How will these approaches benefit policy and programme development and how they can be used?

Peter Bennich

The Swedish Energy Agency
Three topics:

1. Policy evaluation
2. Market enforcement
3. Improved policy design
Three topics:

1. Policy evaluation
How everything is related...

Regulations
Behavioural studies
Data

MEPS → Producers

Technical data

How do the producers reason?

Energy labels

Market

Sales data

How do the retailers reason?

What govern the consumers at the moment of purchase?

Consumers

User data

What govern the consumers when they use the appliances?

Procurement incentives etc…
Bottom-up model from DK

\[ E = \text{Stock of appliances} \times \text{Specific consumption} \times \text{Frequency of use} \]

- Sales figures from GfK, web crawler etc.
- Appliance tests, technical journals etc.
- Questionnaires (not so reliable)
- Measurements (very accurate)
Policy evaluation

- Track the development of energy use
  - Aggregated level
    - Residential sector, Public sector, etc
  - Detailed level
    - Per household, Per appliance type, etc
- Attribute changes/improvements to policies
  - What is the base level? BAU
  - A true Bottom-up model is best… but cumbersome
  - Tracking the market is second best (or?)… sales, price and performance.
Policy evaluation cont

• The data source doesn´t matter…or does it?
  • Market coverage
  • Degree of details
  • Time resolution
  • Recent or old data

• What kind of policy?
  • MEPS and labels: doesn´t matter…?
  • Incentive or procurement programs; campaigns (think SEAD, GLC etc): matter!
Three topics:

2. Market enforcement
From Test Methods to Enforcement
(using the EU as an example)

- Enforcement; individual MS (Member states); requires competent laboratories
- Regulations; EU Commission and MS (vote)
- Metrics (SB)
- Test methods (test standards); standardisation bodies (SB)
- Product categories (SB)
Market enforcement

Compliance:

- Testing (very expensive)
- Documents
- Labels
- In stores and at the Internet

Two main principles of sampling:

- Random selection
- Targeted selection

… but requires knowledge about what’s on the market!
Three topics:

3. Improved policy design
Improved policy design

• MEPS:
  • In EU: MEErP (Methodology for the Ecodesign of Energy-related Products)
  • Seek the Least Life Cycle Cost (LLCC)
• Problems:
  • Purchase price almost always over-estimated
  • Difficult to project energy prices
• Campaigns:
  • Launch a prize, track the sales and impact in real time…