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Energy Efficiency Market Report 2014

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ECEEE

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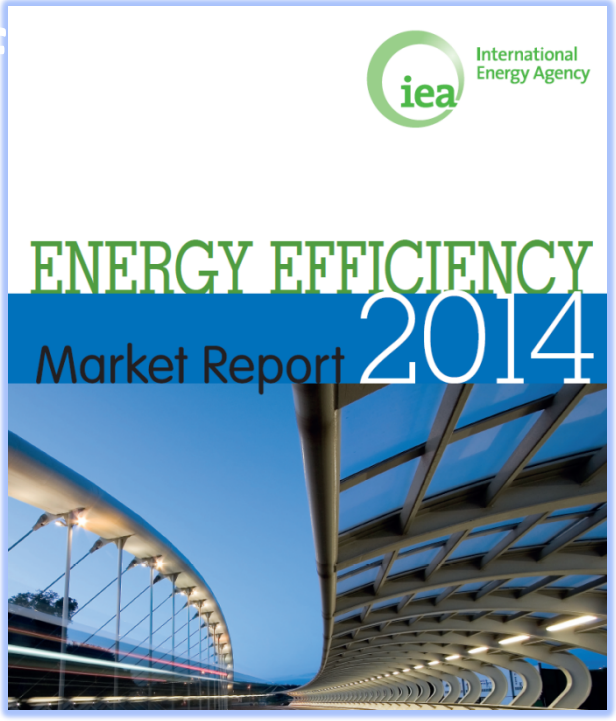
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2014 Highlights

- **Energy efficiency market estimated value to be between USD 310 billion and USD 360 billion**

- **Energy efficiency is *still* the first fuel in IEA-11 countries:**
  - **Avoided energy use was larger than the supply of oil, electricity or natural gas in 2011**

- **Energy efficiency market: diffuse, extensive and anticipated to grow**



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What's new in 2014

- More robust market evaluation methods
- Expanded analysis from 11 to 18 countries
- New decomposition methodology
- Expanded systematic year-on year tracking of energy efficiency indicators

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Part 1: The Market for Energy Efficiency

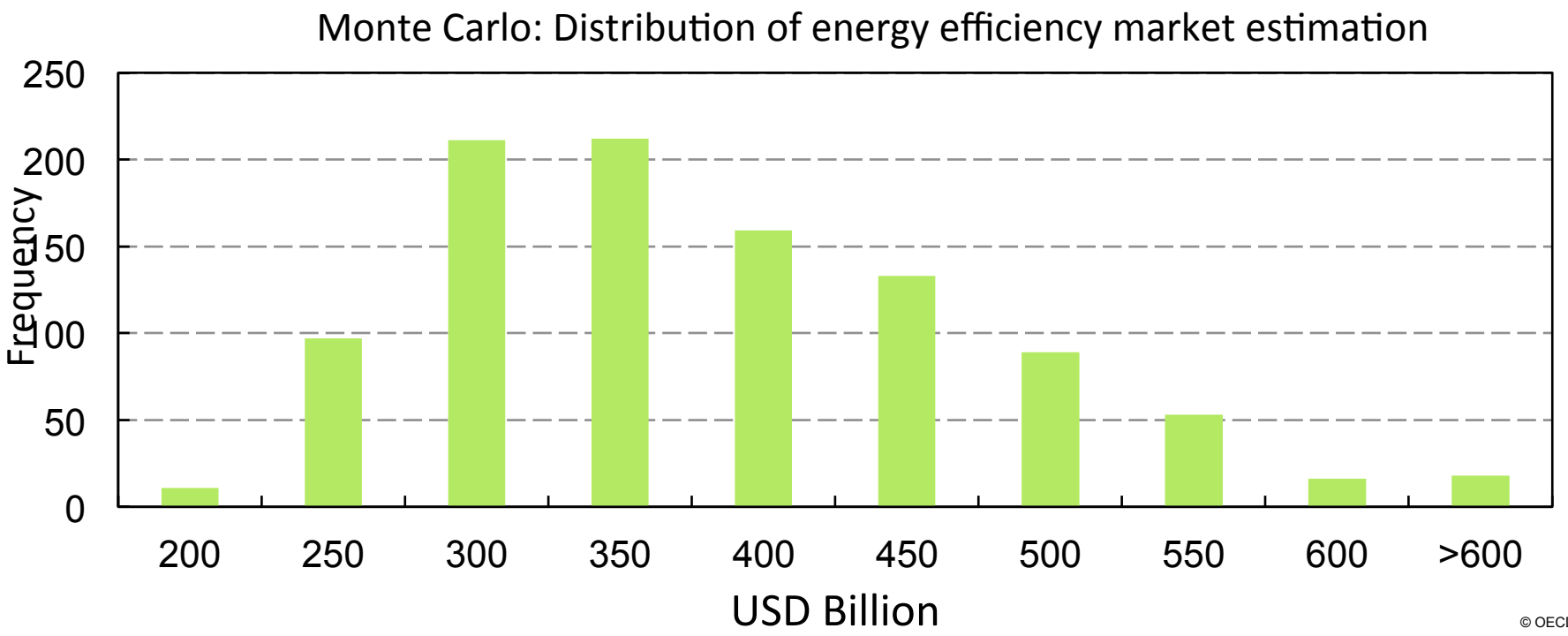
1. Toward a better estimation of the global energy efficiency market
2. What the numbers say: Tracking energy efficiency progress
3. The market for energy efficiency in transport (land-based sub-sector)
4. Energy efficiency finance

