

Energy Efficient Prosperity: Promoting Social and Economic Development through Energy Efficiency

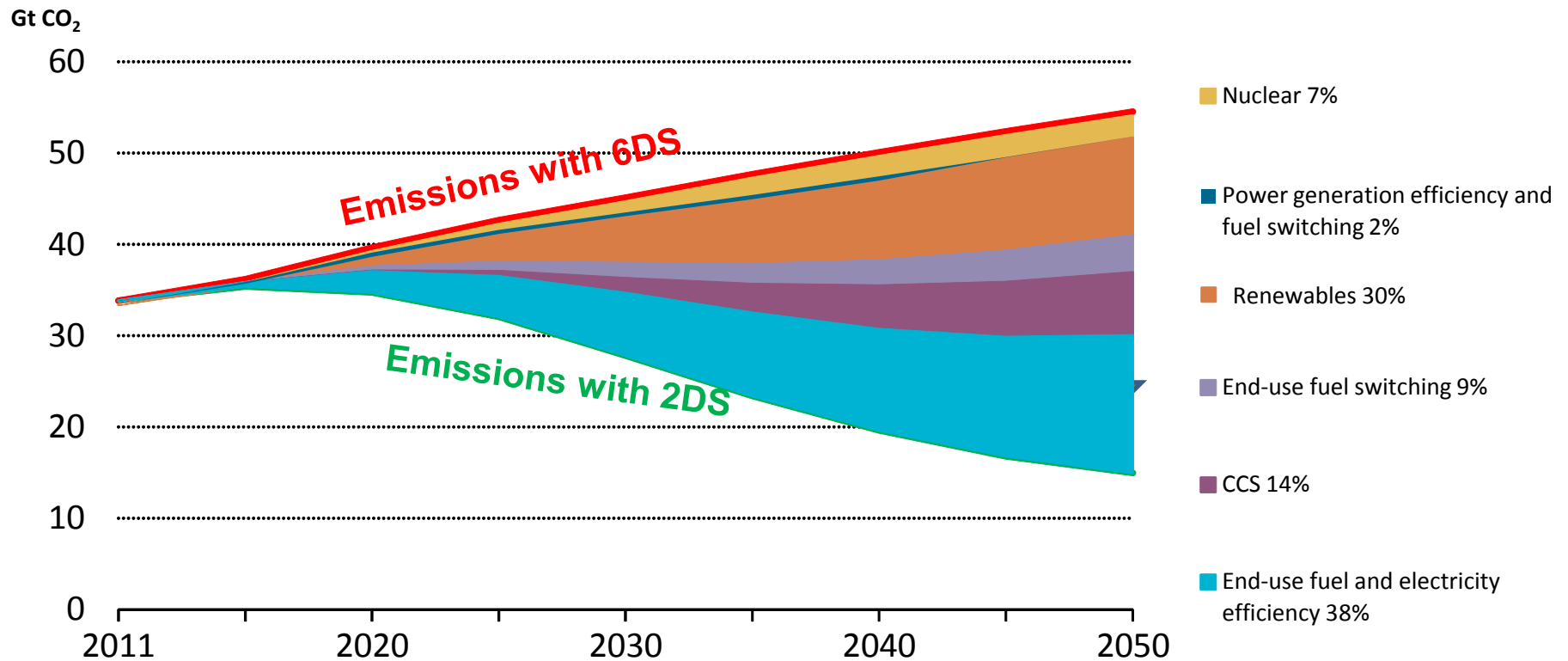
Philippe Benoit

Head, Energy Efficiency and Environment Division, IEA

COP 21, 1 December 2015

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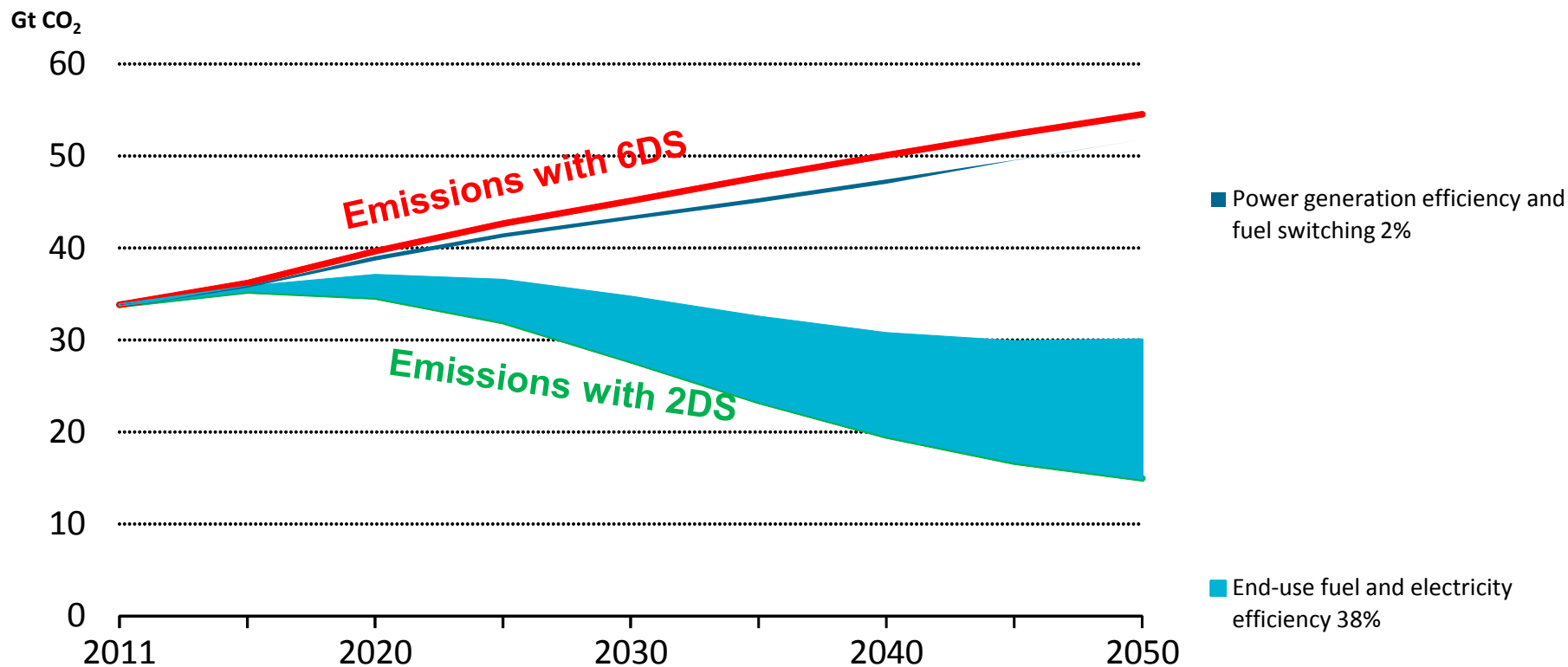
Portfolio of actions to reduce energy sector emissions



