THE GLOBAL COMMISSION ON THE ECONOMY AND CLIMATE

Better Growth, Better Climate: The New Climate Economy Report

IMF-WB Annual meetings, 8 October 2014

THE NEW CLIMATE ECONOMY
The Global Commission on the Economy and Climate

The New Climate Economy Partnership:

- *to re-examine the link between economic growth and climate action*
- *to provide practical lessons for economic decision-makers*

7 Commissioning Countries

Colombia
Ethiopia
Indonesia
Norway
Sweden
South Korea
United Kingdom

8 Partner Research Institutes

Climate Policy Initiative (USA)
Ethiopian Development and Research Institute
Indian Centre for Research on Economic Relations
Global Green Growth Institute (South Korea)
London School of Economics (UK)
Stockholm Environment Institute (Sweden)
Tsinghua University (China)
World Resource Institute (USA)

Global Commission

24 global leaders : ex-Presidents and Finance Ministers, major CEOs, heads of the main international economic Organisations

Chaired by former President of Mexico
Felipe Calderón

Economic Advisory Panel

14 world leading economists, chaired by **Professor Lord Nicholas Stern**

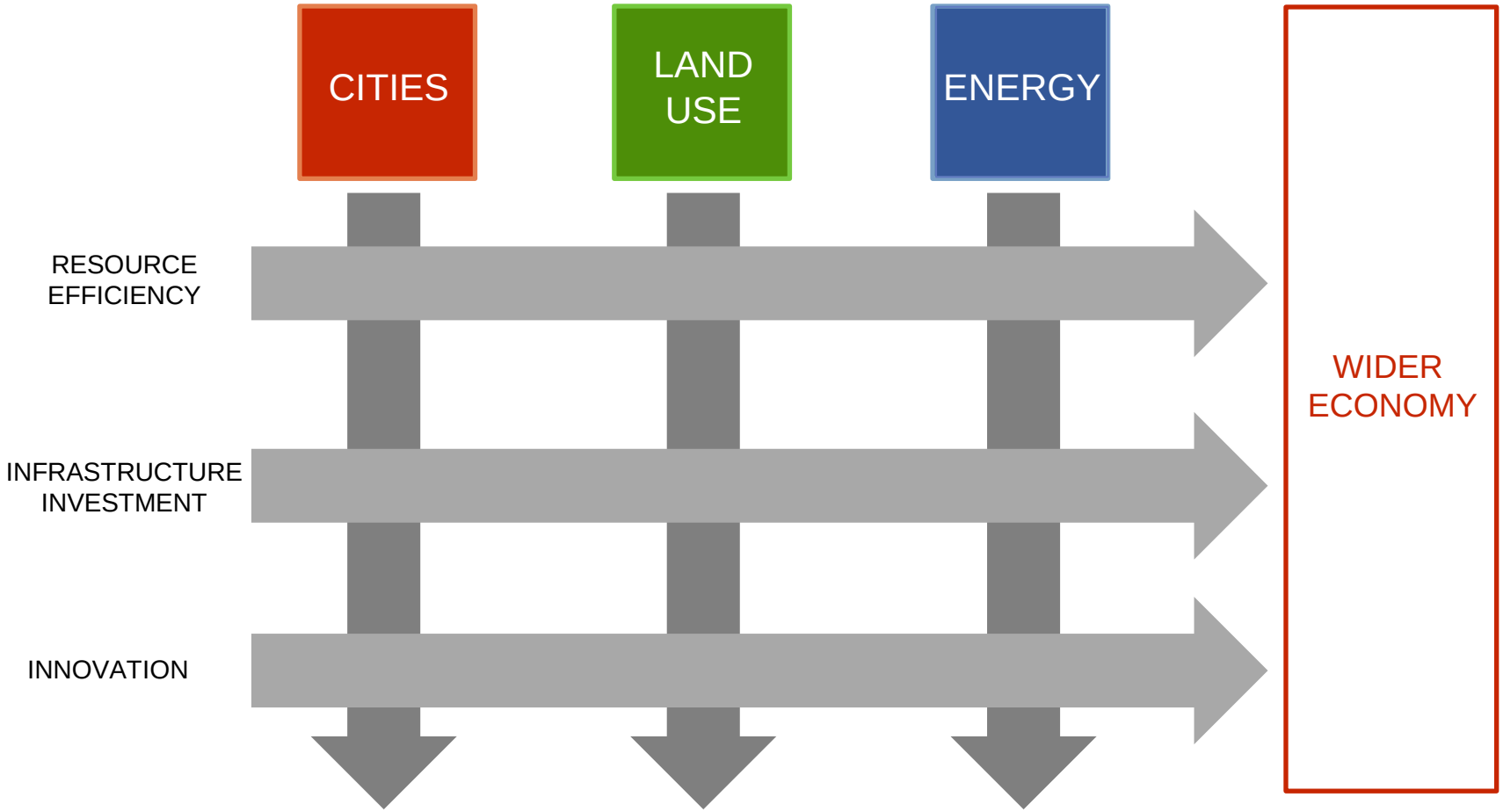
Includes:

Two Nobel prize winners:
Daniel Kahneman and Michael Spence

Main findings of the Commission:

- Economic growth and climate mitigation can be achieved together. We do not need to choose one or the other.
- A growing number of businesses, cities and countries are now demonstrating this. Given recent technological and policy developments, even more opportunities are available today.
- About US$ 90 trillion will be invested in infrastructure (cities, energy, land use) to 2030 – need to choose if it is low-carbon and climate resilient. Evidence that 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 important economic and social impacts of climate change. Urgency to act.
- The multiple economic benefits of action are significant (eg reduced health costs of air pollution, less congestion & road deaths; enhanced energy, water and food security), and in many cases will outweigh the costs of action.

