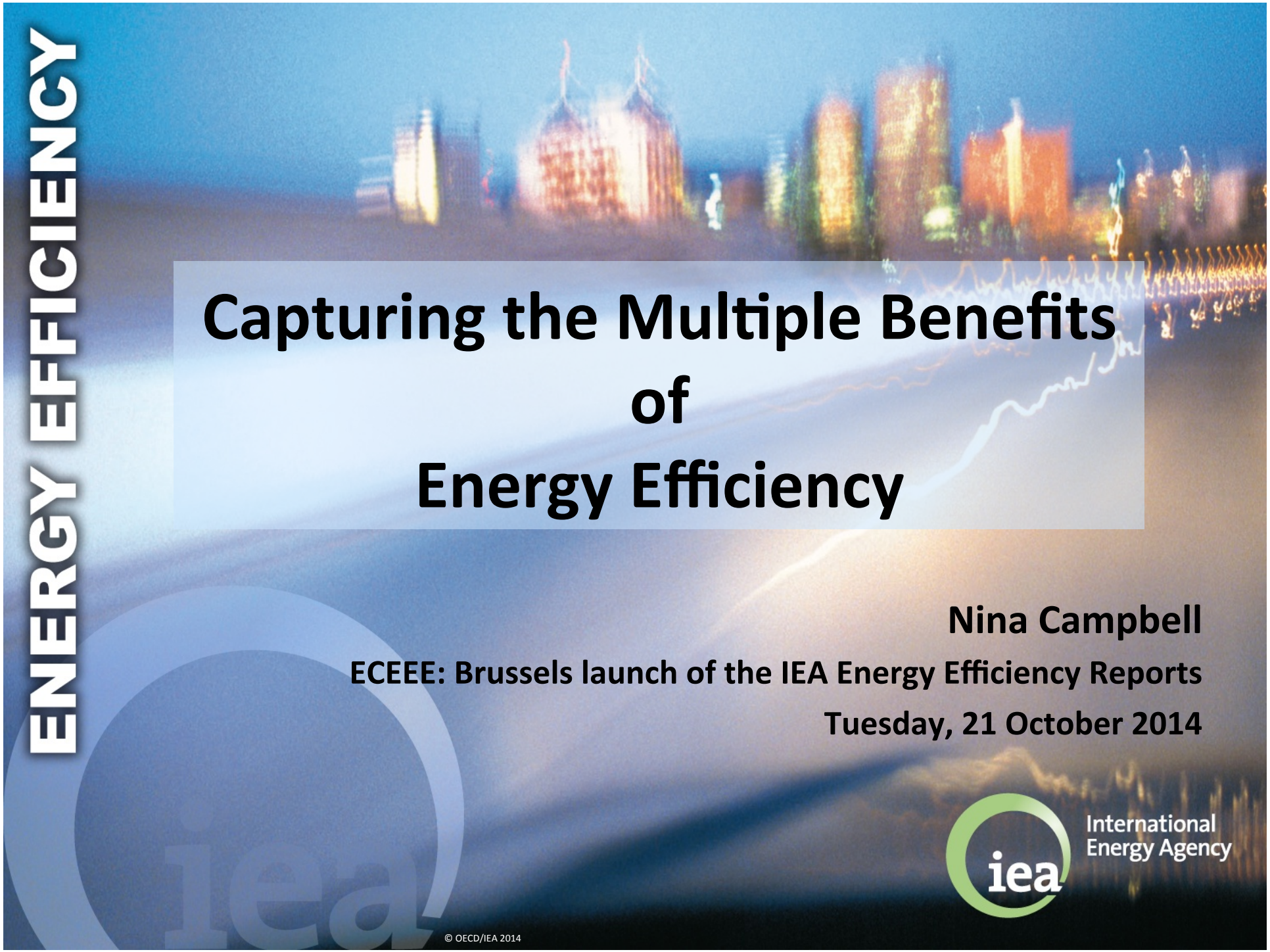