Portfolio of actions to reduce energy sector emissions



EE provides largest contribution to abatement

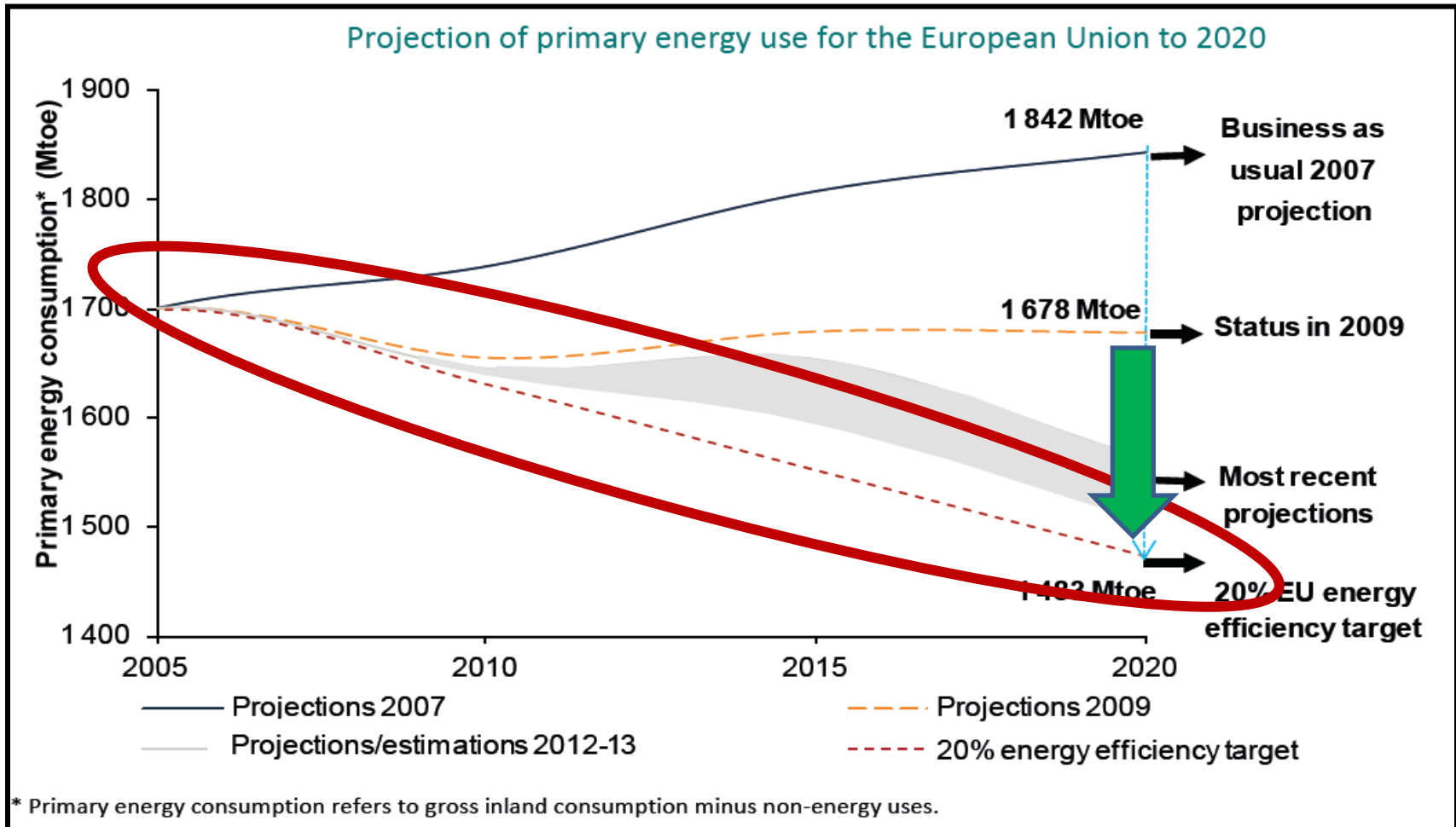


EE 'traditional' view: "Doing more with less"