Key drivers of growth and climate performance



HIGH QUALITY, RESILIENT, INCLUSIVE = BETTER GROWTH

CITIES: Atlanta and Barcelona have similar populations and wealth levels but very different carbon productivities

ATLANTA

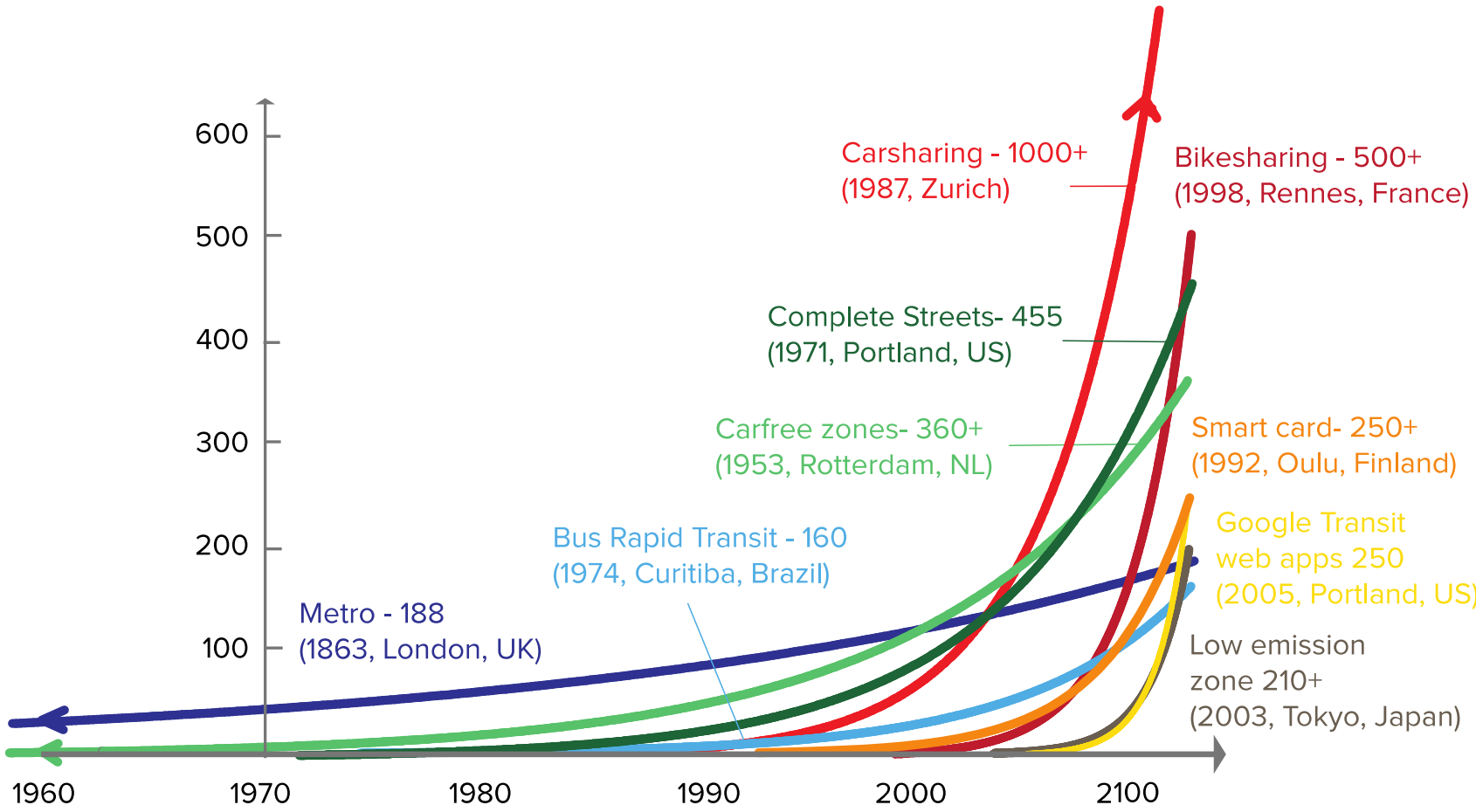
Population: 2.5 million
Urban area: 4,280 km^2
Transport CO_2 pp: 7.5 tCO2e

BARCELONA

Population: 2.8 million
Urban area: 162 km^2
Transport CO_2 pp: 0.7

Source: Transit and Density: Atlanta, the United States and Western Europe, Bertaud, A. (2004)

