

Energy Efficiency: at the center of the climate change challenge

ATEE
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www.iea.org

efficient

The little engine that could ...



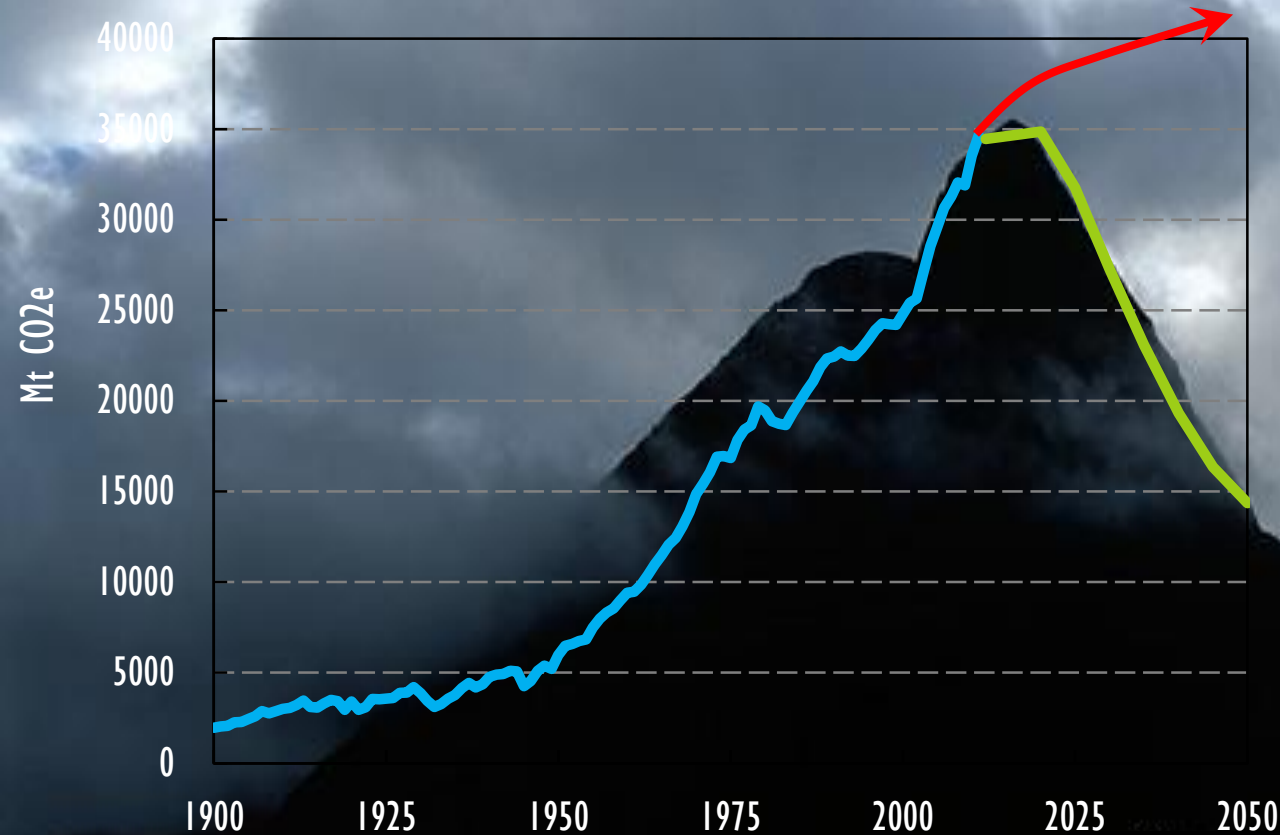


Prologue

“Getting to the top is optional.

Getting down is mandatory.”