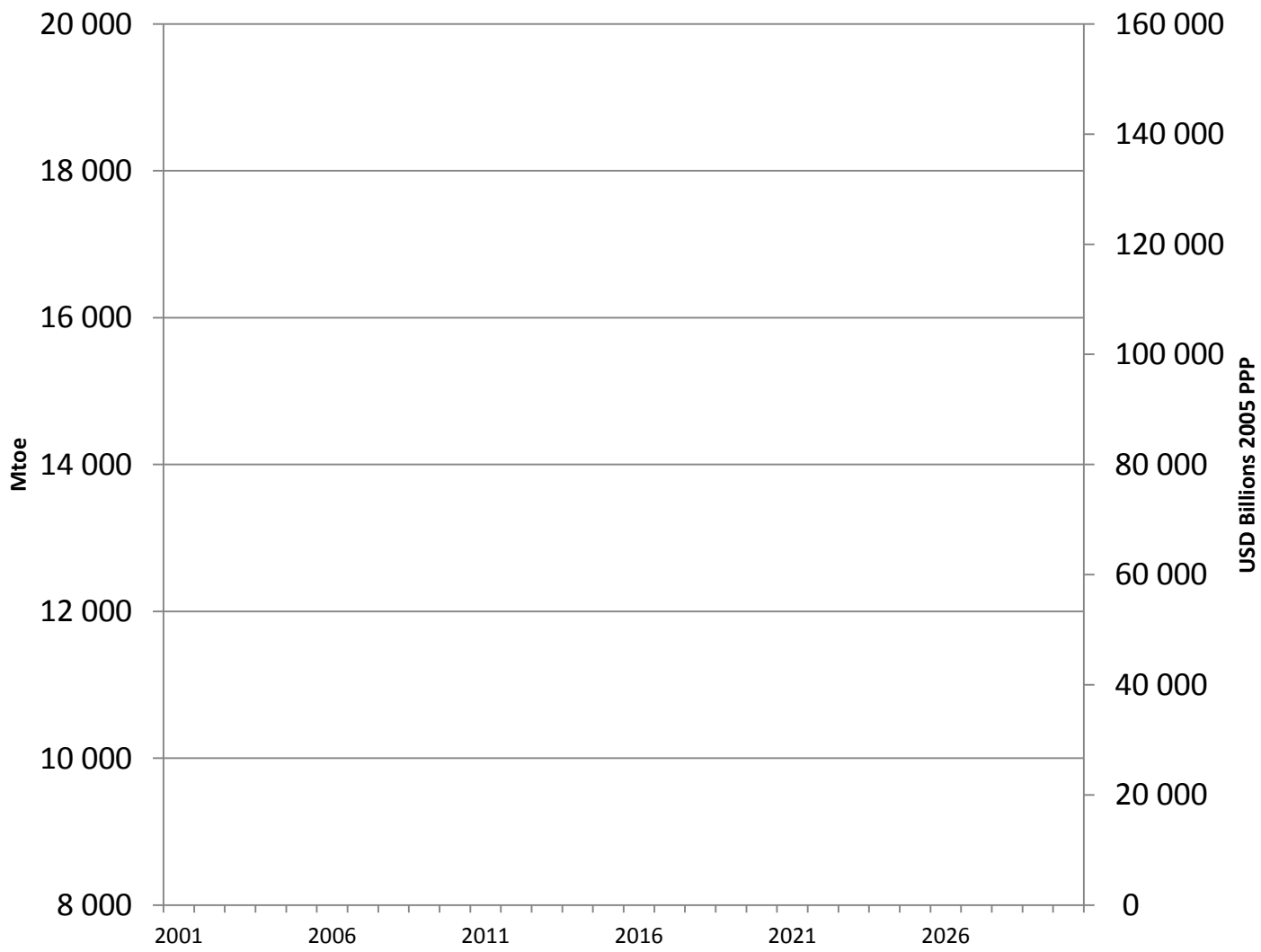


Energy
Efficiency

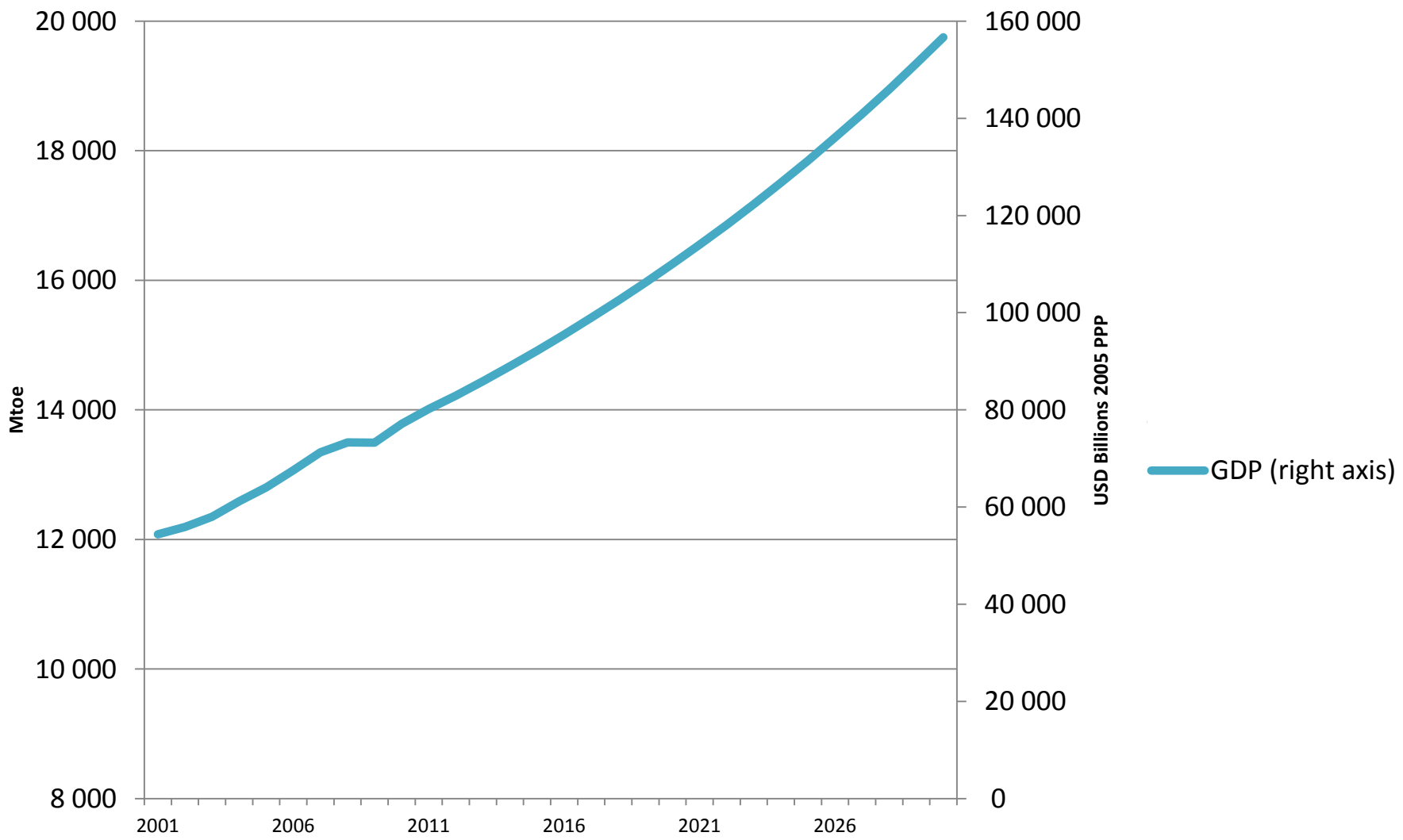
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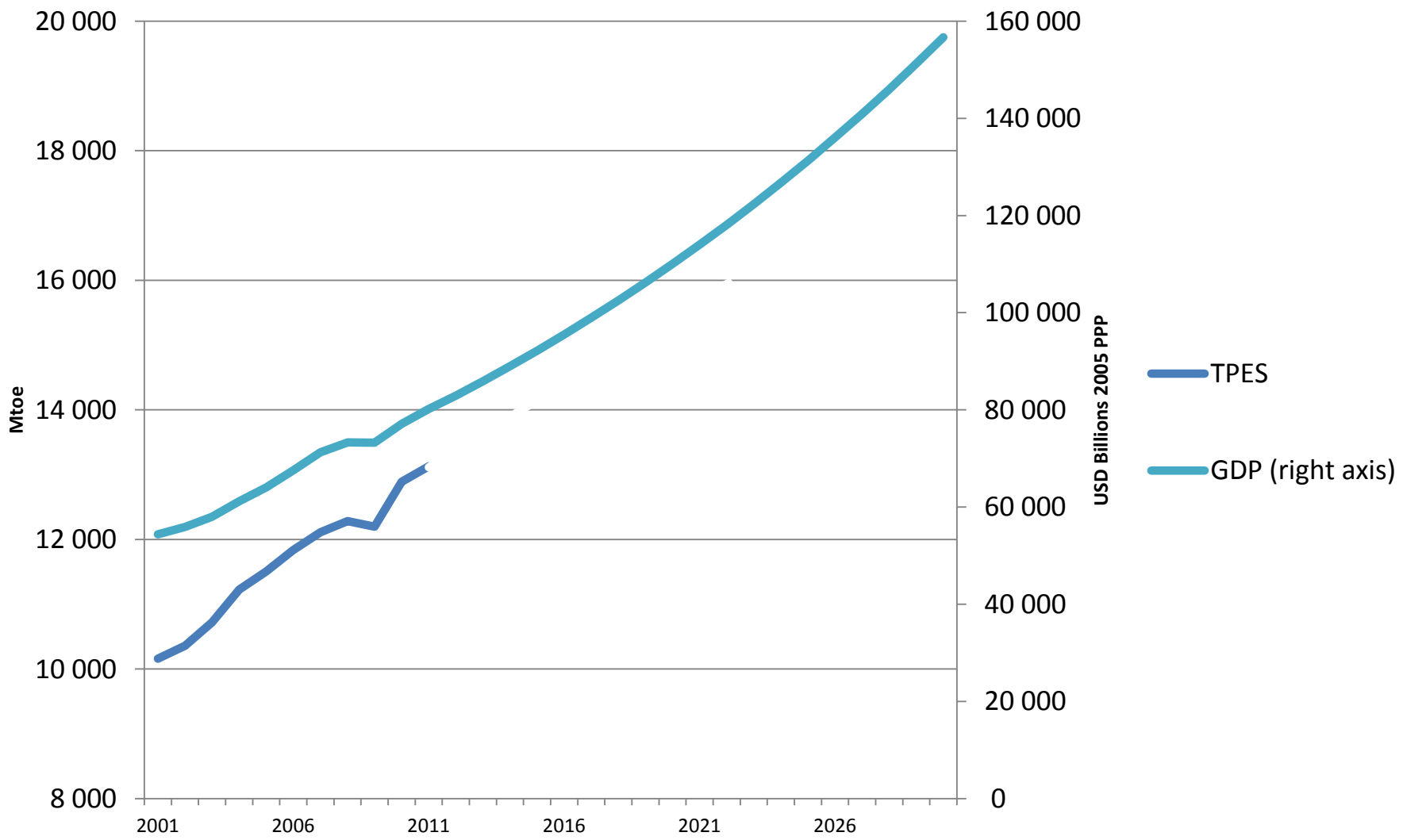
EE: Decoupling GDP from Energy



