



# THE GLOBAL COMMISSION ON THE ECONOMY AND CLIMATE

## NEW CLIMATE ECONOMY

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# The New Climate Economy project

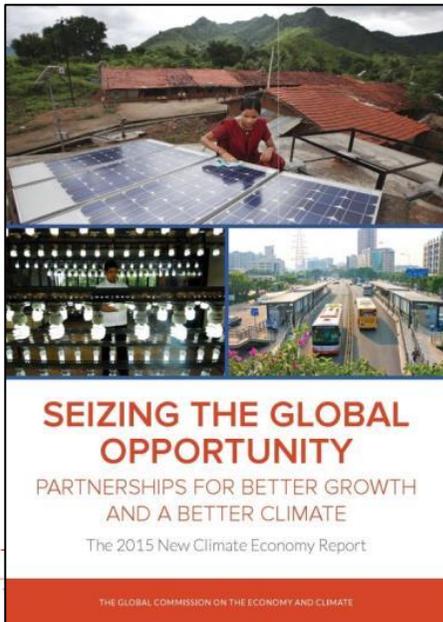
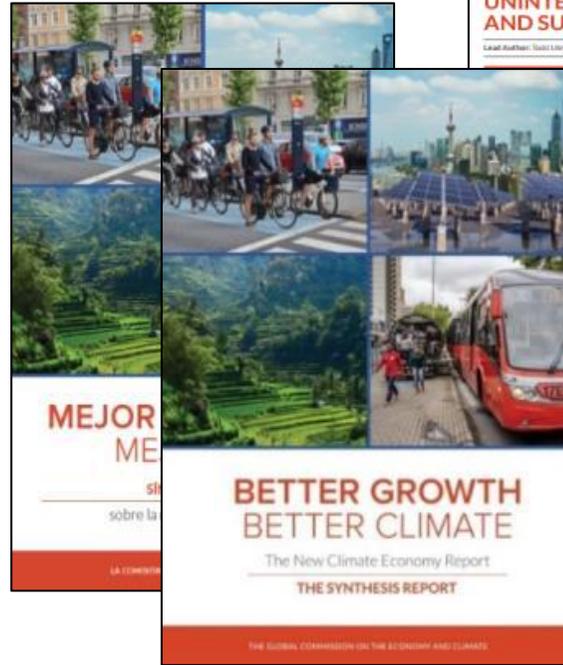
Commissioned in 2013 by 7 countries

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

Led by a Global Commission

28 former heads of government, finance ministers, CEOs and heads of economic institutions.

8 leading global research institutes conducted the analysis for the reports.

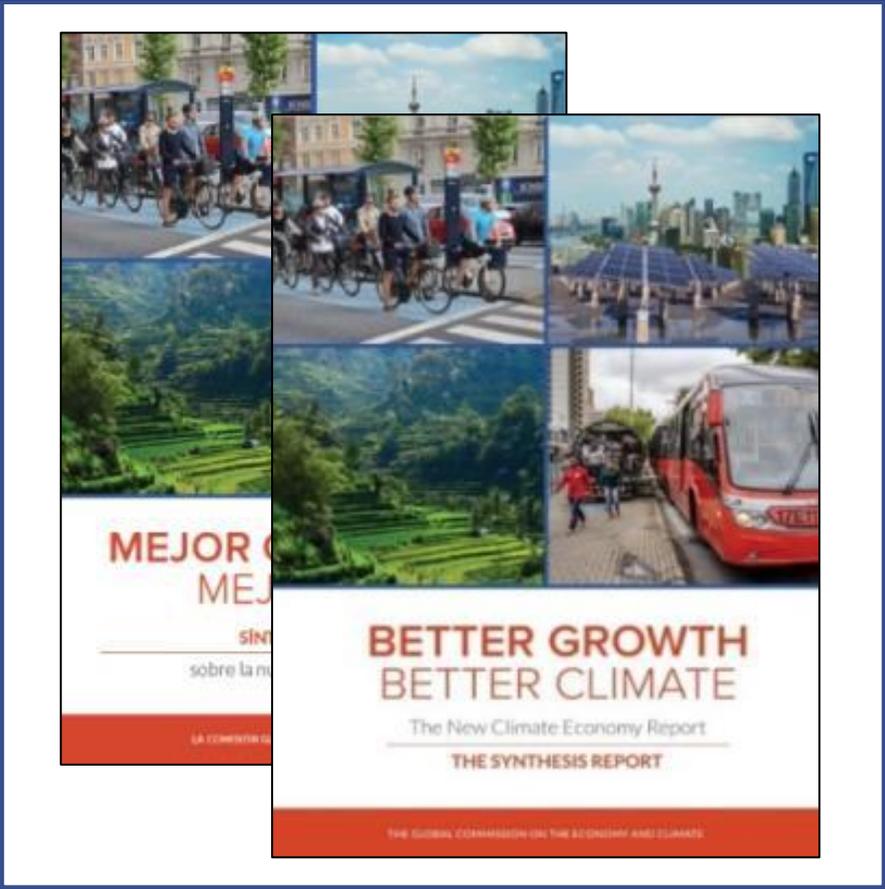


***Better Growth, Better Climate*** report (September 2014) showed that economic growth and climate protection can be achieved together.

***Seizing the Global Opportunity: Partnerships for Better Growth and a Better Climate*** (July 2015) focuses on how international and multi-stakeholder cooperation can catalyse better growth and a better climate.

Both reports are supported by numerous country reports and working papers.