Part 2: Profiles of 11 national and regional energy efficiency markets

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Global Energy Efficiency Market

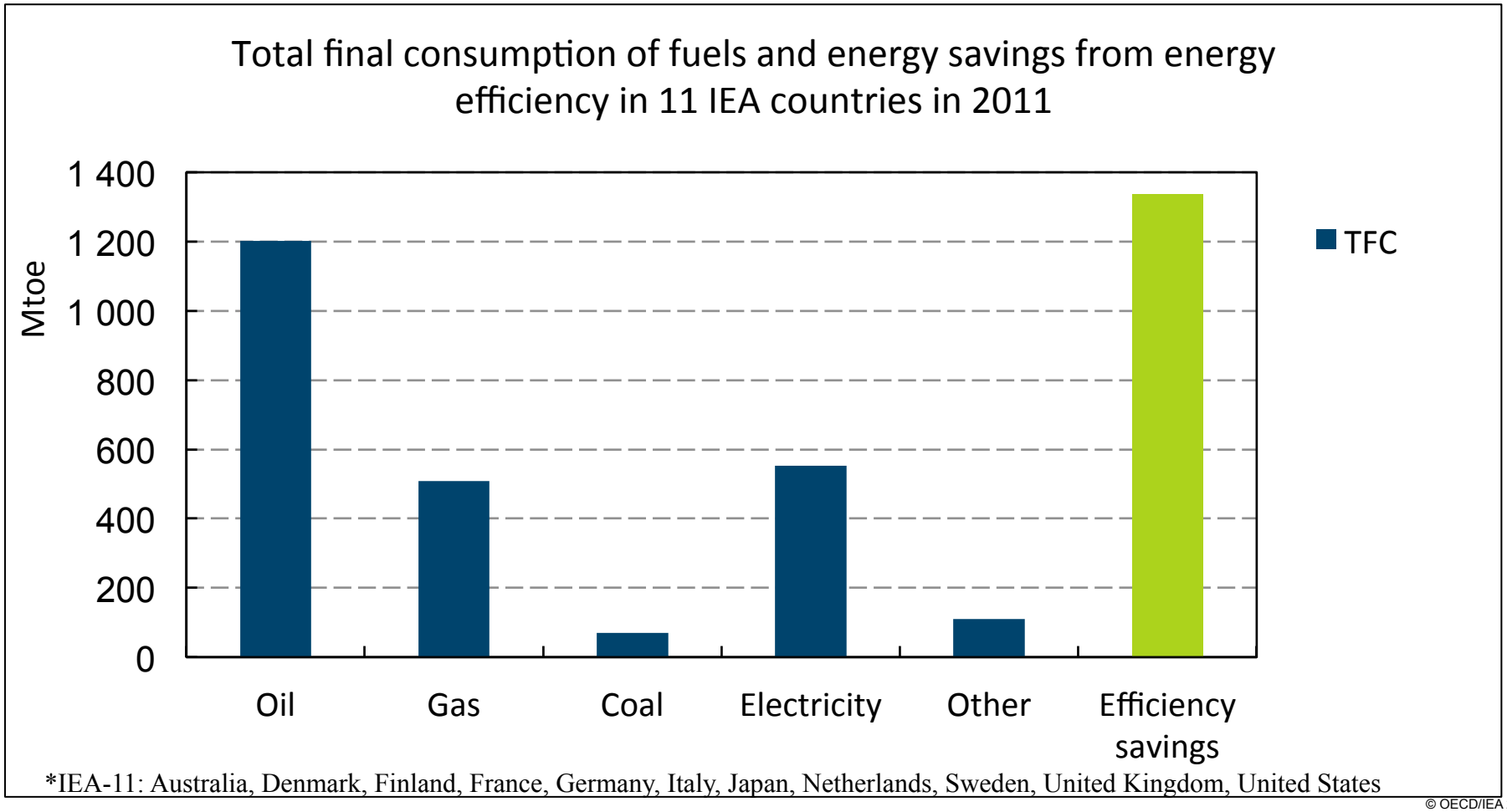
- **Estimated to be between USD 310-360 billion and growing**
- **Energy savings are product of energy consumers investing in new, more efficient energy consuming stock and practices**
- **IEA produced a series of new market estimates indicating it is between USD 310 and 360 billion**



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Energy efficiency: still the 'first fuel'

Supplied (1336 Mtoe) more in 2011 to meet energy service demand than oil (1200 Mtoe), electricity (552 Mtoe), natural gas (509 Mtoe) in IEA-11*