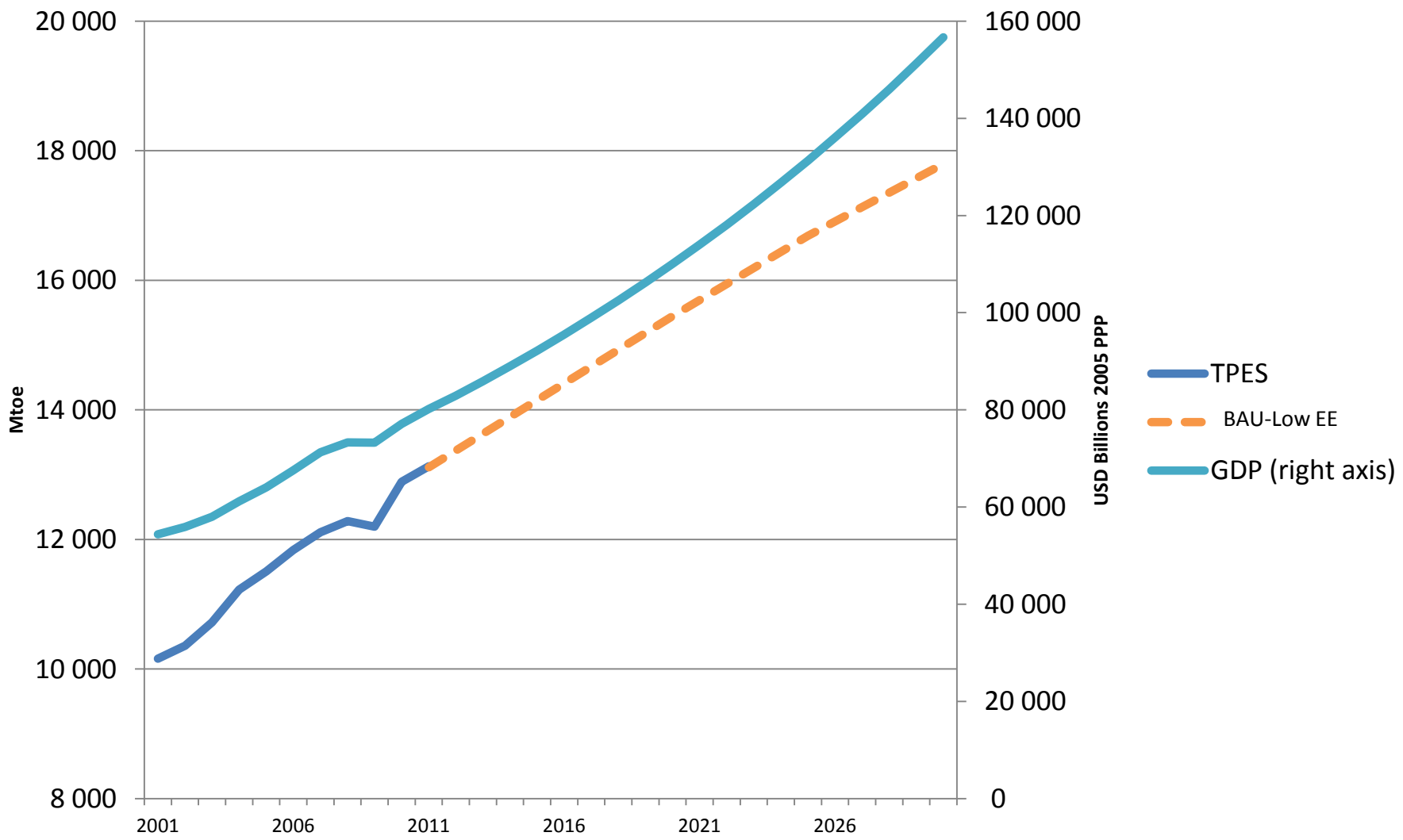
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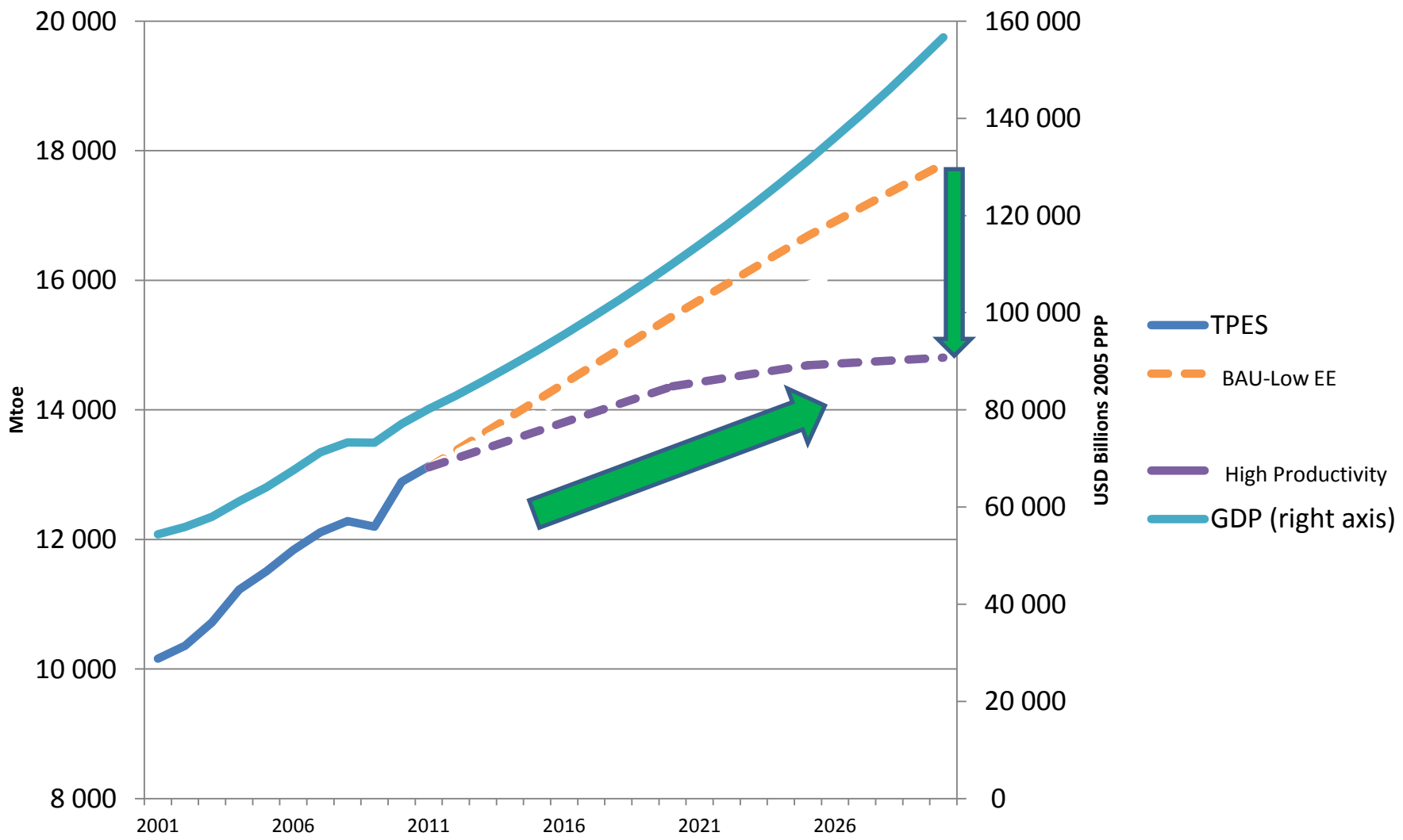
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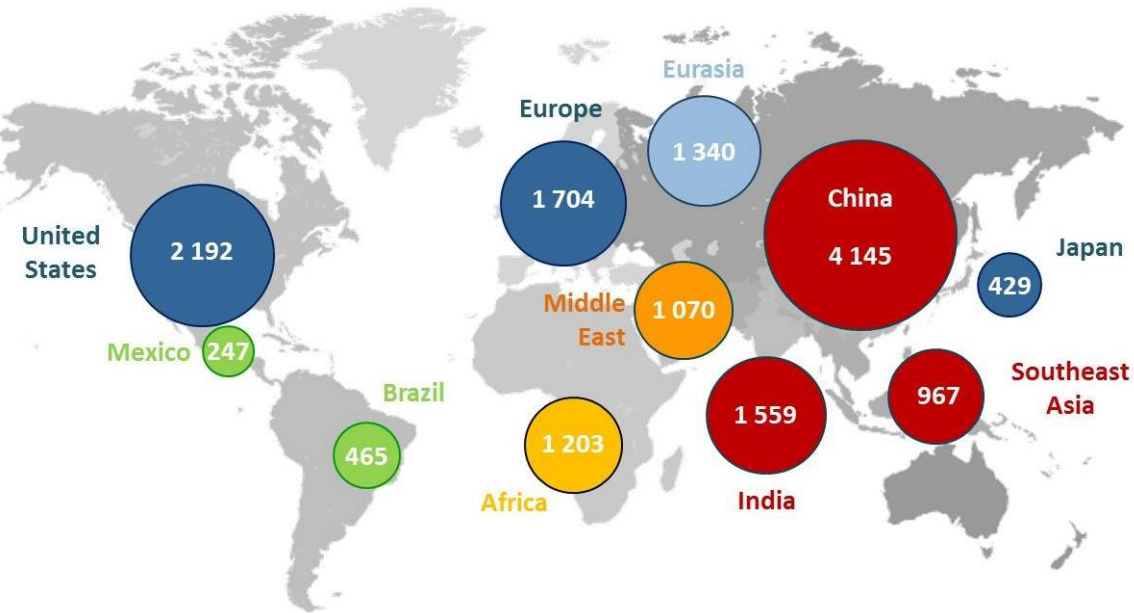


EE: Decoupling GDP from Energy

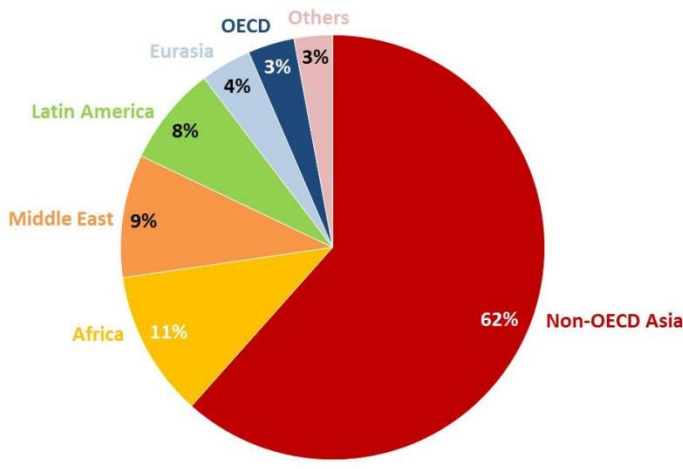


Geography of growth in Global Energy Demand

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)

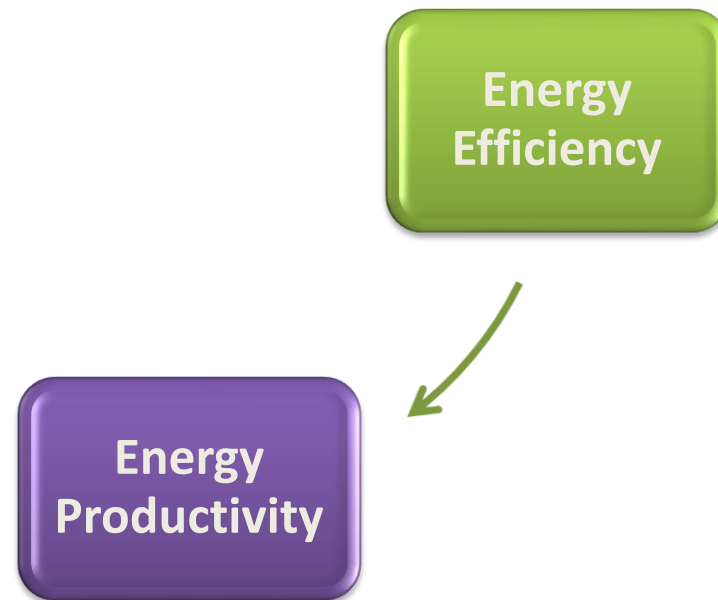
Source: based on World Energy Outlook 2014
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Energy efficiency
for many emerging economies:
from
“doing more with less”
to . . .