Ed Viesturs



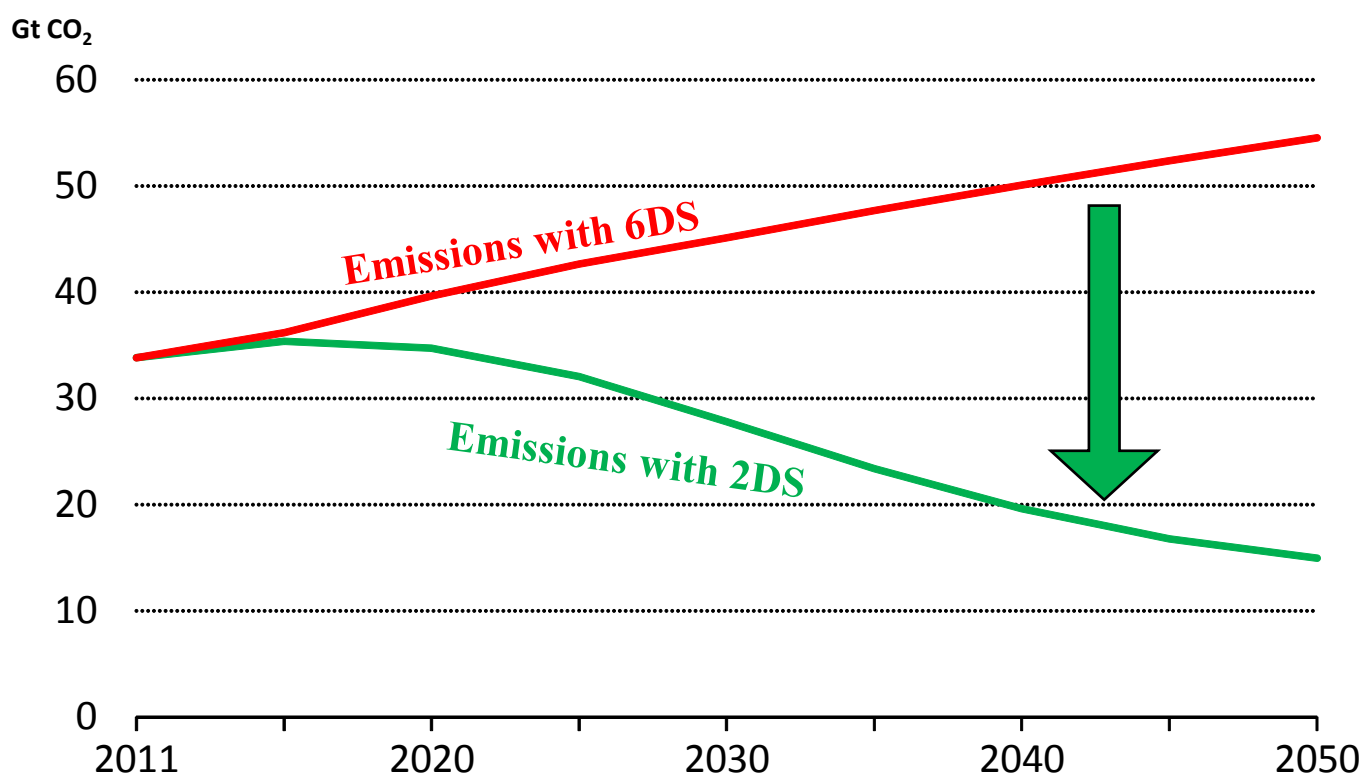


International
Energy Agency
Secure
Sustainable
Together



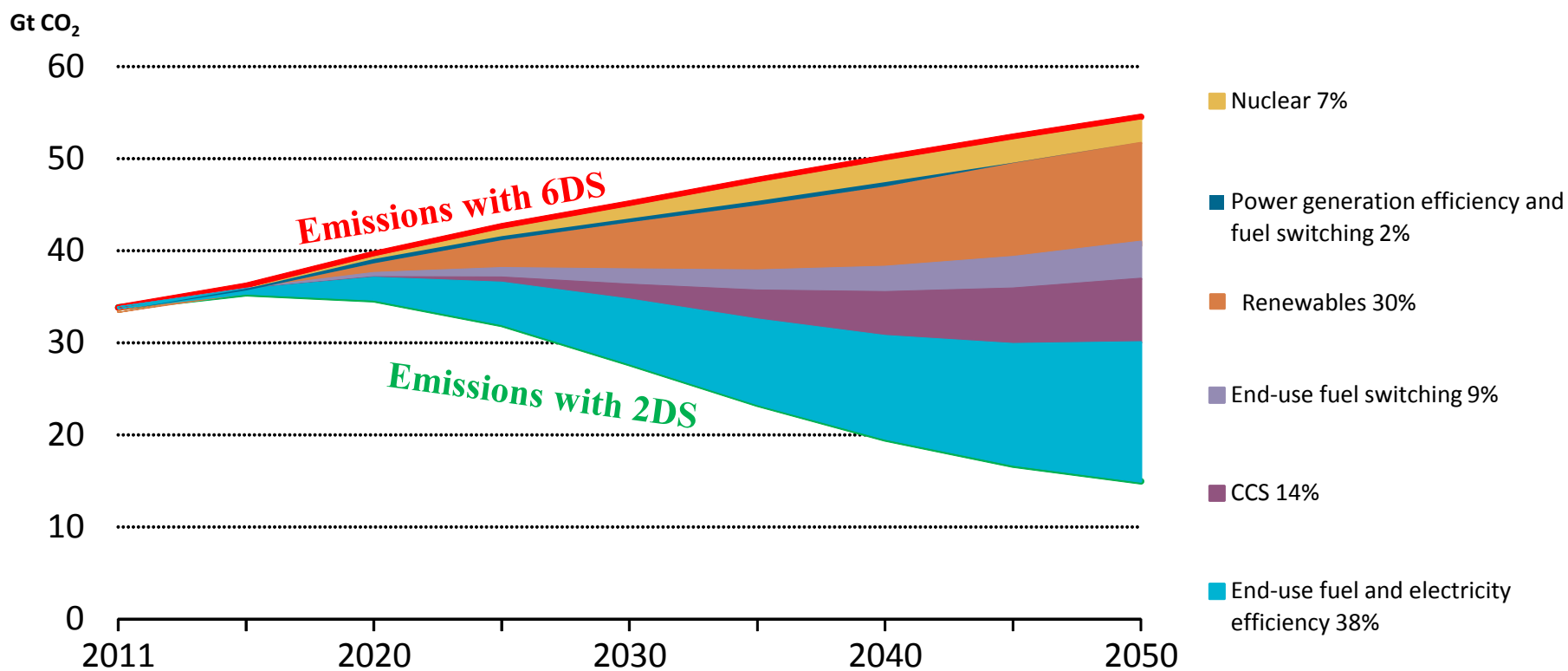
Our mitigation story

Portfolio of actions to reduce energy sector emissions

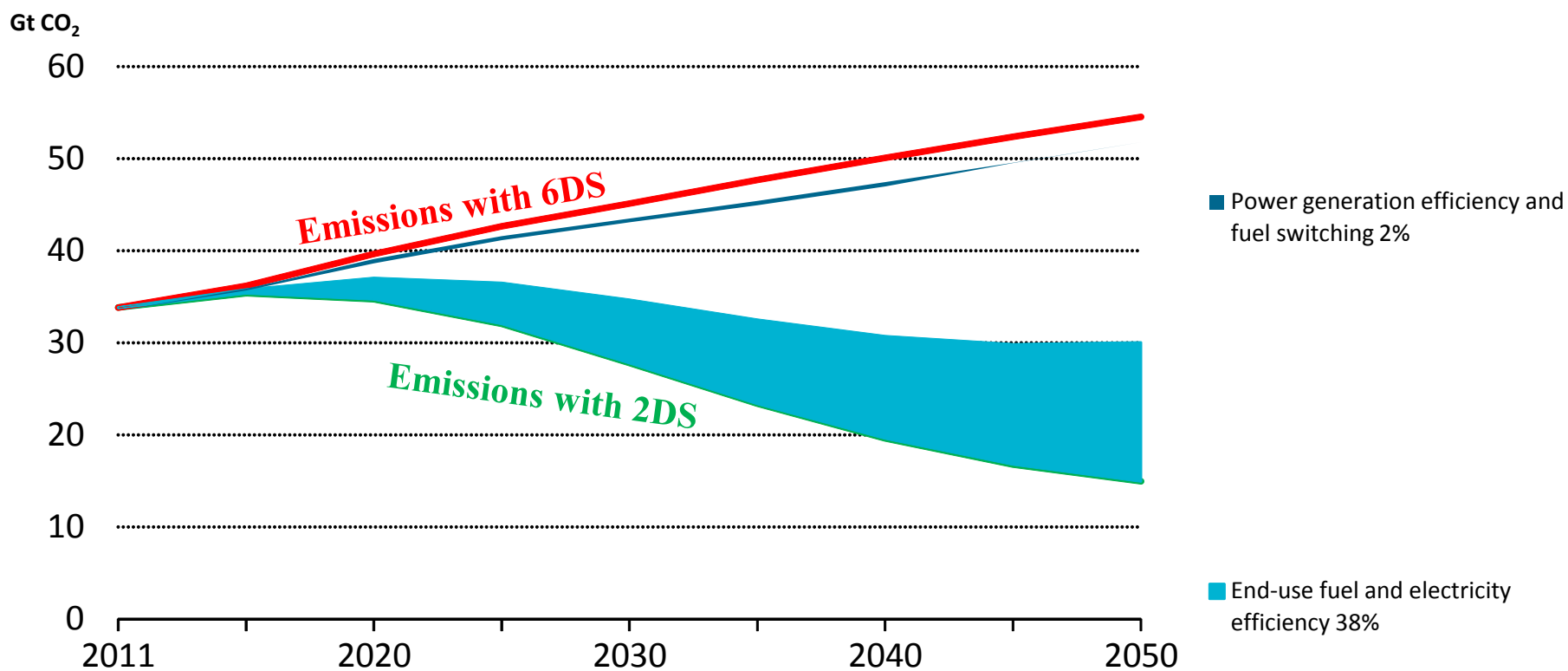


Source: ETP 2014

Portfolio of actions to reduce energy sector emissions

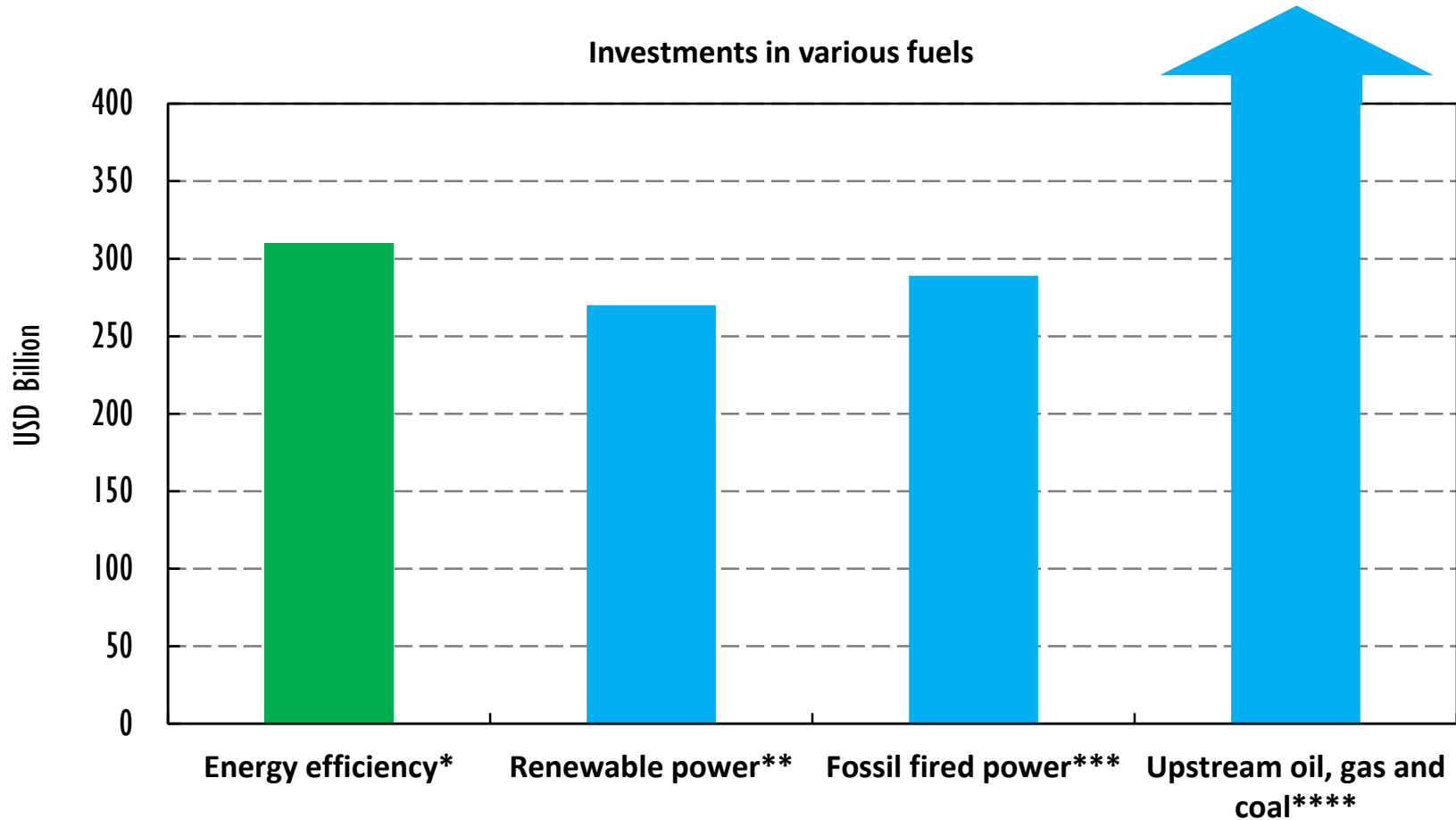


Portfolio of actions to reduce energy sector emissions



EE provides largest contribution to abatement at 40%

Energy efficiency investment: bigger than you might think



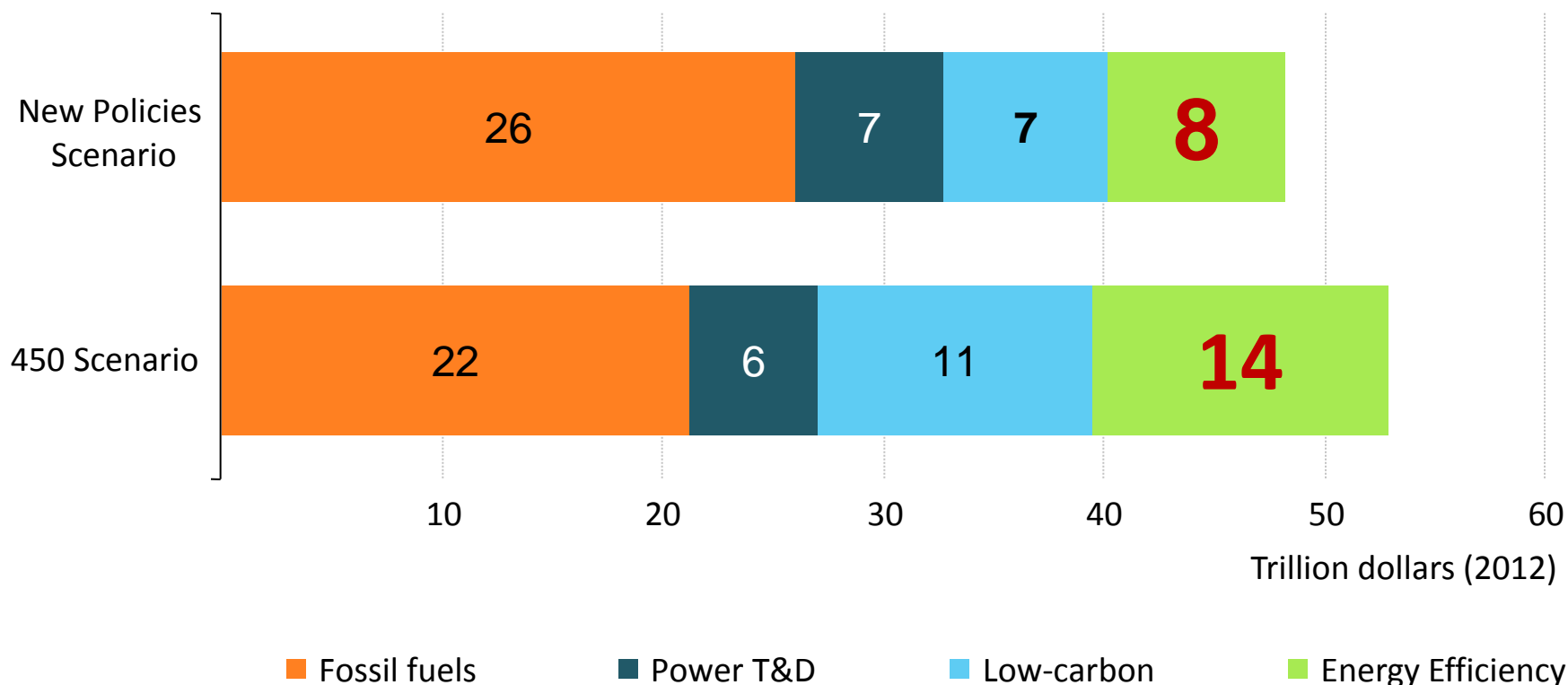
* IEA (2014), Energy Efficiency Market Report, Paris: OECD/IEA. ** IEA (2015), Renewable Energy Market Report, Paris: OECD/IEA.

