



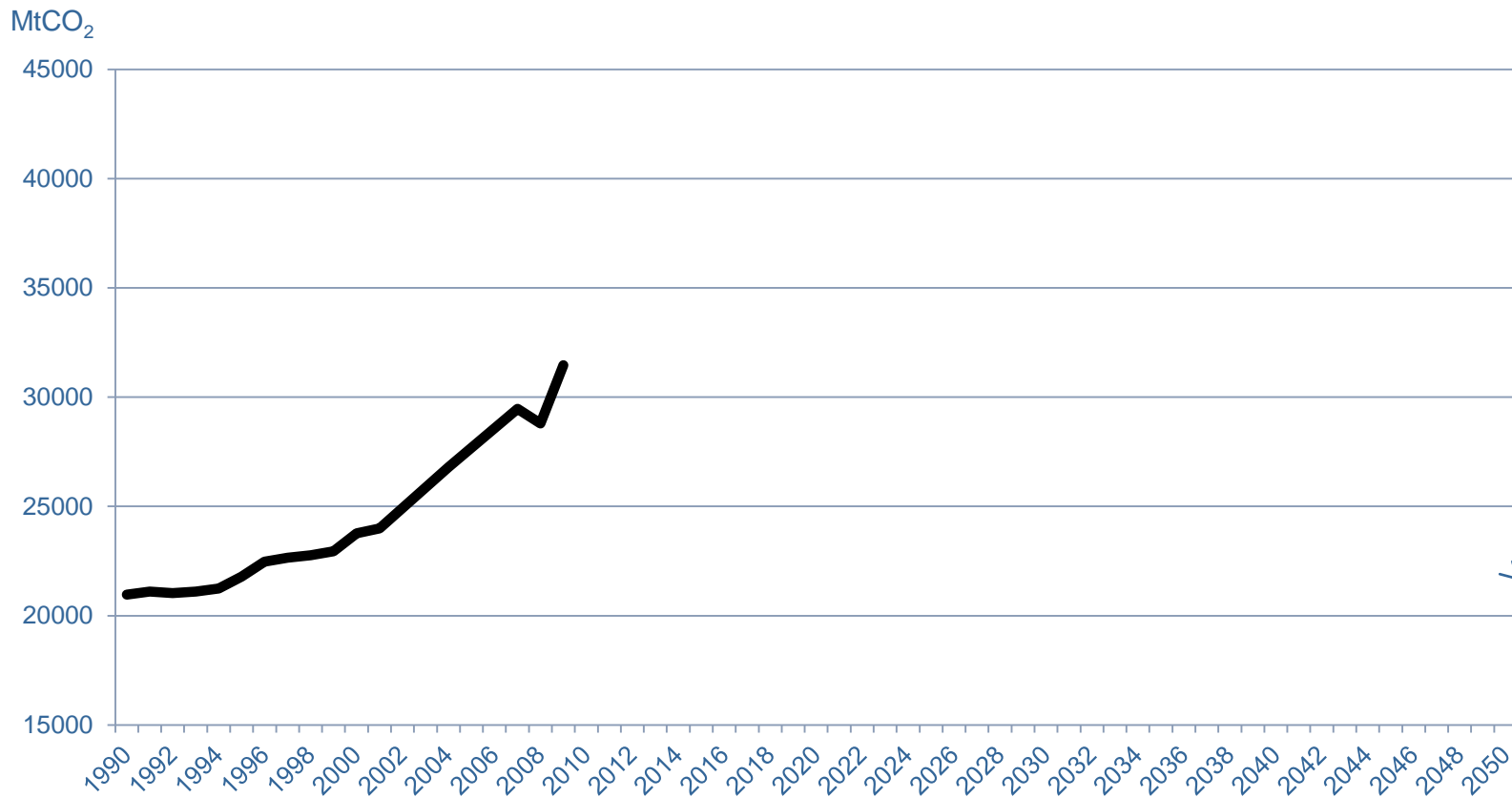
International
Energy Agency

Multiple Benefits of Energy Efficiency: Supporting Greater Climate Ambition

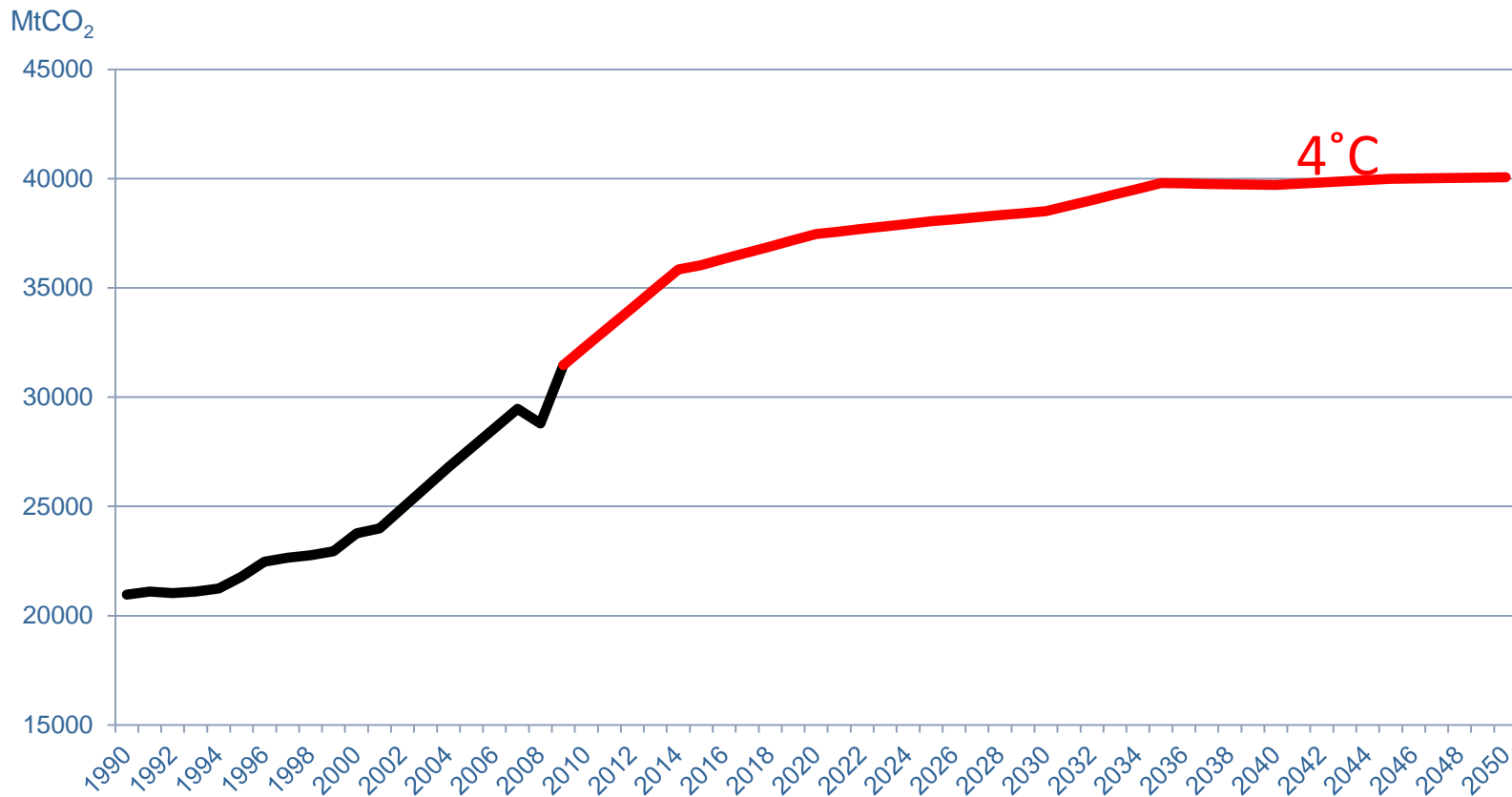
Philippe Benoit
Head of Energy Efficiency & Environment (Climate) Division, IEA

