



# What lessons can be drawn from the evaluation of energy advice centres?

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# Summary

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- The local energy advice centres?
- The different evaluations and the objectives
- Evaluation of individual energy advice
- Evaluation of outreach actions
- The regional evaluations of individual energy advice
- Conclusions



# The local energy advice centres?

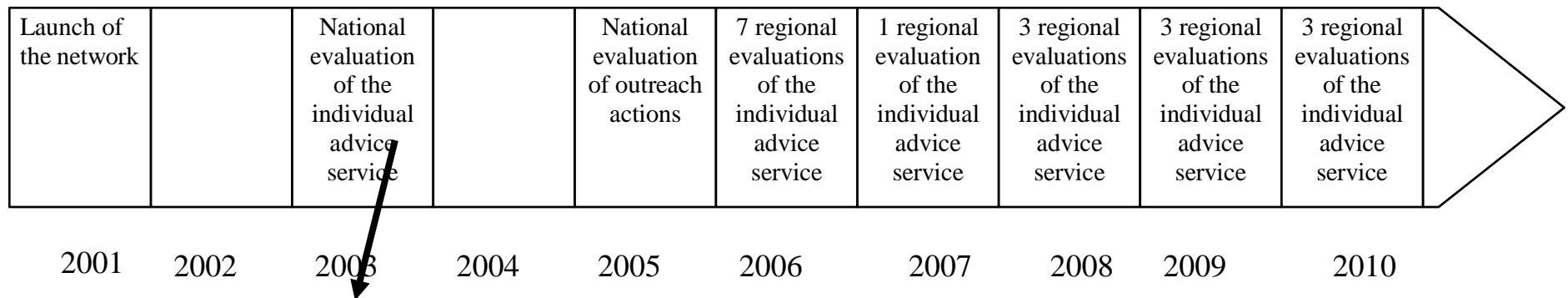
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- Local energy advice centres called “*Espace Info Energie*” provide **free, objective and neutral information and advice** on energy efficiency, energy savings, and renewable energy sources
- EIEs have two assigned and distinct missions:
  - to provide free, independent individualized advice to the general public, organizations and small companies: we will refer to this mission in the text as “**individualized energy advice**”
  - to perform outreach and information actions by holding conferences, leading working groups, organizing on-site visits, participating in fairs and exhibitions, etc.: these are grouped under the generic term “**outreach actions**”



# The different evaluations and the objectives

## Chronology of the different evaluations



## Objectives :

- to assess satisfaction following a request for information,
- to identify actions carried out by clients and the changes in their behaviour,
- to estimate the impact on energy consumption and greenhouse gas emissions,
- to provide the agency with a methodological tool to carry out evaluations at regular intervals.



# The different evaluations and the objectives

## Chronology of the different evaluations

Launch of the network		National evaluation of the individual advice service		National evaluation of outreach actions	7 regional evaluations of the individual advice service	1 regional evaluation of the individual advice service	3 regional evaluations of the individual advice service	3 regional evaluations of the individual advice service	3 regional evaluations of the individual advice service	
2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	

### Objectives :

- Concentrate EIEs' activities on their main target, (households), and on their specialist subject (energy in dwellings), and, in particular, on individualized advice.
- Analyze the comparative effectiveness of outreach actions



# Evaluation of individual energy advice

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## Method:

- Collect all the data recorded on the EIE database, which represented 10,810 contacts
  
- A typology of clients was created in order to target the survey :
  - Three types of clients : 503 households, 95 local authorities, and 56 construction professionals.
  
- To evaluate the environmental and economic impact, a second questionnaire was sent to clients who had undertaken energy saving works in their households