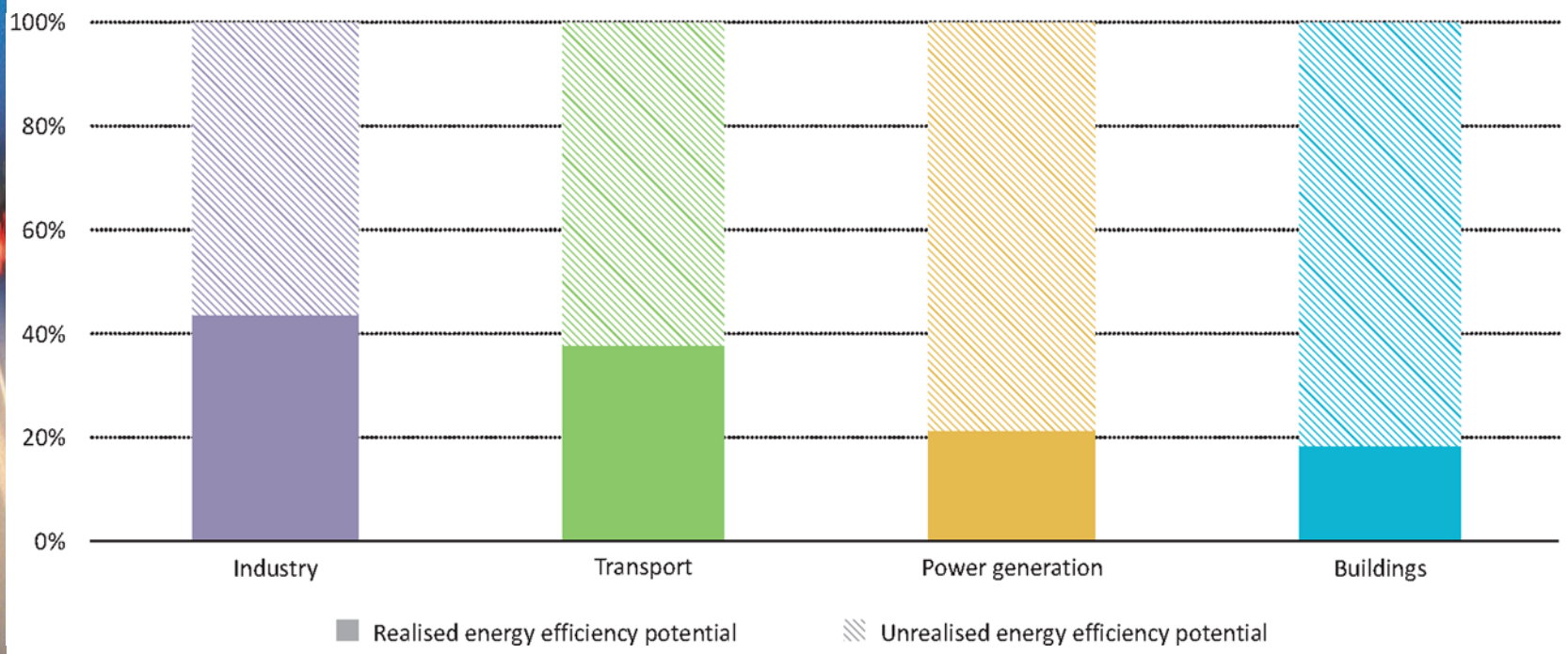