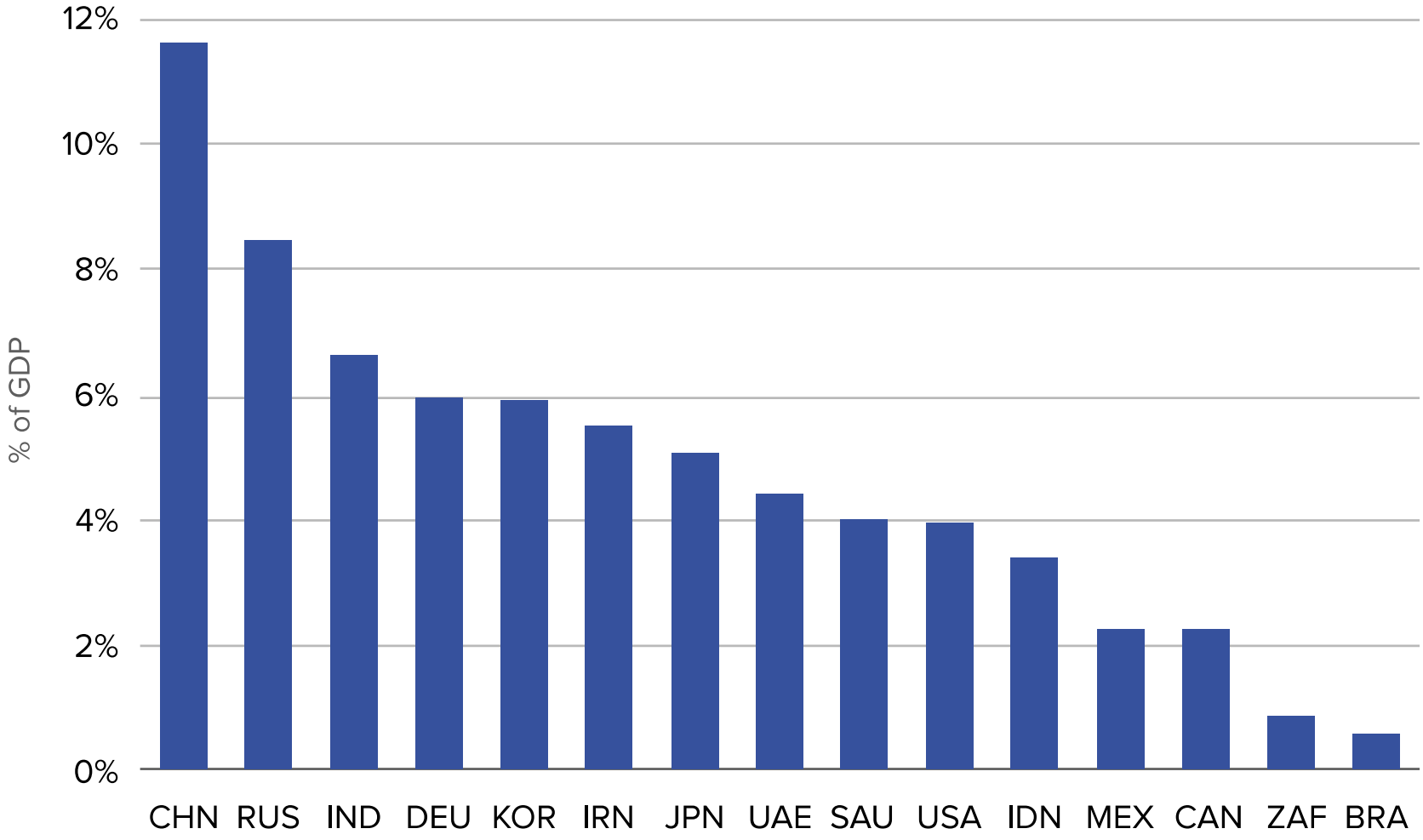
CITIES: A range of smart transport systems have taken off in numerous cities worldwide since 2000



Source: Sustainable Transport Adoption Curves, Embarq 2013

CITIES: The rising costs of air pollution

Value of the premature deaths from PM2.5 air pollution



Source: NCE estimate, based on WHO mortality data

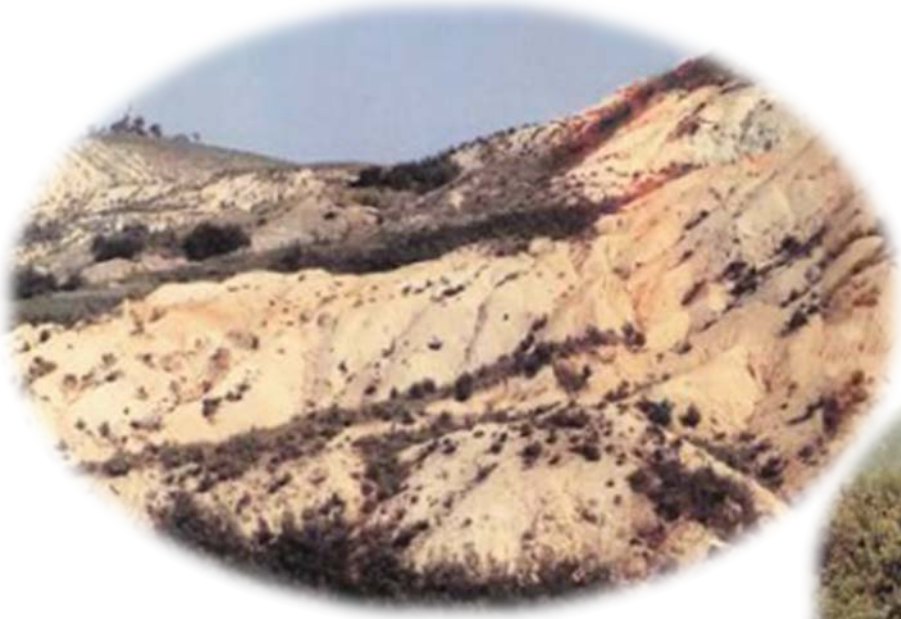
LAND USE: China's Loess Plateau shows how an agricultural landscape approach can deliver economic and climate benefits

1990

2012

Source: World Bank project completion evaluations of the Loess Plateau Watershed Habilitation Projects I and II, 1999 and 2005.

LAND USE: South Korea expanded full forest cover from 35% to 64% of total land area between 1953 and 2007