*** Frankfurt School-UNEP Center (2015), Global Trends in Renewable Energy Investment, Frankfurt: Frankfurt School of Management, UNEP and Bloomberg New Energy Finance.

**** IEA (2014), World Energy Investment Outlook, Paris: OECD/IEA.

Big . . . but not big enough . . .

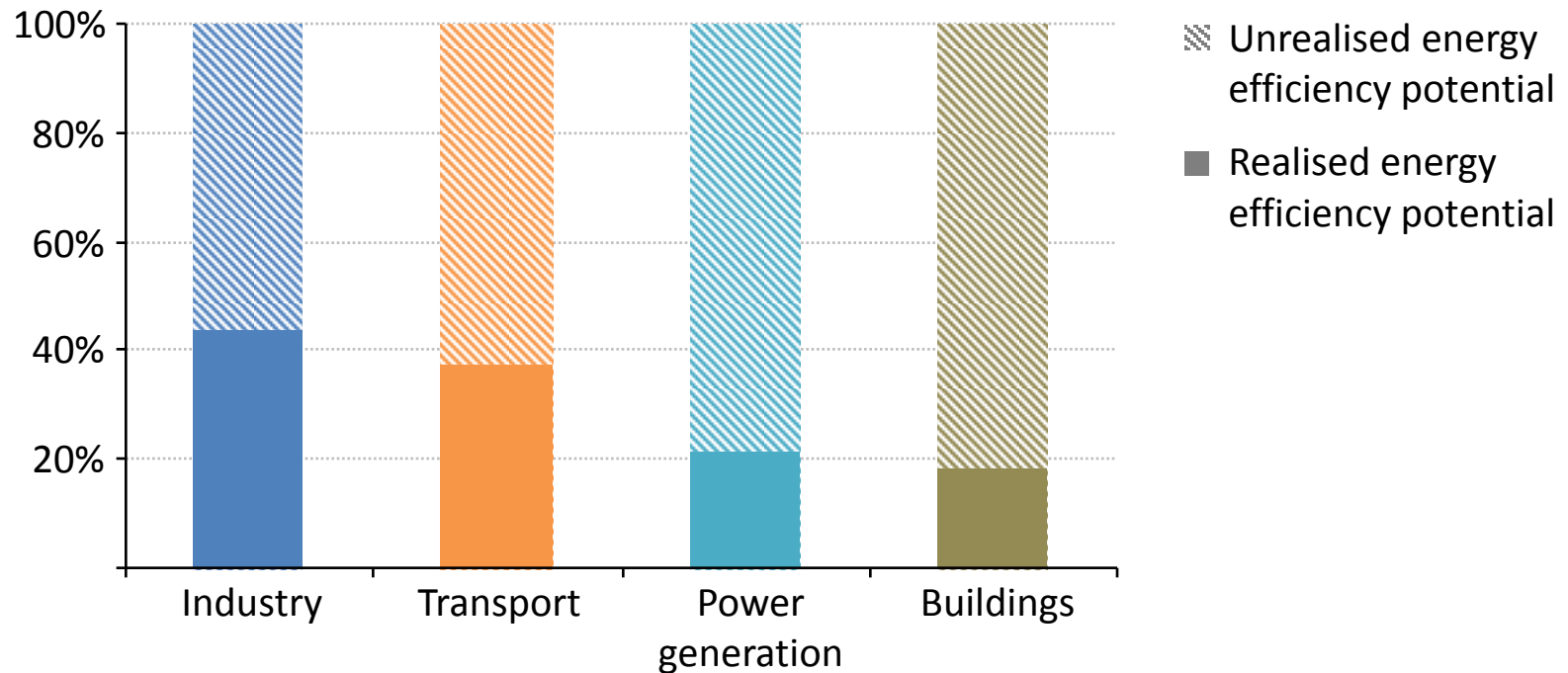
Cumulative Investment in the New Policies and 450 Scenarios, 2014-2035



Spending on energy efficiency in the 450 (2DS) scenario needs to top over \$600 billion/yr

Potential for energy efficiency scale-up is there ...

Energy efficiency potential used by sector in the WEO 2012 New Policies Scenario

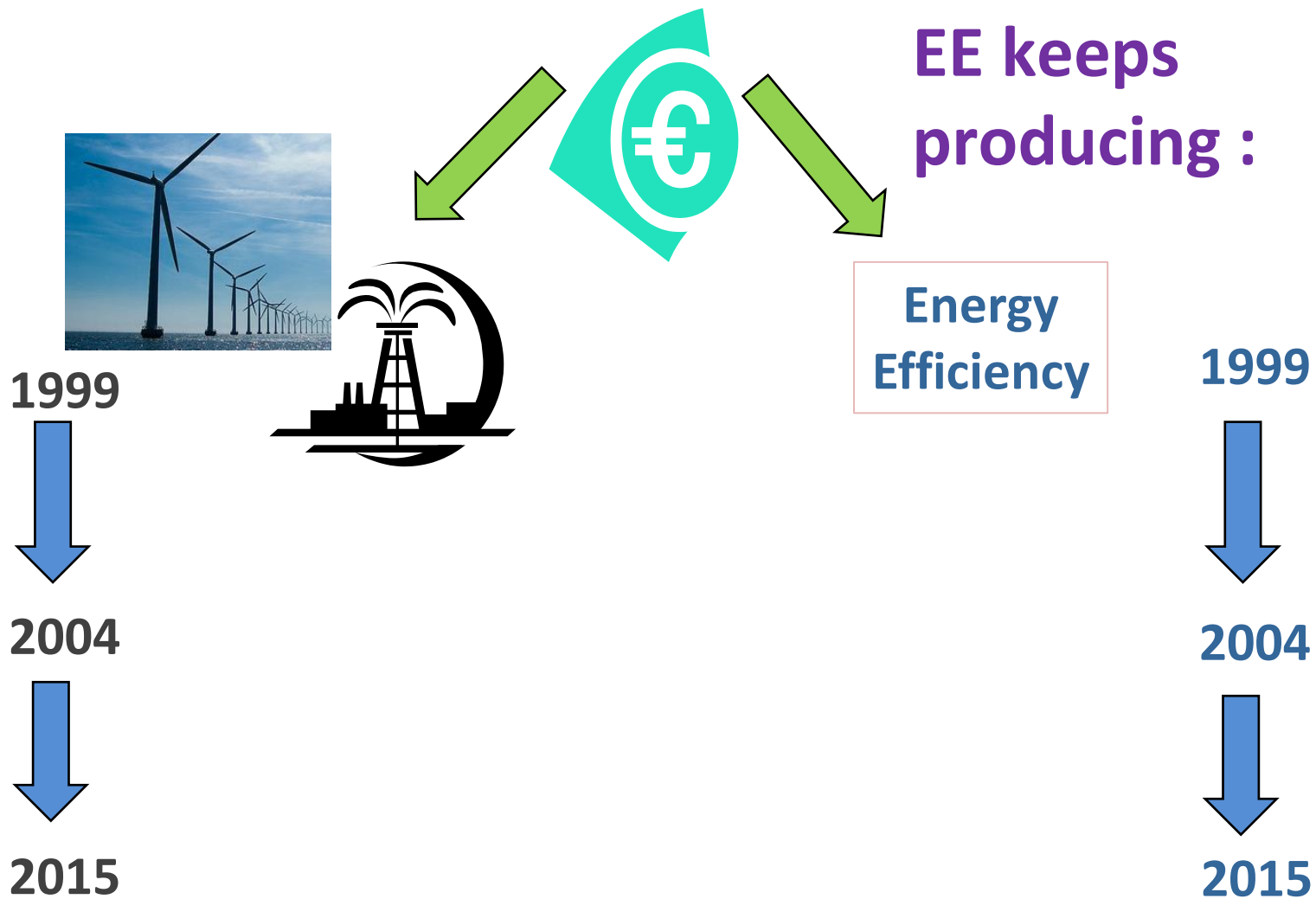


Two-thirds of the economic potential to improve energy efficiency remains untapped in the period to 2035



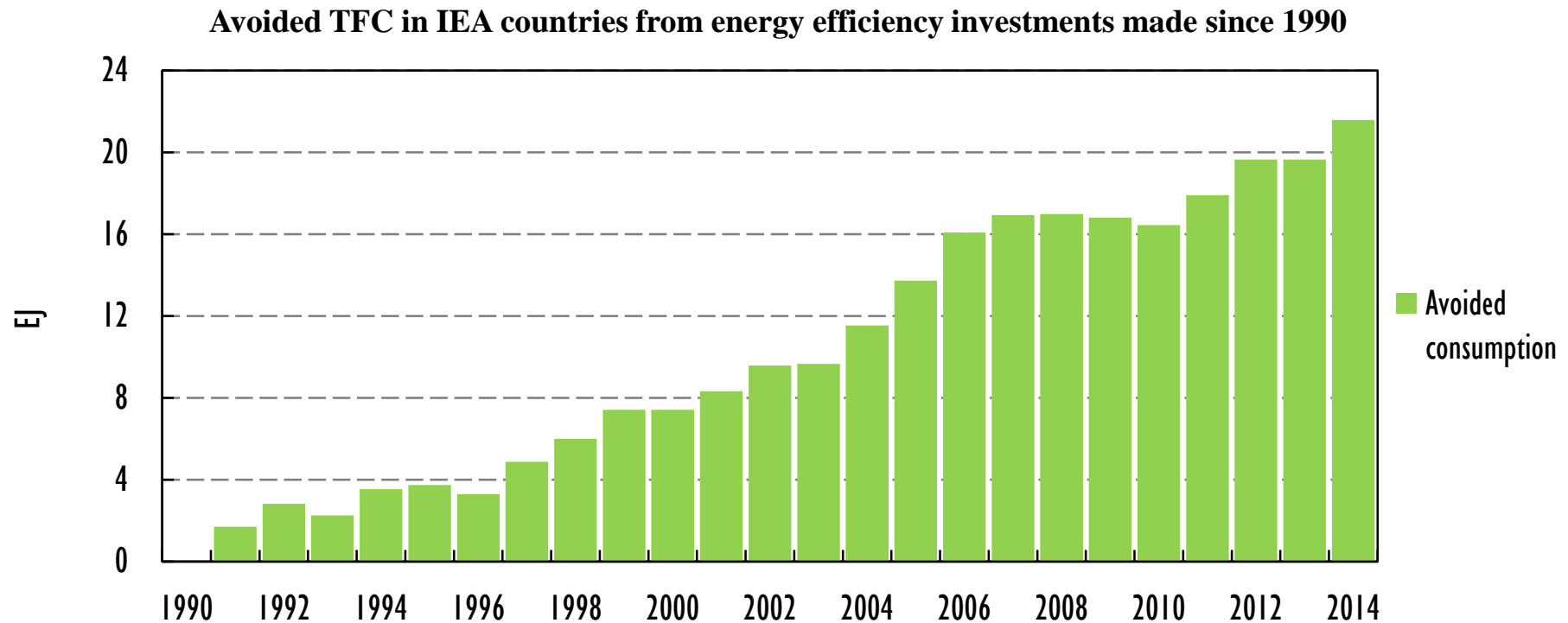
***Energy efficiency:
the gift that keeps
on giving . . .
in so many ways***