# Better Growth, Better Climate: The New Climate Economy Report



## The false dilemma



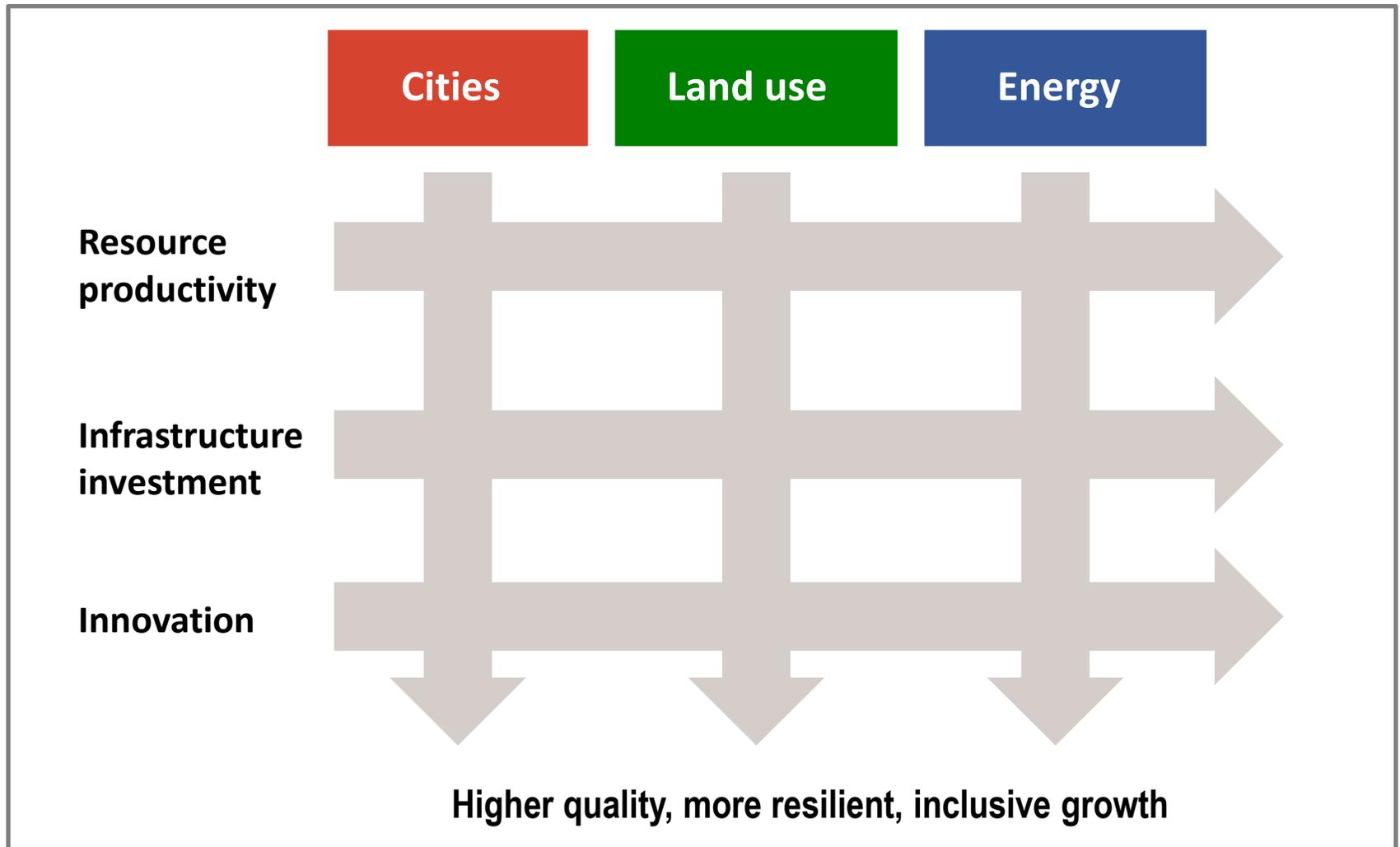
**Promoting  
economic  
growth**

VS



**Fighting  
climate  
change**

# *Better Growth, Better Climate* identifies 3 key systems and 3 key drivers of growth and climate performance



## The Commission's recommendations include:

*In the **key economic systems** where growth and emissions are concentrated*

Accelerate low-carbon development in the world's **cities**

Restore and protect **agricultural and forest landscapes** and increase agricultural productivity

Invest at least US\$1 trillion a year in **clean energy** by 2030

Raise **energy efficiency** standards to the global best

*For the **key drivers of economic growth** and emissions reductions*

Implement effective **carbon pricing**

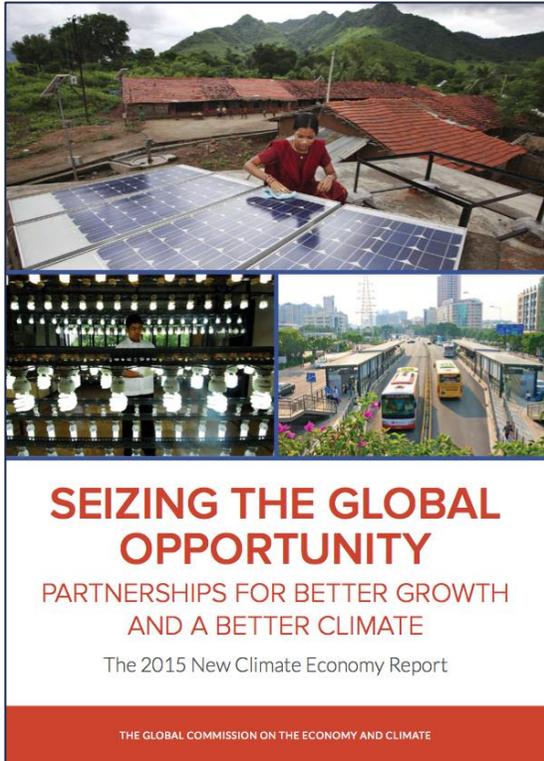
Ensure new **infrastructure** is climate-smart