ENERGY EFFICIENCY
Capturing the Multiple Benefits of Energy Efficiency
Nina Campbell
ECEEE: Brussels launch of the IEA Energy Efficiency Reports
Tuesday, 21 October 2014
iea
International Energy Agency
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A huge opportunity going unrealised

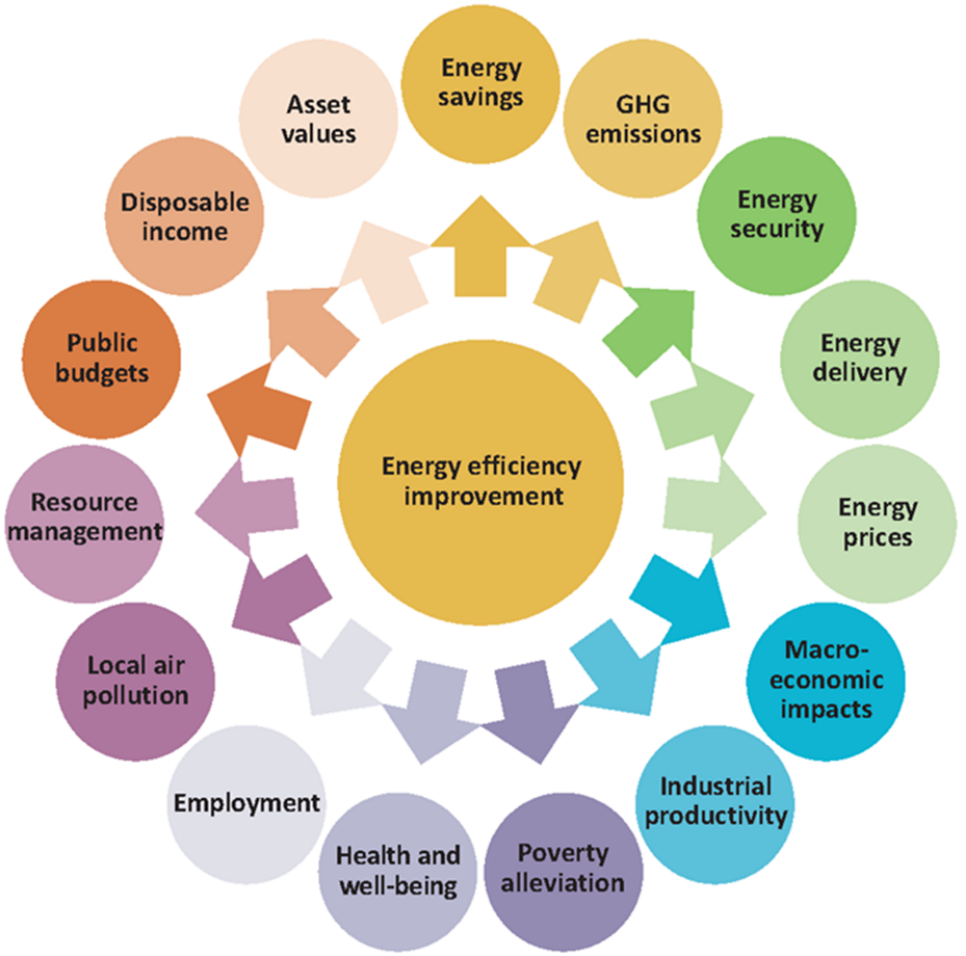


Two-thirds of the economic potential to improve energy efficiency remains untapped in the period to 2035 unless policy activity increases

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EE generates multiple benefits