CCXG Global Forum
Paris, 19 September, 2013

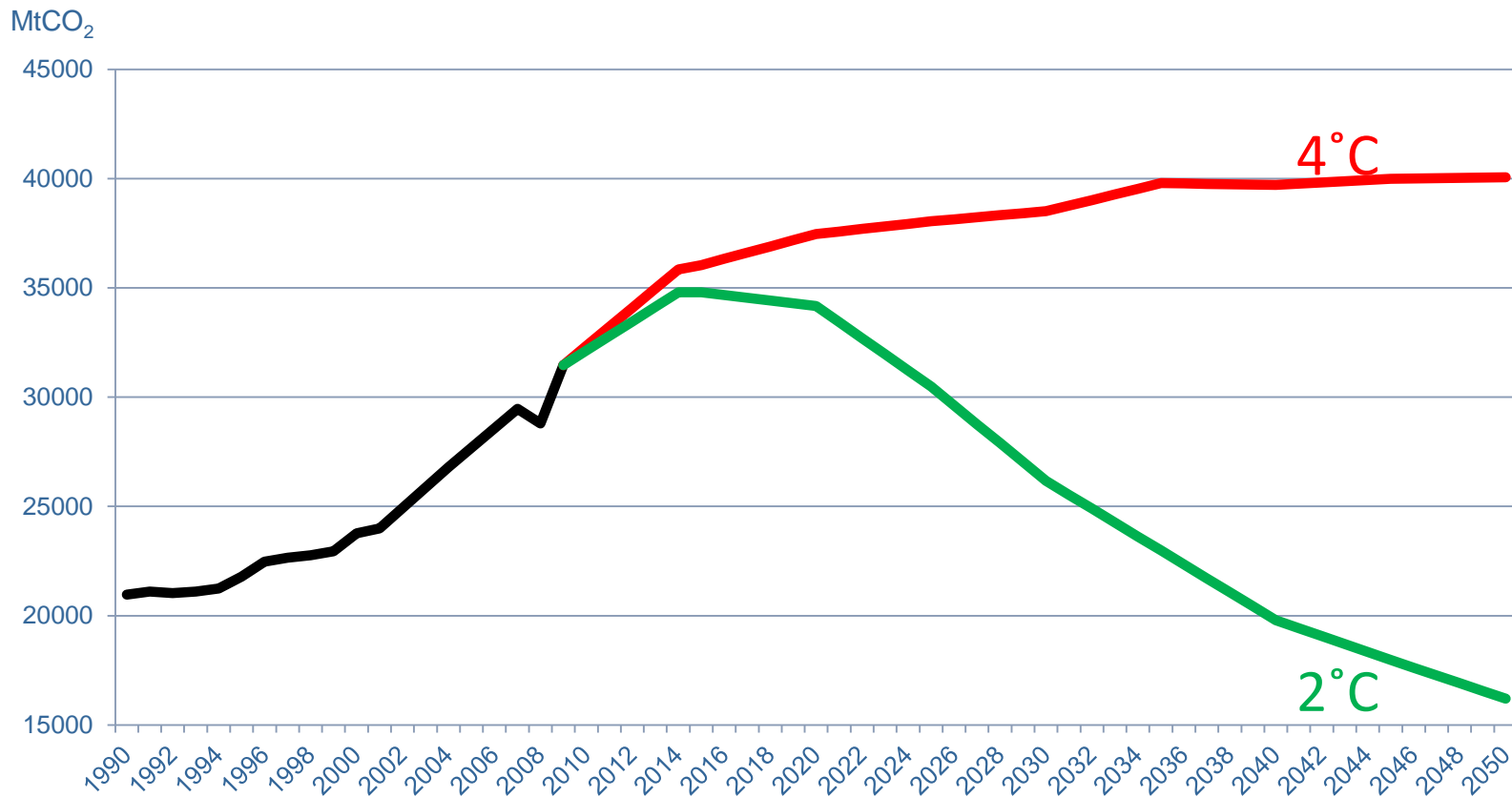
Energy emissions



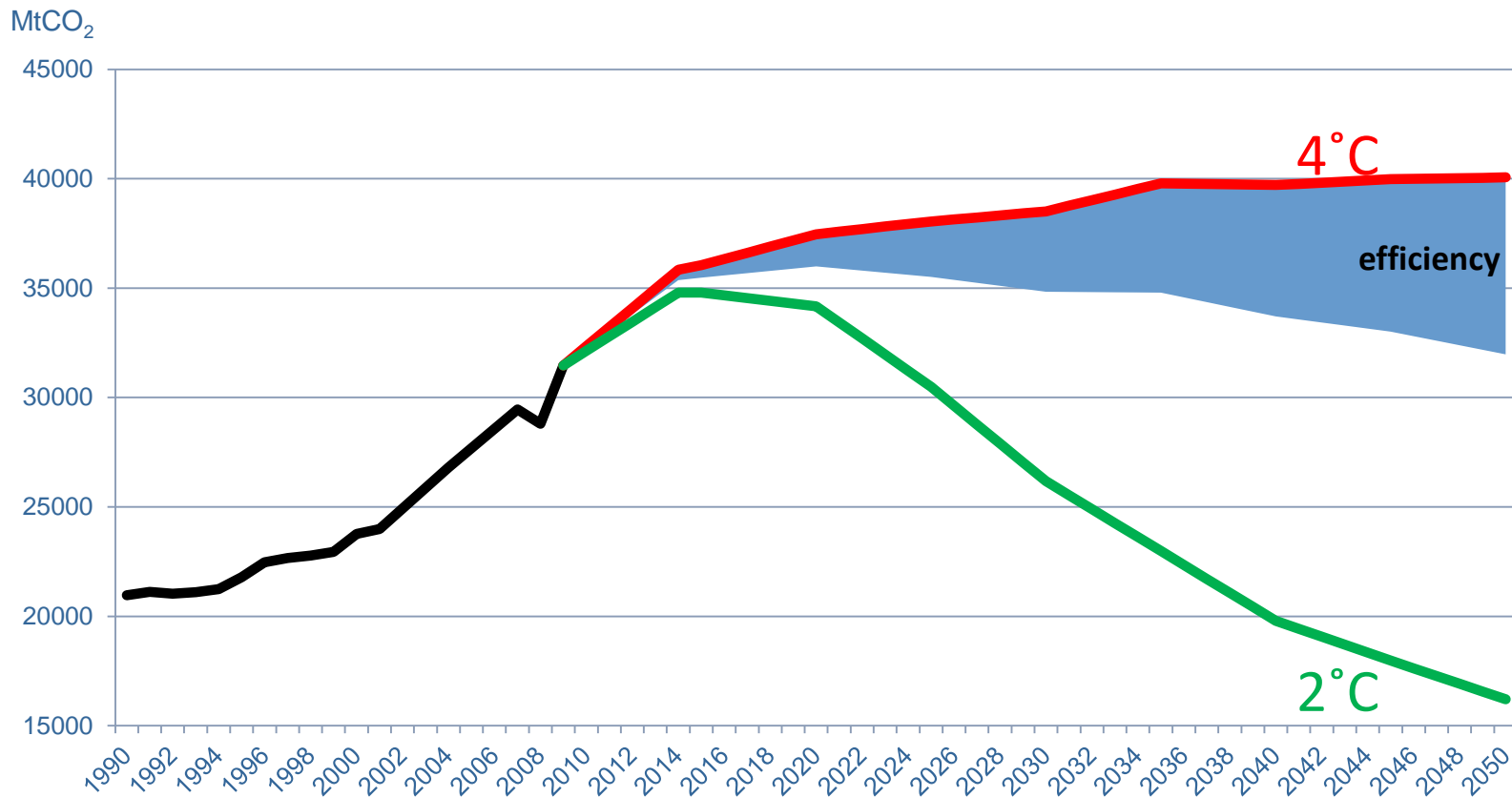
Energy emissions



Energy emissions