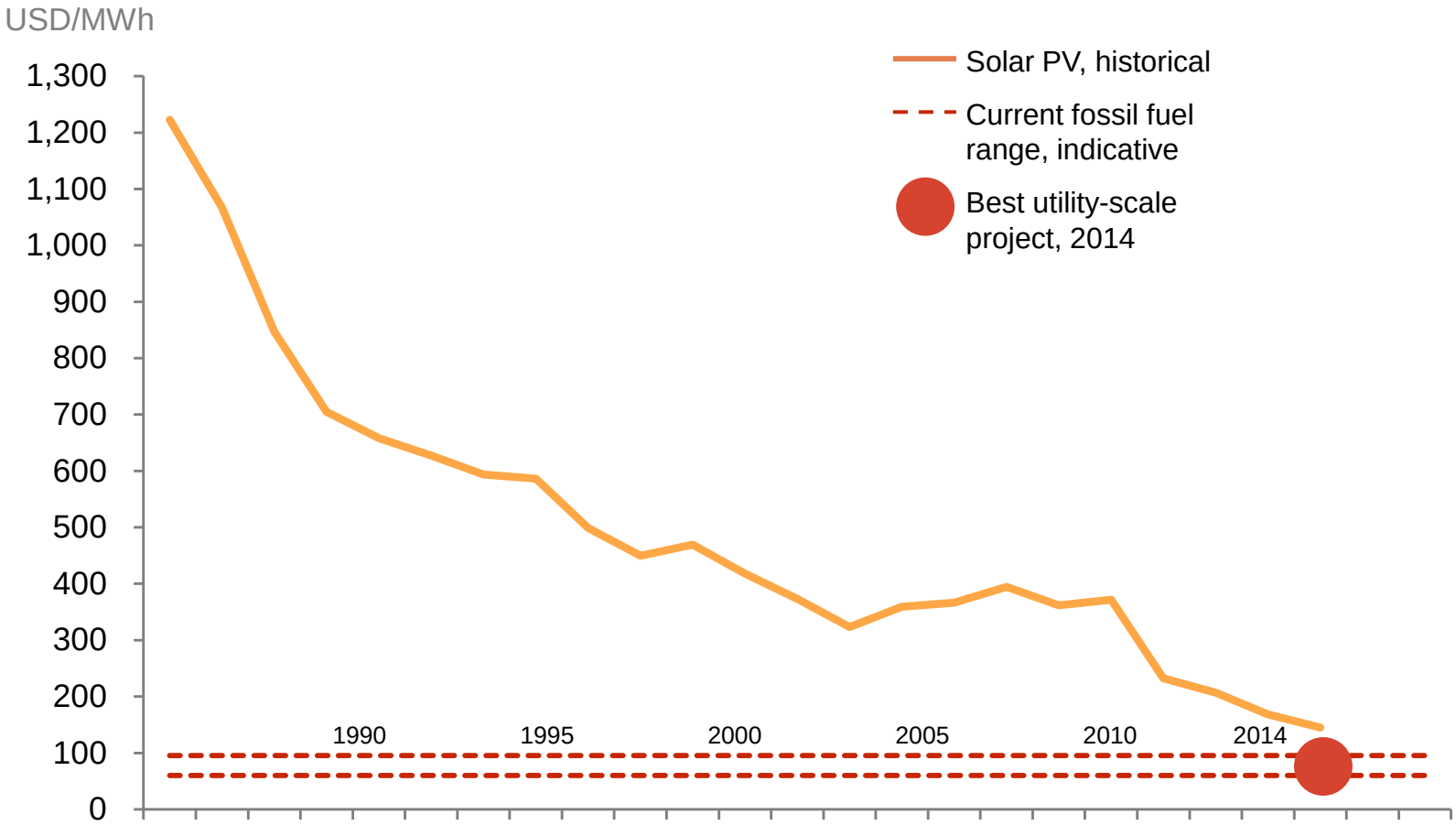


1953

2007

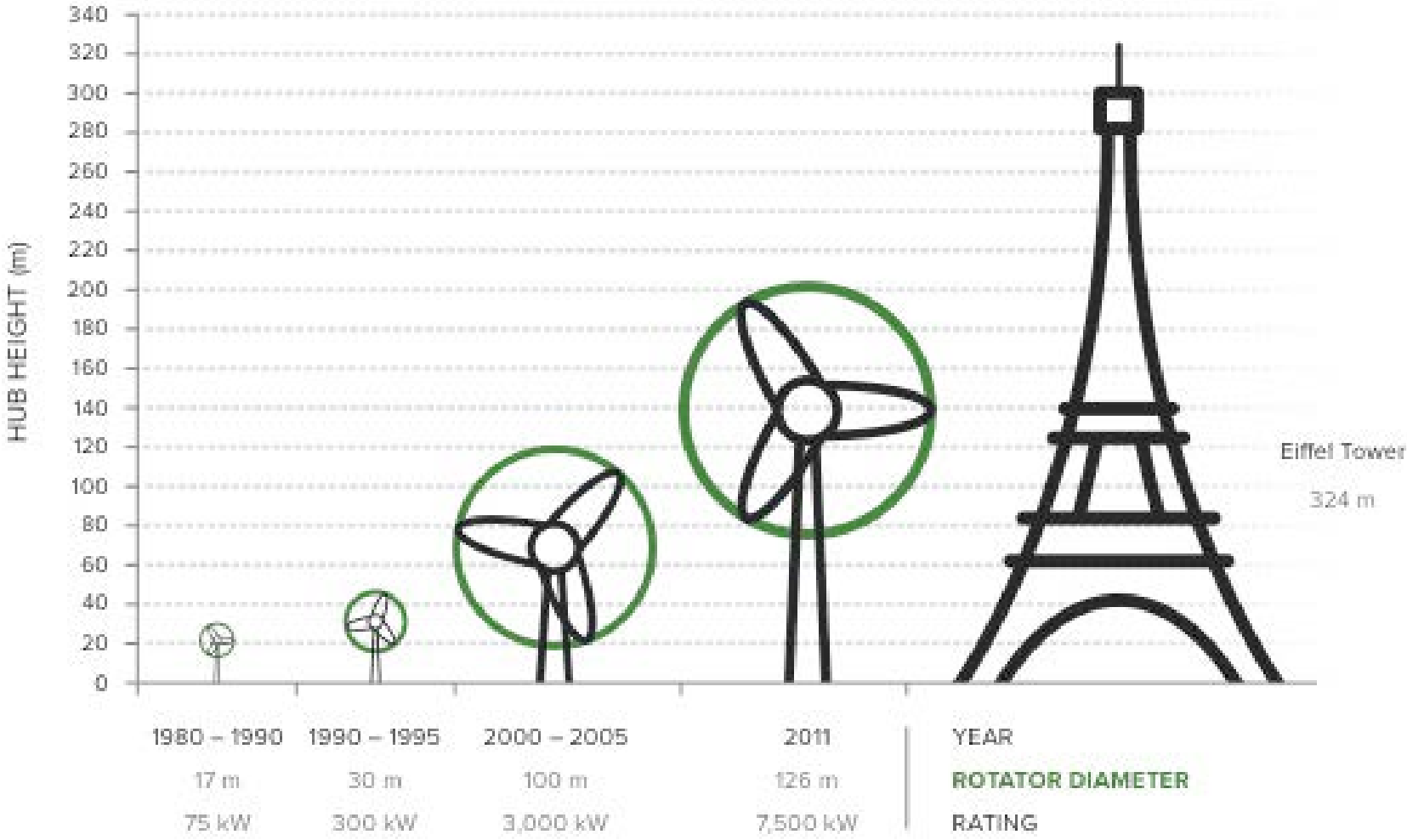
Source: http://english.forest.go.kr/newkfsweb/html/EngHtmlPage.do?pg=/english/policy/policy_010_050.html&mn=ENG_03_01_05