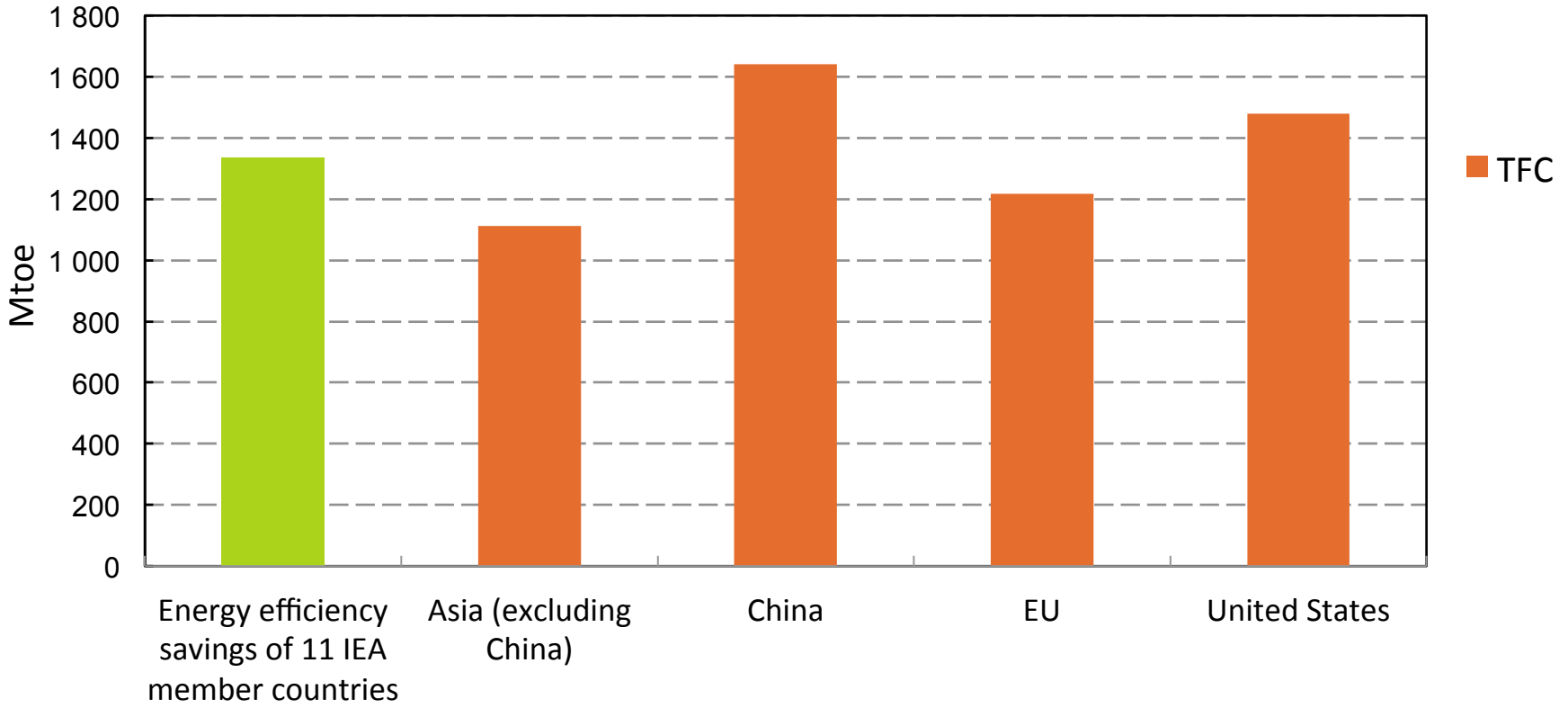


*IEA-11: Australia, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Sweden, United Kingdom, United States

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EE: an invisible power-house

Energy efficiency savings in IEA-11 countries rival TFC of major energy consuming countries and regions (e.g., EE improvements over the last 4 decades saved more energy in 2011 than TFC in EU)



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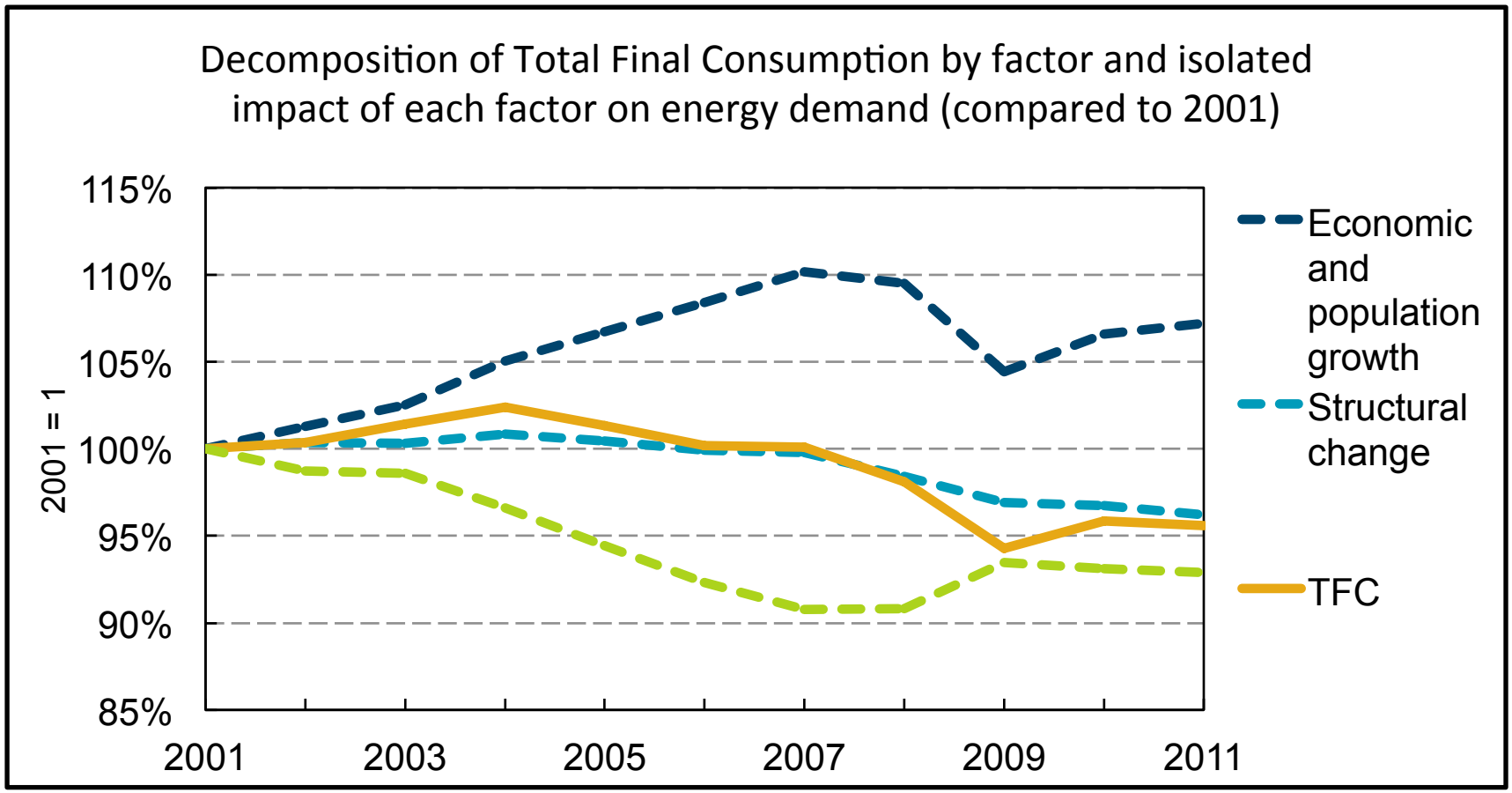
Looking at impacts: an expanded methodology