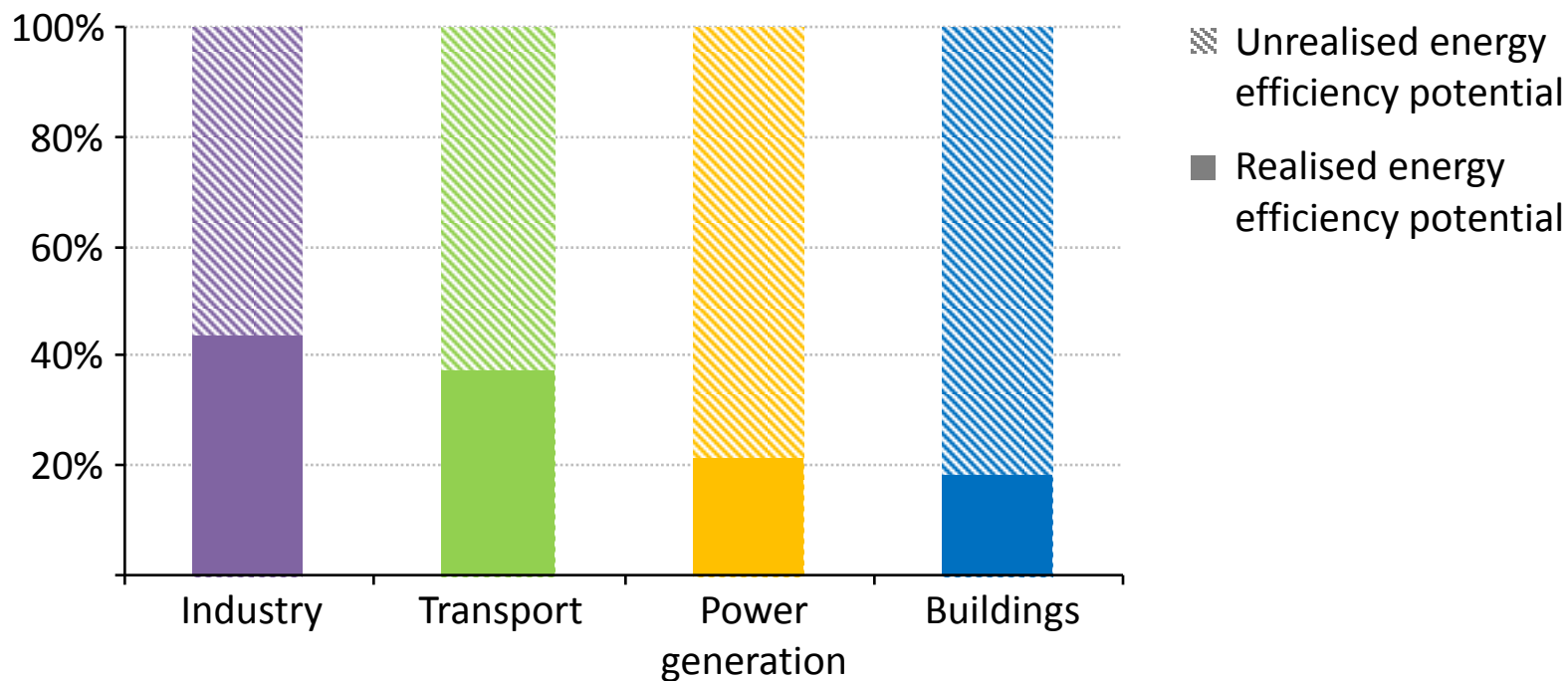


Energy emissions



Energy efficiency: a huge opportunity going unrealised

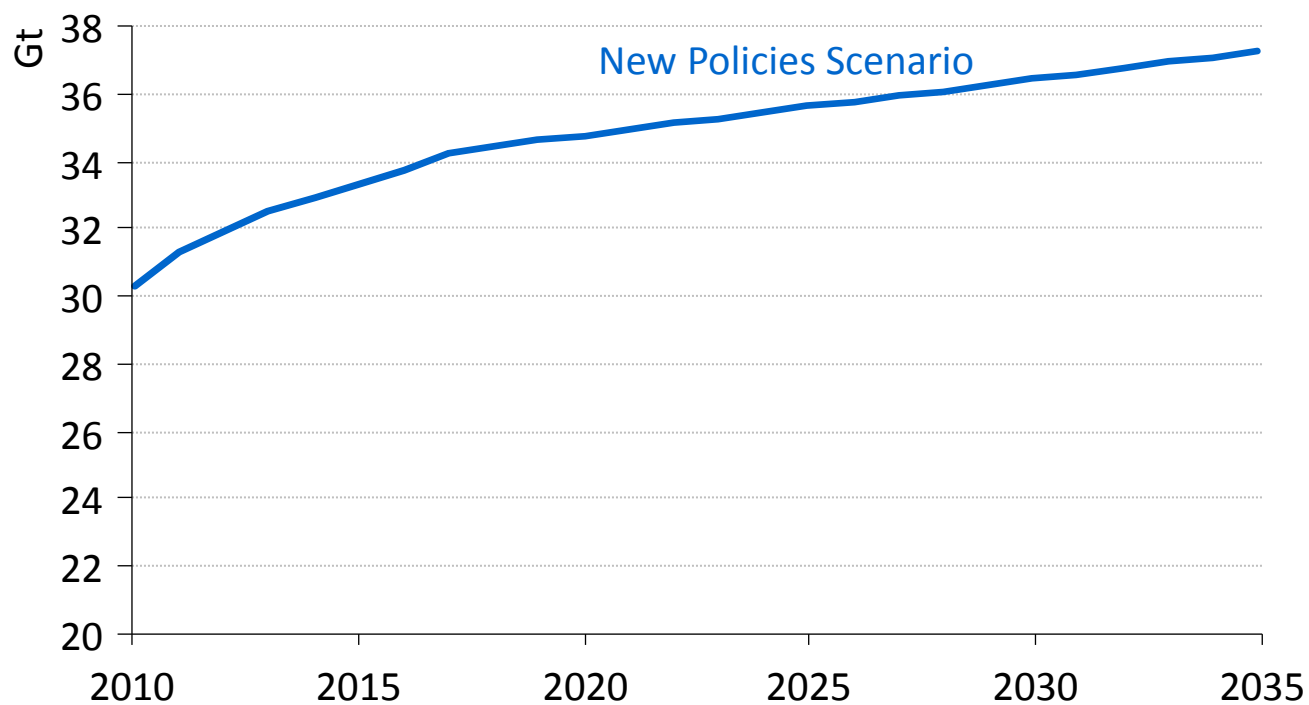
Energy efficiency potential used