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

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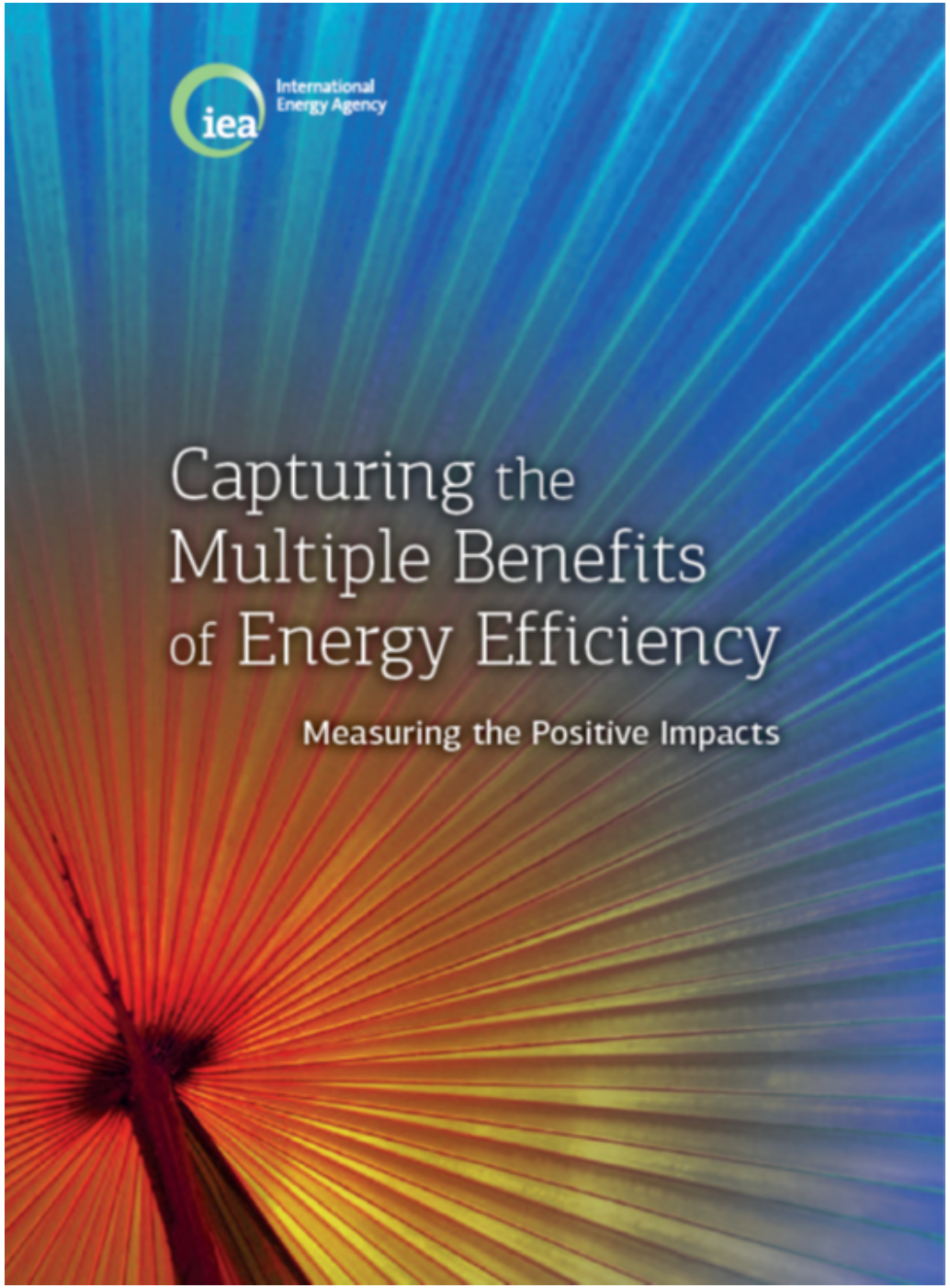
Objectives of the Multiple Benefits work

- Raise Awareness
- Increase Analytical Substance
- Identify Methodological Tools
- Build Capacity

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Presenting



Launched Sept 9 by the IEA Executive Director at the 2014 IEPPEC Conference in Berlin

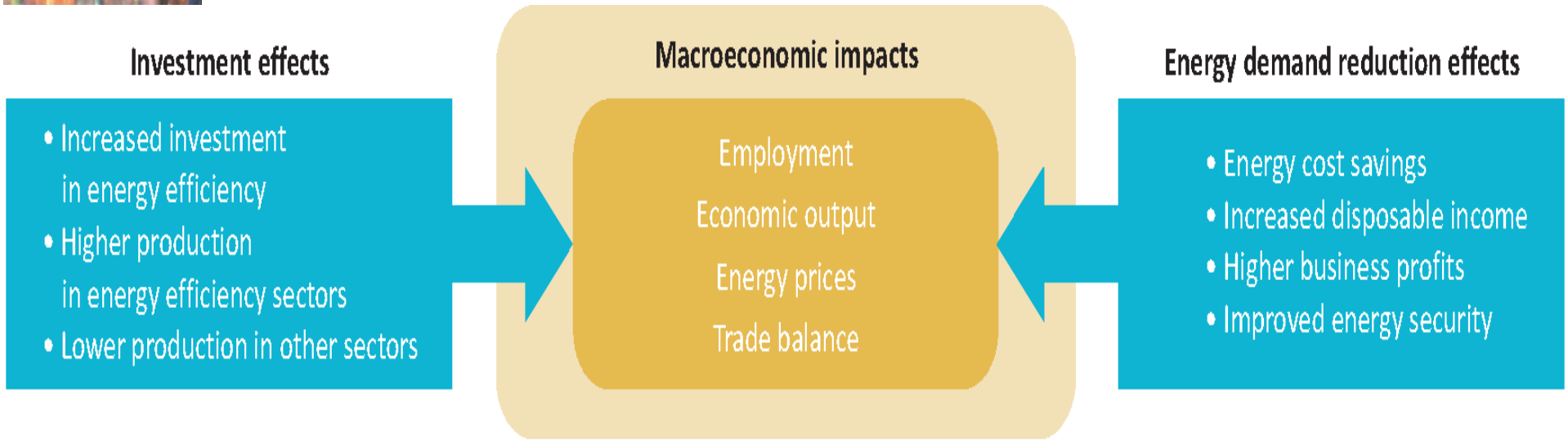
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EE generates multiple benefits