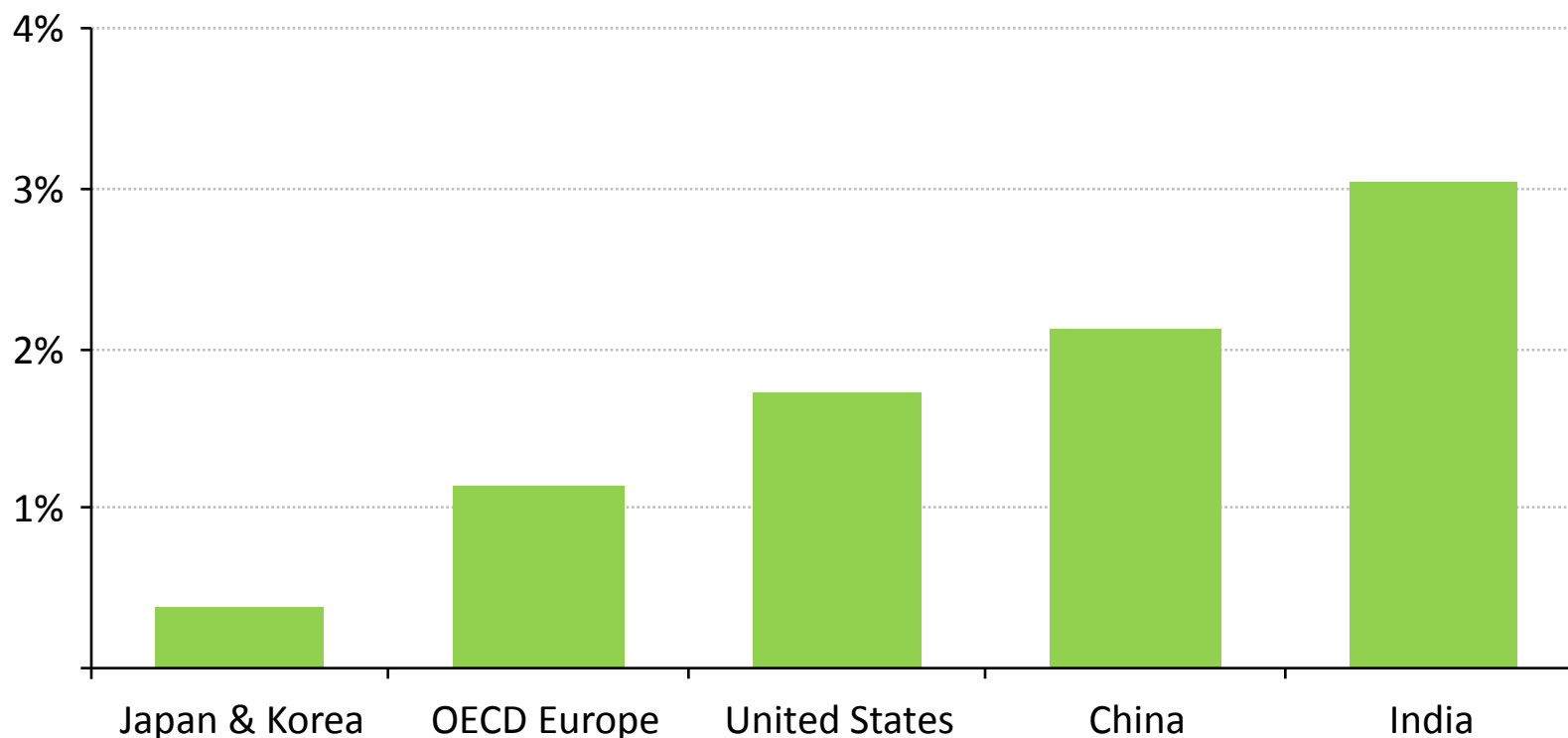


Energy efficiency
for many emerging economies:
from
“doing more with less”
to
“doing even more with more”
raising standards of living and
promoting prosperity



Energy efficiency can help drive economic prosperity

GDP in Efficient World Scenario versus New Policies Scenario, 2035



Cumulative investments in energy efficiency of \$12 trillion are more than offset by fuel savings & trigger economic growth of a cumulative \$18 trillion

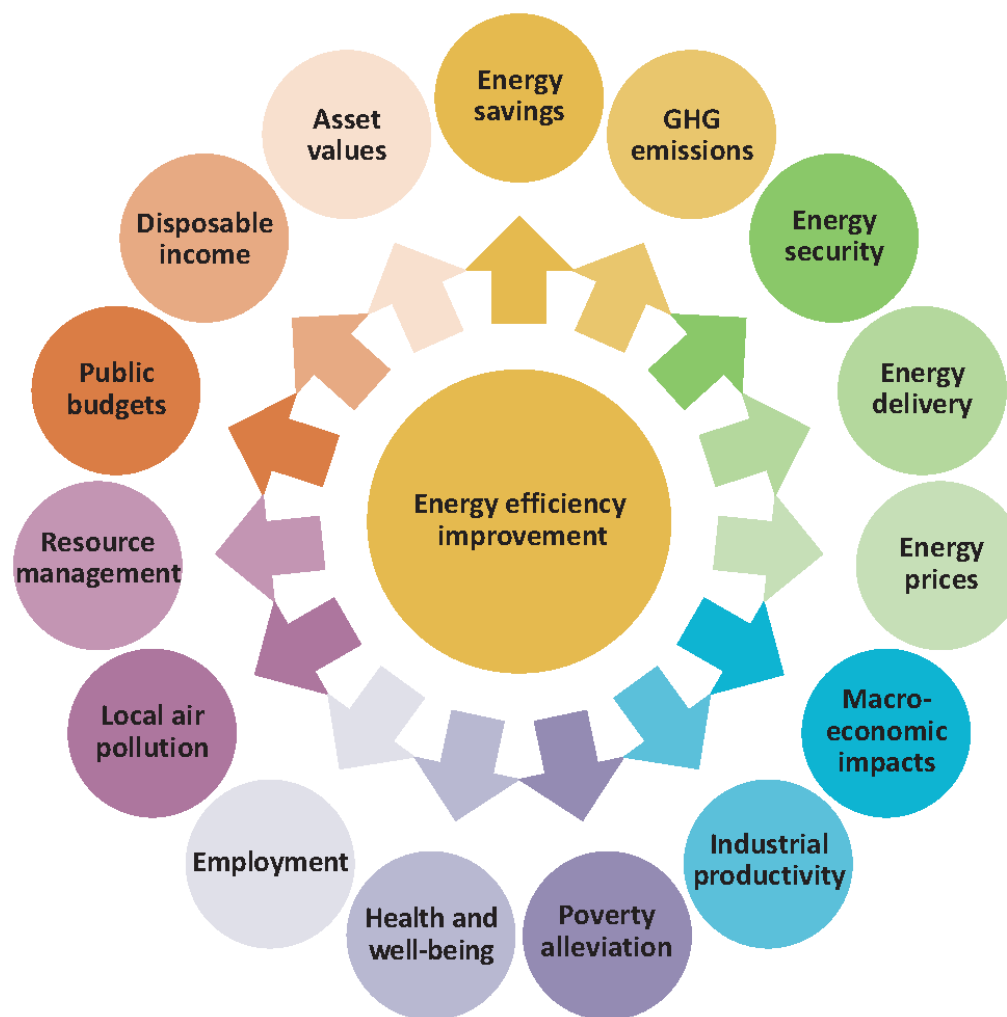
Dirty air prompts free public transport in Paris

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

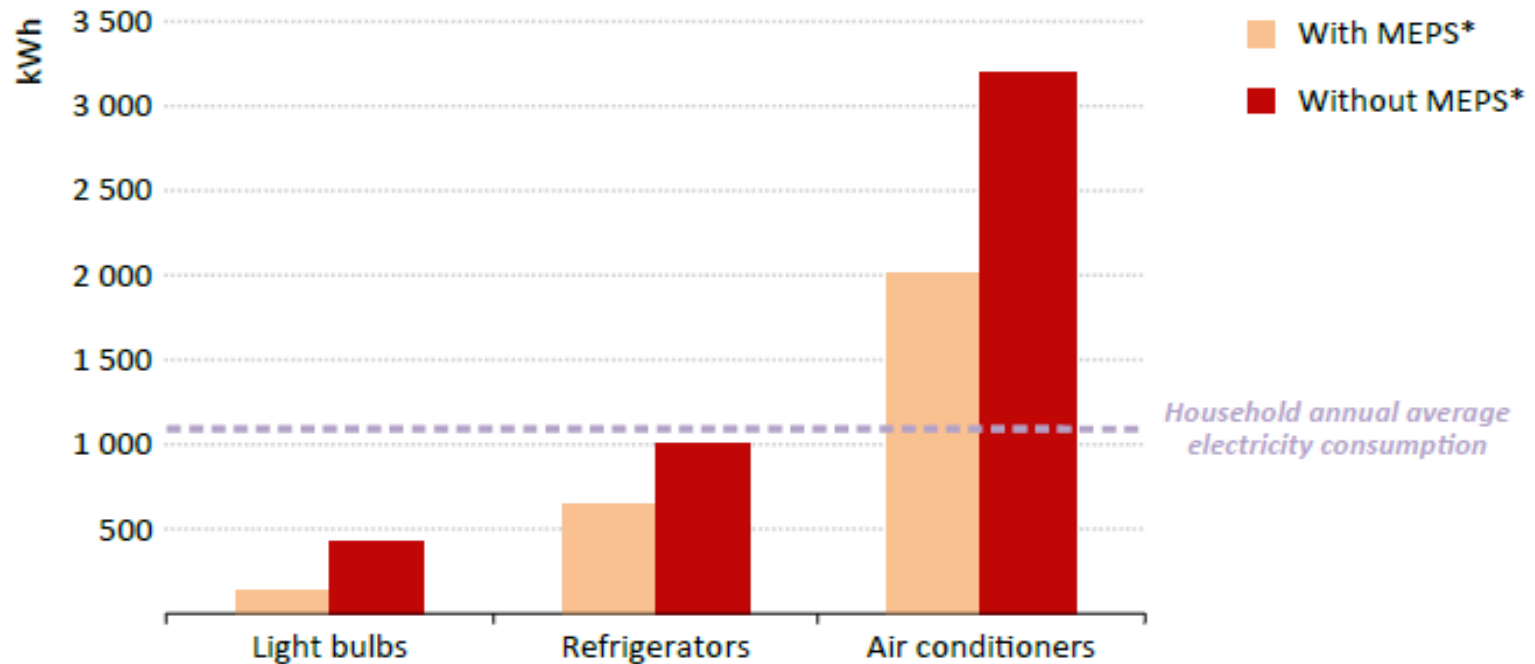
**Shifting to more efficient
transport to fight
air pollution**