by sector in the New Policies Scenario



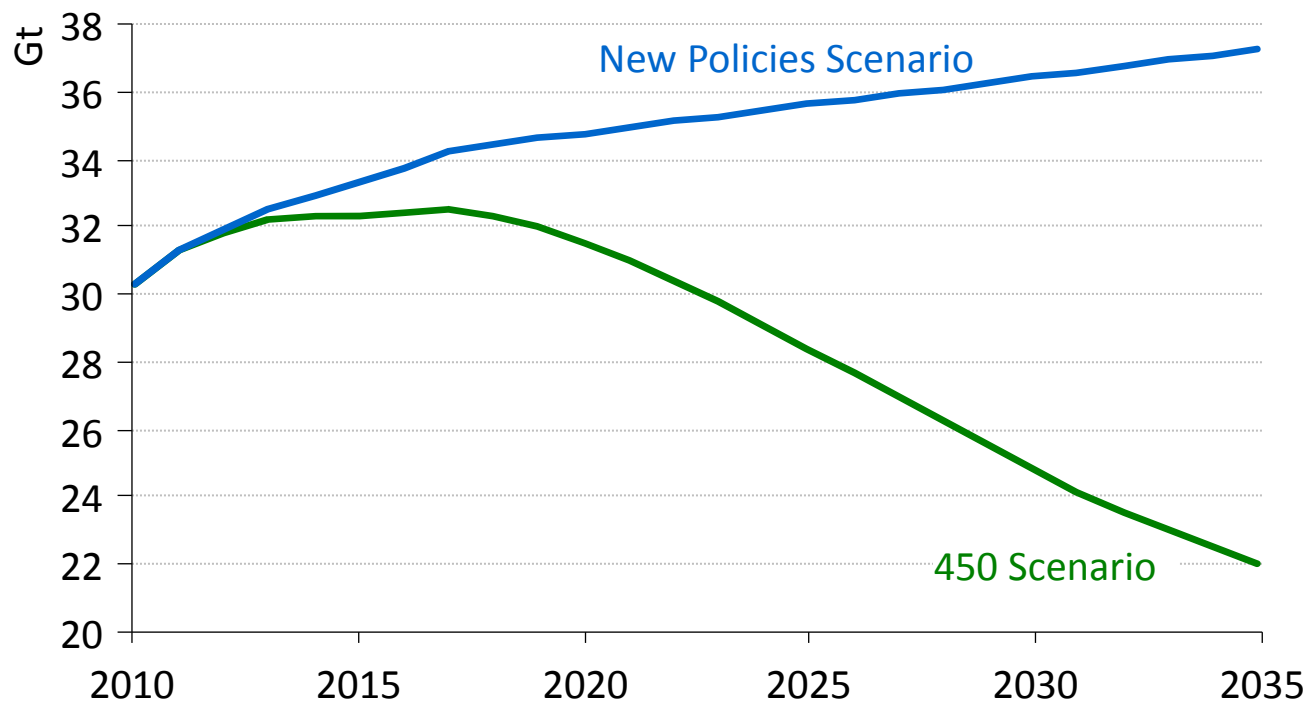
Two-thirds of the economic potential to improve energy efficiency remains untapped in the period to 2035

