



The multiple benefits of energy efficiency – Update on IEA work

Kathleen Gaffney

April 25, 2018

- Outline of March workshop
- Key findings
- Next steps for the IEA

Workshop: Beyond Energy Savings – The Multiple Benefits of Energy Efficiency

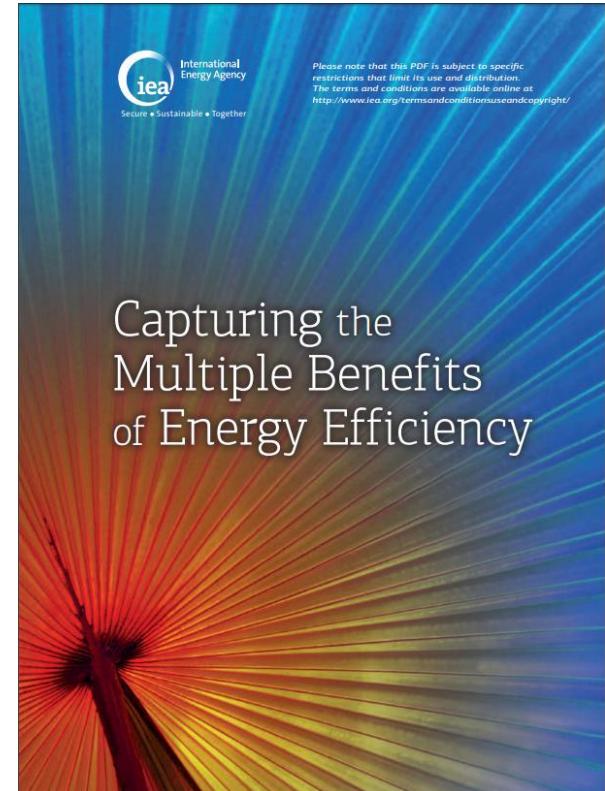
5-7 March, 2018, Paris

Workshop (5-7 March, 2018)



Aims:

- To reinvigorate the IEA's work on the multiple benefits of energy efficiency.
- Bring together policymakers and evaluators to explore:
 - Policymakers' needs
 - Methodologies for quantifying multiple benefits
- Determine if the multiple benefits framework needs updating and how the IEA can help fill gaps in the evidence base.



Questions for consideration

1. Is the **geographic scope** of our evidence base wide enough? Do we have enough evidence in countries whose energy consumption is projected to grow?
2. How broad is the **sectoral coverage** of the existing evidence base?
3. How much do we know about the benefits of different efficient **end uses**?
4. Is evidence targeting **policy needs**?
5. Are policies being designed with **multiple benefits in mind**?

Workshop format

	Monday, 5 March	Tuesday, 6 March	Wednesday, 7 March
Morning		Policymaker needs Methodologies	Methodological issues
Afternoon	Global case studies	Open discussion Communicating EE using multiple benefits	

Attendees



- **Over 70 attendees** from government, academia and the private sector
 - **14 countries** represented:
Australia, Belgium, Brazil,
Denmark, France, Germany,
Indonesia, Ireland, Italy,
Luxembourg, Mexico,
Turkey, United Kingdom,
United States.



Workshop findings

I. The existing evidence base and policy maker needs

- The **geographic scope** of evidence on multiple benefits appears to be limited.
 - Yet potential for using MBs as a communications tool very high (e.g. Indonesia)
- In buildings:
 - Work on tenant satisfaction nascent
 - Benefits of cooling EE understudied
 - Interactions between indoor/outdoor air quality also understudied
 - Single family vs multi-family homes?
- In transport:
 - Biggest gap is in quantifying activity changes due to policies that incentivize changes in transport users' behaviour
 - Big data offers opportunities

I. The existing evidence base and policy maker needs cont'd

- In industry:
 - Providing sector-specific evidence of MBs at the project level, may help to increase industry acceptance of energy efficiency.
- Addressing policy makers' needs:
 - Some policy makers unsure of what they should be asking
 - Difference in developed vs developing country contexts but still work to be done in both.
 - Policy maker's needs are diverse...
 - ...but in most contexts health and wellbeing and various macroeconomic benefits resonate.

