The role of timing in the success of energy saving programmes

Mikko Rask and Eva Heiskanen National Consumer Research Centre, Finland
Ynke Feenstra and Ruth Mourik, Energy Research Centre of the Netherlands (ECN)

The argument & viewpoint

- Timing is an important but poorly conceptualized
- Timing means "bringing together of problems, solutions and political contexts"
- Successful timing requires acknowledgement of past, present and future issues of the programme in its micro, meso and macro levels of context
- We are on the way to build a context & timing sensitive toolkit for the design of energy saving programmes – ideas welcome!

Content of the presentation

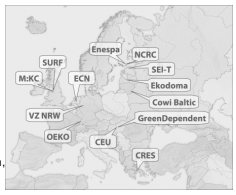
- 1. Background
  - The CHANGING BEHAVIOUR project - drawing lessons from previous success and failure
- 2. Timing as strategic activity
  - the "streams model" of timing
  - rationality, irrationality and arationality of timing
  - past, present and future timing issues – preliminary findings & examples from the case studies
- 3. Immediate lessons and the way ahead

CHANGING BEHAVIOUR: the project

- Background:
  - Energy Services Directive: Europe could save 20%
  - Increased demand for energy demand side programmes, but mixed results until now
- Changing Behaviour aims to:
  1) develop a "sophisticated but practical model of success factors" on the basis of previous experience
  2) pilot the transfer of context-tailored demand side programmes from one European country to another
  3) create a toolkit for practitioners to manage the socio-technical change involved in energy saving programmes
- Through:
  - intensive co-operation between researchers and intermediary organisations in the field of energy demand management

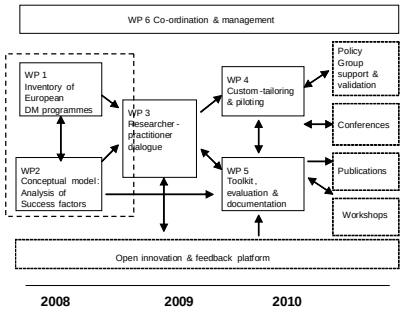
CHANGING BEHAVIOUR: The project

- National Consumer Research Centre, Finland
- Energy research Centre of the Netherlands ECN, Netherlands
- University of Salford, SURF Centre, UK
- OEKO Institut e.V, Germany
- Central European University, CEU, Hungary
- SEI-Tallinn, Estonia
- Cowi Baltic, Lithuania
- Energy Service Company Enespa Ltd, Finland
- Manchester Knowledge Capital, United Kingdom
- GreenDependent Sustainable Solutions Association, Hungary
- Ekodoma, Latvia
- Consumer Association of North Rhine Westphalia, Germany
- Centre for Renewable Energy Sources CRES, Greece



Funded by the EC FP7 THEME ENERGY (contract 213217) 2008-2010

CHANGING BEHAVIOUR: the project



Focus on lessons from past success and failure

- OUR UNIT OF ANALYSIS IS PROGRAMMES TO CHANGE ENERGY USERS' BEHAVIOUR
  - What best practices can be transferred to other places?
  - Approach
    - in-depth analysis of factors influencing success of 24 cases from different parts of Europe - > development of conceptual model -> use of the model in pilot projects to develop a toolkit for practitioners
- Two types of utilisation:
  - immediate: new ideas; potential pitfalls
  - conceptual: identification of meta-issues to consider

Overview of case programmes analysed in the CHANGING BEHAVIOUR project (1)

Country	Programme	Aim of the programme
1. Denmark	Samsø	Creation of a renewable, energy self-sufficient island municipality
2. Estonia	Energy Saving Competence Centre	Promotion and knowledge networking on energy saving measures in apartment buildings
3. Finland	Green Office programme	Certification and management scheme to reduce CO_2 and resource consumption in offices
4. Finland	Energy Efficiency Agreements	Negotiated agreement to promote energy audits and investments in municipalities
5. Finland	Energy expert program	Training of volunteer residents promoting energy efficiency in housing associations
6. Finland	Climate Change Campaign for Schools	School climate change awareness campaign implemented by environmental and youth NGOs
7. Germany	SANIT	On-site advice service for energy efficiency renovations provided by consumer NGO
8. Germany	Standby	State-wide campaign to create awareness of standby energy among consumers and retailers
9. Germany	EcoTopTen initiative	Nation-wide information and rating service for energy efficient products
10. Germany	Contracting Rommerskirchen	Implementation of energy performance contracting for municipal buildings
11. Hungary	Energy Trophy	Competition for saving energy in office buildings through change in employee behaviour.
12. Hungary	Carbonarium Association	Produce information on participants' personal climate change impacts and promote public awareness

Overview of case programmes analysed in the CHANGING BEHAVIOUR project (2)