Energy-related CO₂ emissions by scenario & abatement measures

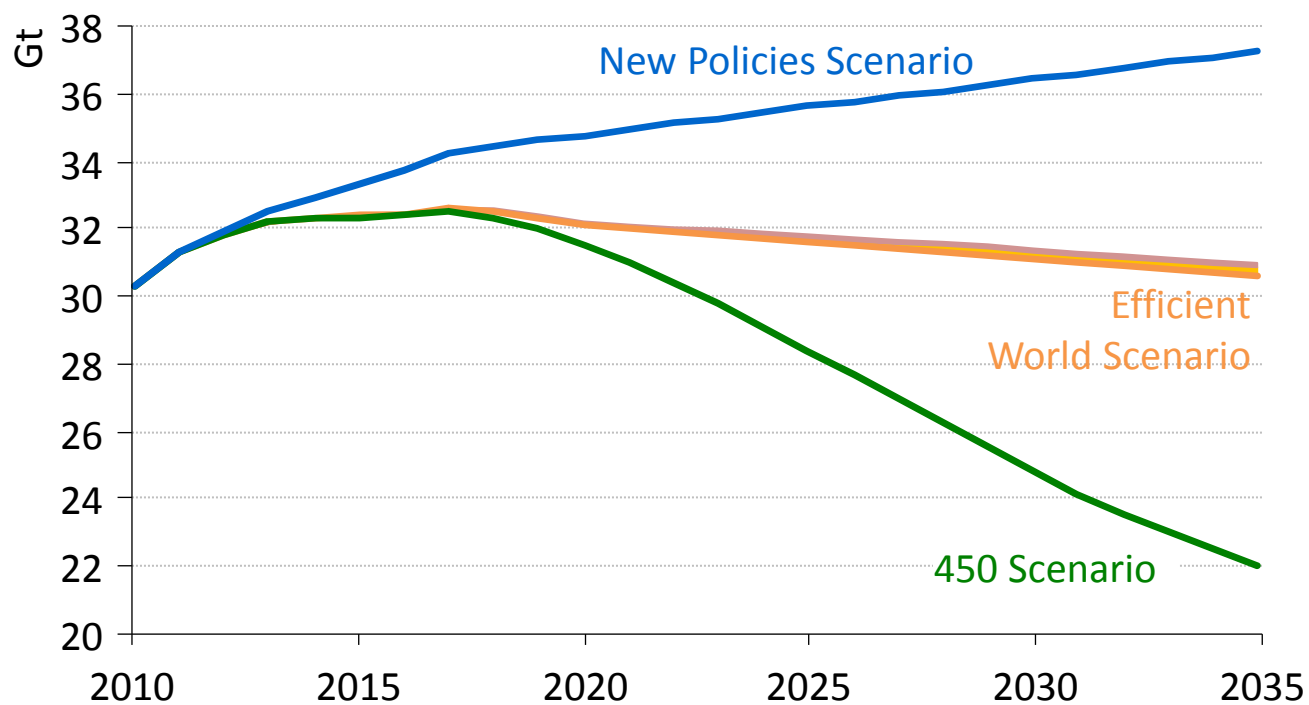
WORLD
ENERGY
OUTLOOK
2012



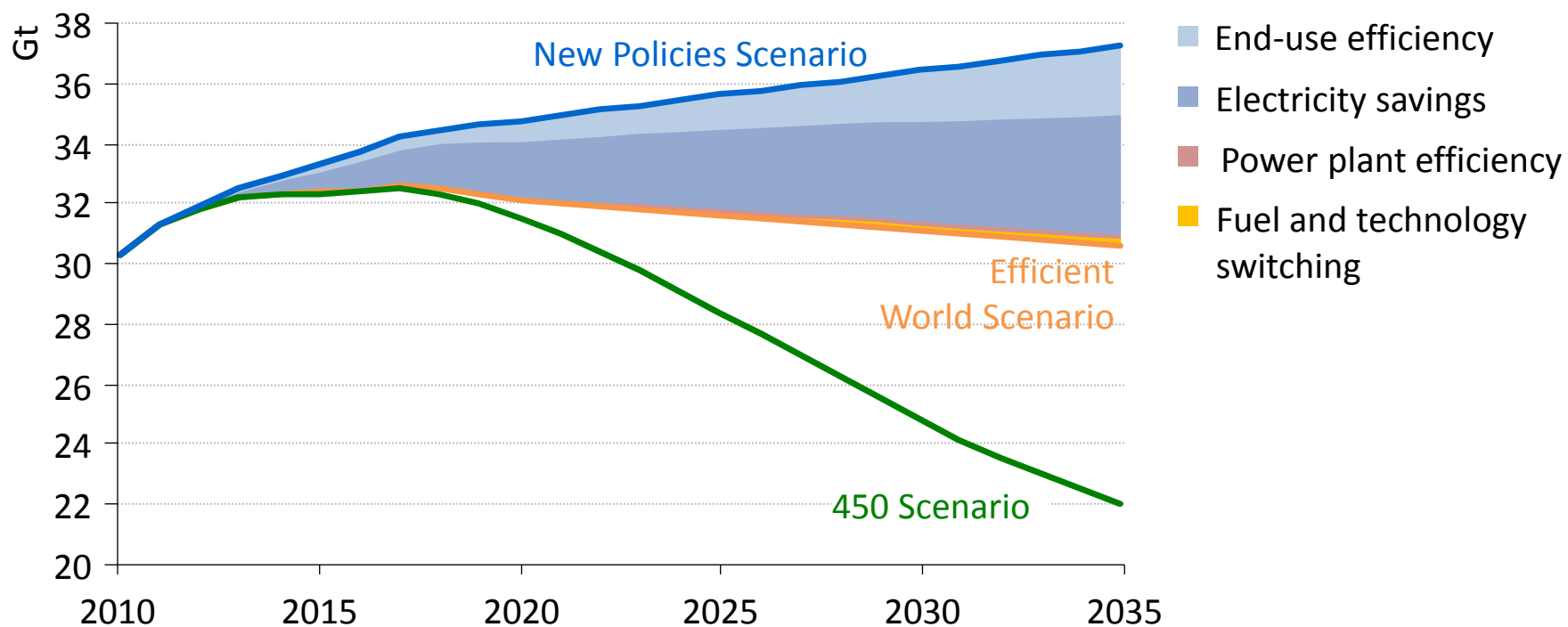
Energy-related CO₂ emissions by scenario & abatement measures