ENERGY: The cost of solar PV is dropping fast; with renewables increasingly cost-competitive

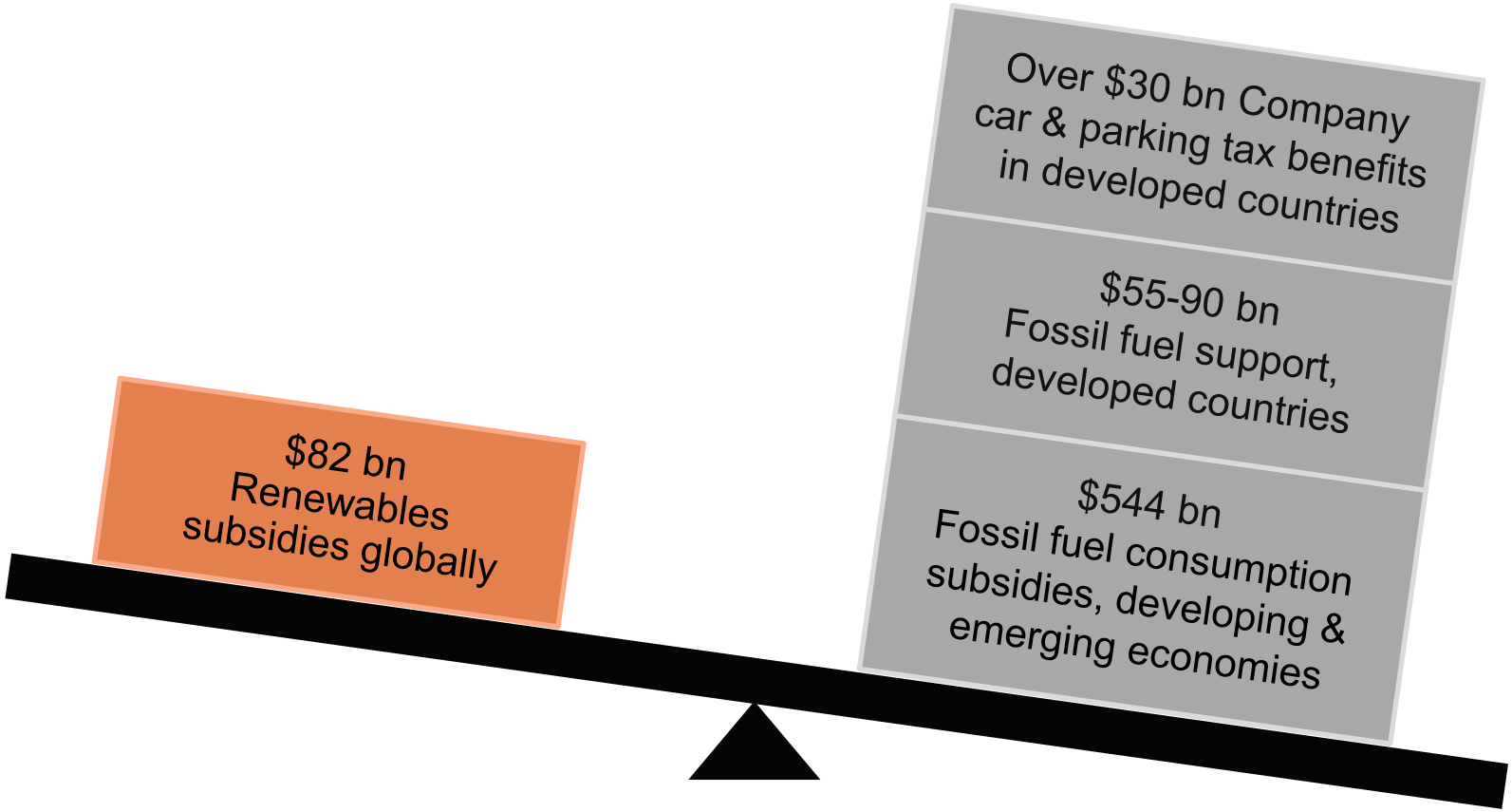


Sources: Citi Research 2012; IEA World Energy Outlook 2013; G. F Nemet, "Beyond the learning curve", Energy Policy 34, 3218-3232 (2006)