Energy efficiency: more 'productive' that we give it credit for



EE's avoided consumption in IEA topped 22 EJ (520 Mtoe) in 2014

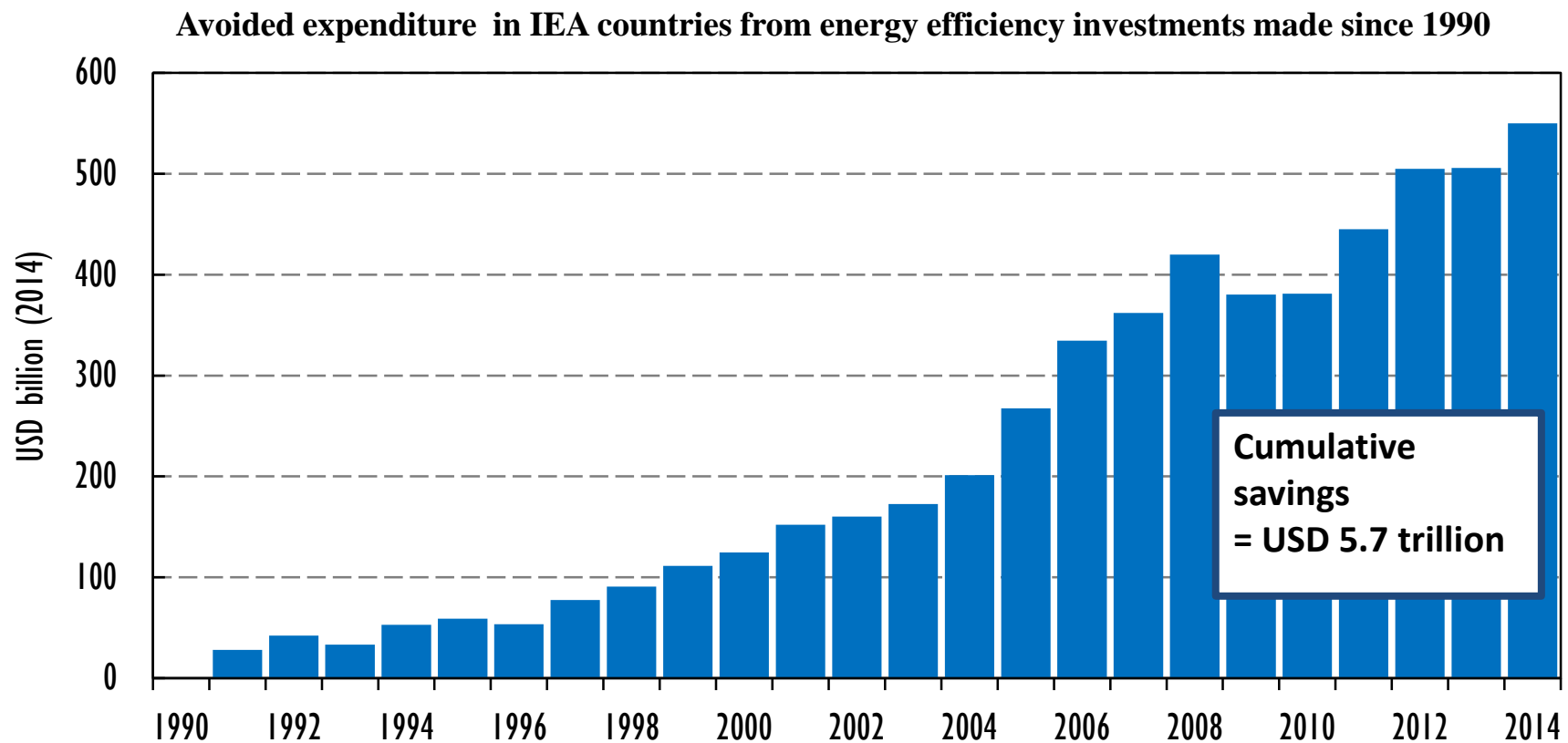
- **Avoided consumption generated by energy efficiency increased by 10% in 2014**



IEA countries avoided more consumption in 2014 than the TFC of Korea and Japan combined

EE is saving household, business and government consumers billions each year

- IEA countries saved USD 550 billion in TFC in 2014 as a result of energy efficiency investments since 1990

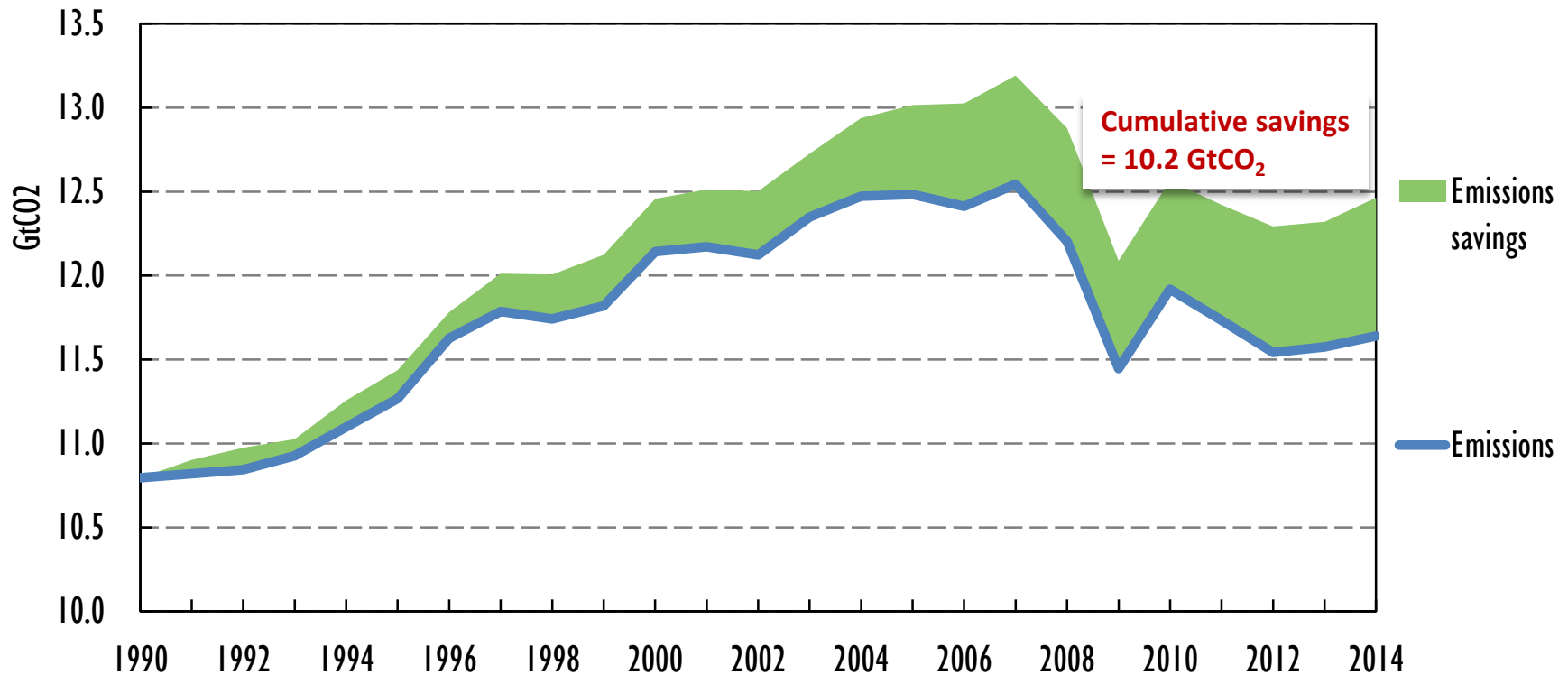


Annual savings are greater than the EU's fuel import bill

A clean energy source: efficiency reduces emissions

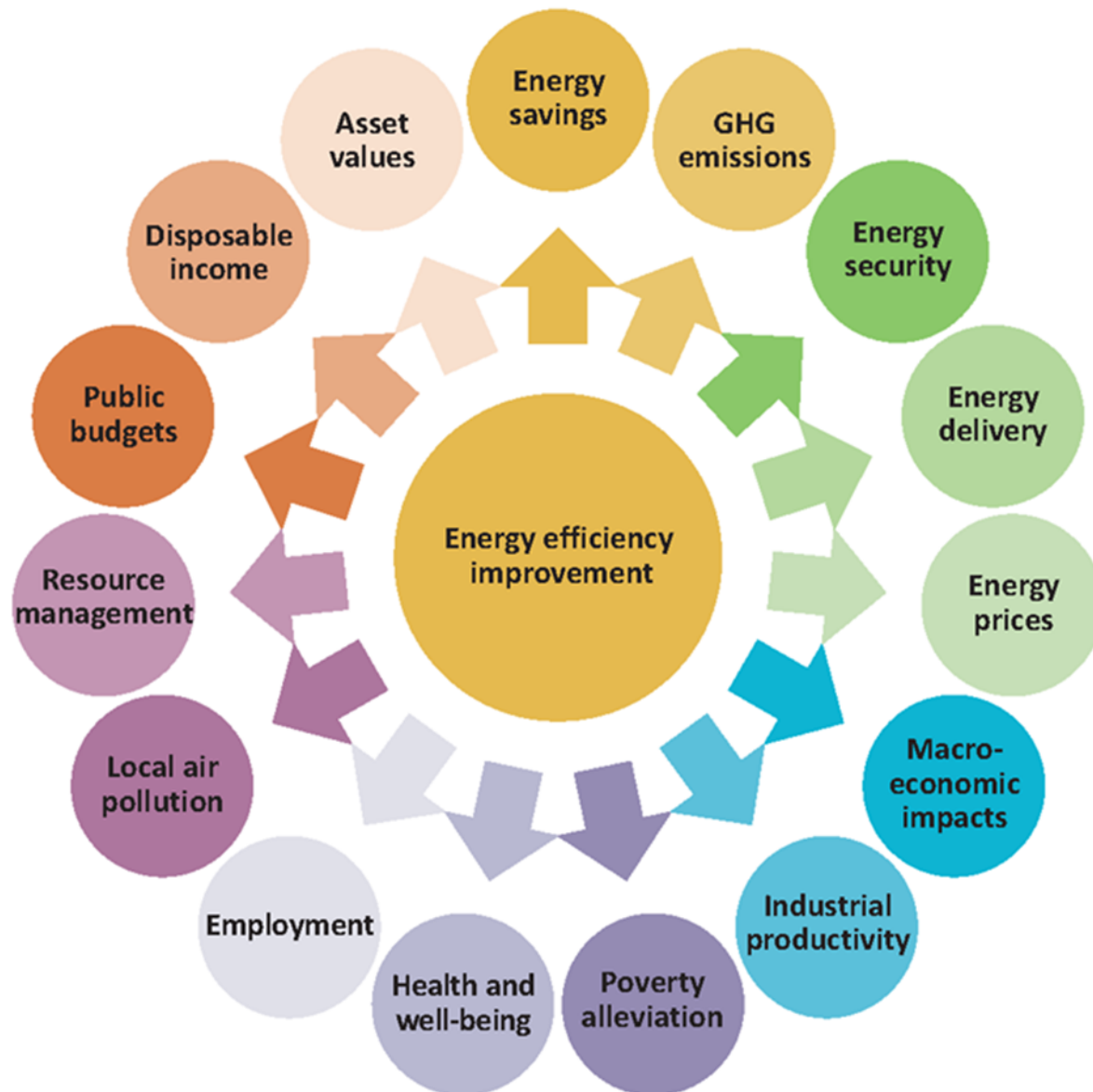
- Without energy efficiency investments, estimated IEA member country emissions would have been 870 Mt CO₂ higher in 2014

