Alleviating fuel poverty through energy efficiency measures: the French programme Habiter mieux (="Living better")

Ute DUBOIS, ISG International Business School, Paris
ute.dubois@isg.fr

ECEEE SUMMER STUDY
June 5th, 2015

Three "layers" of energy efficiency programmes (or: the "Lego" of EE policy design)

How to move towards a situation where low-income people take the energy-efficiency "train"?

1. People willing to take the train (rather than their car)

   Under which conditions will fuel poor households engage in energy efficiency investments?

2. Trains (wagons, locomotive)

   Characteristics of energy efficiency programme and the coordination of the programme matter!

3. Train schedule and rails

   Decisions must be taken on priorities and on the timetable, and political commitment is important

Part 1

The design of an energy efficiency programme for low-income households: Habiter mieux

1. People willing to take the train? The problem

- ***Under which conditions will fuel poor households engage in energy efficiency investments?***

- Market failures & transaction costs
  - The **"usual suspects"**
    - Imperfect information
    - High discount rates
    - Complexity of procedures, ...
  - are even **more important for low-income people** than for the average household
    - Non take-up of measures (lack of information, fear of stigma,...)
    - Lack of financial capacity to invest

➢ **No spontaneous "demand" to be identified & helped:** Low-income households as a group for which obstacles to implementation of energy efficiency measures are very high!

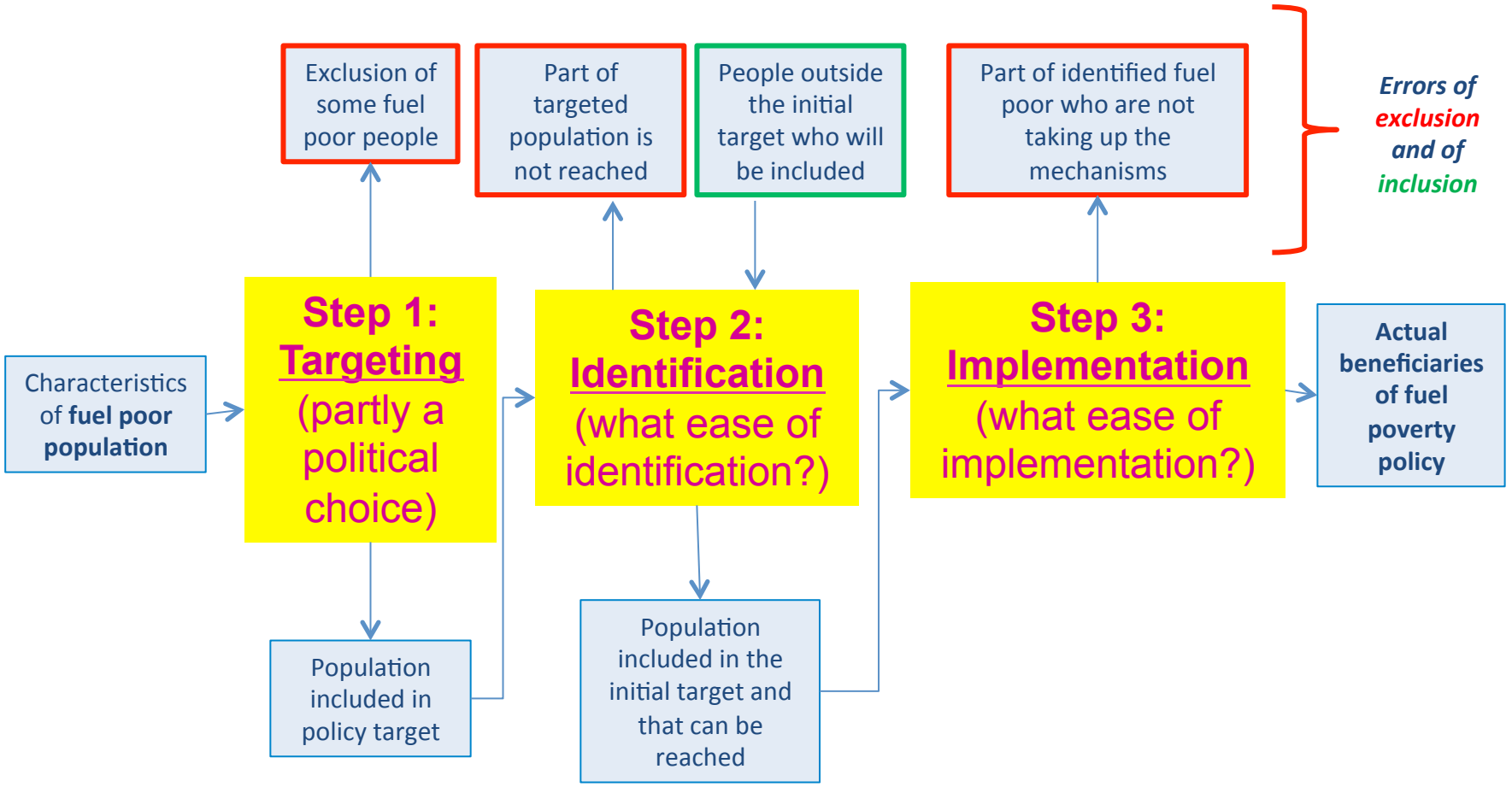
1. People willing to take the train? "Habiter mieux" approach