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

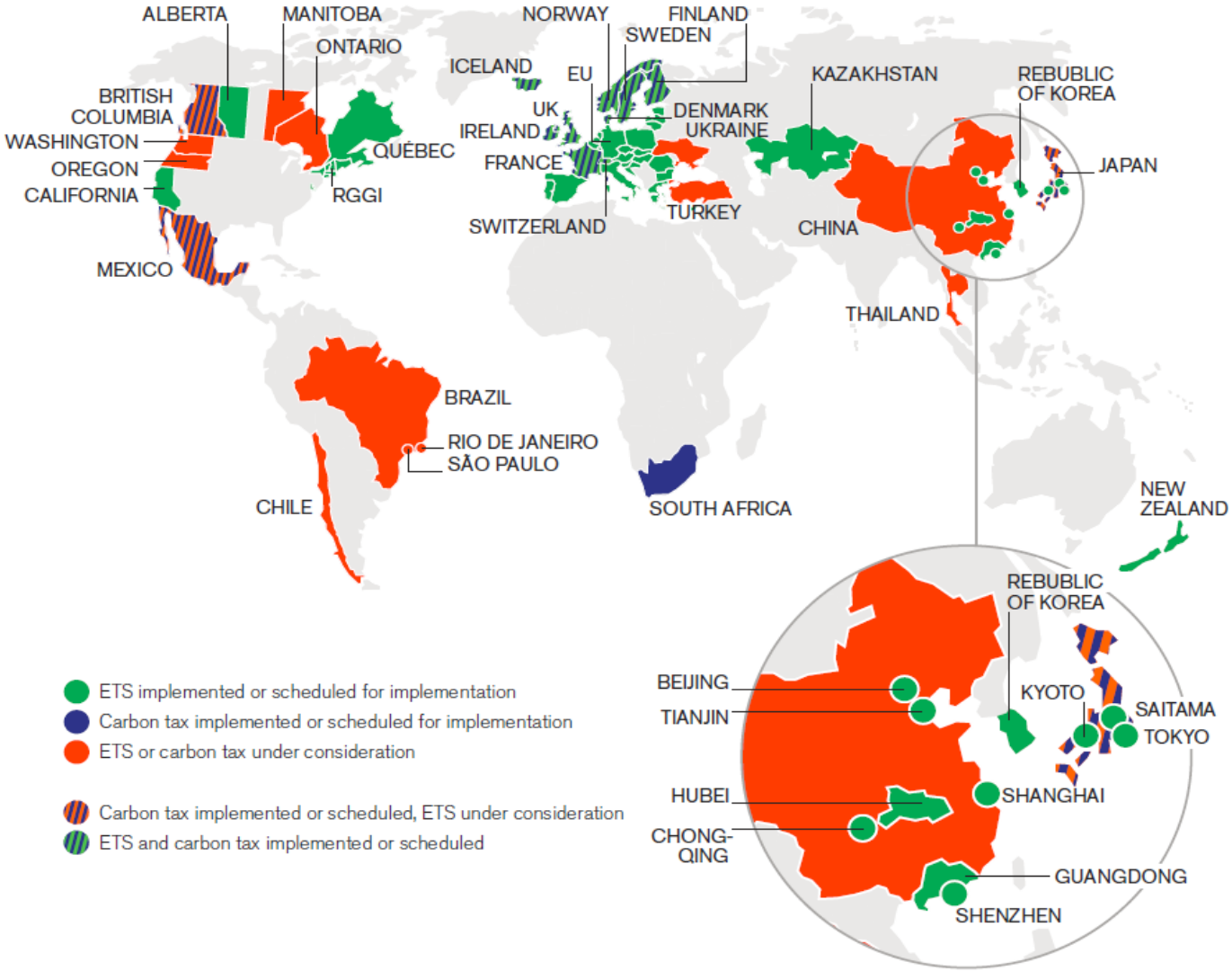


ENERGY: There are significant subsidies to the high-carbon economy



Sources: OECD (2013), Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels; IEA (2013), World Energy Outlook; IEA (2013), OECD (2014, forthcoming)

POLICIES: Global spread of carbon pricing

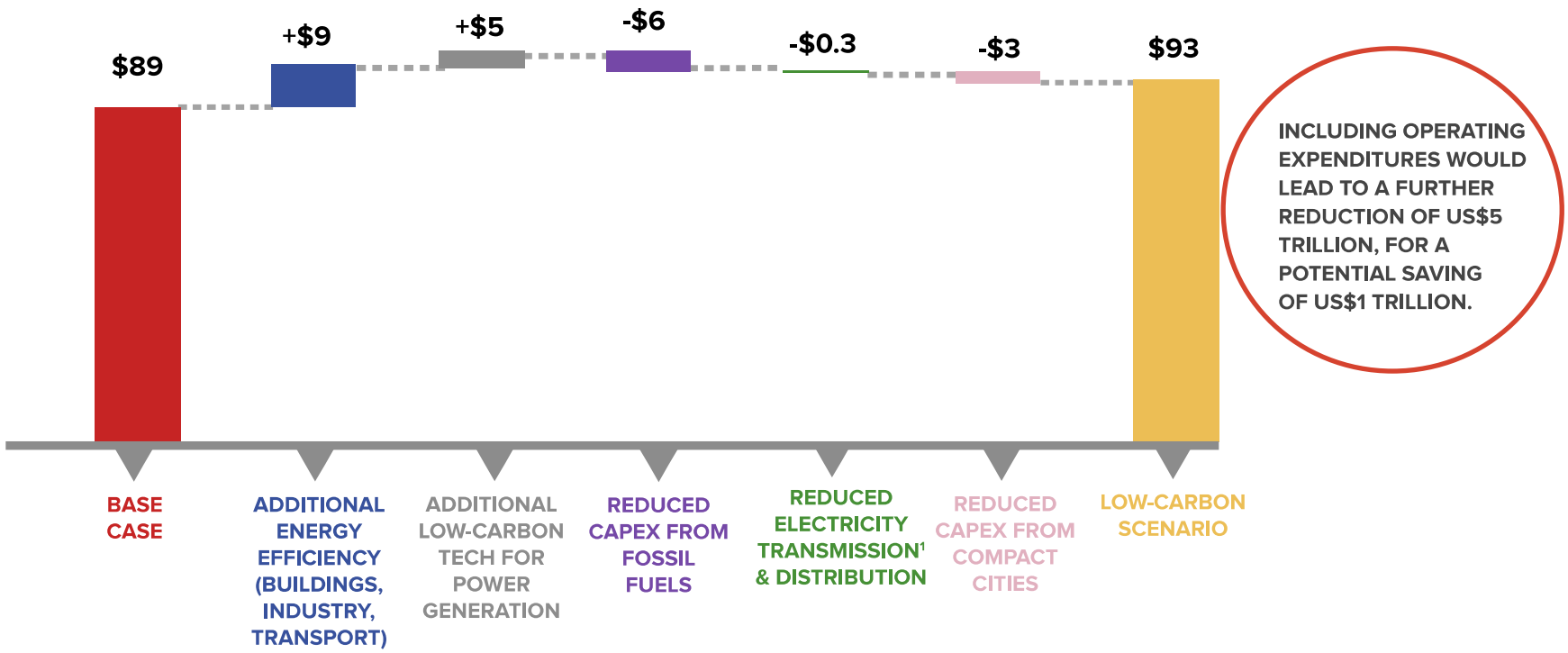


SOURCE: "This map was taken from the State and Trends of Carbon Pricing report 2014, developed by the World Bank and Ecofys, and published in May 2014. It was modified in August 2014 for the purpose of this report, to reflect the abolition of the Australian carbon pricing mechanism from 1 July 2014."