Energy-related CO₂ emissions by scenario & abatement measures

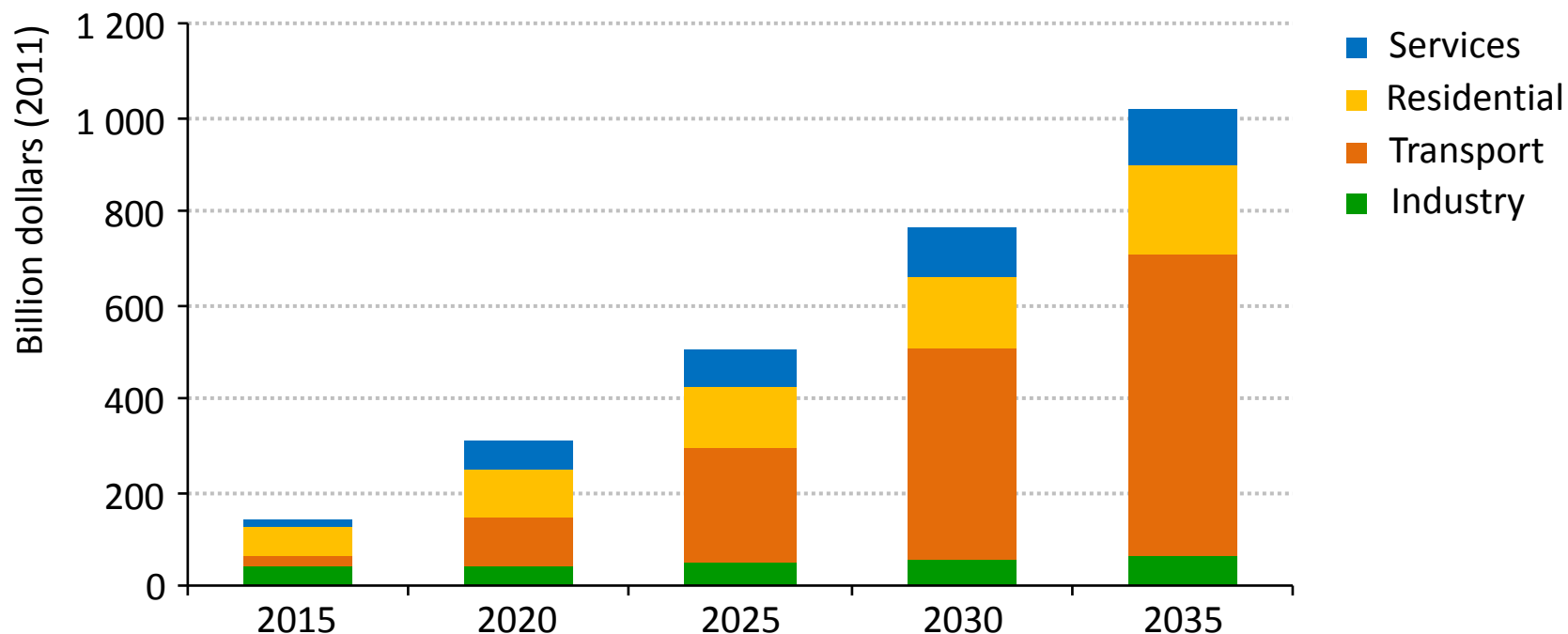


Energy-related CO₂ emissions by scenario & abatement measures



Massive global additional investment required

The Efficient World Scenario relative to the New Policies Scenario



Additional investments required in end-use efficiency are \$11.8 trillion over 2012-2035; saving consumers \$17.5 trillion in energy expenditures in this period

Need to . . .