IEA emissions from fossil fuel combustion and emissions savings from energy efficiency investments since 1990



Energy efficiency has helped to make the 2 degrees target more achievable by lowering emissions to date

The multiple benefits of EE



Dirty air prompts free public transport in Paris

Public transportation in the capital will be "gratuit" from Friday morning to Sunday night, as officials battle against a spike in "dangerously" poor air quality. Velib' rental bikes and the car-sharing Autolib' scheme are also on the house.

The Local
FRANCE'S NEWS IN ENGLISH

**Shifting to more efficient
transport to fight
air pollution**

March 11, 2014

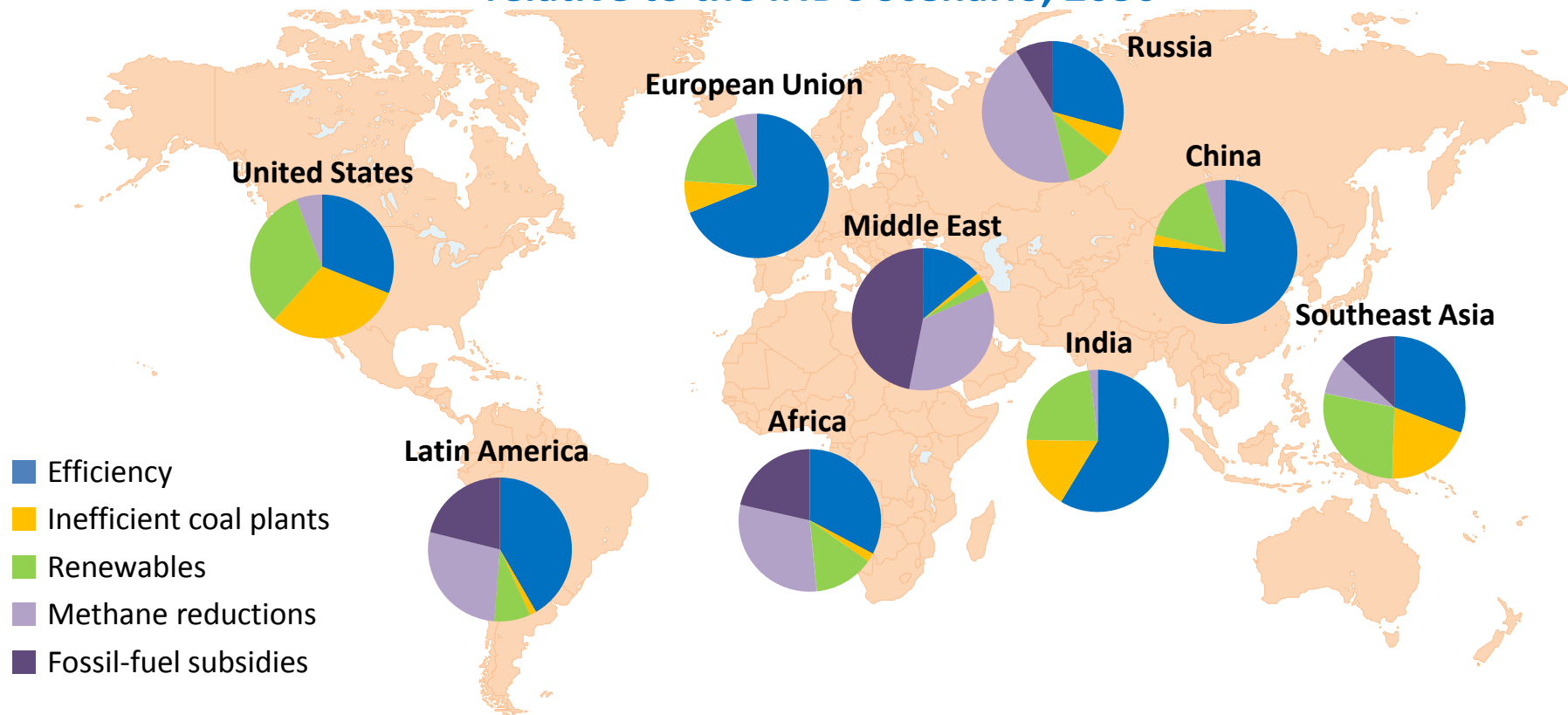
Credit: Patrick Kovarik AFP



Energy Efficiency: now showing around the World

Emissions reductions and economic growth worldwide

GHG emissions reduction by measure in the Bridge Scenario, relative to the INDC Scenario, 2030

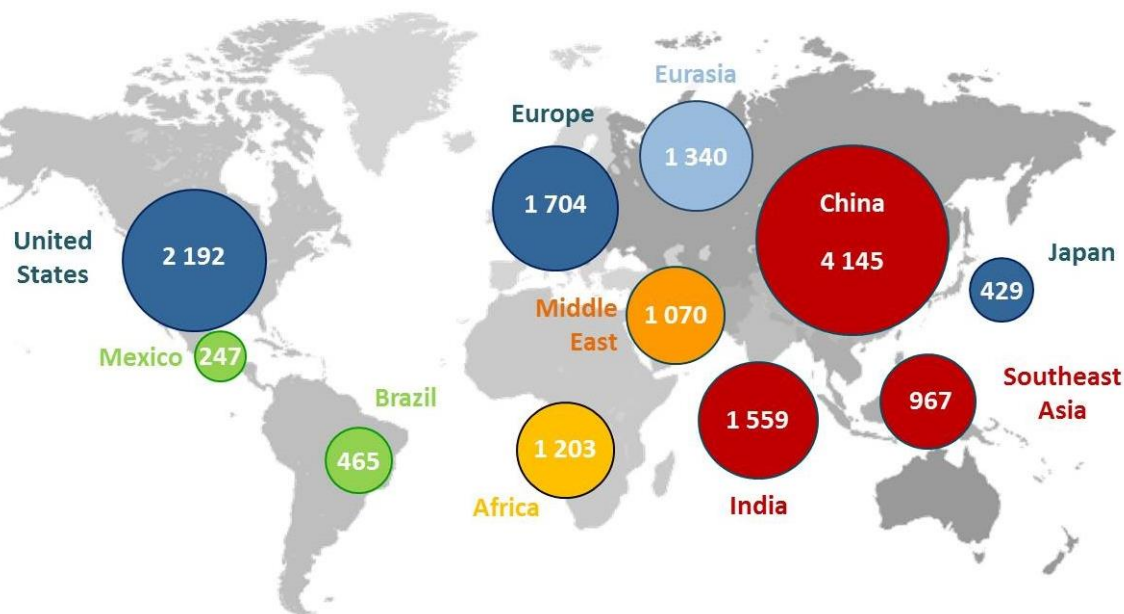


Source: World Energy Outlook Special Report: Energy and Climate Change (2015).

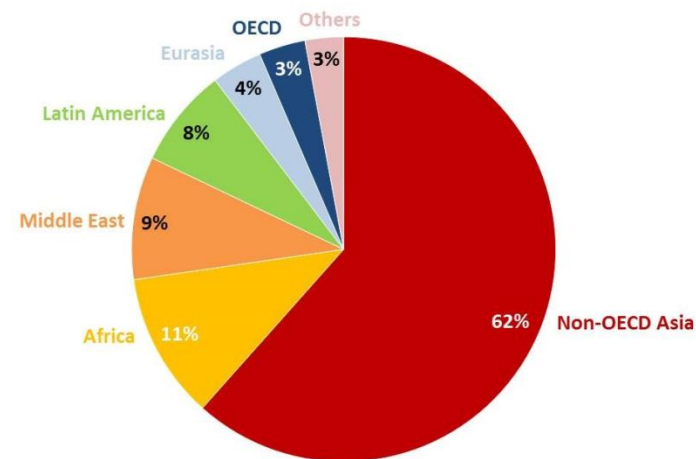
The measures in the Bridge Scenario apply flexibly across regions, with energy efficiency & renewables as key measures worldwide

Shifting geography of growth in Global Energy Demand

Primary Energy Demand, 2035 (Mtoe)