13. Hungary	Global Environmental Social Business Mechanism	Implement energy renovations in apartment blocks
14. Hungary	Climate Change Watch	Educational and award programme for school groups to reduce CO2 emissions
15. Latvia	Building energy audits	Energy audits of apartment blocks
16. Latvia	EnERLIn - Efficient Residential Lighting Initiative	Increase the efficiency of residential lighting by 50% increase in CFL penetration via promotion campaign and quality charter
17. Lithuania	Taupukas residential awareness campaign	Communicate the bene fits of energy and water consumption efficiencyand stimulate energy and water saving
18. Lithuania	Multi -apartment buildings modernization programme	Promote energy modernisation of multiapartment buildings via demonstrations and subsidies
19. Netherlands	Groene energie trein Leidsche Rijn	Reduce the energy, heat and water use in apartment houses by 5% through a specific education and communication approach
20. Netherlands	Groene energie trein Rijswijk	Reduce the energy, heat and water use in apartment houses by 5% through a specific education and communication approach
21. UK	CIS Co -operative Insurance Society Solar Tower	Renovate a landmark building using solar panels
22. UK	Metropolitan Police Energy Efficiency Programme	Improve energy efficiency improve energy efficiency in existing buildings and practices of the Metropolitan Police Service
23. UK	Manchester is My Planet (MiMP) programme	Increase policy development/implementation on Climate Change among Greater Manchester local authorities
24. UK	MiMP Climate Change Pledge	Attract citizens in Greater Manchester to sign up to a Climate Change Pledge and encourage a switch to less carbon intensive lifestyles.

2. Timing as strategic activity

- Timing has value!
  - Timeliness or untimeliness of action (in the context of political actions) "...open gateways, erect barriers, dictate scenarios, and significantly shape the distribution of rewards and punishments" (Miller 1993, p. 182)
- Timing involves a dynamic and strategic relation between the programme and its context

...but can timing be managed?

- Rational view: timing is a matter of humanly control
- Irrational view: timing is a matter of luck and fortune
- Arational view: "doing the right thing at the right time is possible, but only on intuitive basis" (cf. Dreyfus & Dreyfus, 1986)

Toward an analytical view of timing

- Rational view required in formal contexts
  - problems: non-linearity of programmes; prediction of consequences difficult
- Irrational & arational views lead to fatalistic & romantic conceptions
  - problem: involves a pessimistic view on what can be learned from past experiences
- Our ambition: toward an analytical and balanced view of timing
  - what issues are out-of-the control, subject to rational management of belonging to the sphere of intuitive mastery?

The "streams model" of timing (Kingdon, 1995)

- Timing means bringing together of three kinds of elements:
  - Problems (e.g., environmental shocks)
  - Solutions
  - Political context (e.g., events such as new legislation)

Implications of the "streams model" of timing

- For energy saving programmes, there are two types of windows of opportunity
  - "problem windows" AND
  - "political windows"
- The success of the programmes increases dramatically if
  - problems, programmes and political receptivity are linked in a single package (Kingdon, 1995)
- A non-linear view of programmes & contexts
  - Problems, solutions and political contexts have "lives of their own"
    - path dependences; future expectations & decision calculi

Timing issues related to the past, present and future of energy saving programmes

	PAST	PRESENT	FUTURE
macro	historical legacy of policies, culture, markets and infrastructures	ongoing changes in energy prices and policies, related policies, market and demography	expected vs. realised changes in policy, prices and macro-economy
meso	previous experiences and existing capacities in the sector or region existing infrastructure of provision	supporting programmes and developments competing programmes and developments	future prospects and expectations of the sector
micro	previous experiences and existing capacities of the target group existing infrastructure of consumption	changes and turnover in target group life cycle change	programme managers' vs. target group's expectations about the future expected vs. realised changes in the target group and its immediate environment

Present issues - future challenges

With programmes of a long duration, it is necessary to think about renewal of the programme itself ("endogenous timing")

Example:

…the Ilmari Climate Change campaign for schools (Finland) originally addressed an important gap in educational materials on climate change, but needed to change its focus over the years to more motivational aspects as informative materials on climate change for schools became available.

Is there a "demonstration effect" for energy saving programmes?

Demonstration effect (Dekimpe et al., 2000):

…as the number of countries adopting a technology becomes larger, the likelihood of "similar" countries following their example increases.

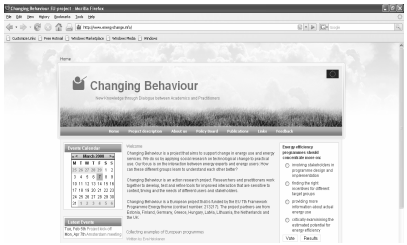
How the legacy of the past impact on energy saving innovations?

…in the case of the Latvian Efficient Residential Lighting Initiative, the attention of the energy efficiency community was entirely focused on other energy end-use applications such as household appliances or residential heating. This "crowded out" the interest in energy efficient lighting, and created challenges for the programme in engaging project partners…

Some preliminary lessons

- Carefully analyse the history of the context
  - problematic tendencies that have led to distrust of certain technologies (e.g., geothermal heath pumps)?
  - positive experiences and competences (e.g., the Hungarian "culture of working together" on common projects)
- Examine potential links of the programmes to on-going in the operating environment
  - e.g., synergetic vs. competing programmes
- Articulate & align future expectations
  - e.g., if programme design based on expectations of rising energy prices and supportive policies -> clear justification and communication to stakeholders
- Anticipate future changes by keeping the programme design flexible
  - scaling up or down the programmes!

The way ahead…

1) Conceptual framework of success factors under development
   - some hypotheses (e.g., "demonstration effect") on timing will further be tested and elaborated (WP1 database)
   - the framework will be tested with energy efficiency practitioners in four parts of Europe
2) Further testing in pilot projects
3) Creation of a Toolkit for practitioners
   - to help in placing programmes in a broader context…
   - to help in taking the perspective of the target group…
   - to help take timing aspects into account
     - e.g., checklists and tables to identify present and historical timing issues
     - simple scenario guidelines to anticipate future needs

Thank you!