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Overarching macroeconomic impacts



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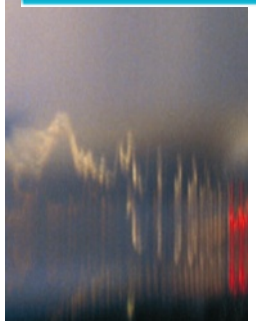
Balancing public budgets

Investment effects

Sales tax revenue from sales of energy efficiency products and services	↑
Sales tax revenue from other goods when crowded out by Energy Efficiency	↓
Initial costs of public investment in energy efficiency products and services	↑
Social welfare and unemployment benefits expenditures	↓
Real estate transaction revenues if properties become more valuable	↓

Energy savings effects

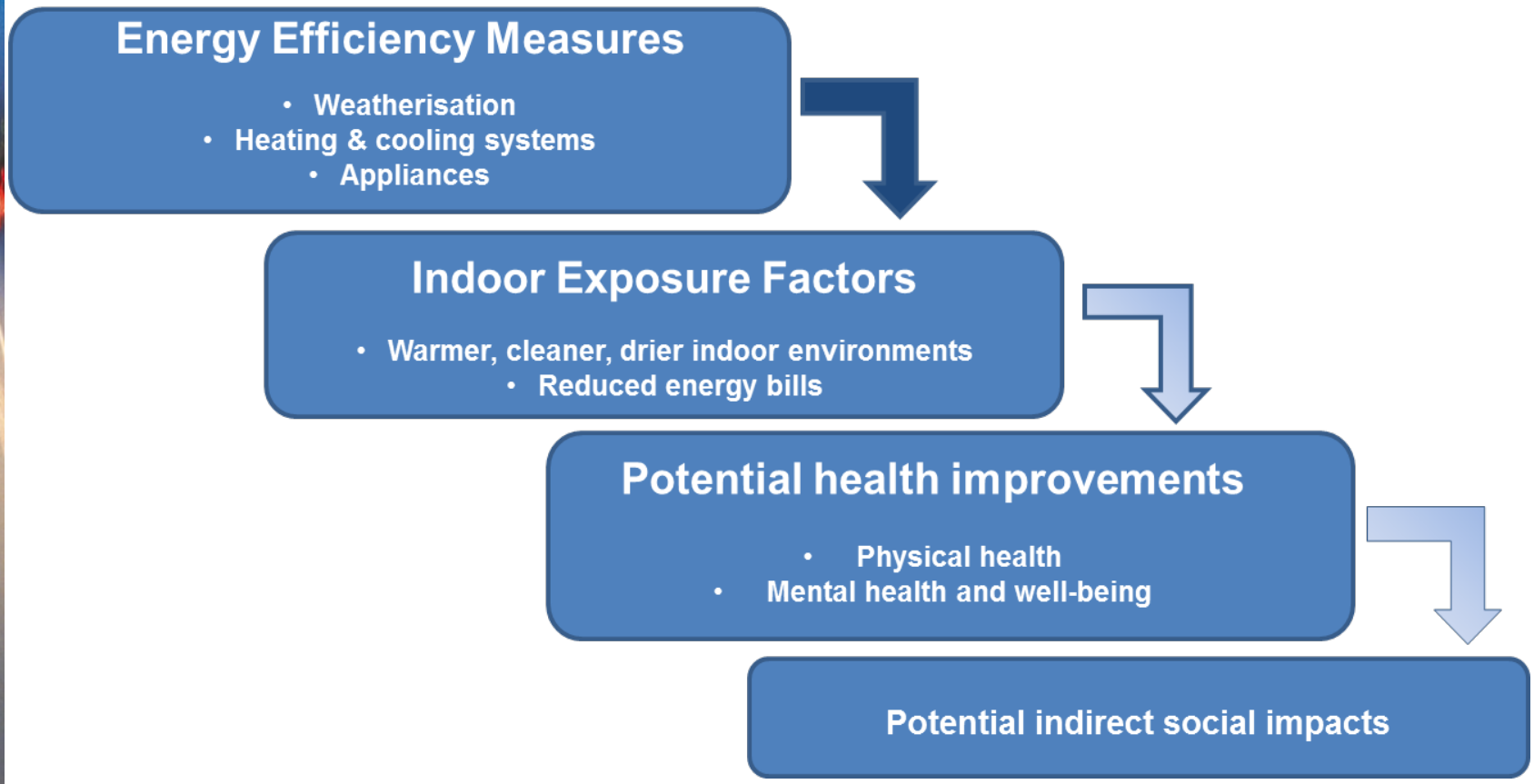
Public expenditure on public sector energy	↓
Energy subsidies to final consumers	↓
Energy excise duty, emissions trading, and carbon tax revenues	↓
Sales and income tax revenues from sales of goods and services	↑
Public health or social welfare expenditure	↓
Public investment in energy supply infrastructure and subsidies	↓



