

# iea



energy

Department:  
Energy  
REPUBLIC OF SOUTH AFRICA

## Energy Efficiency Training Week Indicators and Evaluation

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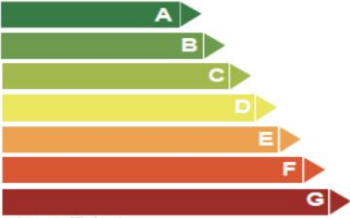


IEA #energyefficientworld

# What's in this session

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- 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	
<b>Manufacturer</b> <b>Model</b>	
<b>More efficient</b>  <b>Less efficient</b>	
<b>Energy consumption, kWh/year</b> <i>(based on standard test results for 24 h)</i>  Actual energy consumption will depend on how the appliance is used and where it is located	<b>XXX</b>
Fresh food volume, litre Frozen food volume, litre	<b>XXX</b> <b>XXX</b>
<b>Noise (optional)</b> (dB(A) re 1 pW)	<b>XXX</b>
Further information is contained in the product brochure.  Norm SANS 62552 Refrigerator Label Directive 94/2/EC	

# Appliances covered

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# Purpose of monitoring and evaluation

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- What we have achieved



- How we can improve



# Different questions for different needs

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Impact, what did we achieve?



- Regulators
- NGOs and public

Process, how did it go?



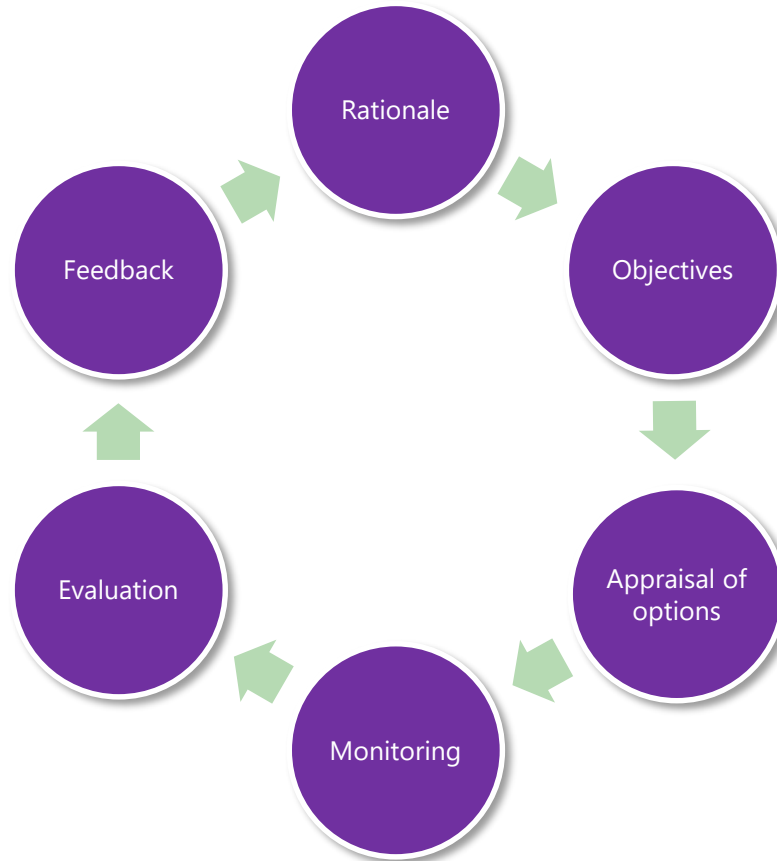
- Programme managers
- Partners

Economic, did we get value for money?



- Funders
- Treasury

# Indicators and evaluation in the policy making process



# What indicators are we interested in?

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- 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

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- 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

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- 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

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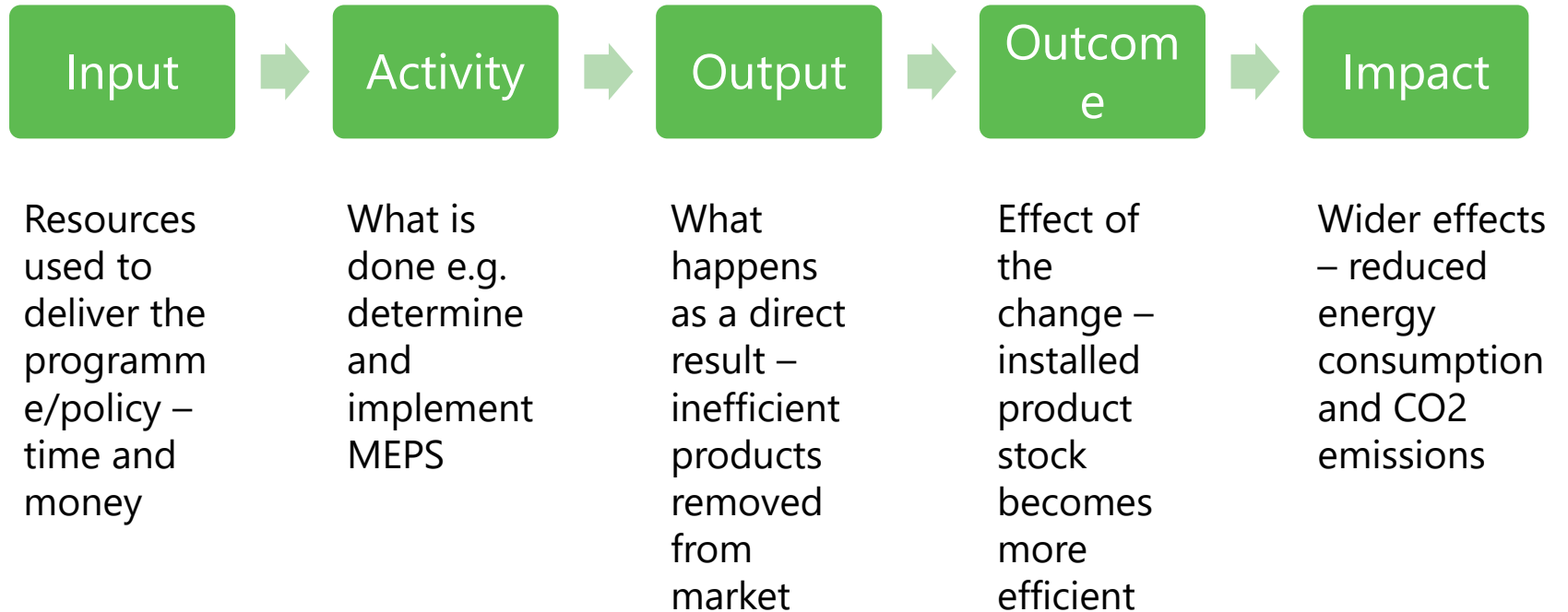
- National statistics e.g. product sales, ownership levels
- Utilities e.g. meter readings
- Management information/reporting e.g. registration scheme
- Measurement e.g. meter readings, compliance data
- Modelling e.g. LEAP
- Surveys e.g. household energy consumption, label compliance
- Interviews and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

# Theory of change

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- 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



# Exercise

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- 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?

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- 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?

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