- Expanded analysis: 2001 baseline - 18 countries
- Sector specific decompositions (residential, passenger transport, freight transport)
- Applied LMDI methodology (no residuals)
- New systematic year-on-year tracking of energy efficiency improvements in 5 sectors and for 8 energy end-uses

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How different factors are affecting energy demand over time

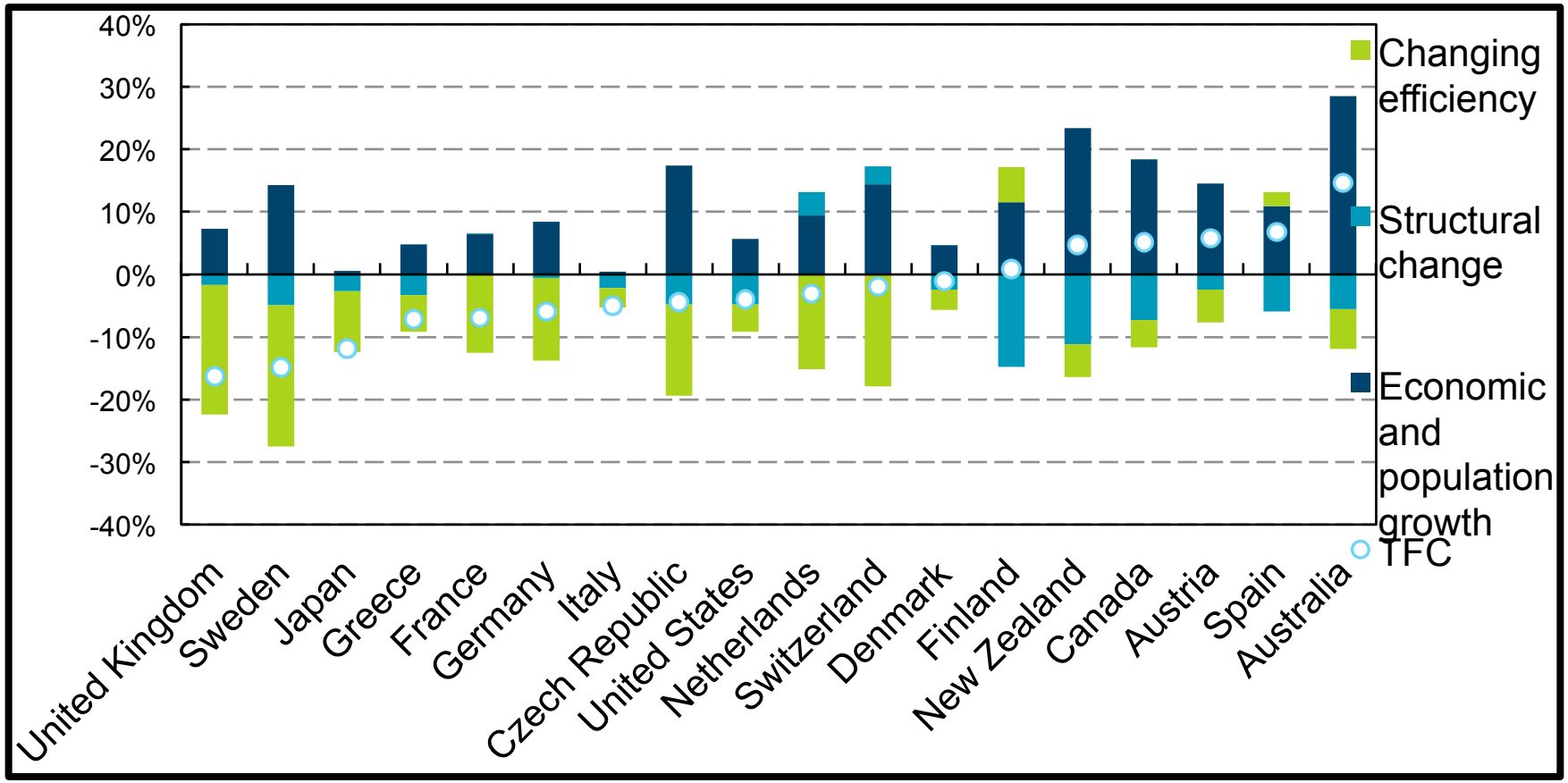
Energy efficiency has been the prime mover to reduce energy demand (TFC)