- General philosophy of the initial programme (2011)
  1. **Adaptation to an ageing population**
     - Why?
       - Because they have been identified as a **group that is particularly affected by fuel poverty** (Anah, 2009, Rapport Pelletier, 2009)
     - Individual and social question
       - 80 % of older people prefer to stay at home
       - This is also the option with the lowest social cost
     - What is required for older people to stay at home?
       - Not only adaptation certain equipments (bathroom,...)
       - But also a **warm home**

  2. **A new funding logic:** away from a pure funding towards a coordination logic → *What* is financed matters!
     - **Renovation of whole building** (package instead of partial measures)
     - **Priority to the most efficient measures** (not necessarily what homeowners would like most)

2. Trains (wagons, locomotive)
The problem

Characteristics of energy efficiency programme and coordination of the programme matter!



2. Trains (wagons, locomotive) "Habiter mieux" approach

1. Coordination → the governance structure

- **Coordination structure**
  - National Habitat Agency (Anah) and its local delegations manage the funding
- **Identification networks**: a **proactive** approach to identification through decentralised (local) networks
  - "Contracts of commitment" & networks at Département level
  - Standardised (optional) identification tools (= forms for data collection)
- **Implementation structure**: "Operators" in charge of
  - Diagnosis (technical visit)
  - Proposal of a renovation package
  - Energy evaluation before & after renovation
  - Assistance / finding professionals
  - Financial coordination
  - Help / follow-up of renovation & acceptance of work

→ *"Accompagnement" over the whole renovation process*

2. Trains (wagons, locomotive) "Habiter mieux" approach

2. Characteristics of the programme

- **Renovation characteristics**
  - **Comprehensive renovation** including thermal insulation (roof, walls, windows) and replacement of heating equipments + other work
  - **Energy efficiency gain: at least 25 %**

- **Funding that aims at covering a large share of work** → combination of different resources

- **What households get** in the first phase (until June 2013)
  - ANAH (traditional funding) (up to 50 %)
  - ANAH Habiter Mieux (1600 €)
  - Local authorities (500€ - 1000 €)
  - Charities, pension funds
  - Microcredit, ...

  →in total: 5000€ per household (but sometimes more)

3. Rails and a train schedule
The problem

- ***Decisions must be taken on priorities and on the timetable, and political commitment is important***

- A **quantitative objective** that should be
  - Realistic, given the capacity of actors to intervene
  - Adequate, in order to contribute to the policy objective

- Sufficient **funding** must be available
  - Who finances the programme

- The question of **commitment**
  - How to be sure that the initial objective will not be modified too frequently or too much?
  - Important especially when the programme requires an investment in the form of creation of skills, trust building, etc.

3. Rails and a train schedule
"Habiter mieux" approach

- The quantitative objective: refurbish 300 000 homes over 7 years (2011-2017)

- Funding:
  - Dedicated fund (FART, created 2010) → 500 million €
  - Plus classic Anah funds → 600 million €
  - But also a contribution of suppliers (EDF, GDF Suez & Total) through the white certificates system → 250 million €

- The question of commitment was raised in 2013, when it became clear that it would be difficult to reach the initial quantitative objective

3. Rails and a train schedule "Habiter mieux" approach

- France has a system of **White Certificates** since mid-2006

- But **energy poverty included in that system only at the end of 2011**
  - Principle is written in the French **energy legislation**
    - But **no decree** defining how this would be implemented
  - Solution adopted: a **contract** between the state and three energy suppliers (Sept. 2011), **EDF**, **GDF-Suez** and **Total**
    - 250 million € paid by the operators to contribute to the thermal improvement of 100.000 homes, over 7 years
    - Out of which 85 million € had to be paid between 2011 and 2013
  - The three suppliers have a **monopoly** over that system
    - Contractually : veto rights on decisions to extend the system to other suppliers
    - De facto : the French territory has been split between the three operators. The white certificates from all thermal renovations on a given territory are transferred to that "referent obliged party"
      - 75 % for the energy supplier
      - 25 % for the local authority