# Evaluation of individual energy advice

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## Results

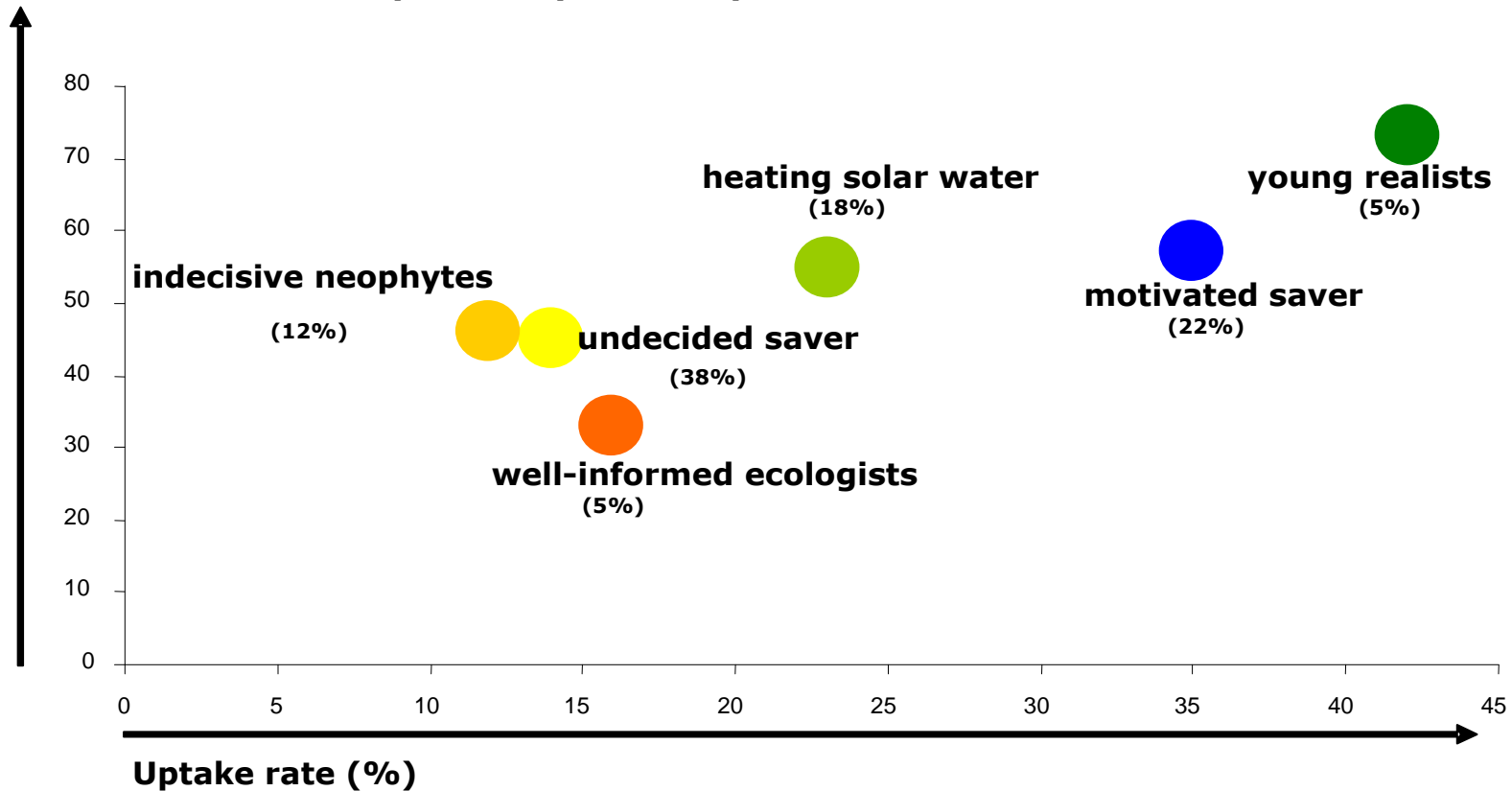
- home-owners (73%), who live in a detached house (73%) in a rural area (67%)
- with a home with an average surface area of between 100 m<sup>2</sup> and 150 m<sup>2</sup> (45%)
- **26% of the households made an investment**, with an average expenditure of €7,650 per action undertaken. 25% intend to search for additional information, 17% want to wait and 14% have decided not to invest
- In 2003, a single contact generated savings of 0.156 toe/year and 0.2686 teq CO<sub>2</sub>/year
- All actions in 2003 represent an investment of **€110 million** and an average of **€733,000 per advisor**



# Evaluation of individual energy advice

**A typological analysis :** The aim was to understand the different types of clients and requests. It helped see whether the EIEs gave appropriate advice to each different profile.

**Level of satisfaction (% of very satisfied)**







# Evaluation of outreach actions

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## Method

- Evaluation of outreach actions on three pilot regions
- A typology of the different outreach actions. **Ten types** were defined:
- A **quantitative evaluation** of the outreach actions carried out in 2003 and 2004 highlighting the number and type of outreach actions, the characteristics of the participants, the theme addressed, etc.
- A **qualitative evaluation** which consisted in evaluating the participants' satisfaction and **the impacts in terms of actions taken after participation**.
- An analysis of the **efficiency** of the outreach actions.