Galvanise low-carbon **innovation**

*In the critical **business and finance** sectors*

Drive low-carbon action through **business and investor** action

# Main conclusions of *Seizing the Global Opportunity*

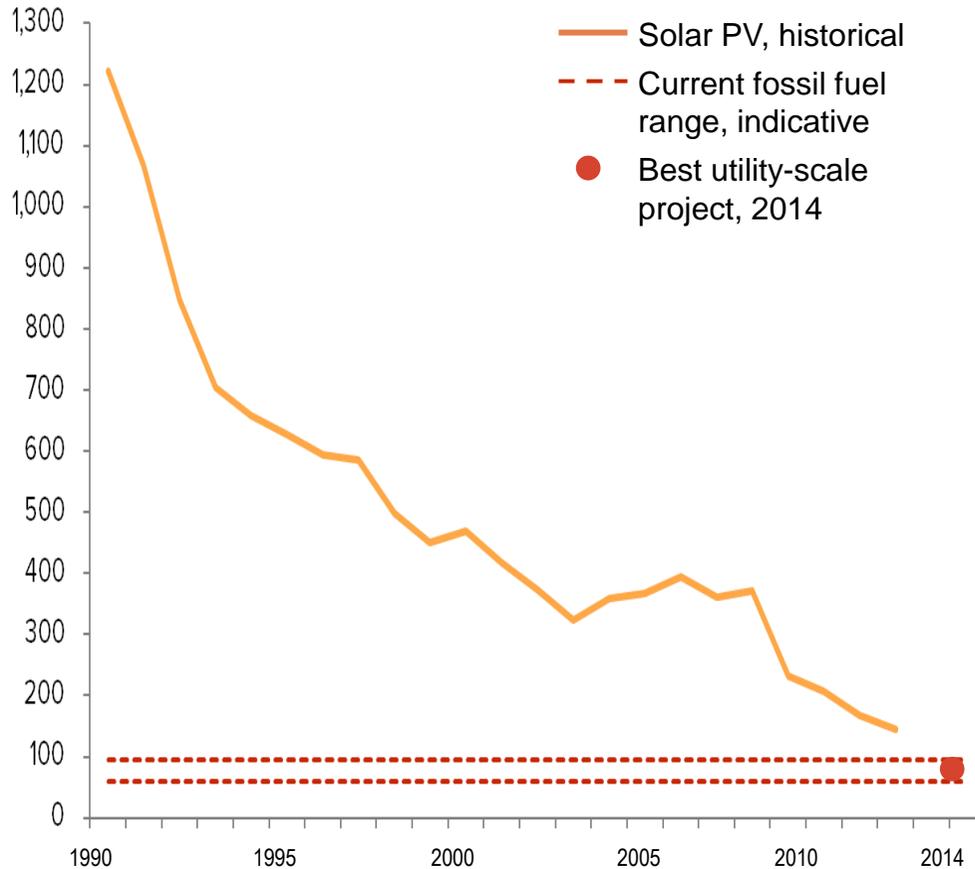


- **Global momentum is building towards a low-carbon economy.**
- **Cooperative, multi-stakeholder partnerships can catalyze further ambition and action and generate economic benefits.**
- **Better growth can almost close the emissions gap.** The 10 proposed actions in the 2015 report can achieve up to 96% of the greenhouse gas emissions reductions needed by 2030.
- **The global level of ambition on climate change can be raised in economically beneficial ways.** National climate pledges (“INDCs”) should therefore be “floors to ambition, not ceilings”.