INVESTMENT: Infrastructure capital spend is estimated to be marginally higher in a low-carbon scenario

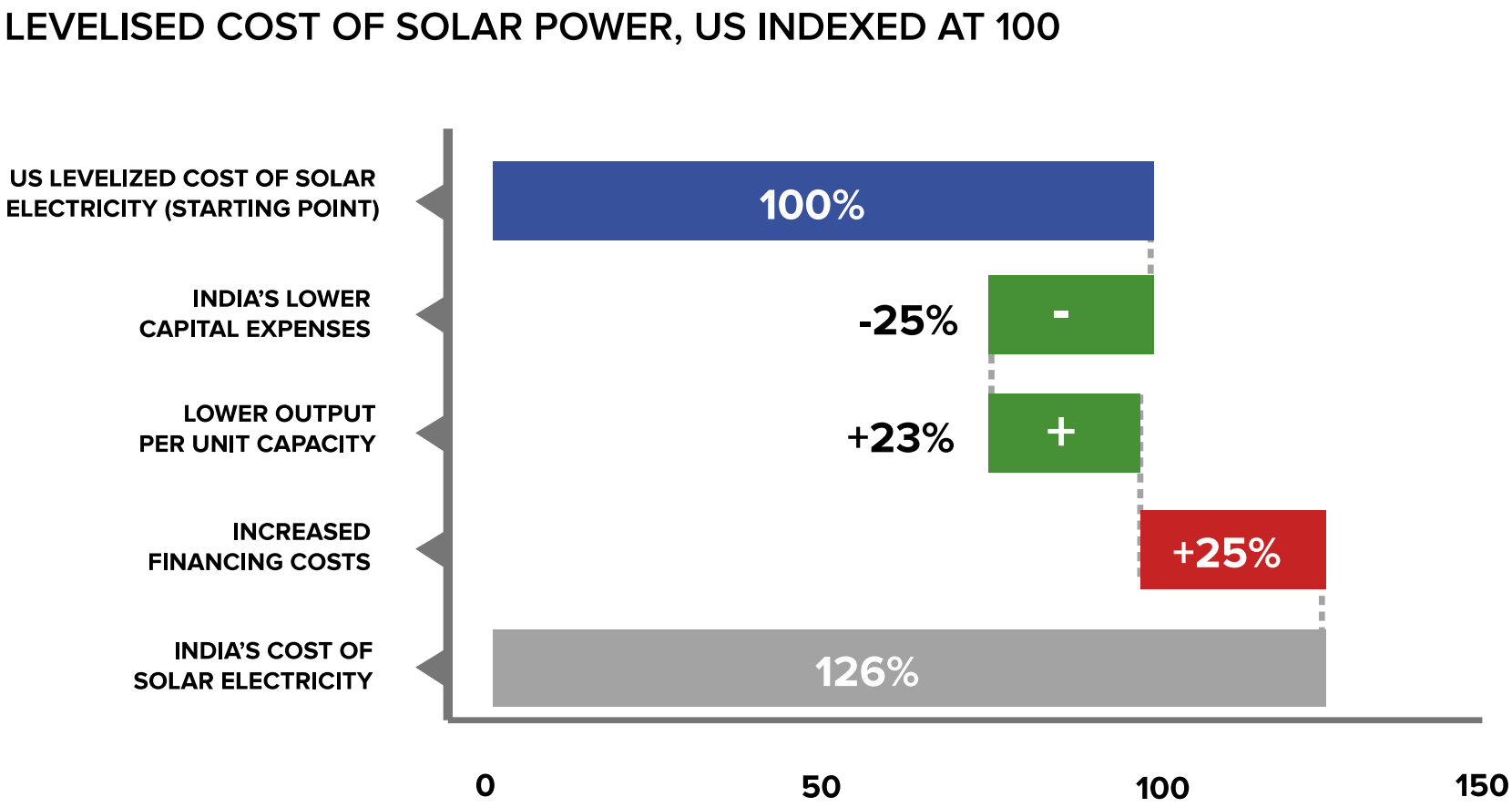
GLOBAL INVESTMENT REQUIREMENTS; 2015 TO 2030, US$ TRILLION, CONSTANT 2010 DOLLARS

Indicative figures only
High rates of uncertainty



Source: OECD (2006, 2012), IEA ETP (2012), modelling by Climate Policy Initiative (CPI) for New Climate Economy (forthcoming), and New Climate Economy analysis.

