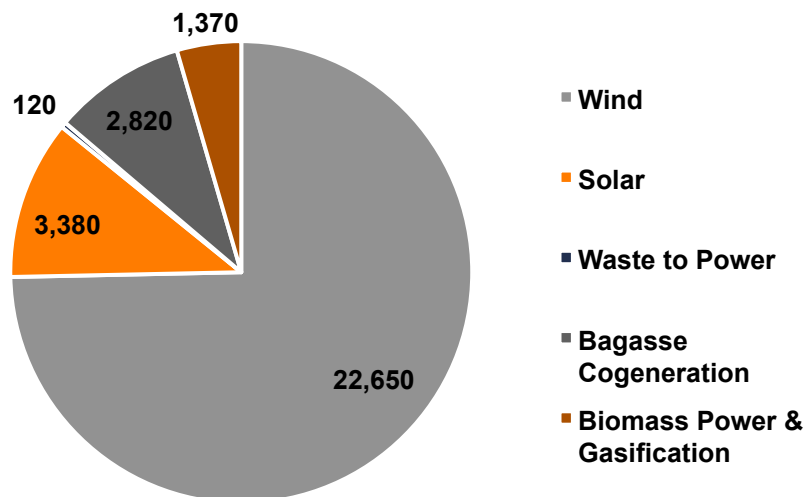
Extra goodies

The RE Scenario in India

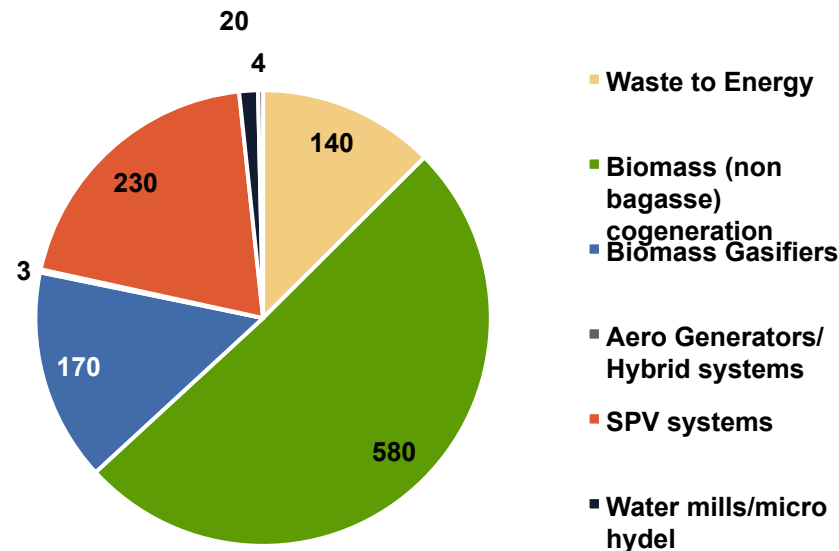
Average installation rates:

Wind: 2200 MW/annum & solar: 840 MW/annum

Grid Interactive RE Capacity (MW)- Feb 2015



Off Grid RE Installed Capacity - Feb 2015



Source: Ministry of New and Renewable Energy, Government of India

Comprehensive approach to scaling RE in India



Financing

Building
Demand

Planning

Accountability