# The costs of solar and wind energy are coming down

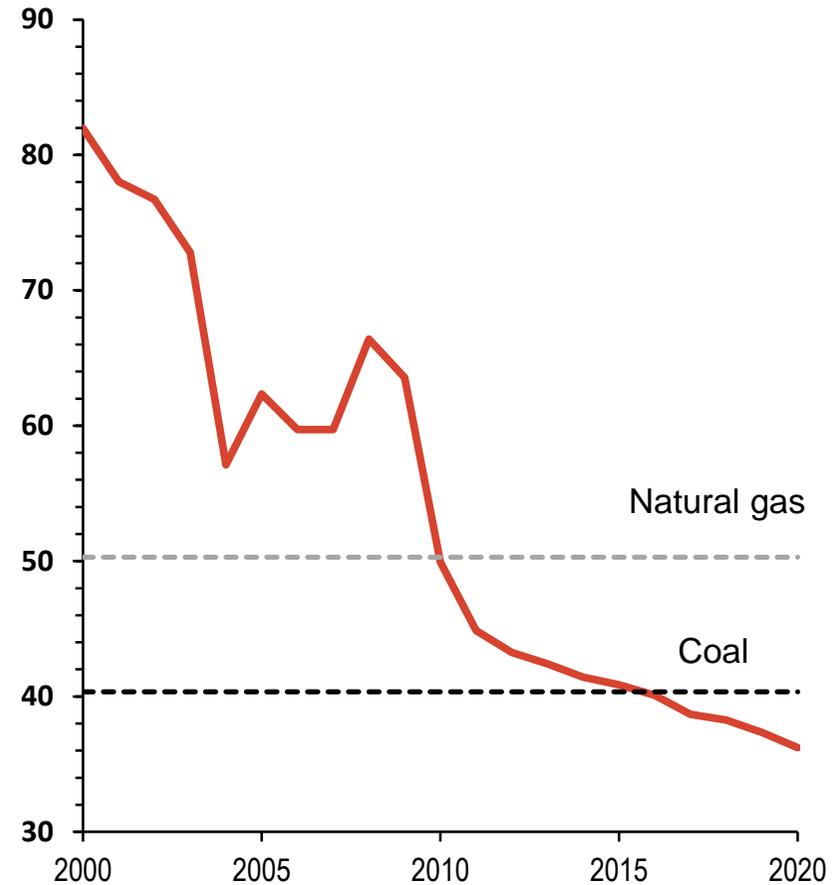
## Solar power costs over time

USD/MWh



## Wind power costs over time

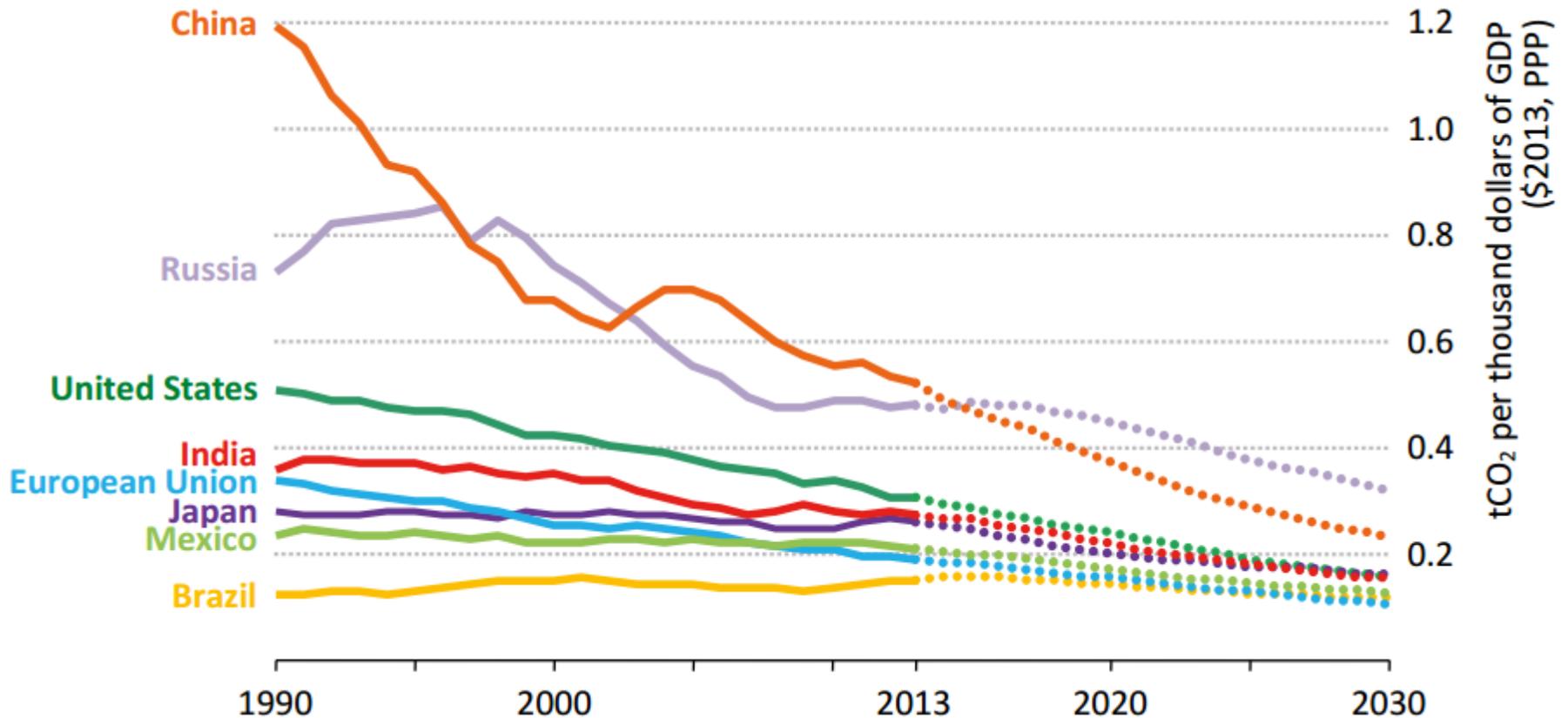
USD/MWh



Note: Assuming coal price of 70 USD/tonne and gas price of 10 USD/Mmbtu. Assuming a 35% capacity factor for wind power i.e. 35% utilisation, and a 15% capacity factor for solar power

# In 2014, global GDP grew by 3% while emissions stalled; the carbon intensity of the global economy is falling

Carbon intensity to date and projected under INDC scenario based on country pledges



Source: IEA (2015). World Energy Outlook Special Report 2015: Energy and Climate Change.