II. Considering multiple benefits during the policy design phase



- Some evidence that countries are considering non-energy benefits during the design phase, which helps improve data collection during implementation.
 - Examples – New Zealand, Ireland
- Problems during policy implementation and data collection can compromise data collection for evaluations:
 - Example – overly intrusive questions in the Australian case
- The importance of carefully designing policy evaluation processes and the need to “speak the language” of the sector you’re working with, to collect useful data on multiple benefits.
- Institutional fragmentation (within govt and between sectors) is a barrier to designing effective, holistic policy that achieves multiple benefits.

III. Methodologies for quantifying MBs

- Quantifying macroeconomic impacts
 - Differences between Computable Generalised Equilibrium (CGE) and Macro-econometric
 - These differences allow for *complementarity*
 - Compelling evidence from the EU in examining targets
 - Assumptions matter
- Quantifying health and healthcare cost impacts
 - EE impacts on exposure to risks (e.g. temperature, air quality) -> Reduced health impacts
 - Health impacts can then be translated into health costs
 - Potential for health models to inform macroeconomic models?
- Quantifying project level impacts
 - Less well developed than macro level
 - Evidence for deep energy retrofits suggests potential to change investment decisions
 - Toolboxes being developed in US and EU

IV. Using the multiple benefits framework to communicate



- Communicative power of multiple benefits could be crucial to help scale up EE
- Academic studies show using multiple benefits a common tactic to influence change
 - Energy savings alone not seen as a benefit of EE, just a “thing”
- Different benefits more salient at different times (e.g. political election cycle)
- Communicating the multiple benefits key for macro and project levels
 - E.g., macro level evidence from the EC for target setting
 - E.g. project level: evidence to increase certainty and reduce investment risk
- Private sector use the multiple benefits to lobby politicians by telling compelling stories

Next steps for the IEA

- Identify priority benefits
 - Preliminary candidates health and wellbeing and associated benefits (e.g. air pollution)
- Develop tools for overcoming silo-ism
 - Helping different stakeholders speak a common language
 - Preliminary talks with EFIG
- Mapping benefits to the SDGs
 - Expand on the SDG7 work
 - Potential to promote multiple benefits to sustainable development stakeholders
- Capacity building
 - Build on the Energy Efficiency in Emerging Economies (E4) Programme and update policy design & training content to explicitly include multiple benefits

Next steps for the IEA

Multiple benefits of energy efficiency

The term "multiple benefits" aims to capture a reality that is often overlooked: investment in energy efficiency can provide many different benefits to many different stakeholders. In other literature, the multiple benefits of energy efficiency have been variously labelled "co-benefits", "ancillary benefits" and "non-energy benefits" – terms often used interchangeably with "multiple benefits". The IEA uses the term multiple benefits, which is broad enough to reflect the heterogeneous nature of outcomes of energy efficiency improvements and to avoid pre-emptive prioritisation of various benefits; different benefits will be of interest to different stakeholders.

Use the selector below to learn about the multiple benefits of energy efficiency and find related resources.

Resources

Browse resources related to this particular impact of energy efficiency from the IEA and other organisations. Note that all links will take you away from the Efficiency Exchange Platform site.

Reports / Books Journal Articles Websites

Journal article Accounting for Health Benefits Oppenheim et al	Report / Book Assessing and measuring the performance of energy efficiency projects	Report / Book Benefits of Energy Efficiency on the German Power Sector Agora
--	--	--

- Gather resources for the Efficiency Exchange Platform

<http://beta.iea.org/multiple-benefits>
- Begin preliminary designs for a new set of online guidance (e.g., playbooks, maps to SDG framework)
- Develop communications materials based on interviews conducted during the workshop

Upcoming events on multiple benefits ...



Calculating and Operationalising
the Multiple Benefits of
Energy Efficiency in Europe

Brussels – May 2018

ODYSSEE-MURE



**International Energy
Policy & Programme
Evaluation Conference**

Vienna – June 2018

M-BENEFITS (H2020)



New Orleans – December 2018 – Health & Environment

Questions?



www.iea.org