Integrating multiple benefits into the calculation can more than double the return on public investment in energy efficiency

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‘Warmth as medicine’: Health impacts



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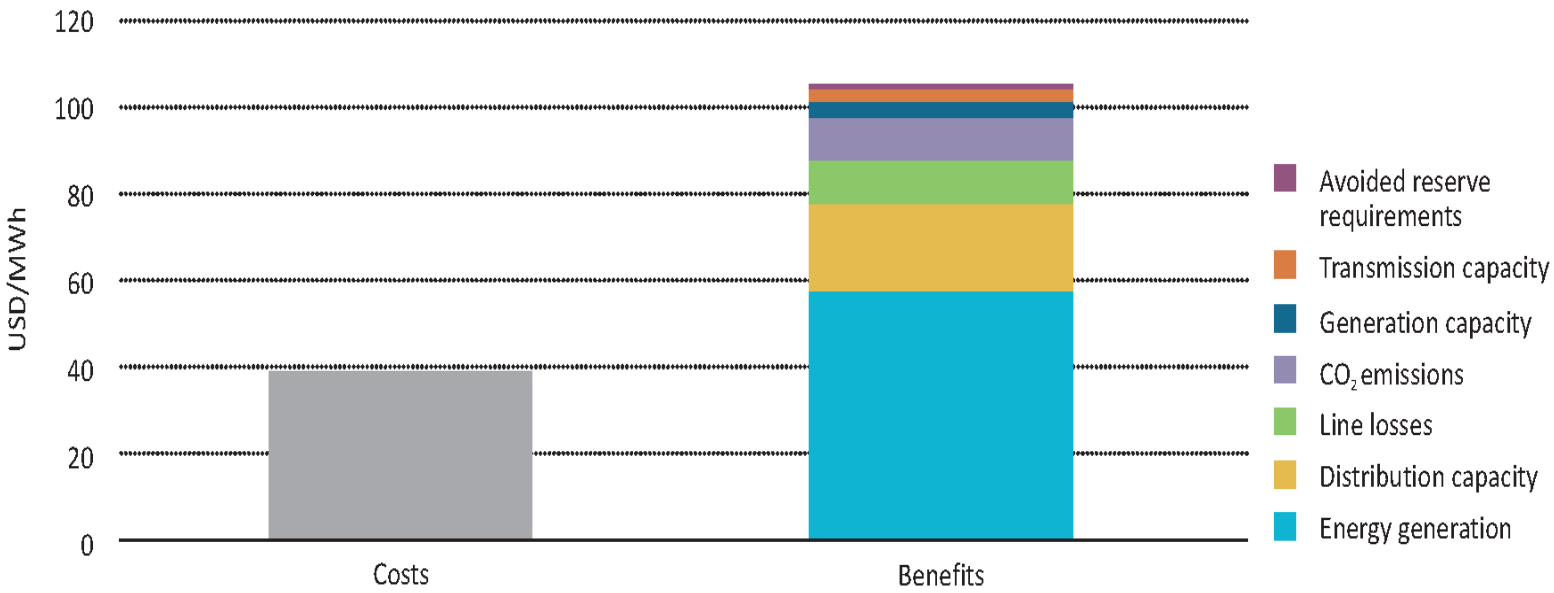