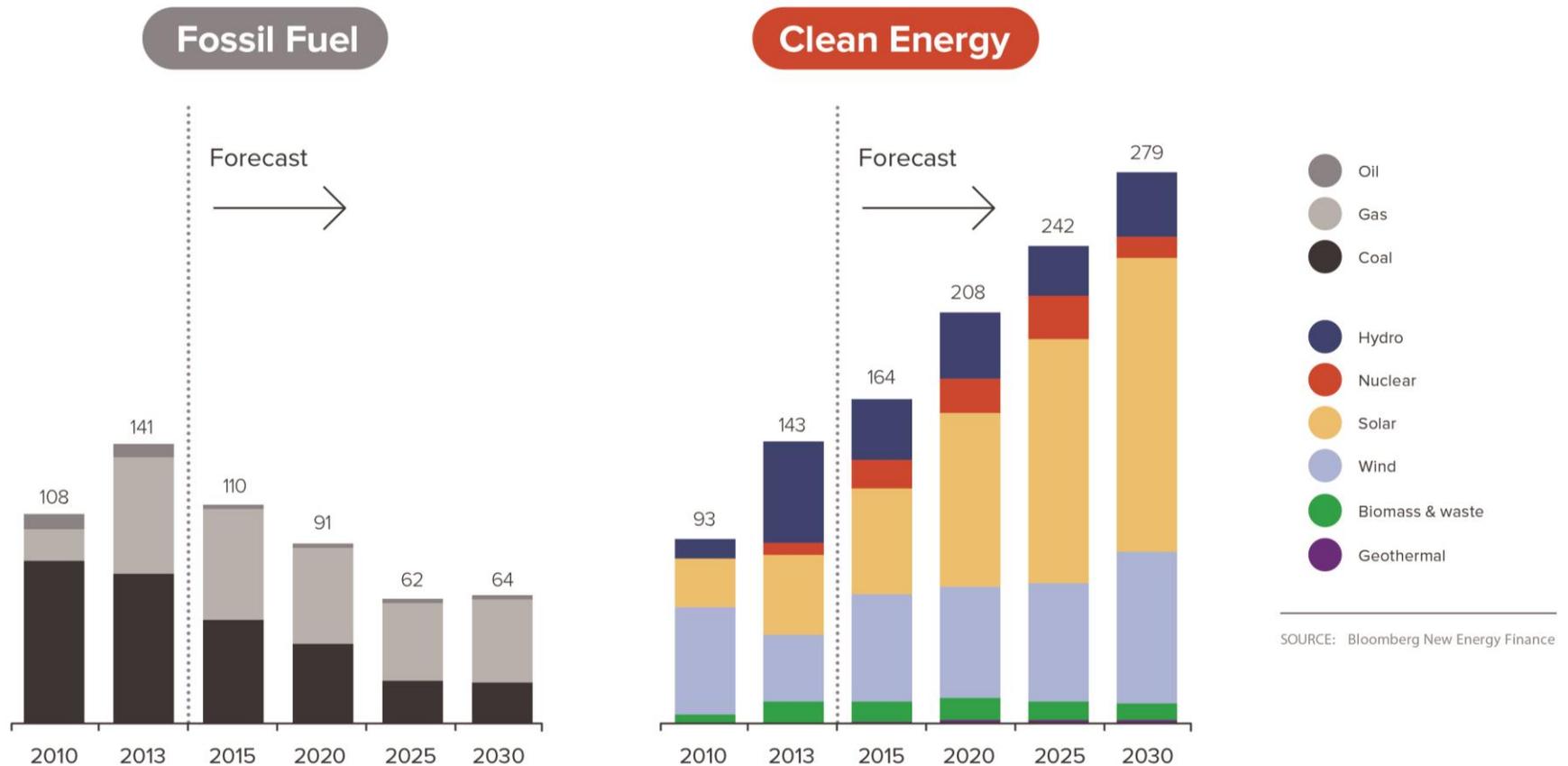
**THE NEW CLIMATE ECONOMY**

The Global Commission on the Economy and Climate

# **CLEAN ENERGY: Invest at least US\$1 trillion a year**

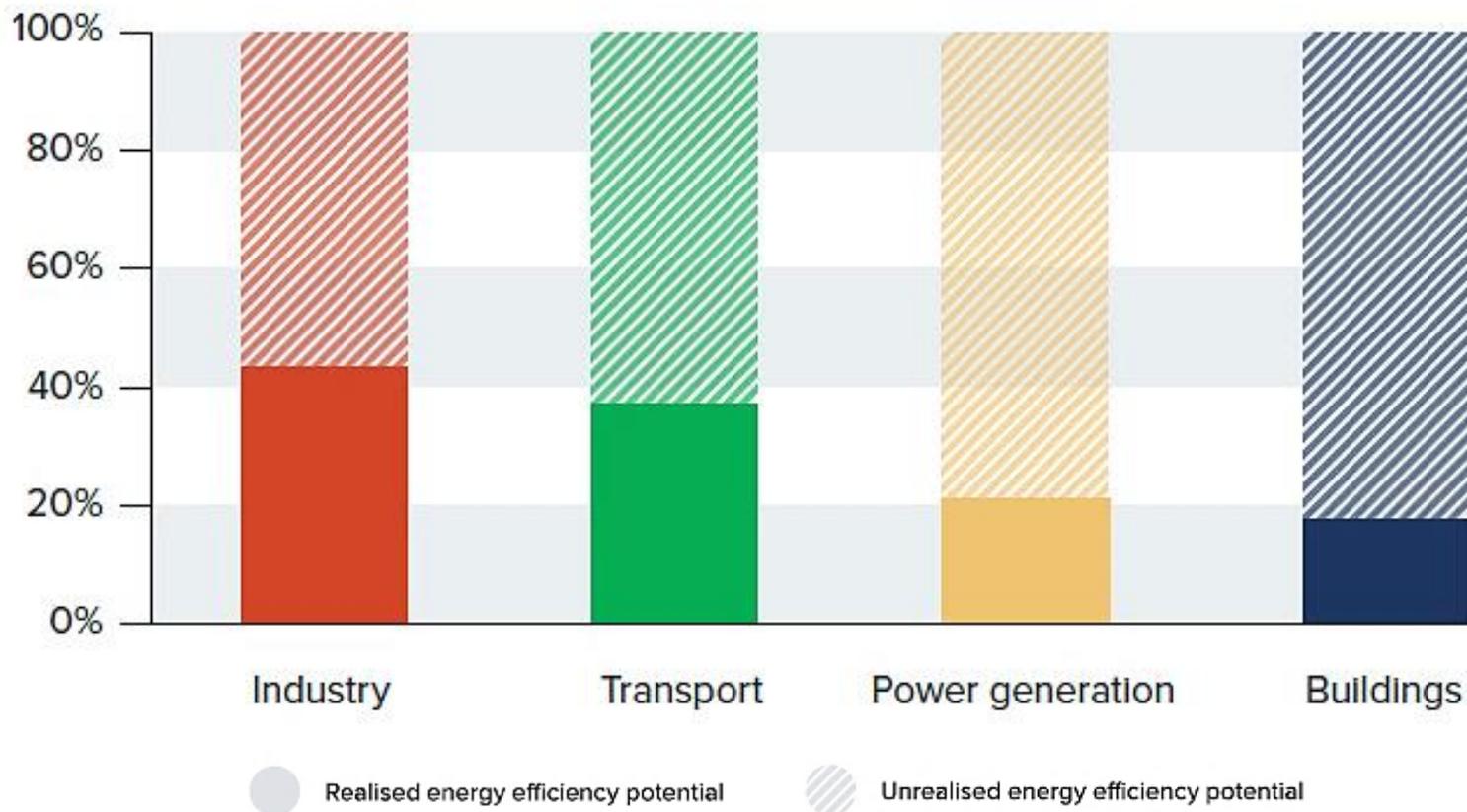


# Momentum is building: in 2013, more low-carbon electricity capacity was added than fossil fuel capacity (GW)



Source: Liebreich, M., 2015. *State of the Industry Keynote*. Presented at the Bloomberg New Energy Finance Annual Summit, New York, 14 April. Available at: <http://about.bnef.com/presentations/liebreich-state-industry-keynote/>.

# ENERGY EFFICIENCY: Up to 2/3 of energy efficiency potential will remain untapped without action



IEA, 2014. *Capturing the Multiple Benefits of Energy Efficiency*. International Energy Agency, Paris. Available at: [http://www.iea.org/bookshop/475-Capturing the Multiple Benefits of Energy Efficiency](http://www.iea.org/bookshop/475-Capturing_the_Multiple_Benefits_of_Energy_Efficiency).

