ONE SIZE FITS ALL?

Emerging challenges to harmonising energy efficiency evaluations in a changing policy arena

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Introduction – Baseline scenario

Energy Efficiency Policy mix

- Buildings retrofitting
- Waste heat reduction
- Regulations
- Energy audits
- Energy management systems
- Information campaigns
- Industrial Energy Efficiency
- Evaluation methodologies
- etc.

Board of Auditors
EED
National Reporting
Policy-makers
The public
Introduction – Guideline scenario

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What is the Guideline?

The **Methodology Guideline** is a mandatory guidance document for energy efficiency policy evaluations of the German Ministry of Economic Affairs and Energy (BMWi). It was released in 2020.

Here’s what it does...

1. Make evaluation comparable
2. Make methodologies understandable
3. Define common methods in three key areas
   a) Objectives
   b) Indicators
   c) Data collection and analysis
4. Stay realistic and open for different policy characteristics
Challenges appeared...

- Political Actor
  - interested in
  - political vocabulary

- Evaluator
  - interested in
  - evaluator’s vocabulary

Overlap:
- how to PREPARE AND USE evaluation, legal exactness, use of their own vocabulary
- data collection, definitions, interpretation advice
- how to DO evaluation, intuitive use, clear step-by-step guidance, use of their own vocabulary

Grey boxes:
- collect all information that are most important for political actors
So what’s in the Guideline?

Definitions

- **Measure** = Policy Measure (Federal Budget Code)
- **Measure** = (sometimes) Energy Efficiency Action

Target System

**Political Actor**

**Evaluator**

Legal correctness

Intuitiveness

- **Input**
- **Output**
- **Outcome**
- **Impact**

**Financial support policy**

- **Investment subsidy**
  - Number of participants
  - Triggered investments
  - Number of installed devices
  - Effected energy cost saving
  - Reduced energy consumption
  - GHG-reduction
  - GDP growth

- **Information campaign**
  - Number of people informed
  - Information, better state of knowledge, expected energy savings due to received information
  - Behavioural change
  - Number / type of affected decisions
  - Actual cost savings
  - Reduced energy consumption
  - GHG-reduction
  - GDP growth

*perhaps participation in financial support programme*
So what else is in the Guideline?

- Cross-cutting aspects
  - CO₂-factors, primary energy factors, energy prices, participant characteristics
- Indicators
  - Grouped into target achievement, impact assessment, assessment of cost-effectiveness, administrative performance and miscellaneous
- Recommended indicator set and many additional non-binding suggestions
- Other methodological details

![Graph showing savings over time and other indicators.](image-url)
Caution! Pitfalls

- Flexibility in cross-cutting aspects
  - e.g. periodically cumulated savings: Can be done for evaluation cycles or for fixed cycles like the EED (2014 to 2020 and 2021 to 2030)
  - e.g. PE-factors, CO\textsubscript{2}-factors, energy prices ... vary over time, place, sector
  - e.g. Definition of SME may be different for different use cases

- Learning effects
  - Evaluators learn...
  - ...and so do other evaluation stakeholders
  - That means priorities change and evaluation methodologies have to adapt
  - Lesson learned: Mostly stick to recommendations and suggestions instead of fixed rules

- Joint effort on data collection
  - Guideline helps policy implementers to know beforehand what evaluators need
Caution! more Pitfalls

- Timeframe attribution
  - attributing (energy / emissions / energy cost) savings by
    - application date?
    - acceptance date?
    - physical implementation date?

- Interpretation
  - Paradox effect of unified methodology
    - suggests that all results can be directly compared and interpreted
  - Advice on interpretation and limits to interpretation given in grey boxes.

- Free-rider effect
  - One of the most critical aspects of evaluation
  - Different methods with different pro’s and con’s
  - All have uncertainties
  - Interpretation and communication advice is necessary in a box!
Did I make it in time?

Thank you for your attention!

- Do you have questions?
- What are your experiences with unified methodologies?
- What other challenges are on your mind?
- How would you solve such challenges?

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