Energy efficiency generates multiple benefits



Energy efficiency is a means to enhance energy security, support economic and social development, and promote environmental goals

Energy efficiency expands access to energy services



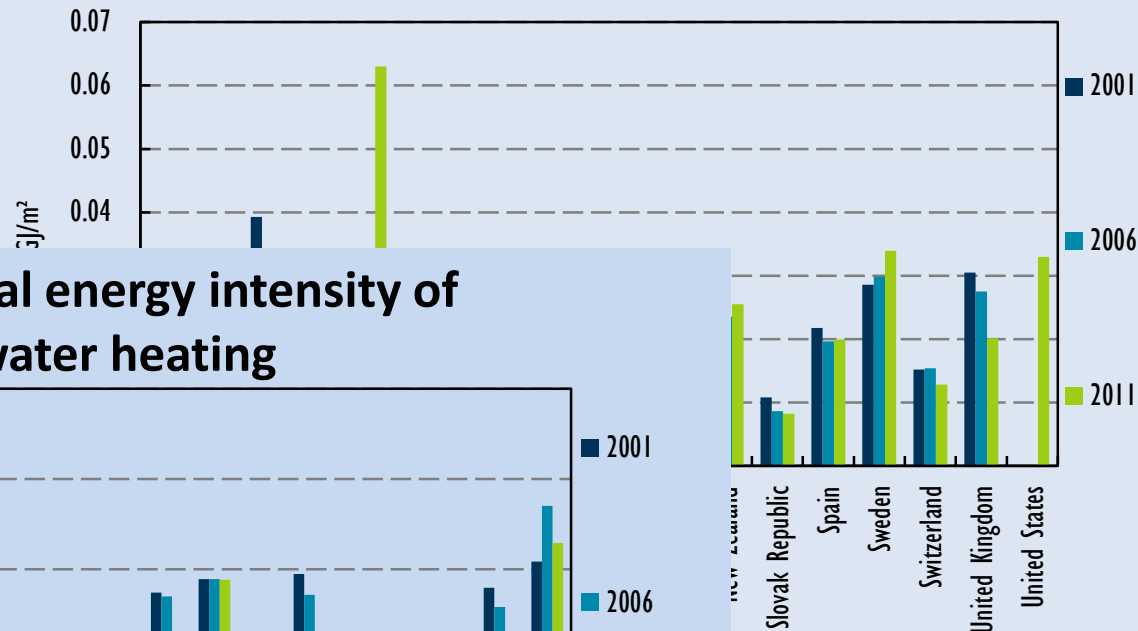
*MEPS = minimum energy performance standards.

Household average electricity consumption of selected equipment in Ghana with and without energy efficiency standards, 2013 (IEA, 2015)

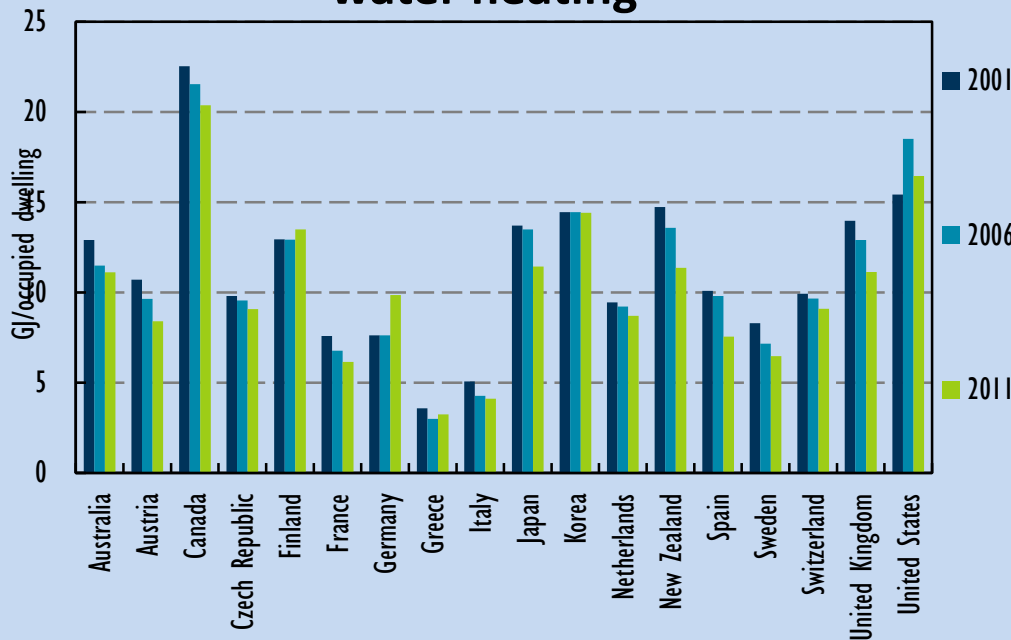
Energy efficiency raises standards of living