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EE: working to decouple economic growth from energy consumption

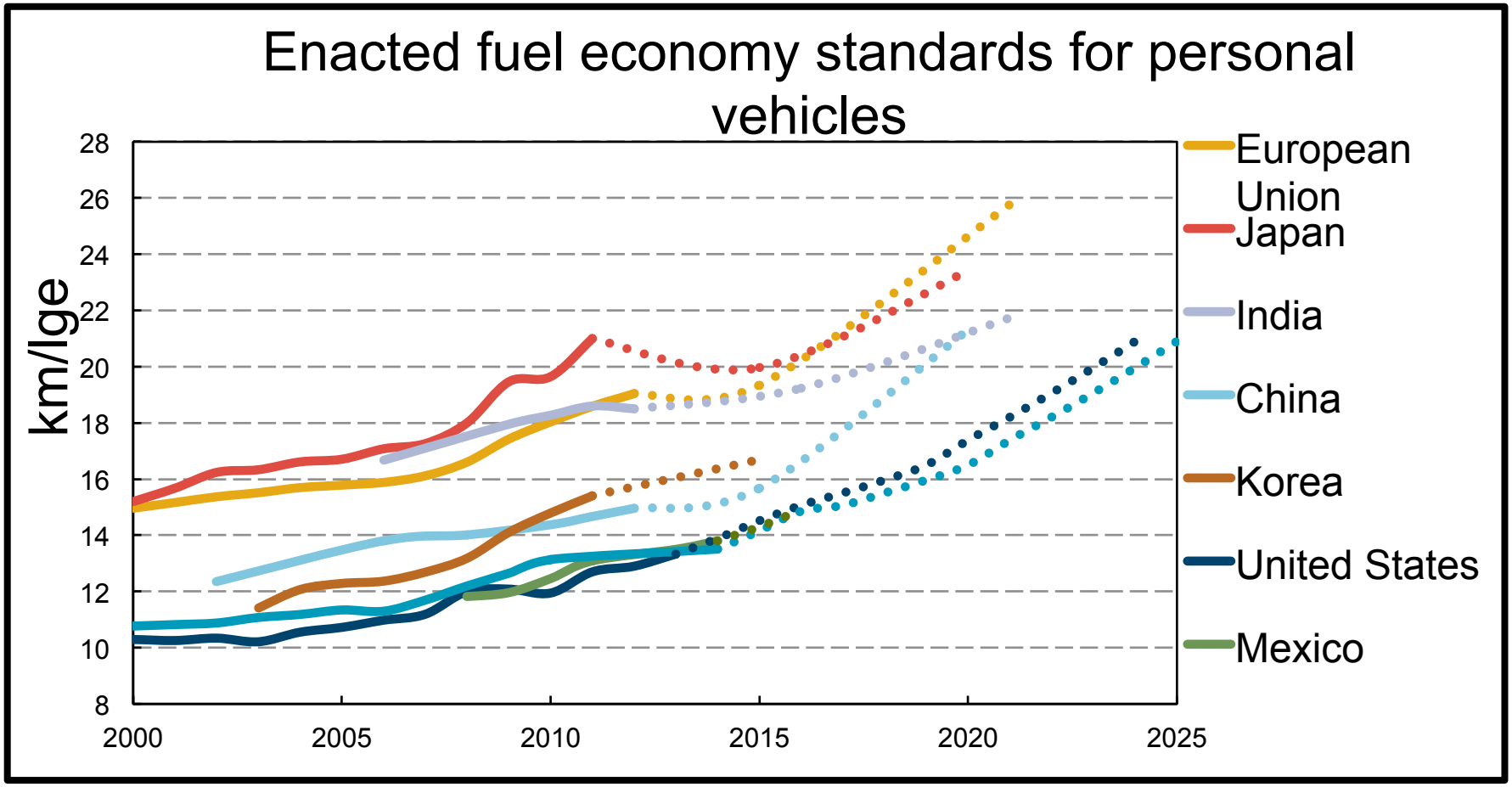
In 12 of 18 IEA countries, EE improvements were greater than growth, resulting in net decrease in TFC



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Transport: EE market driven by VFE standards

- **Vehicle fuel economy standards (VFE) affect 70% of global new vehicle fleet (50 million vehicles in 2011)**

