

Introduction to Panel 4

Monitoring and evaluation for a wise, just and inclusive transition

Panel leader: **Fiona Brocklehurst**
Ballarat Consulting
United Kingdom
fiona@ballaratconsulting.co.uk

Panel leader: **Jessika Richter**
International Institute for Industrial Environmental Economics
Lund University
Sweden
jessika.richter@iiee.lu.se

Introduction

Acting fast for a slow living transition requires learning from the past, monitoring the present and planning for the future – all of which need to be informed by monitoring and evaluation. This panel explore best practices in monitoring and evaluation, the latest advancement in knowledge, methods and application, as well as the continuing challenges and how to deal with them.

The topics presented and discussed in this panel include evaluating renovations of buildings for energy efficiency, a key sector and intervention for a sustainable transition. However, a transition is not truly sustainable if it is not inclusive. Thus, ways of better considering and ensuring interventions are fair and equitable are discussed. In considering how the value of energy efficiency measures could better influence investment decisions, the panel discuss how multiple benefits are considered and measured, in particular non-energy impacts like health, comfort and wellbeing. Lastly, the panel reflect upon practices of evaluation in real life, how to communicate and learn from failures and how evaluation and monitoring methods could be further improved and developed. From the papers and abstracts for this panel, five key themes emerge.

Evaluating and monitoring energy renovations

Renovating existing buildings to improve this energy efficiency is one of the key challenges in reducing GHG emissions. There are three papers for this panel about evaluating and monitoring the effects of policies that aim to do for homes this in three European countries: Two papers identify the difference between modelled and actual energy performance but take quite different approaches. van der Bent (extended abstract 4-033-21) use a huge dataset from over 2 million homes in the Netherlands to

monitor and evaluate social housing renovations. Loga & Behem (peer-reviewed paper 4-121-21) have developed a more 'bottom up' approach, starting from a relatively modest sample of 129 multi-family dwellings in Germany, but with potential to extend this much further. Finally, Nogues et al (peer-reviewed paper 4-103-21) describe how they modelled a housing retrofit policy in France, piecing together data drawn from a wide range of sources to get a surprising result.

Evaluating for justice and equality

Justice and equality need to be considered in all aspects of the energy transition and four papers look at a range of different topics at different levels of detail. From conceptualising and deriving metrics for fairness, to the effect on communities transitioning away from 'dirty' technology, to thinking about lighting taking into account women's and girls' needs and how energy communities participate.

Heiskanen et al (peer-reviewed paper 4-039-21) conceptualise and derive first proposals for metrics for fairness of energy systems and policies. Czako & Murauskaite-Bull (peer-reviewed paper 4-068-21) explore the geographic overlaps and connections between energy poverty, level of digital skills and willingness to participate in adult learning, reskilling and upskilling programmes in the context of coal regions in transition in Europe. D'Angiolini et al (peer-reviewed paper 4-084-21) describe developing guidelines for street and public lighting projects which take account of the needs of women and girls. Young et al (peer-reviewed paper 4-167-21) present the development of a methodology for monitoring and evaluating the involvement of citizens in a wide range of energy communities.

Evaluating non-energy impacts

Energy efficiency is important to energy efficiency experts at eceee, but that doesn't mean it is a priority for all stakeholders, including policymakers and investors. Communicating the co-benefits, or the multiple benefits, of energy efficiency can broaden the appeal and importance of energy efficiency measures for many stakeholders. But what are key co-benefits we should consider? How do we best measure these benefits? And how should we best tell people about them to make energy efficiency measures more meaningful for non-experts? These questions are presented and discussed by four papers and abstracts.

Chatterjee et al (peer-reviewed paper 4-099-21) reviewed the work done on multiple impacts of energy efficiency measures in the EU-27 and South Asia and find different priorities and how much different impacts have been measured in the two regions. Gehrt et al (peer-reviewed paper 4-054-21) quantify the effects of poor quality buildings, homes and schools on the health and wellbeing of Europe's children and the resulting economic impact. Cooremans (extended abstract 4-126-21) focuses on communicating the non-energy benefits of energy efficiency in businesses, presenting the results for five Swiss projects. Skumatz & Vander Vliet (extended abstract 4-229-21) draw on years of experience in utility funded programmes in the USA to present valuations derived for a wide range of non-energy benefits including increasing residents' comfort, reducing the risk of falling behind in paying bills, and improving health.

Learning from real life

We all know that life as experienced can be a lot messier than it looks on paper, often including circumstances that are not ideal or people that don't behave the way they are supposed to. Three contributions give us their insights into energy efficiency evaluation in real life.

Bull et al (extended abstract 4-048-21) reflect on three energy efficiency projects undertaken in the 2010s, the urge to

frame energy efficiency projects as 'hero stories', and how to communicate the results of initiatives that might fail against original targets but succeed in other ways. Blumberga et al (peer-reviewed paper 4-090-21) report their evaluation of a spectacularly unsuccessful policy intended to save energy in the public sector in Latvia, establishing the causes for this failure but also finding hopeful signs for future change. Ivanova et al (peer-reviewed paper 4-173-21) describe five years' worth of annual data on the German energy efficiency market, for commercial and residential customers. They present data on uptake but also on customers' motivation and what stops them from taking action.

Reflecting on methods

Reflection is a strong theme for papers/abstracts in this panel, particularly upon the methods and approaches that are used for monitoring and evaluation. Several contributions pose critical questions about whether commonly used methods are the right ones; and if they are, how can we use them even better? How should we share and further standardise best practices?

Renders et al (peer-reviewed paper 4-164-21) identify a number of challenges to streamlined energy efficiency calculations, including lack of data but suggested ways of moving forward in streamlining and sharing best practices. Santini (peer-reviewed paper 4-158-21) explore the issues in transferring "metered savings" methodologies developed in the USA to EU countries, enabling models for pay-for-performance financing schemes in the building sector. Petelin Visočnik et al (peer-reviewed paper 4-127-21) describe the development of and response to a Climate Action Mirror in Slovenia, reporting progress against targets and offering policy leads recommendations for corrective action. D'Souza & Skumatz (peer-reviewed paper 4-230-21) present the ways that using Likert scales in analysing surveys can be misleading and challenge us to use alternatives which are still straightforward to use but can give more robust results.