Energy Efficiency Training Week
Indicators and Evaluation
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What’s in this session

• Case study

• Indicators and evaluation as part of policy making

• Types of indicator

• Types of evaluation

• Introduction to theories of change

• Choosing indicators and setting evaluation questions
Case study

Energy Refrigerators

Manufacturer
Model

More efficient

A
B
C
D
E
F
G

Less efficient

Energy consumption, kWh/year
(based on standard test results for 24 h)
Actual energy consumption will depend on how the appliance is used and where it is located

Energy consumption, XXX

Fresh food volume, litre
Frozen food volume, litre

Noise (optional)
(dB(A) re 1 pW)

Further information is contained in the product brochure.
Norm SANS 62552
Refrigerator Label Directive 94/2/EC
Appliances covered
Purpose of monitoring and evaluation

• What we have achieved

• How we can improve
Different questions for different needs

**Impact, what did we achieve?**
- Regulators
- NGOs and public

**Process, how did it go?**
- Programme managers
- Partners

**Economic, did we get value for money?**
- Funders
- Treasury
Indicators and evaluation in the policy making process

- Rationale
- Objectives
- Appraisal of options
- Evaluation
- Monitoring
- Feedback

What indicators are we interested in?

• Economy...
  - Whole economy
  - Sector e.g. residential
  - End use e.g. space cooling

• Policy/programme
  - Compliance/uptake
  - Technology adopted
  - Behaviour change
  - Energy saved
What makes a good indicator

- Specific Measurable Achievable Replicable Timebound (SMART)
- Not too many
- Represent the outcome of interest e.g.
  - Is the number of products sold a good indicator for understanding energy use?
  - What are the implicit assumptions?
- Beware of averages
  - Heavy users might be more likely to buy efficient products
  - Annual consumption may not be a good indicator of peak demand
  - Some sectors of interest may behave differently from the average e.g. rural consumers, poor households, women
OECD Development Assistance Committee criteria for evaluation

- Relevance – are the objectives still valid, are the activities consistent with the objectives?
- Effectiveness – to what extent did the policy achieve its objectives?
- Efficiency – was the policy good value for money?
- Impact – what difference did the policy make?
- Sustainability – will the benefits be sustained after the funding ceases?

http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm
Main sources of evidence

- National statistics e.g. product sales, ownership levels
- Utilities e.g. meter readings
- Management information/reporting e.g. registration scheme
- Measurement e.g. meter readings, compliance data
- Modelling e.g. LEAP
- Surveys e.g. household energy consumption, label compliance
- Interviews and focus groups
Theory of change

- Forms the basis of monitoring and evaluation
- Should be developed alongside policy/programme design
- Participative process
- Refine in the light of evidence
Generic theory of change

Input

Resources used to deliver the programme/policy – time and money

Activity

What is done e.g. determine and implement MEPS

Output

What happens as a direct result – inefficient products removed from market

Outcome

Effect of the change – installed product stock becomes more efficient

Impact

Wider effects – reduced energy consumption and CO2 emissions
Exercise

- Develop theory of change for energy efficiency labels for refrigerators covered by South Africa’s energy efficiency labelling policy

- Suggest indicators for each stage (Specific Measurable Achievable Replicable Timebound)

- Suggest evaluation questions (Relevance, Effectiveness, Efficiency, Impact, Sustainable)

- Consider where the evidence would come from
Who pays and who benefits?

• Are your policies fair?

• Wealthier consumers benefit most from product policy
  - Buy more products
  - Use them more
  - Spend more on energy

• Who pays for subsidies/incentives/scheme costs
  - Manufacturers?
  - Consumers e.g. levy on bills?
  - General taxation?

• What are the implications for indicators and evaluation?