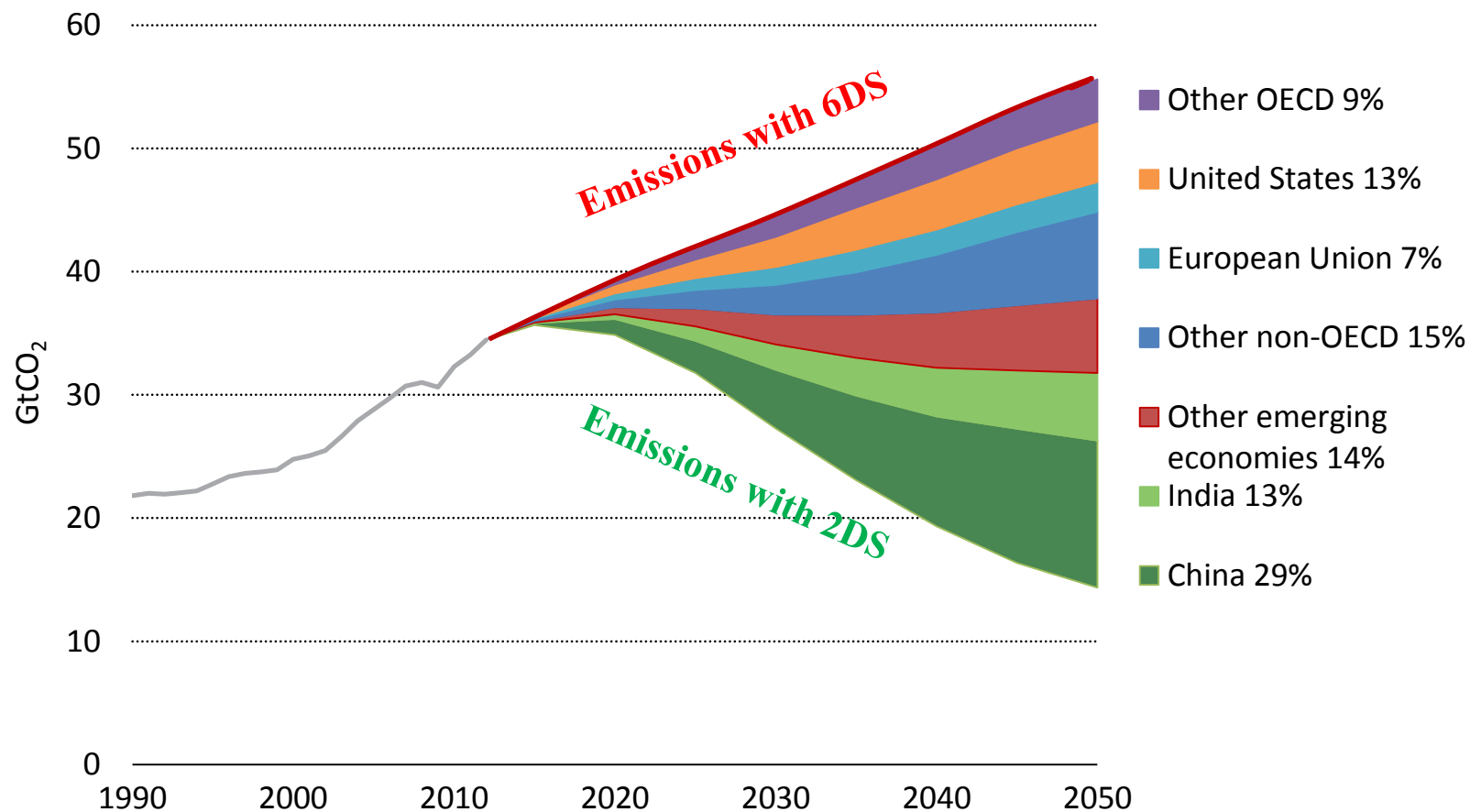


Share of Global Growth, 2012-2035

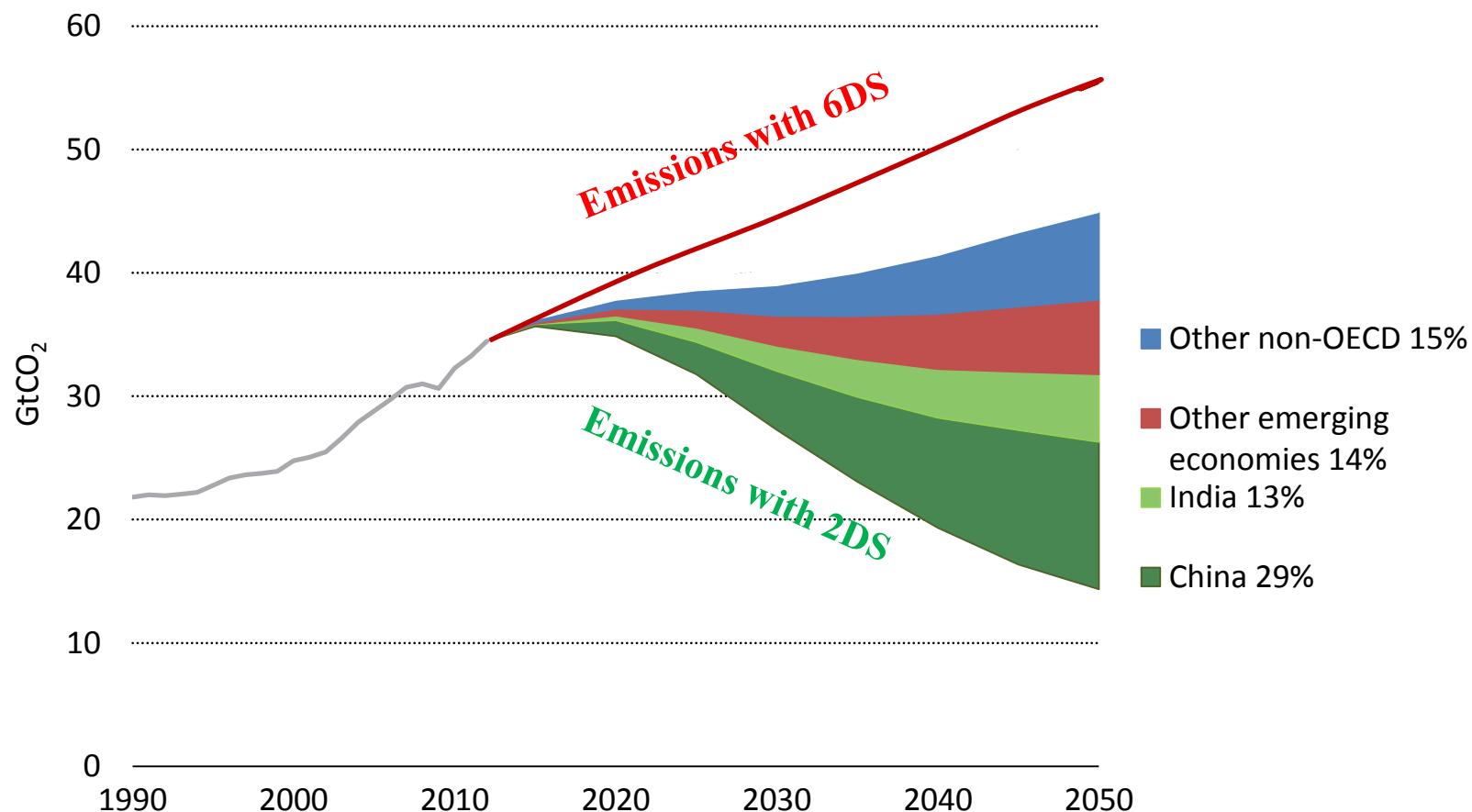


Over 95% of the projected growth in energy demand between now and 2035 happens outside the OECD (NPS)

Changing Geography: OECD and non-OECD action for a low-emissions future



Changing Geography: OECD and non-OECD action for a low-emissions future

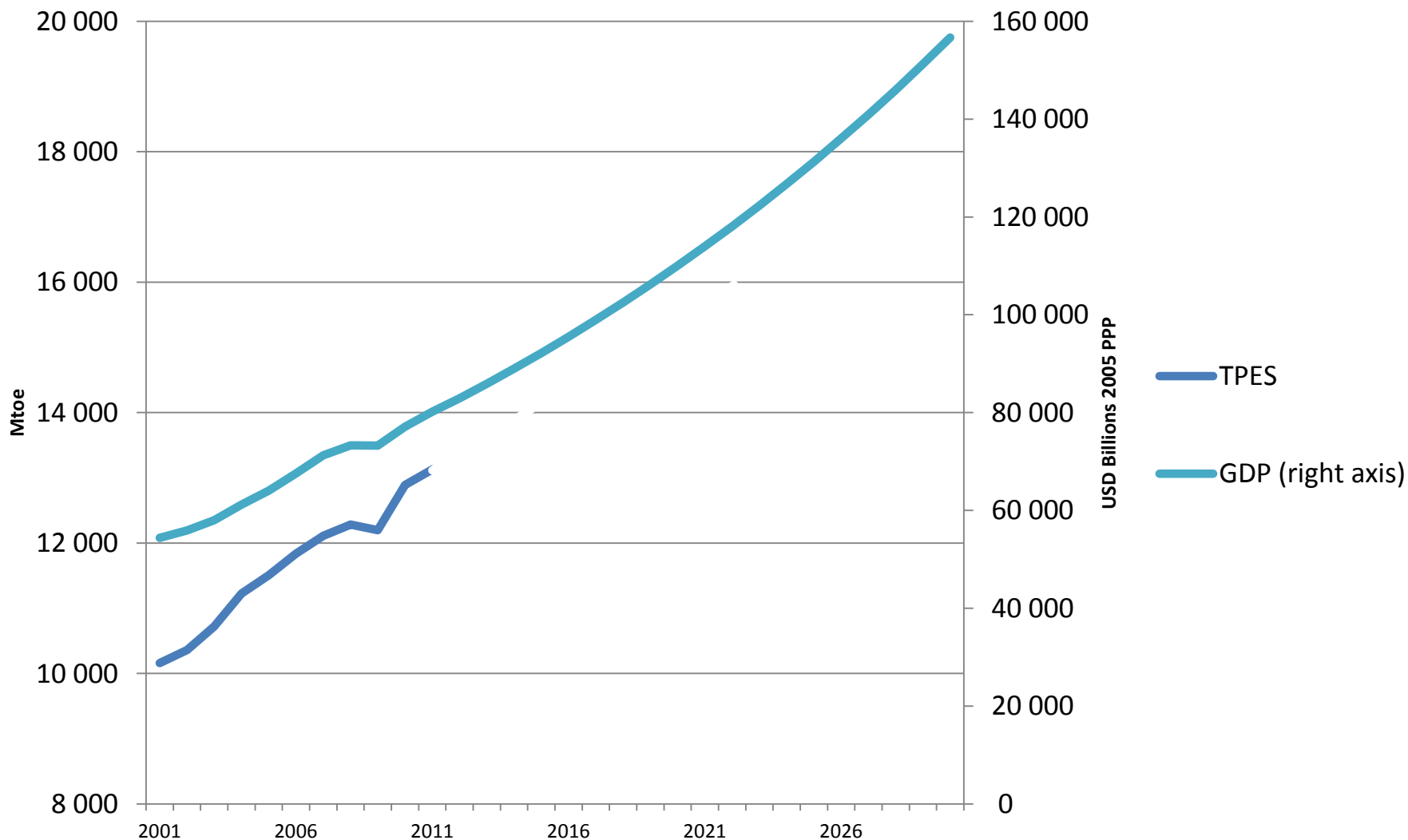


About 70% of the decarbonization actions need to take place in non-OECD countries