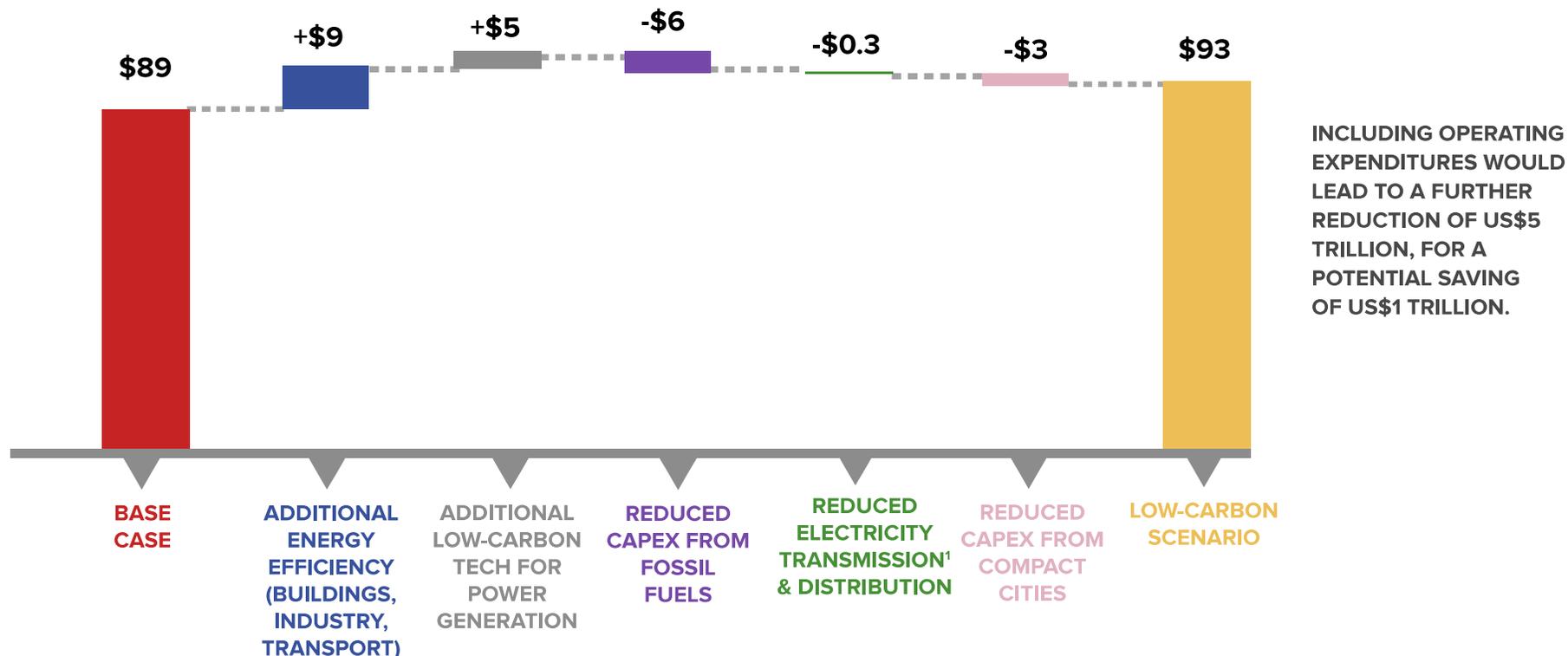
# INFRASTRUCTURE: Ensure new infrastructure is climate-smart



# INFRASTRUCTURE: Investment needs in a low-carbon scenario are comparable to under business-as-usual

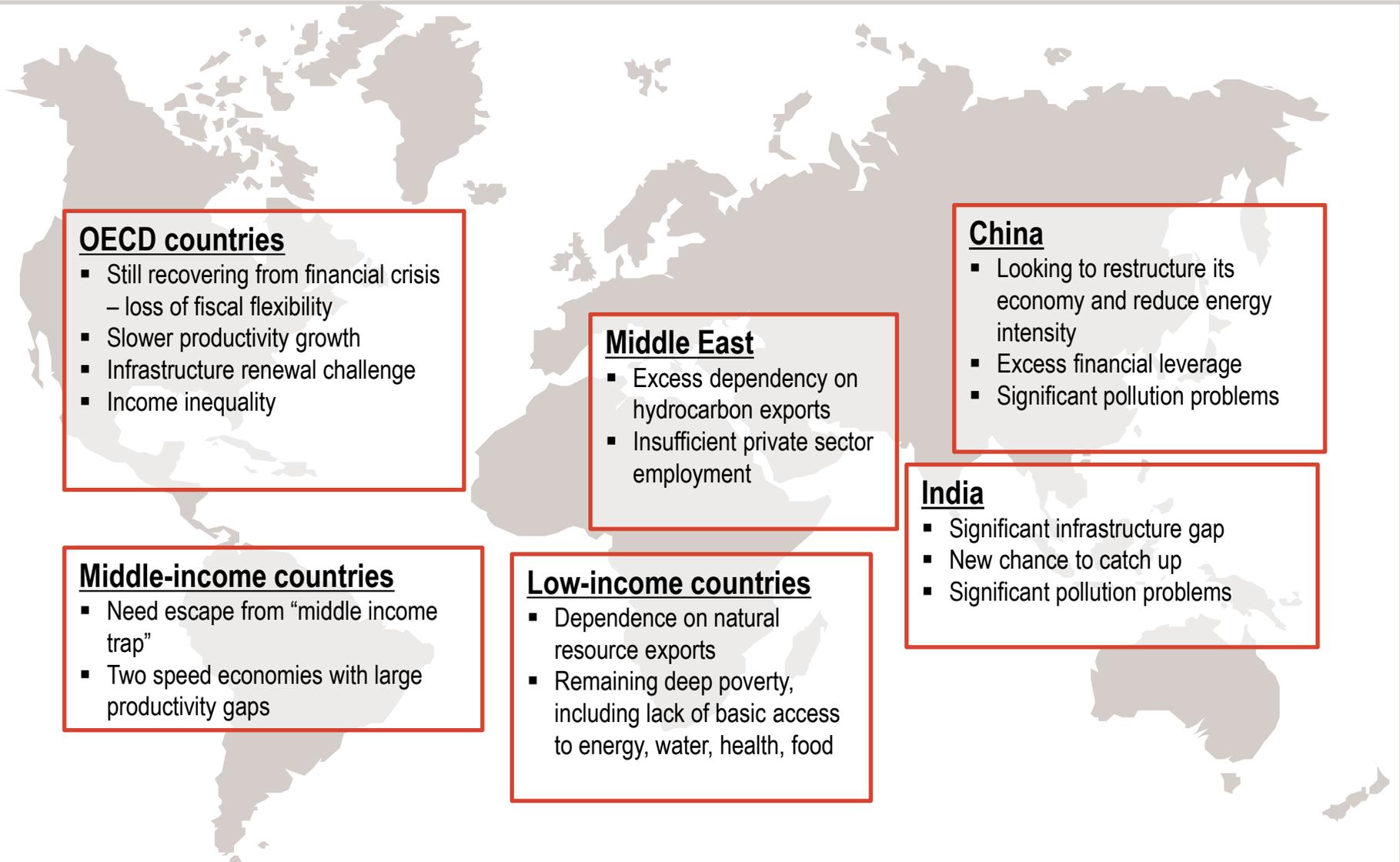
**GLOBAL INVESTMENT REQUIREMENTS; 2015 TO 2030,  
US\$ TRILLION, CONSTANT 2010 DOLLARS**