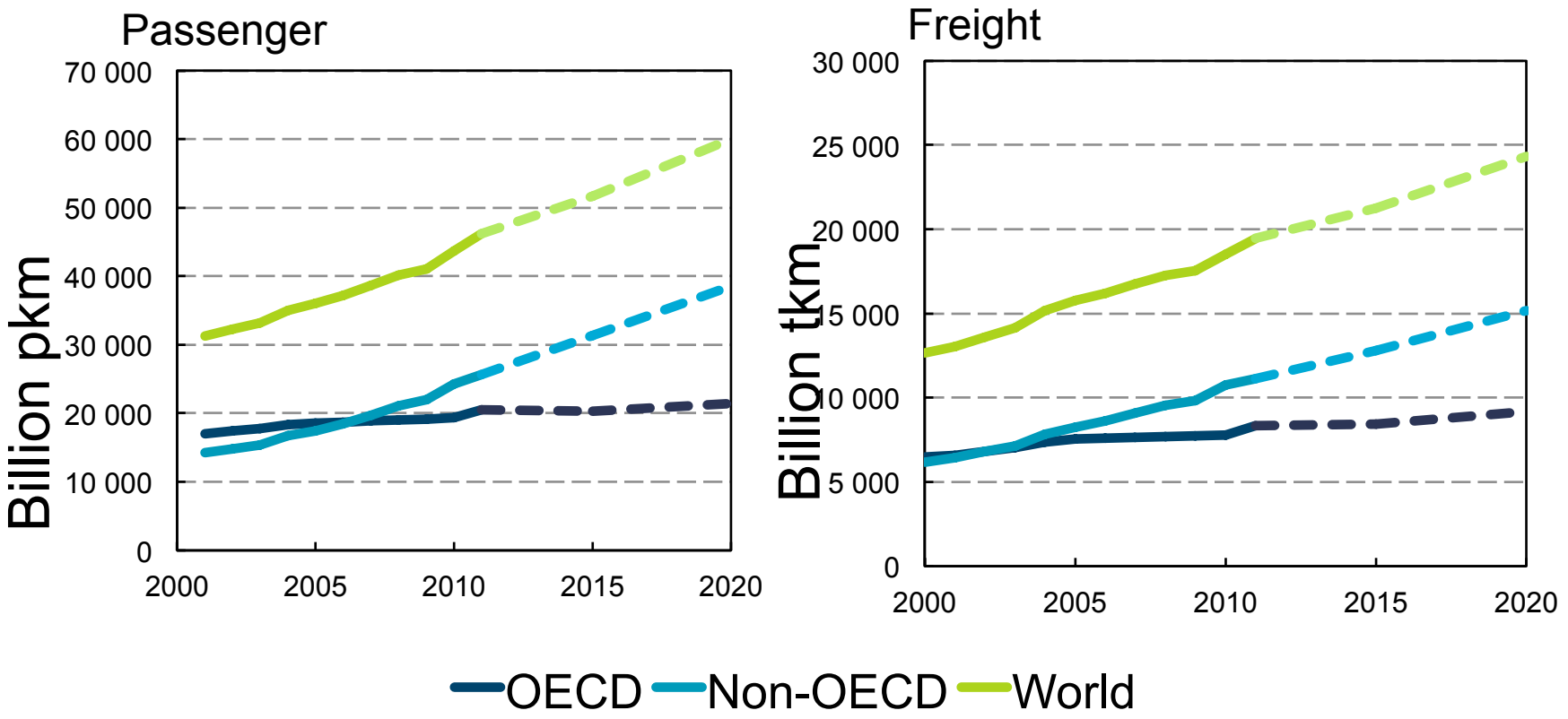


Source: Global fuel economy initiative

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Transport: a shift in geography

All new transport demand estimated to come from non-OECD: source for demand translates into EE market opportunity

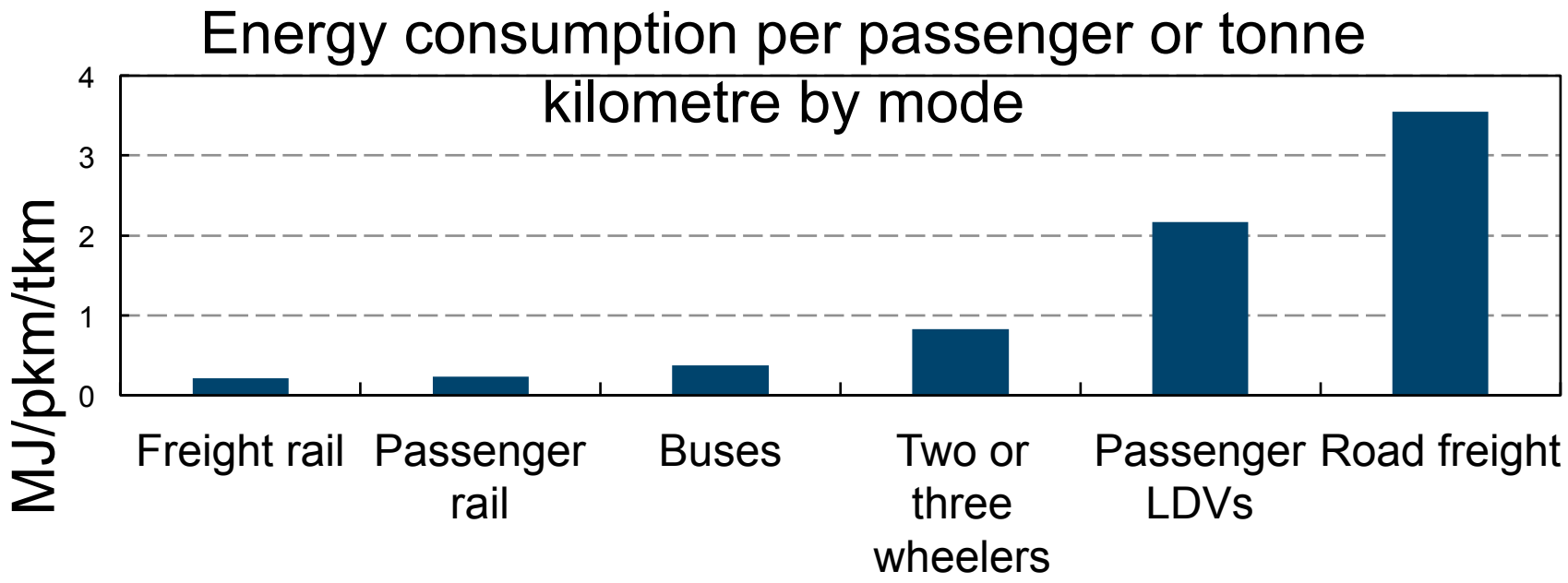


Source: *Energy Technology Perspectives,* IEA

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Transport: large potential in 'shift' in modes