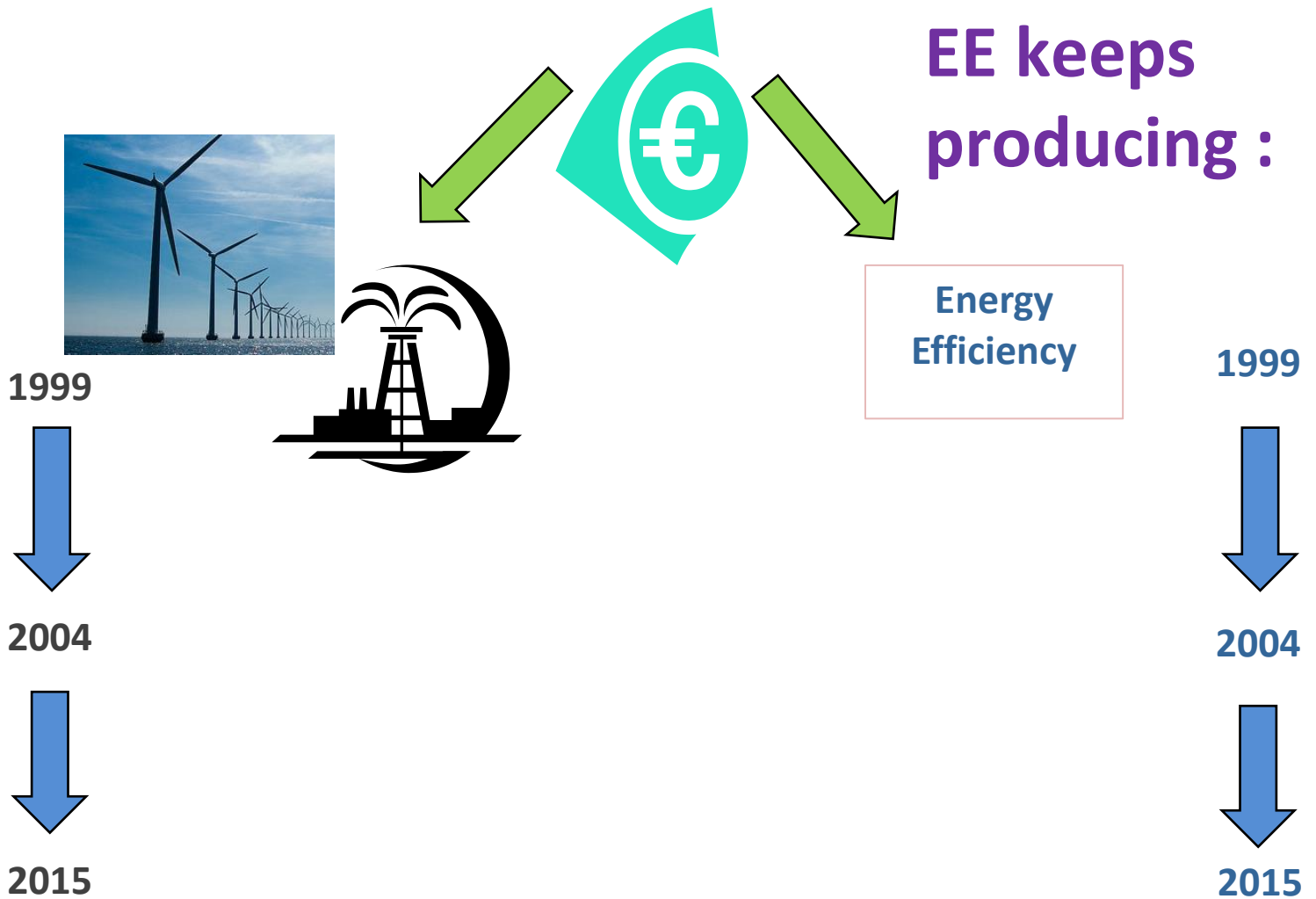
Residential lighting intensity



Residential energy intensity of water heating



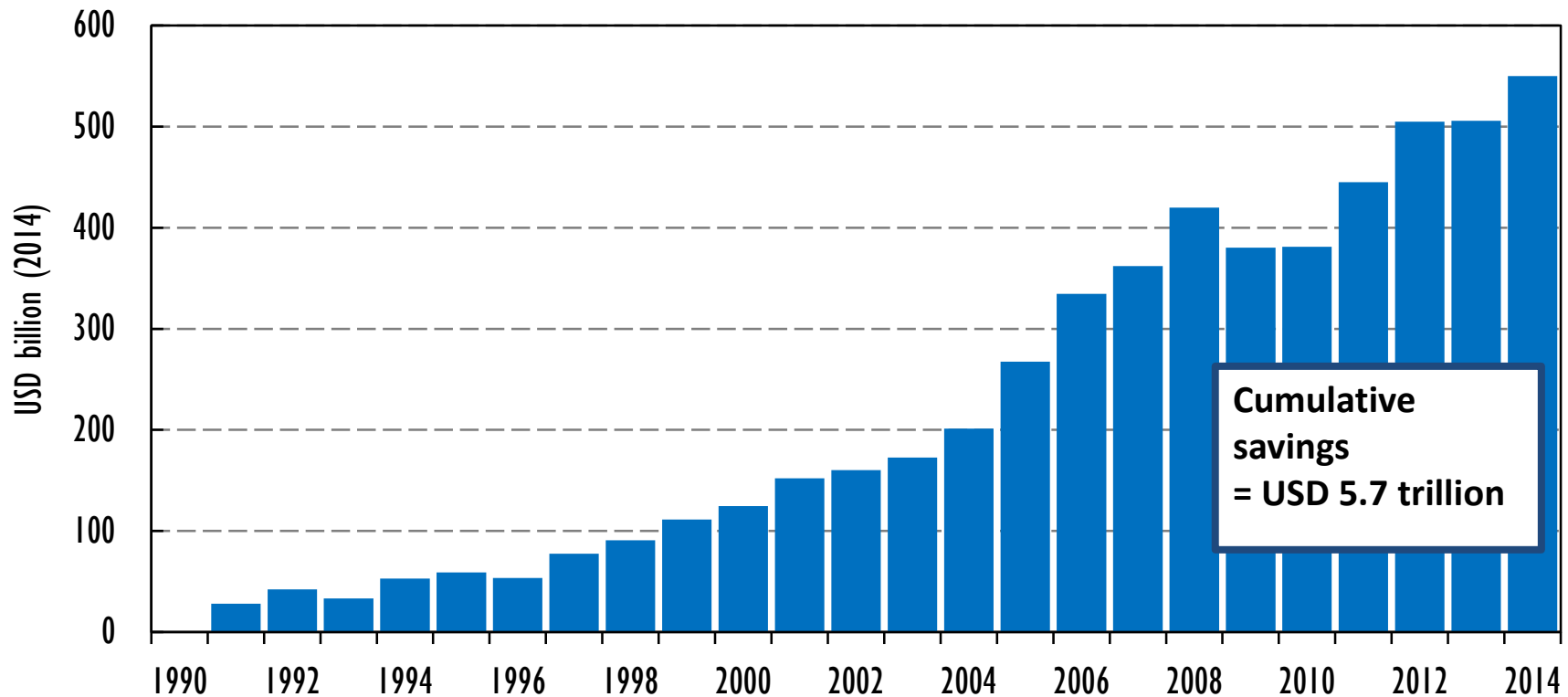
EE is a fuel that keeps on producing



EE is saving households, businesses and government consumers hundreds of billions of dollars each year

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

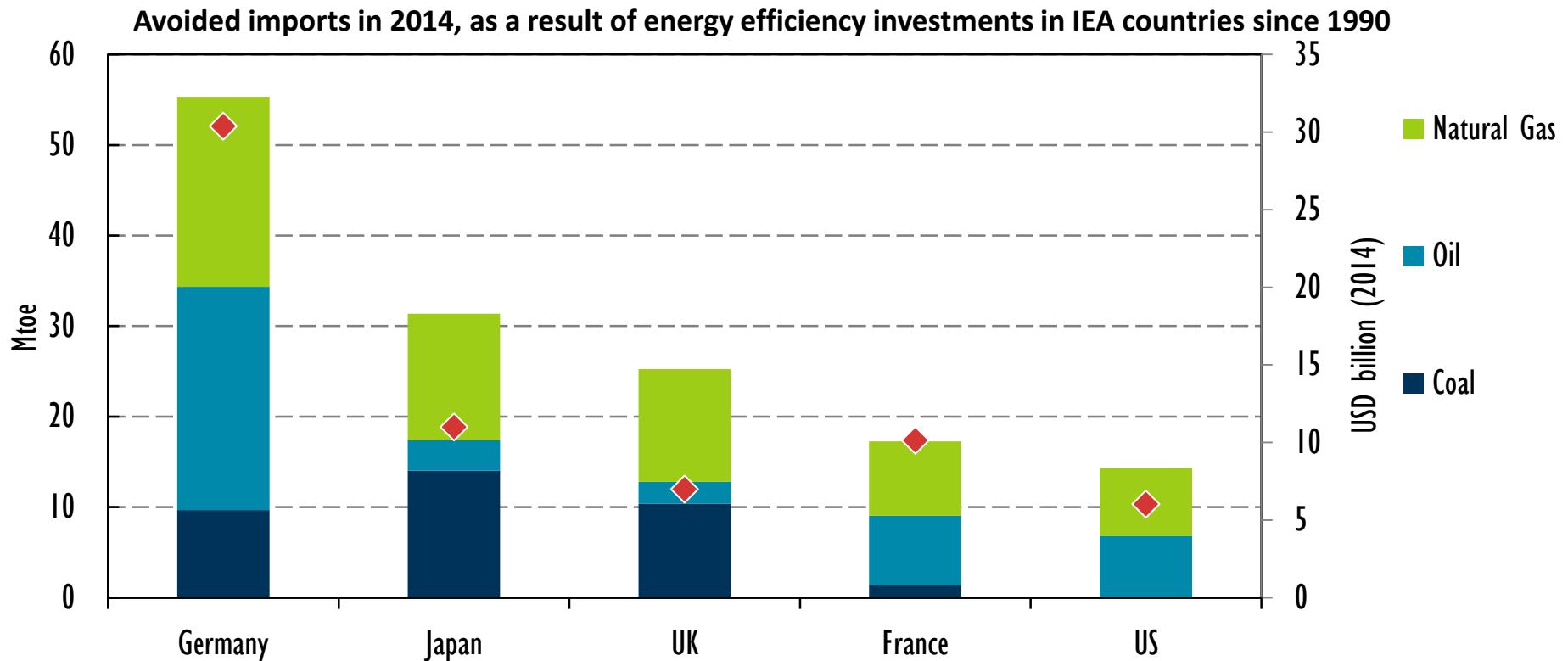
Avoided expenditure in IEA countries from energy efficiency investments made since 1990



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

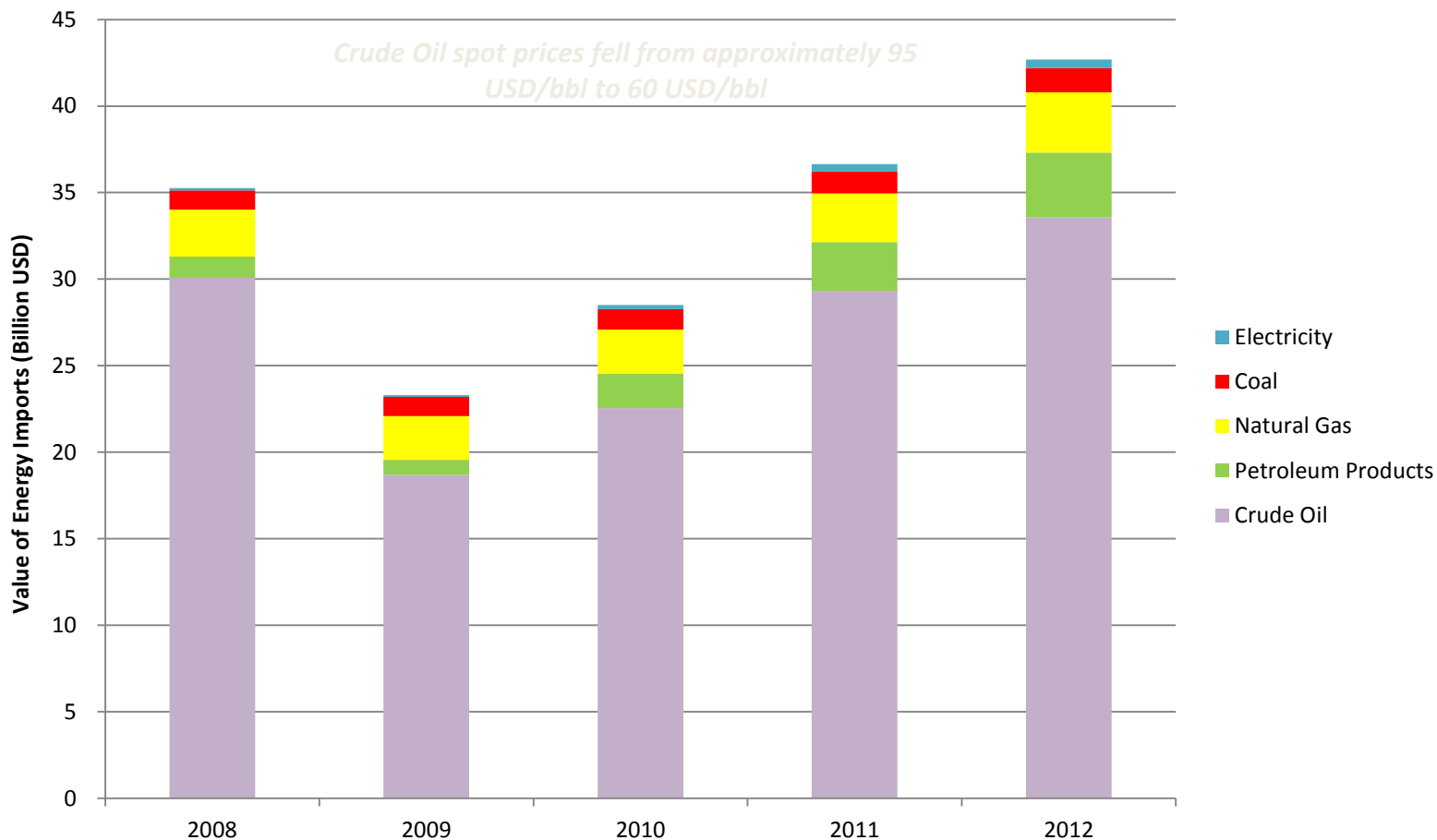
Efficiency's domestic production substitutes for fuel imports