Indicative figures only  
High rates of uncertainty



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

# Growth is weak across the world economy: countries face different challenges



## OECD countries

- Still recovering from financial crisis
  - loss of fiscal flexibility
- Slower productivity growth
- Infrastructure renewal challenge
- Income inequality

## Middle-income countries

- Need escape from “middle income trap”
- Two speed economies with large productivity gaps

## Middle East

- Excess dependency on hydrocarbon exports
- Insufficient private sector employment

## Low-income countries

- Dependence on natural resource exports
- Remaining deep poverty, including lack of basic access to energy, water, health, food

## China

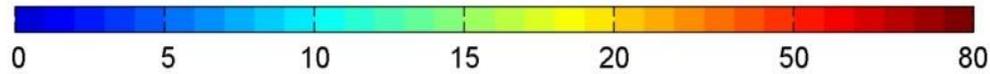
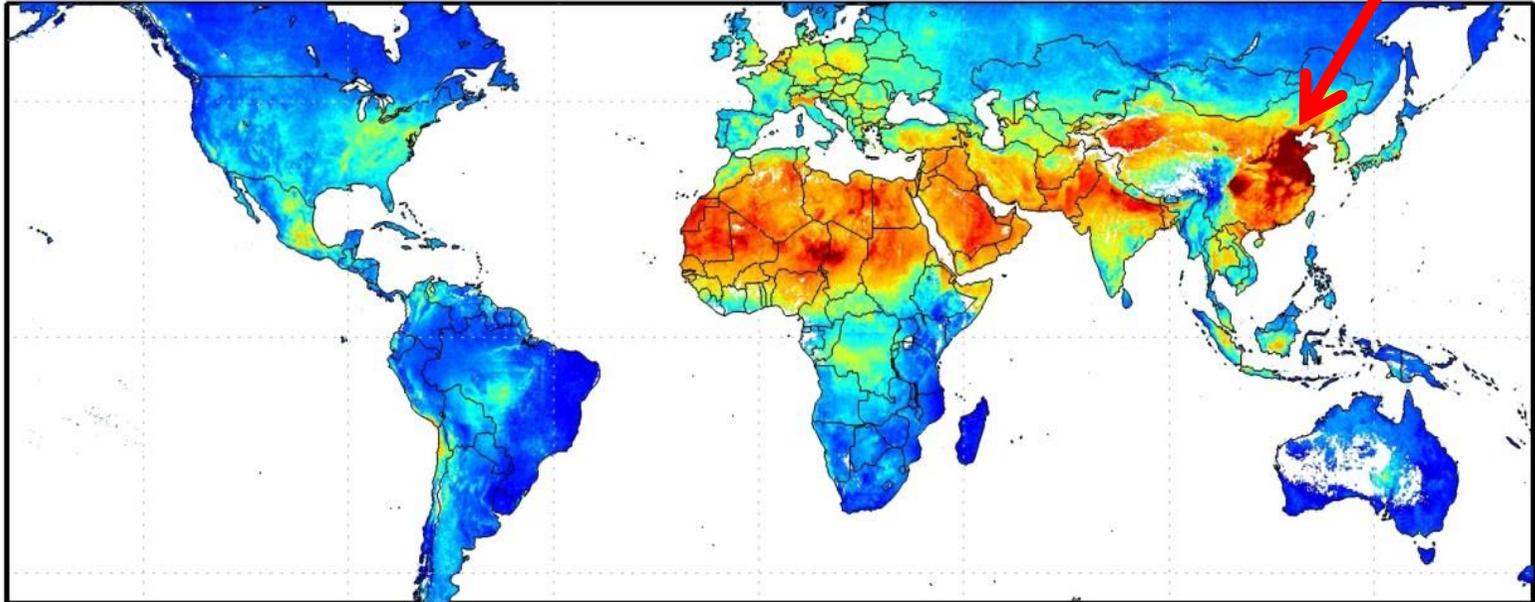
- Looking to restructure its economy and reduce energy intensity
- Excess financial leverage
- Significant pollution problems

## India

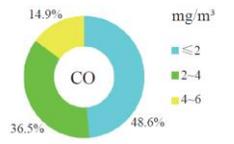
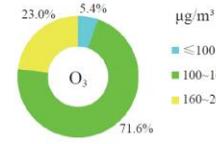
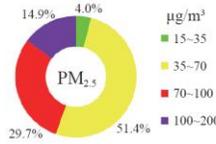
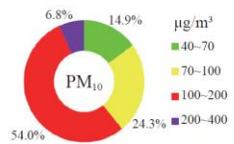
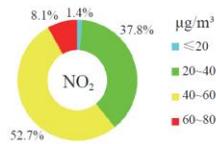
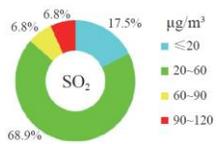
- Significant infrastructure gap
- New chance to catch up
- Significant pollution problems

# Air pollution in China

Hebei, Shangxi and Shangdon provinces



Satellite-Derived PM<sub>2.5</sub> [ $\mu\text{g}/\text{m}^3$ ]



# NCE China study calls for synergy of economic, energy and environmental goals



## *Economy*

- The slowing down growth of economy needs new drivers to avoid middle income trap



## *Energy*

- Energy consumption will surpass supply capacity, requires for improved energy security