- **Transport EE improves with modal shifts (e.g., rail/bus from less efficient PLDVs)**
- **Involves large investments in infrastructure: global spending on rail/ bus infrastructure USD 195 billion in 2010**
- **Area of increasing focus in both OECD and non-OECD**



Source: *Energy Technology Perspectives,* IEA

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Energy efficiency finance

- Energy efficiency finance is expanding and innovating
- Third-party financing estimated in range of USD 120 billion (drawing on WEIO estimate of financing share)
- Bilateral and multilateral development funding for energy efficiency was over USD 22 billion in 2012
- Energy efficiency finance is moving from niche to established financial market segment
- Energy efficiency market will grow with greater transparency and standards for financial products

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Energy Performance Contracting market size in selected countries

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- **ESCOs: a USD 30 billion market globally, and growing**

Country	Estimated market size (USD)	Number of ESCOs or projects
China	12 billion	..
United States	6.50 billion	> 500 projects
Germany	4.5 billion	500-550 ESCOs
France	4.3 billion	350 ESCOs
Italy	670 million	50-100 ESCOs
United Kingdom	540 million	30-50 ESCOs
Spain	450 million	20-60 ESCOs
Canada	420 million	..
Korea	330 million	> 1 400 projects
Denmark	195 million	15-20 ESCOs
Croatia	140 million	10 ESCOs
Russia	140 million	30-100 ESCOs
Ukraine	140 million	30 ESCOs
Japan	140 million	50 projects
Total	**30 Billion**	>1100 ESCOs

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Country case studies

- **11 countries:**

Canada	*Italy*
China	*Japan*
EU	*Korea*
India	*The Netherlands*
Indonesia	*Thailand*
Ireland	

- **Highlighted sub-markets and innovative policies harnessing market factors**

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China: increasing investments in EE from 11th to 12th Five-Year Plan

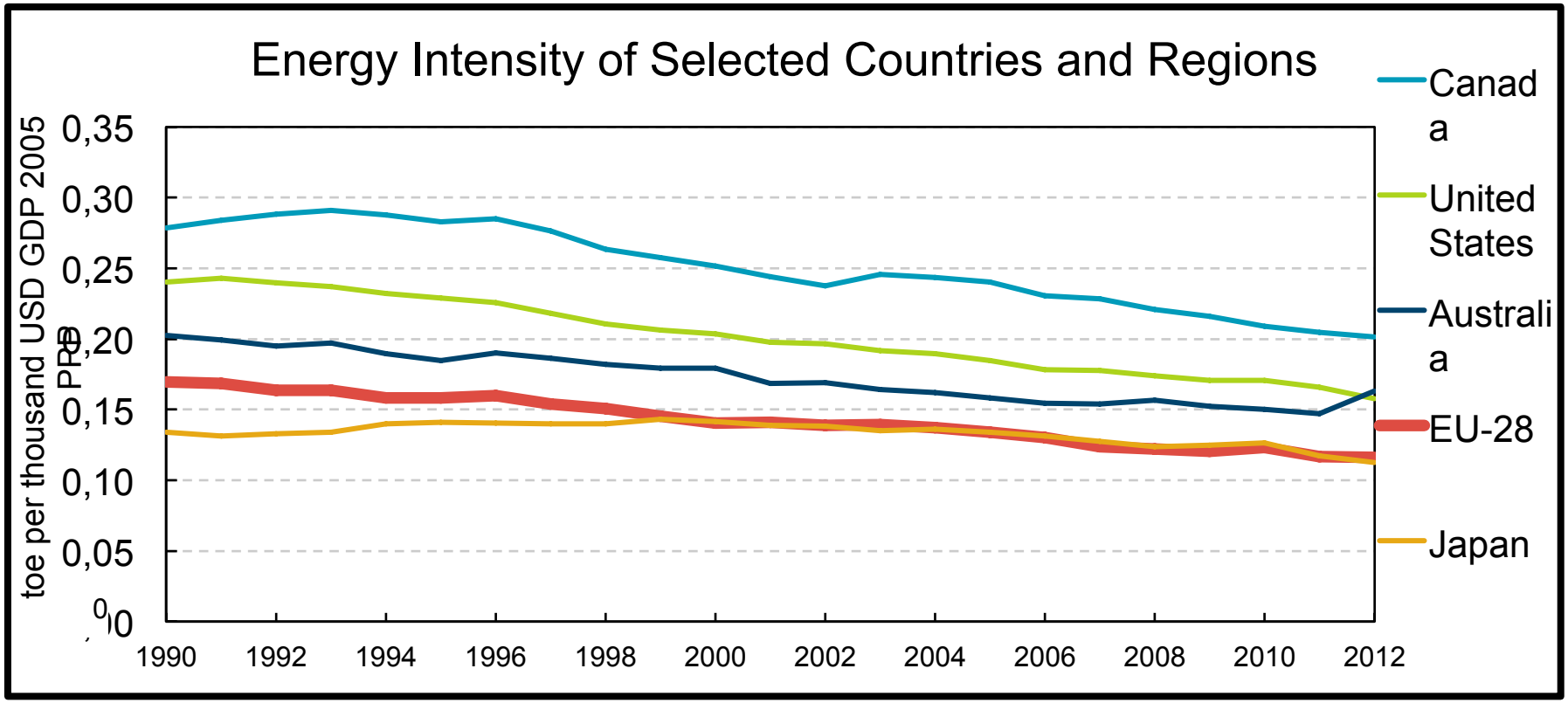
- 11th FYP: Invested USD 120 billion between 2006-2010 to achieve between 238-287 Mtoe of energy savings
- 12th FYP: Target of USD 200-270 billion in efficiency investments between 2011-15 to achieve 235-268 Mtoe
- Change in 'return' may reflect (i) easy wins in industry previously captured and (ii) shift to more capacity building investments