Increase motivation

***by expanding set of engaged
stakeholders
(what is their EE benefit)***

Multiple stakeholders at multiple levels

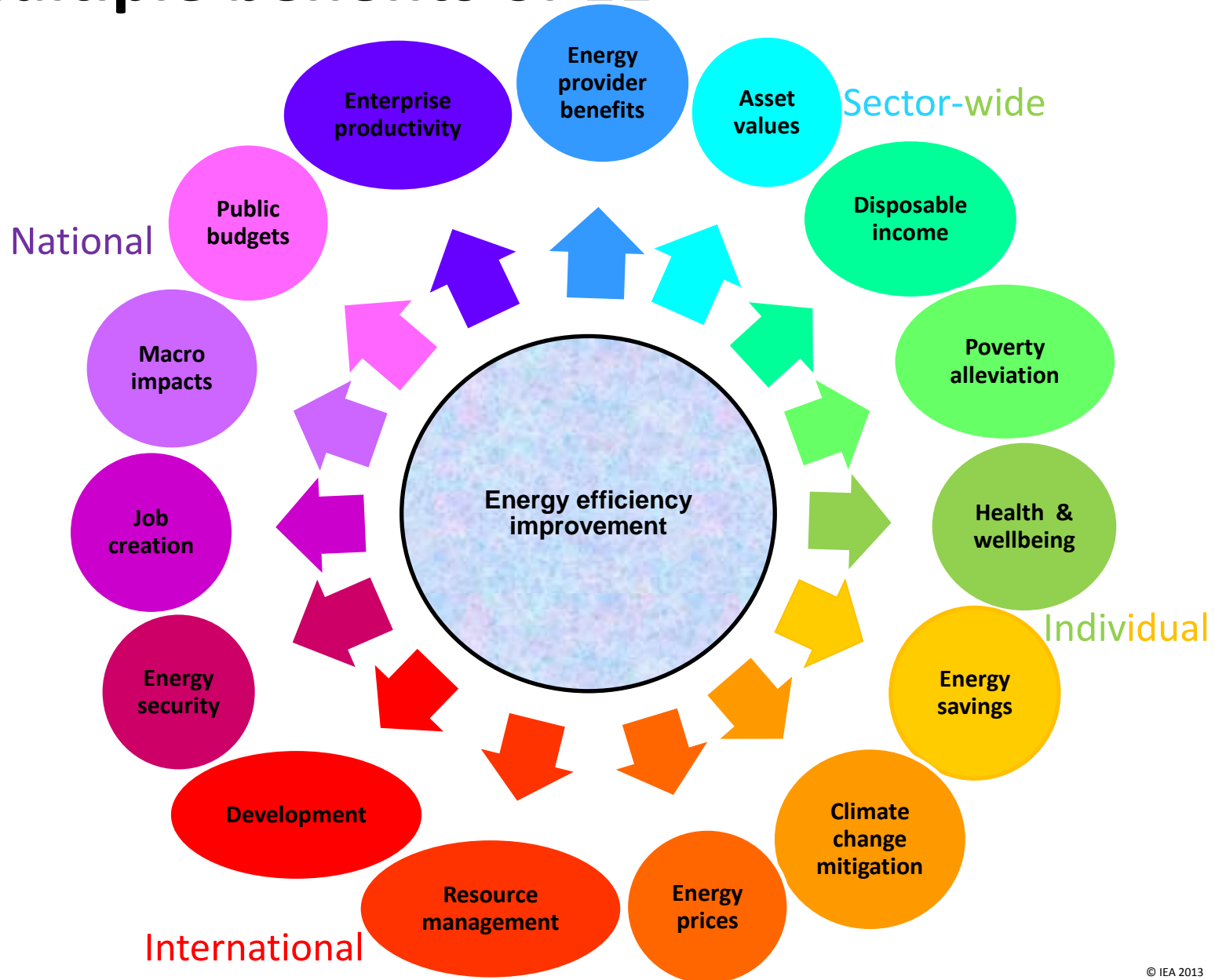
International

National

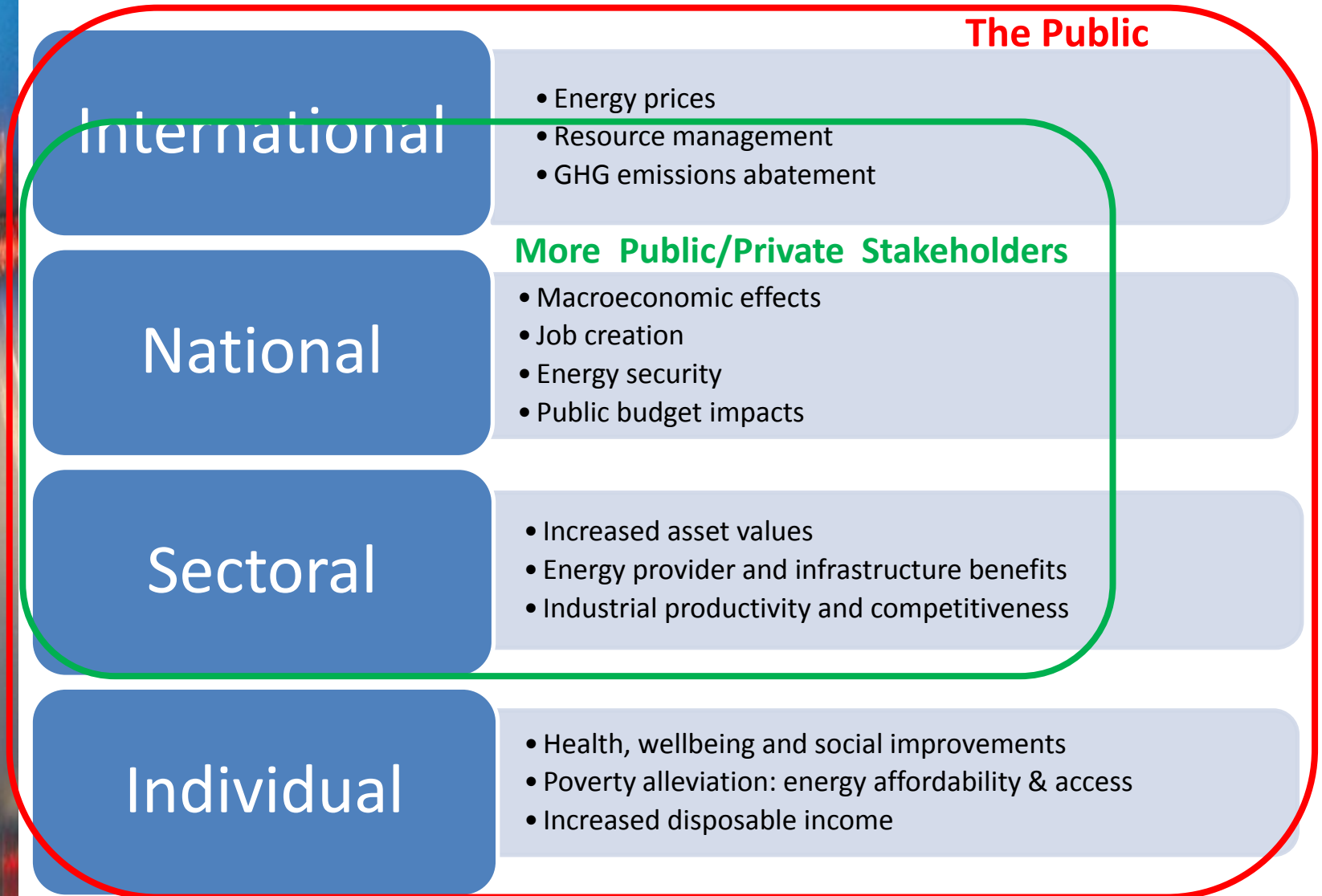
Sectoral

Individual

Multiple benefits of EE



Multiple benefits at multiple levels



'Different strokes for different folks'

Benefits vs. Co-Benefits  **Multiple Benefits**

	Country or Stakeholder A	Cty/Stk B	Ctry/Stk C	Etc.
Industrial Competitiveness	Co-Benefit			
Fuel Imports	Primary	Co-Benefit		
Poverty Alleviation and Development			Primary	
GHG Emissions		Primary	Co-Benefit	
Job Creation	Co-Benefit	Co-Benefit		
Etc.				

Multiple Benefits of EE

Initial IEA analysis of 5 benefits:

- **Macro-economic**
- **Health**
- **Utilities/Energy providers**
- **Public budgets**
- **Industrial productivity**

Outputs: Results to Date

■ ***Analytical scoping study***

- *Spreading the Net: Capturing the Multiple Benefits of Energy Efficiency Improvements (OECD/IEA, 2012)*