Boosting industrial productivity: from savings to value creation

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.

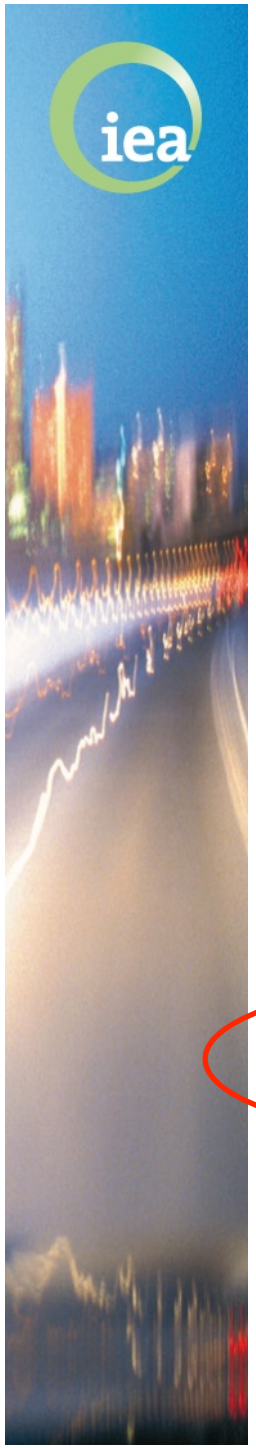
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Energy providers: supporting a changing business model



- ***Benefits for utilities: in resource constrained operating context***
- ***Benefits for consumers/indirect benefits for utilities: increased affordability reduces customer default and associated costs***

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Rebound effect in the multiple benefits context

- **Rebound can be a positive**
- **Not all benefits are dependant on energy savings – many occur independently**
- **Some benefits drive a rebound effect, others do not**

Benefit	Energy security	Energy delivery	Energy prices	Macroeconomic development	Industrial productivity	Poverty alleviation	Health and well-being	Employment	Environmental sustainability	Public budgets	Disposable income	Asset values	Development
Entirely dependent on energy savings	Y	Y	Y	N	N	Y	N	N	Y	N	Y	N	N
Could drive up energy consumption	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y

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Important for developing countries

Energy access	Helping countries to expand access, effectively enabling them to supply power to more people through the existing energy infrastructure.
Economic development	Supporting economic growth through various aggregate benefits, for example by improving industrial productivity and reducing fuel import bills.
Poverty alleviation	Increasing the affordability of energy services for poorer families by reducing the per-unit cost of lighting, heating, refrigeration and other services.
Combatting local pollution	Reducing the need for energy generation – and lower associated emissions – through energy efficiency measures on both supply side and demand side.
Climate change resilience	Reducing the need for energy infrastructure, energy efficiency reduces the amount of energy assets exposed to extreme weather events.

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Applying a multiple benefits approach

The multiple benefits approach includes three key recommendations:

- **Apply the multiple benefits approach to energy efficiency policy development**
- **Pay more attention to impact assessment; take an innovative approach**
  - **Engage a range of stakeholders/ community level experts**
  - **Adapt existing tools to capture hard-to-measure impacts**
- **Build consensus on methods for data collection and assessment so that results are comparable across countries and experience can be meaningfully shared**

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Proposed further research for stakeholders

- Expand analysis: depth and breadth
- Better understand the scope and scale of certain benefit areas
- Identify key relevant indicators and metrics and improve data
- Refine and develop impact assessment methods and address existing barriers to robust and systematic assessment
- Develop collaborative initiatives and data sharing opportunities to build coherency and consensus between approaches.

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Thank you

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