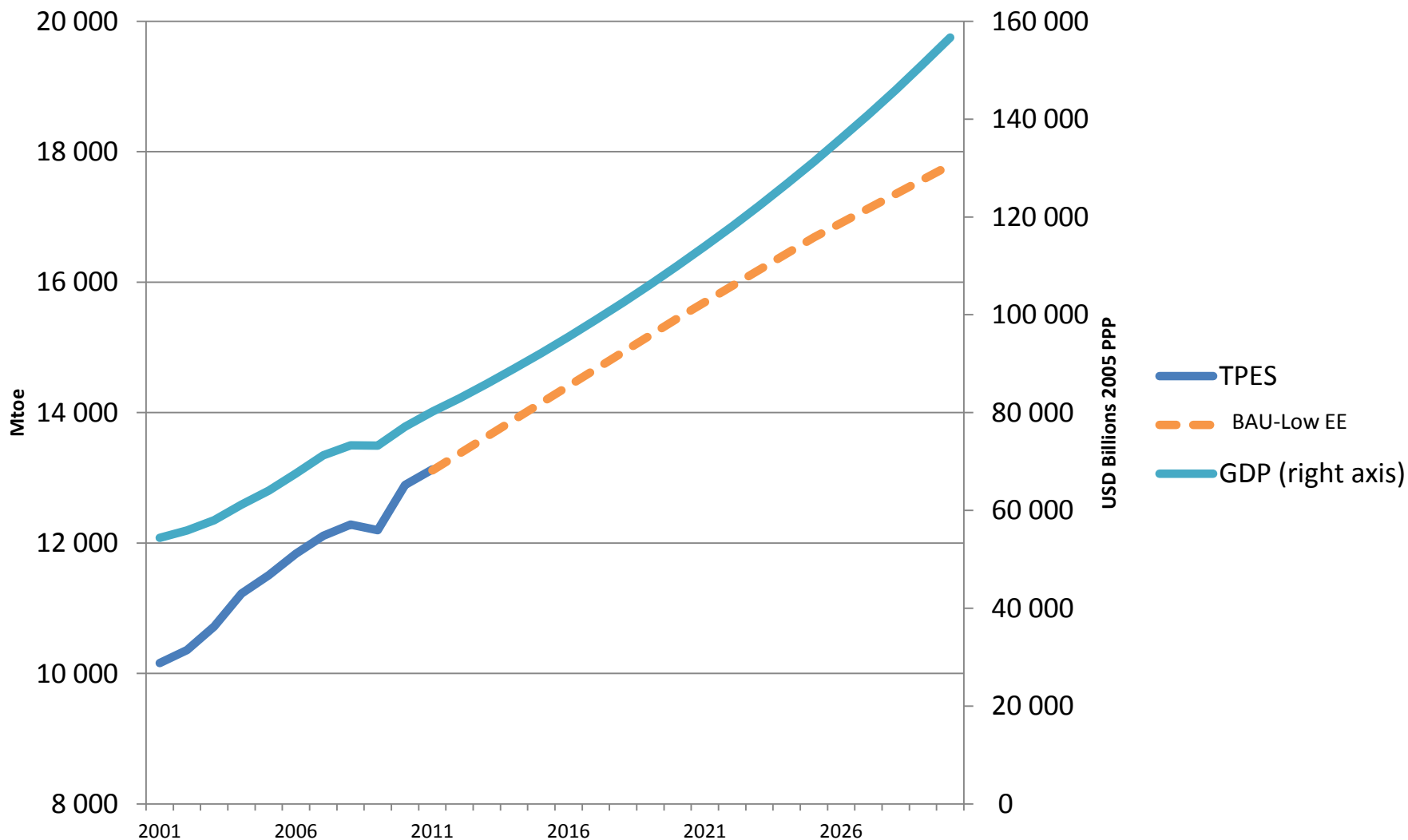
EE: Decoupling GDP from Energy



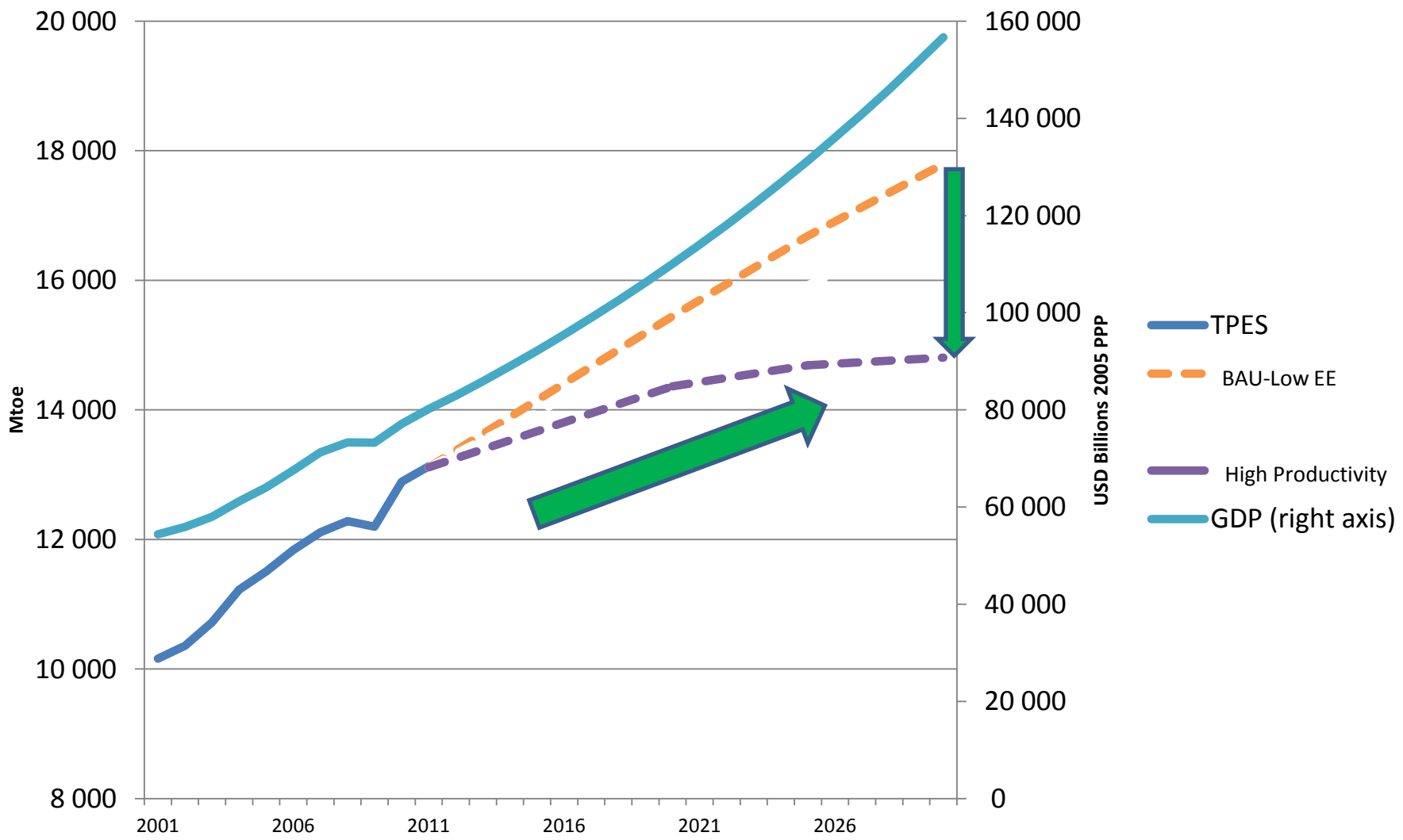
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EE: Decoupling GDP from Energy



EE: Decoupling GDP from Energy





Energy efficiency
for many emerging economies:
from
“doing more with less”
to



Energy efficiency
for many emerging economies:
from
“doing more with less”
to
“doing even more with more”
raising standards of living and
promoting prosperity

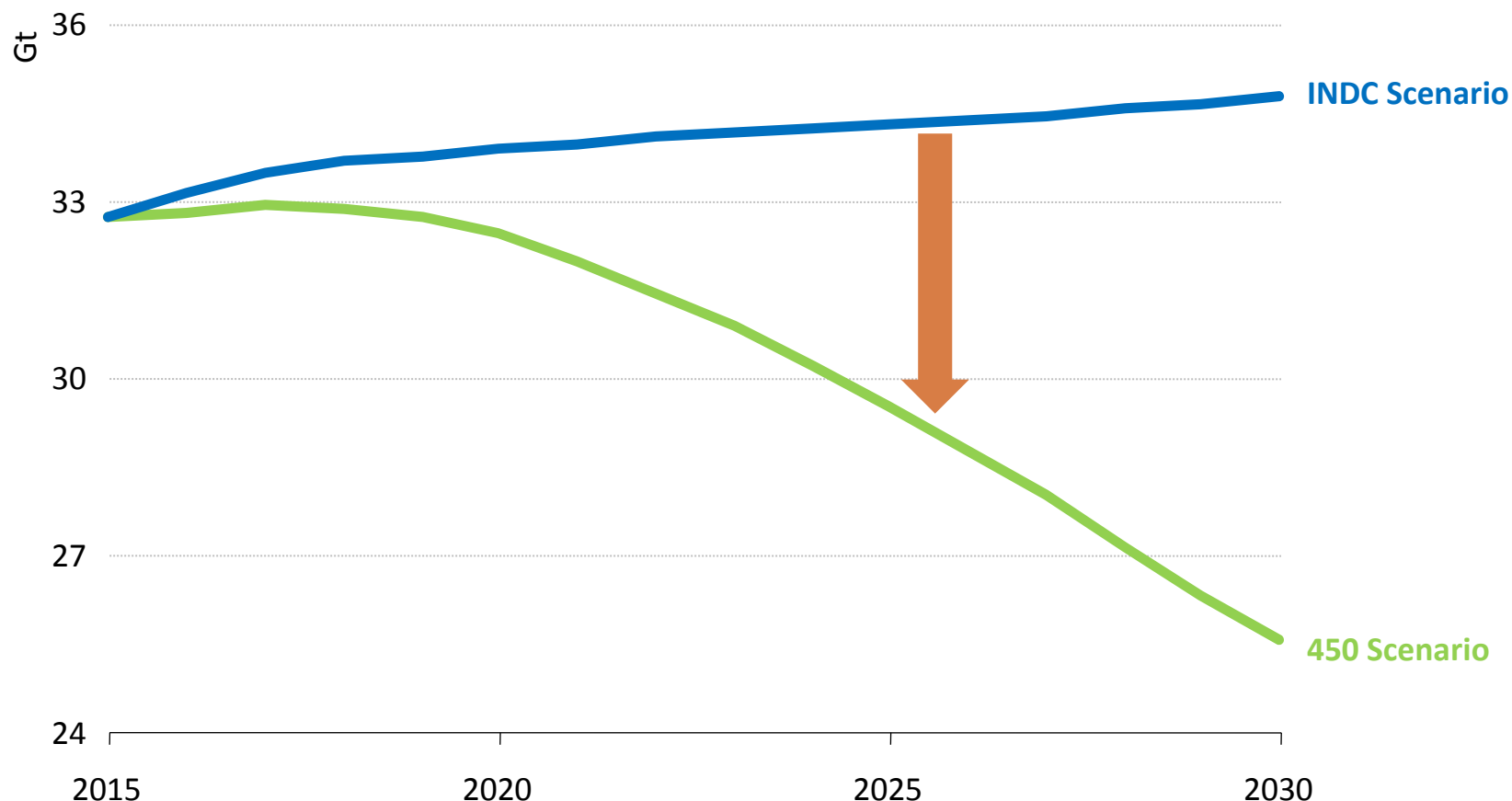
To shift the energy sector onto a low-carbon path ***that supports economic growth & energy access:***