■ ***Expert Roundtable on Macroeconomic Benefits***

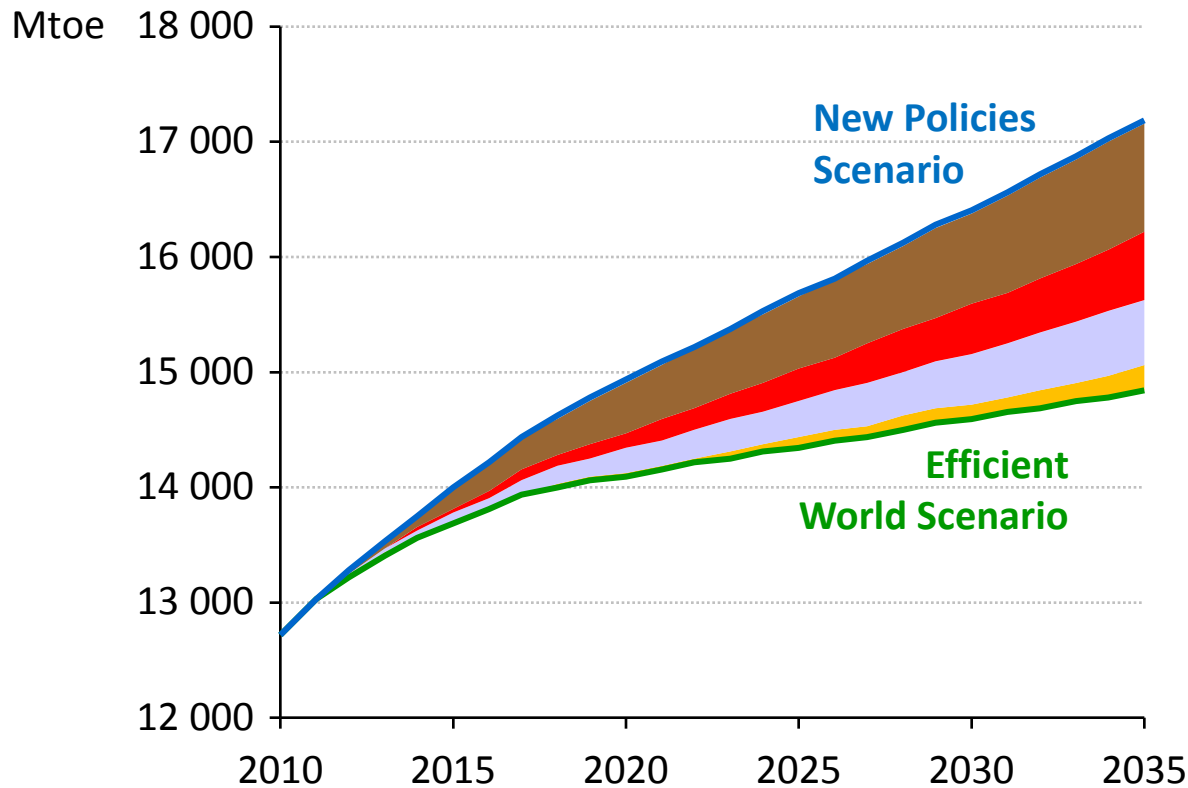
- Paris, January 2013

■ ***Expert Roundtable on Health & Wellbeing Impacts***

- Copenhagen, April 2013

The Efficient World Scenario: lowering demand

Total primary energy demand

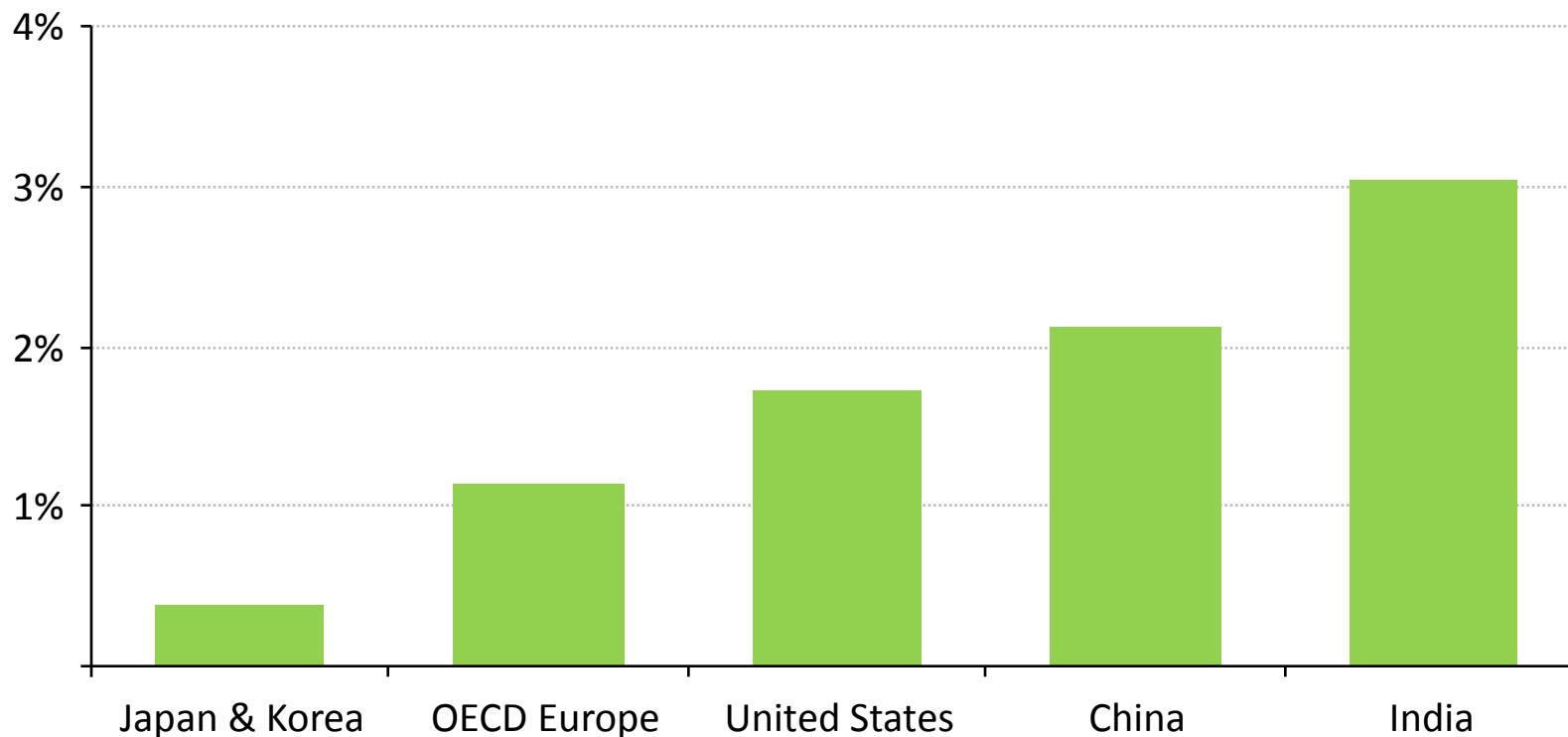


Reduction in 2035	
Coal	1 350 Mtce
Oil	12.7 mb/d
Gas	680 bcm
Others	250 Mtoe

Economically viable efficiency measures can halve energy demand growth to 2035; oil prices are \$15 per barrel lower by 2035 due to oil demand savings

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

Health & well-being impacts

■ Some key messages:

- *A clear link has been established*
- *Studies show \$4 can be saved in public health for every \$1 spent on EE*
- *A growing body of evidence that mental health benefits (reduced stress, anxiety and depression) are equal to or greater than physical benefits*
- *Significant benefits emerge when targeting vulnerable groups*
- *BUT overall cost/benefit suggests targeting dwellings not occupants, or IDEALLY start with a dwelling approach + demographic data overlay*
- *Policies must include safeguards to avoid negative impacts being generated inadvertently – i.e. ventilation testing post EE intervention*
- *Collected proven methodologies and received messaging advice*



Outputs: Next Steps

■ *Final Roundtables*

- **Energy provider and infrastructure benefits:**
Ottawa, Canada 15/16 October 2013
- **Industrial productivity:** Paris, 2 December 2013

■ *Multiple Benefits Handbook for Governments and Evaluators*

- Publication expected in 2014

Need to . . .

***adjust our approach
to achieve scale up at level
required for CC mitigation goals.***

***EE multiple benefits
outreach can help***

Thank You

Philippe Benoit
Head of Energy Efficiency & Environment (Climate) Division, IEA