## *Environment*

- The Grade II standard of air quality needs to be achieved in year 2030



# New Climate Economy and Africa Progress Report

## AFRICA'S ENERGY GAP: THE COSTS OF THE DIVIDE

**621 MILLION**

Africans do not have access to electricity



of SSA's energy is consumed by South Africa

**89 BILLION**

US dollars of petroleum exported by Nigeria in 2013

**93 MILLION**

Nigerians lack access to electricity

**4/5**   
The icon consists of five stylized human figures in a row. The first four are black, and the fifth is white.

**OF THE POPULATION (727 MILLION)** rely on solid biomass, mainly fuelwood and charcoal, for cooking

**600,000**

**AFRICANS ARE KILLED EVERY YEAR** by air pollution caused by the use of solid biomass for cooking

In 9 African countries, more than

**80%**

**OF PRIMARY SCHOOLS HAVE NO ELECTRICITY**

In Africa, the poorest households spend



**MORE PER UNIT OF ENERGY THAN THE WEALTHIEST HOUSEHOLDS** with a connection to the grid

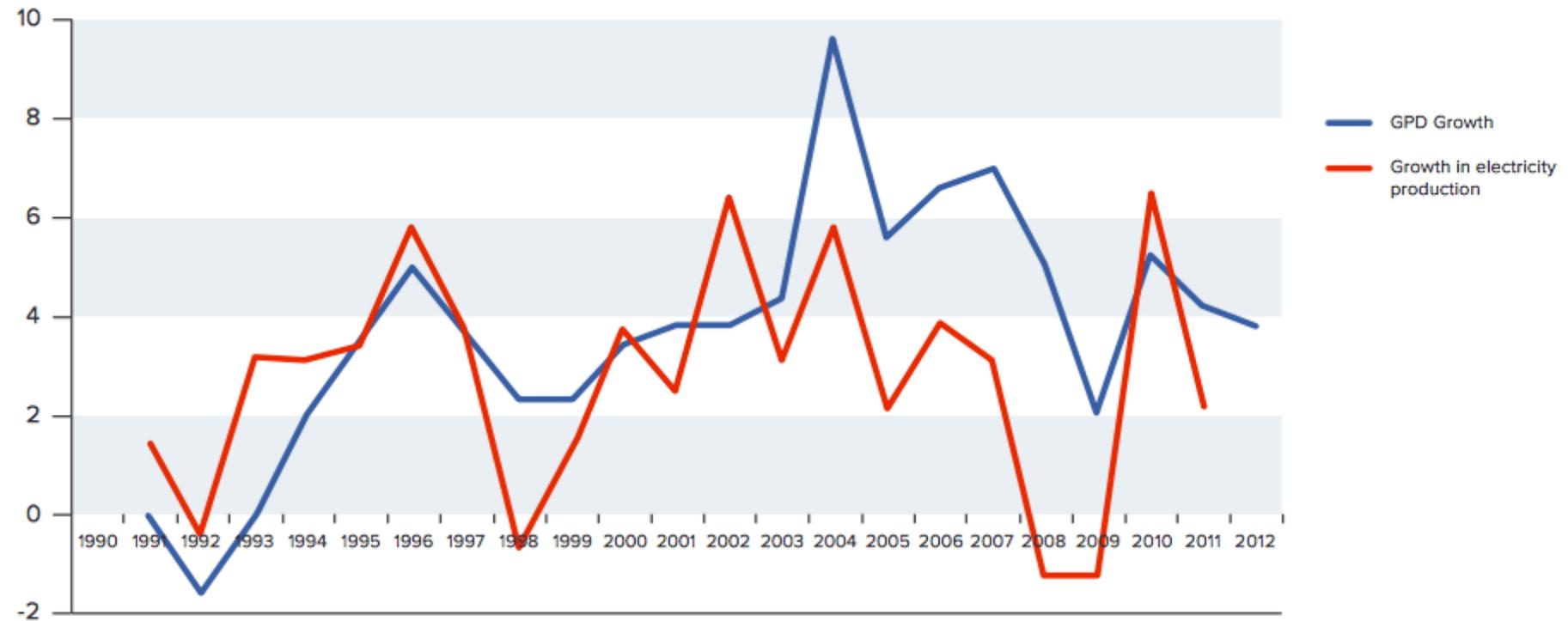
On current trends, it will take Africa until

**2080**

**TO ACHIEVE UNIVERSAL ACCESS TO ELECTRICITY**

# We know that energy access and electricity use is important for both growth and reduction of poverty

Pattern of annual growth rates in GDP and electricity consumption, sub-Saharan Africa, 1990-2012



Source: World Development Indicators.

# New Climate Economy approach for Low-Income Countries

## Low-Income Country mindset...

Growth is the top priority - any other goals will distract from growth. “Pollute first, clean up later”.

Because it is still a fight to access basics - e.g. clean water, sanitation, food, healthcare - can't focus on emissions.

Using expensive low-carbon energy will delay development.

Capital costs of low-carbon energy make it unaffordable.

## New Carbon Economy mindset...

Growth and climate are compatible. Costs of “pollute first...” are higher and benefits lower than often perceived.

Better and more efficient use of resources leads to better access. (e.g. water, energy, etc.)

Costs have fallen dramatically in recent years and there are many other benefits.

Low-carbon energy does have higher capital costs, but is affordable with donor support and good policy.

## Energy Intensive Sectors

“Employment in heavy and energy-intensive industrial sectors is also likely to be affected, as the shift to a low-carbon economy would probably shrink the relative share of these industries in the economy over the long term. ... Governments may need to **support affected industrial sectors in developing new lower-carbon strategies, particularly to exploit the potential for technological innovation in products and processes.**” (*NCE, 2014*)

## A Just Transition

"Governments will need to commit to a “just transition”, providing **support for displaced workers, affected communities, and low-income households.** And the mix of policies used will need to be adjusted to suit different country circumstances.” (*NCE, 2015*)

## For more information on the New Climate Economy and World Resources Institute

- Download reports, country case studies, and working papers:  
[www.newclimateeconomy.report](http://www.newclimateeconomy.report)
- Sign up for the NCE mailing list:  
[www.newclimateeconomy.net](http://www.newclimateeconomy.net)
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