# Evaluation of outreach actions

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## Results

- The number of people contacted went from 100,000 in 2002 to 530,000 in 2004.
- The EIEs organized 8,500 events between 2002 and 2004, **raised the awareness of 850,000 people** and distributed 1,000,000 documents.
- **Markets and fairs are clearly the dominant outreach action** of the three regional networks and mobilize take up 50% of the time devoted to such actions.
- Outreach actions have a **leverage effect on the first mission** which is providing individualized advice
- impact is difficult to quantify, **but it is certainly considerable**
- Lot of recommendations were given



# The regional evaluations of individual energy advice

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- Method

- The evaluation of the environmental impact was based on a national hypothesis : unsuitable for regional use.

What is the best way to evaluate the environmental impact of a regional EIE network?

- Using energy bills : certainly the most reliable method but difficulty to get information on individual bills by phone survey
- Energy savings certificates
- Regional ratio and data was difficult to obtain in the household sector.

Which solution?



# The regional evaluations of individual energy advice

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In fact, the most logical and practical solution was to develop a method based on the EIE thermal software “Dialogie”.

- Dialogie allows making **simple diagnoses** on a house
- Each diagnosis is carried out at a local level as a weather station is included in the software. The diagnoses take into account the annual degree day in the area where the house is located.
- Simple diagnoses can be made based on around ten questions.** These questions allow to define the characteristics of the house before the actions are undertaken and to describe in basic terms the actions realized: type of device, energy, size of dwelling, number of inhabitants, etc.



# The regional evaluations of individual energy advice

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## Results

- In total, 2,413 works were been realized for 6,234 t eqCO<sub>2</sub> savings between 2005 and 2009.
- The uptake rate increased strongly (56% compared with 26% in 2003) and related mainly to heavy installations (46%).
- **This impact is considered as an order of magnitude** because the margin of error related to the method (data resulting from declarations of contacts, assumptions used in Dialogie) is estimated at 25%.
- In 2009, the cost effectiveness of the EIE is about **€48/t eqCO<sub>2</sub>** (€8 million/ 166 kt eqCO<sub>2</sub>).



# Conclusions

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- Since 2001, the EIE network has been assessed at the local level as well as the national level.
- These evaluations have enabled a better understanding of the EIE network and have led to better management.
- However, a lot of time and money was spent
- **Was it relevant to carry out so many evaluations?**



# Purpose/advantages

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- **Regional partners needed a local evaluation** of the regional network to know the effectiveness and the impact
- **Regional evaluations are a tool for piloting**, and are integrated into the life cycle of the regional EIE networks' policy
- Besides the financial partners, the positive results made it possible to **mobilize and find other additional partners** (like *départements*) to increase the size of the network
- Regional evaluations were also **useful for the advisors themselves** as they provided feedback
- Each regional branch could launch its own evaluation at a convenient time to suit the different calendars. This allowed **flexibility in the implementation of the evaluations**
- Moreover, the aggregation of the results of the various regional evaluations makes it possible to **update the national results** and the information obtained in 2003



# Drawbacks/limits

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- Problem of the validity of the results obtained by aggregation.
- How integrate the change of the context between 2005 and 2009?
- Certain regional results appeared very heterogeneous on different scales.
- The important differences between 2003 and 2009 should be explained by a meta-evaluation.





# What lessons can be drawn from the evaluations of the network? And what recommendations can be made?

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- Carrying out a great number of evaluations which must then be aggregated would entail a meta-evaluation. Indeed, a straightforward aggregation is limited in scope and does not guarantee valid results. **A meta-evaluation would make it possible to analyze all the results and provide an interpretation.**
- However, a meta- evaluation is expensive and needs careful planning. Inevitably, it does not guarantee the analysis of the context and a reality measurement of the net effect of the programme. In order to know the net effect of each policy, it is necessary to compare the results of each policy with the data from the assessments of other policies/tools.
- Possible solutions
- One of the solutions which would make it possible to reconcile a certain number of constraints could be to select a **single consultant who would lead all the regional assessments at the request of regional branches and compile all the data.** The contract with the consultants would be multi-annual and the guarantee of the results would rest on the single method used by the consultant.



# What lessons can be drawn from the evaluation of energy advice centres?

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**Thank you for your attention**

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