1. Take 5 key actions, led by **energy efficiency** & renewables, to peak then reduce global energy emissions
2. Use the Paris Agreement to drive short-term actions consistent with long-term emission goals
3. Accelerate energy technology innovation to make decarbonisation easier and even more affordable
4. Enhance energy security by making the energy sector more resilient to climate change impacts



‘Et après Paris?’

Beyond INDCs: the need for more

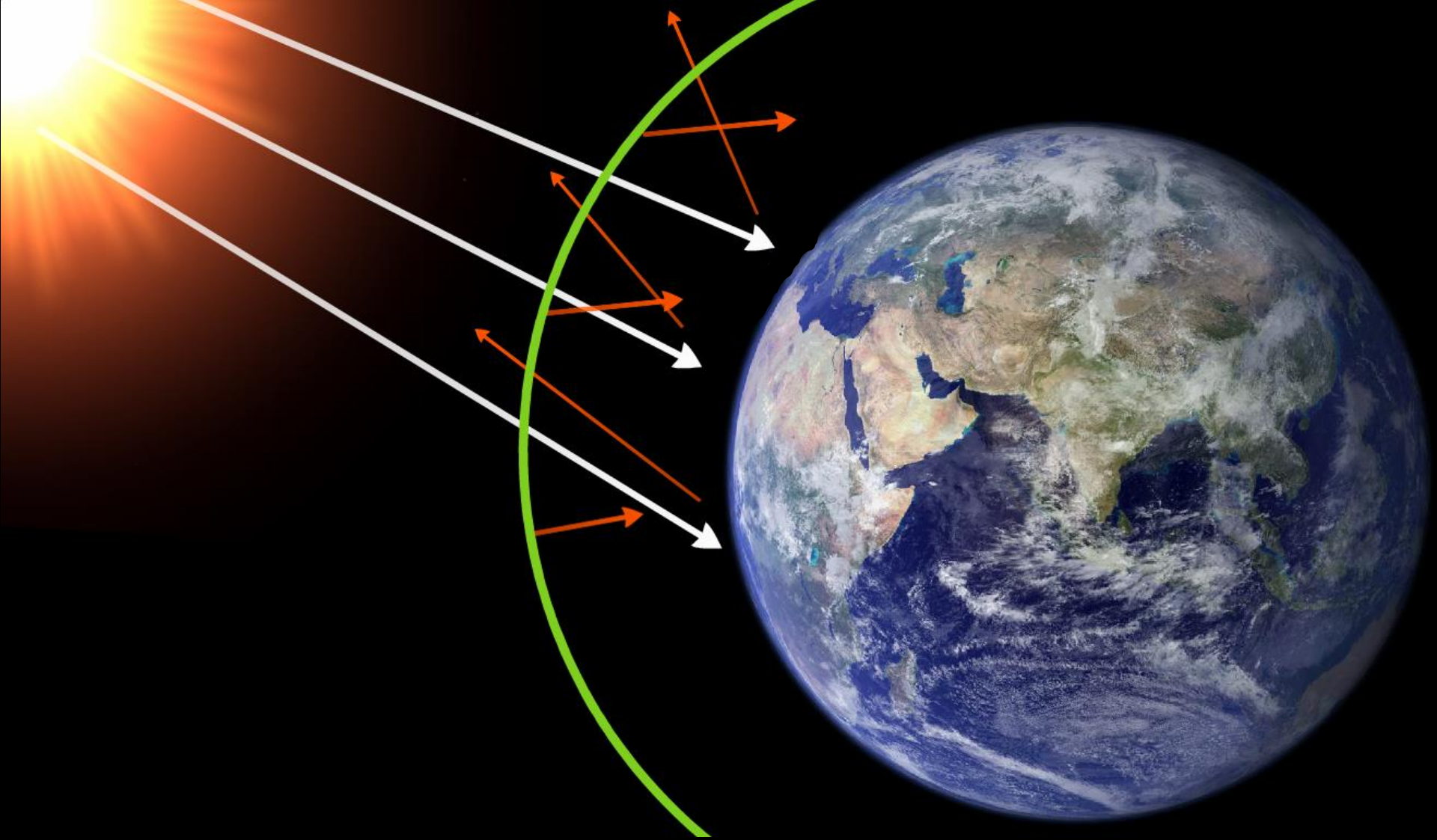


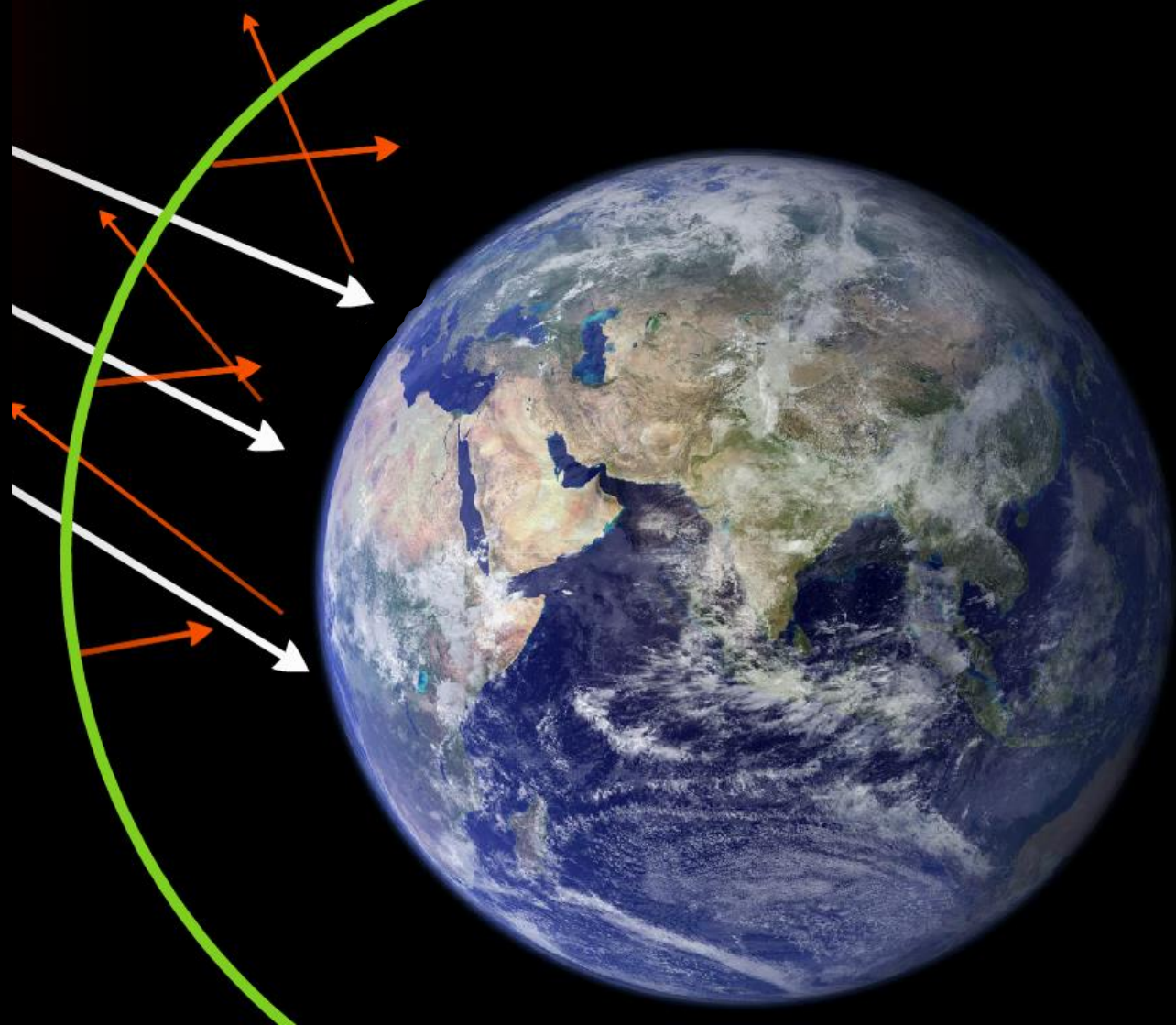
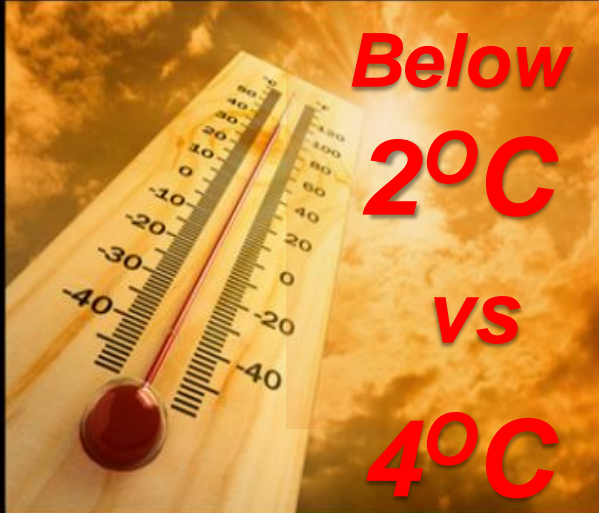
“Room” for further policies promoting energy efficiency



Epilogue







Thank you



***the little engine that can ...
beat climate change***