	Energy savings		Investment		
	Total (Mtoe)	Savings achieved by energy efficiency (Mtoe)	Total (USD billion)	Public funds	Commercial funds
11th FYP actual	**441**	**238-287**	**120**	**18-19%**	**81-82%**
12th FYP needed	**469**	**235-268**	**200-270**	**-**	

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European Union showing progress and stepping up ambition

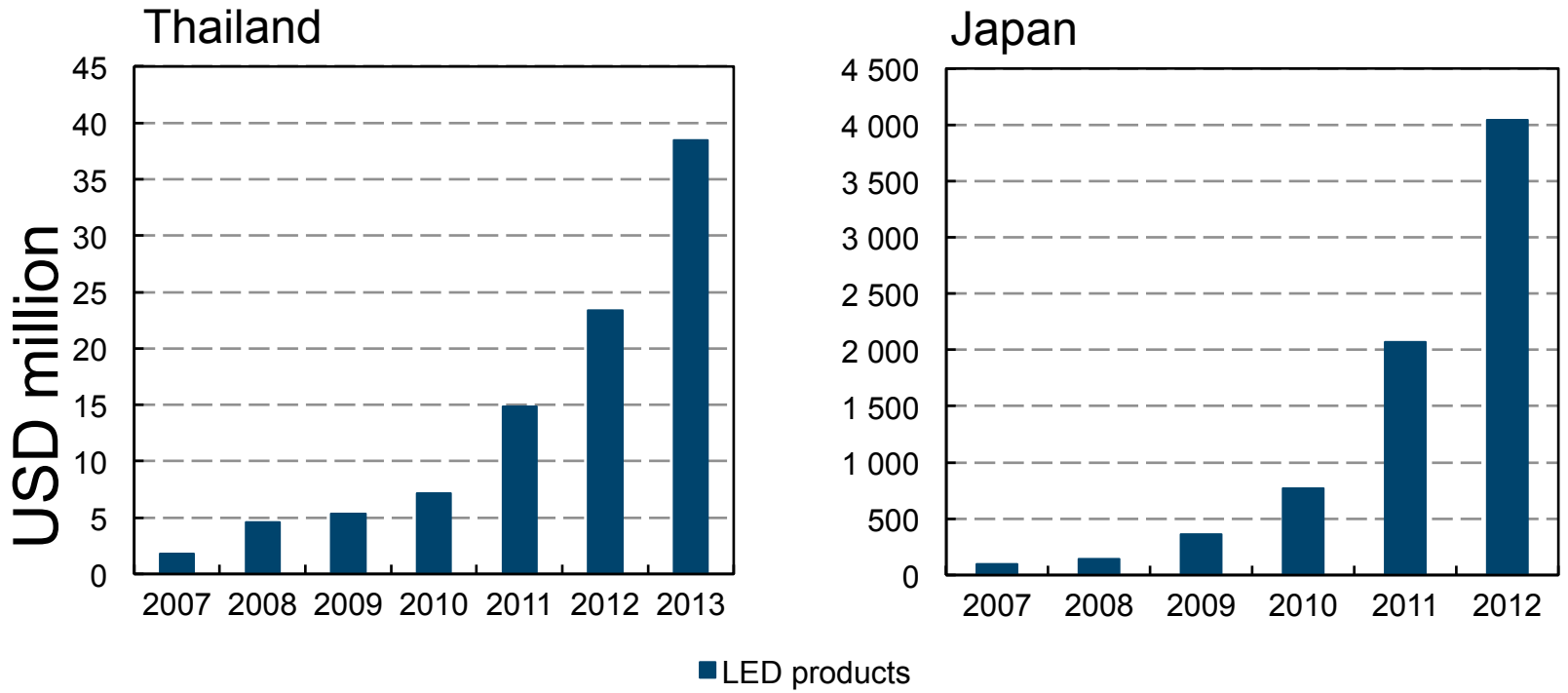
- **EU has reduced energy intensity by 28 percent since 1990**
- **Doubling of European Commission-sponsored energy efficiency finance to over EUR 10 billion**



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Asia: Growing EE lighting markets

- **LED market taking off in Asia:**
  - **Thai LED sales have growth exponentially from USD 2 million in 2007 to 38 million in 2013**
  - **In Japan LED sales grew from USD 100 million in 2007 to 4 billion in 2013**



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EEMR 2015

- Electricity Efficiency: market implications
- Global technology focus on Buildings
- Domestic resource aspect of EE market
- Continued improvements to analytical framework
- Better efficiency indicators and improved data

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Conclusions

- Energy efficiency market a significant component of the global energy system
- Market is growing with drivers strengthening
- Issues such as climate change to drive further attention
- Policies, standardization, information and data, critical to achieve the opportunity

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