- In 2014, IEA countries avoided primary energy imports totalling 190 Mtoe, saving USD 80 billion in energy import bills and improving trade balances



Domestically produced, efficiency supports energy security

EE strengthens trade balances (lowered fuel imports)



Import costs of fossil fuels in Thailand

Energy efficiency improves well being: indoor health impacts



International
Energy Agency
Secure
Sustainable
Together



Energy Efficiency Measures

- Weatherisation
- Heating & cooling systems
- Appliances



Energy efficiency boosts industrial productivity



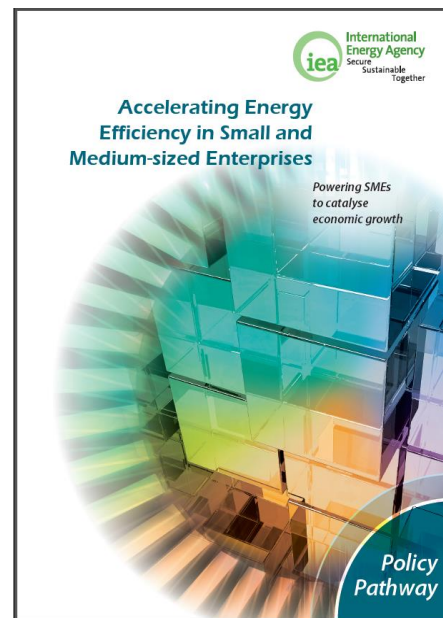
Competitiveness	Ability to enter new markets; reduced production costs etc.
Production	Capacity utilisation; improved product quality etc.
Operations and maintenance	Improved operation; reduced need for maintenance etc.
Working environment	Site environmental quality; worker health and safety etc.
Environment	Air pollution; solid waste; wastewater; reduced input materials etc.

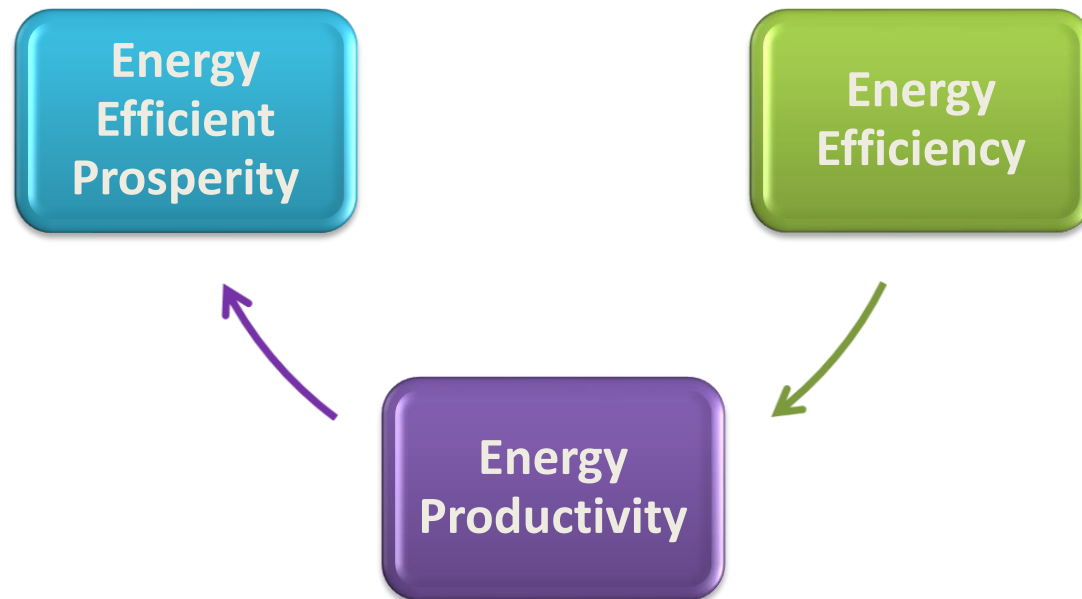
From savings to 'value creation'

EE strengthens productivity and competitiveness for SMEs



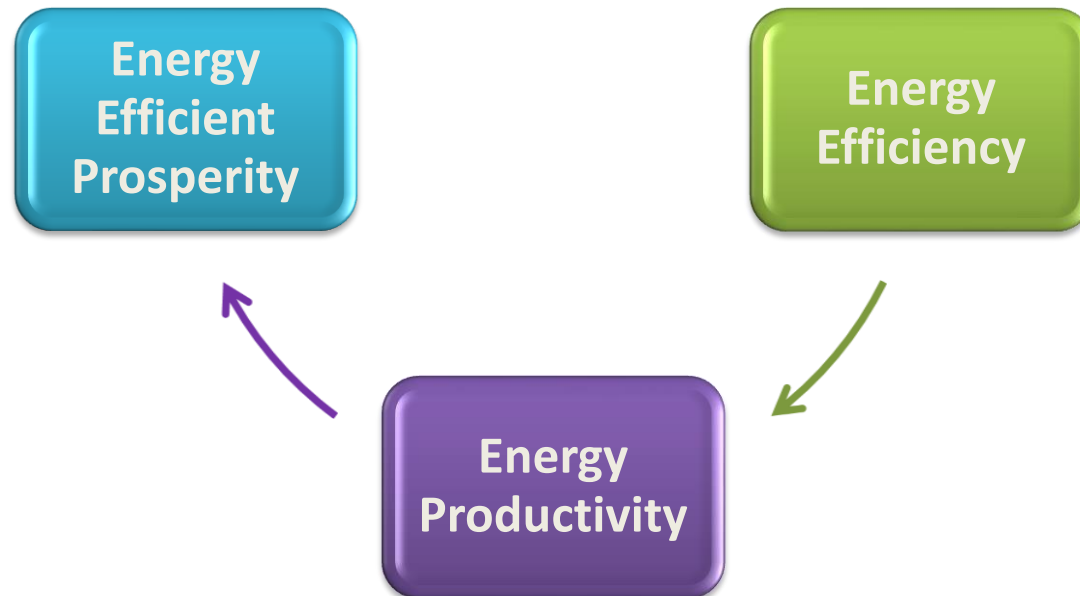
- SMEs provide 60% of global jobs; SMEs produce nearly 60% of GDP in China; SMEs deliver 45% of manufacturing output in India
- Consume about 74 EJ/year (about 13% of Global TFC)
- EE in SMEs could save 30% of consumption, about 22 EJ (equivalent to Japan & Korea's combined annual energy use)
- Barriers to energy efficiency (information, capacity, access to finance)
- IEA Policy Pathway

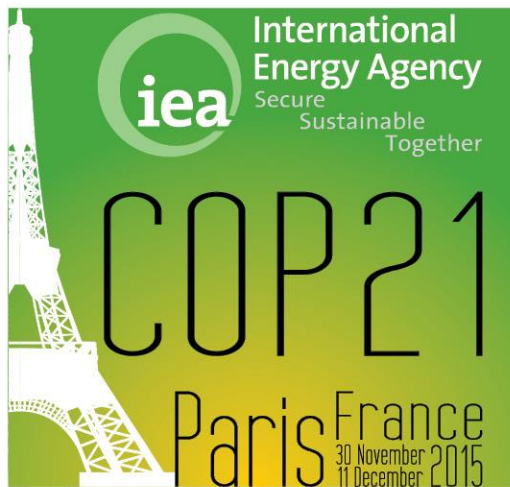






***Energy Efficiency is
a strong and sound tool to promote
economic and social objectives***





**Thank you for
your attention**

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