INVESTMENT: Financing costs for solar power are high in India – need measures to reduce the cost of finance

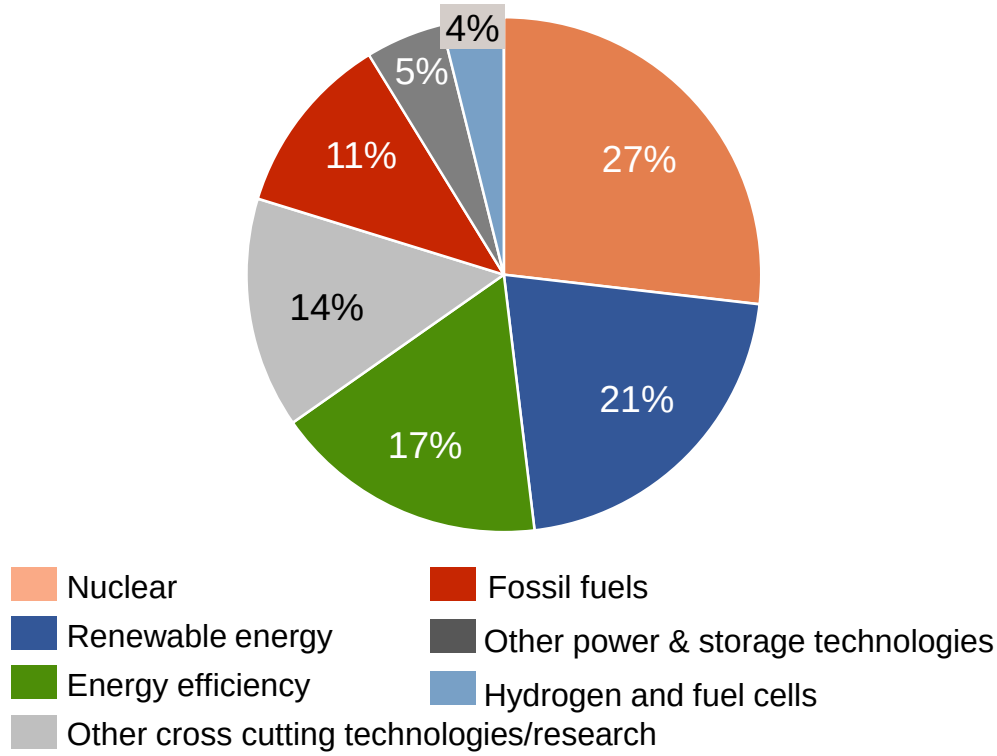


Source: Climate Policy Initiative modelling

INNOVATION: 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 countries[1]

Energy R&D split in 2011



Source: R&D figures and split from International Energy Agency (2013), Tracking Clean Energy Progress 2013, OECD/IEA, Paris, GDP figures from World Development Indicators 2014, adjusted for inflation from 2005 to 2010

The Global Commission recommends 10 transformative actions

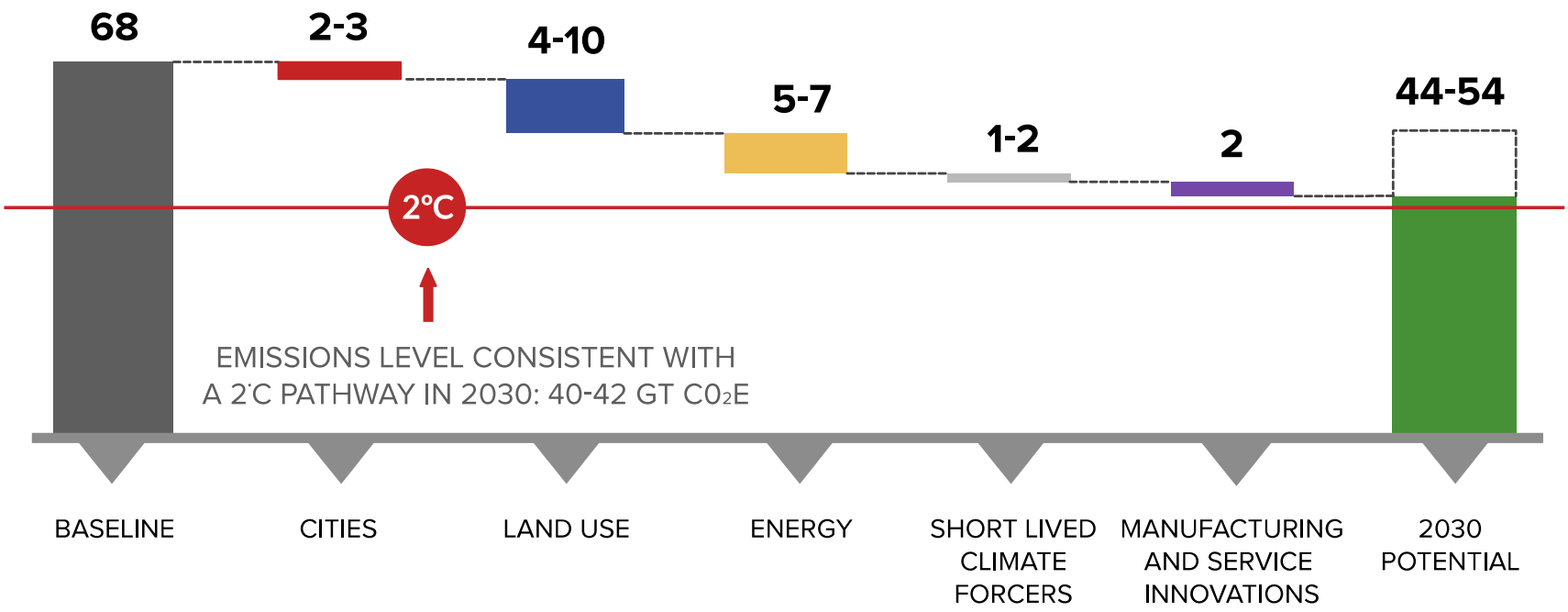
1. Integrate climate risk into strategic decisions
2. Secure a strong international climate agreement
3. End perverse subsidies
4. Price carbon to send a clear market signal
5. Scale-up low-carbon innovation
6. Reduce the cost of capital for low-carbon investment
7. Move toward connected and compact cities
8. End deforestation
9. Restore degraded lands
10. Phase out unabated coal fast

Source: NCE. For details please see the NCE Global Action Plan (2014)

Actions with net economic benefits could deliver most of the GHG abatement needed by 2030 for a 2C pathway

GHG EMISSIONS AND ABATEMENT POTENTIAL FROM SELECTED MAJOR LEVERS: 2030

Gigatonnes of CO_2 equivalents



Source: Emissions estimates: IPCC AR5; New Climate Economy analysis based on expert input and multiple data sources