PART 2

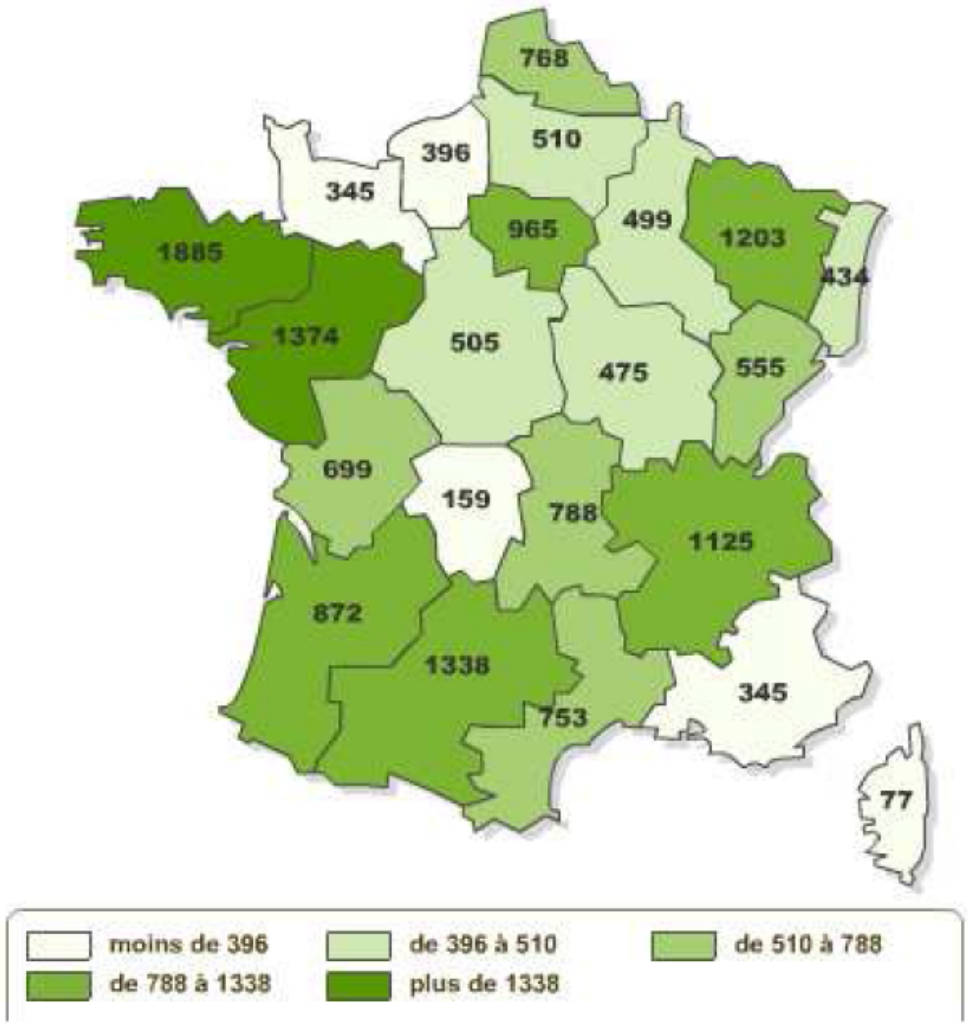
RESULTS:
A SLOW START OF THE PROGRAMME AND PRESSURE FOR REFORM

A slow rhythm of engagement of households into renovation projects

	1st semester 2011	2nd semester 2011	1st semester 2012	2nd semester 2012	Jan. 2013 to Aug. 2013
Number of renovations started in the semester	464	6669	3453	9333	8400
Total number since start of programme	464	7133	10586	19919	28319

Source : Cour des Comptes (October 2013)

Habiter mieux: the situation in November 2012



Source: ANAH (2012)

Until **November 2012**, 9 400 households have benefited from ANAH subsidies and the renovations have been realised + 1774 were under investigation

Average cost of refurbishment: 18 000 €

Average energy efficiency gain: 38 %

Slow start of the programme → investment dimension (it takes time to create local networks)

Unequal implementation →appropriation of the programme strongly dependent on involvement of local actors

Characteristics of homes renovated by Habiter mieux until June 2013

une "aide travaux" pour un logement économe et écologique

Year of construction	Total		Percentage of single family homes	Average amount of work	Average energy efficiency gain	Part of very low-income homeowners
	Number	Percentage				
Before 1949	10 887	47%	97%	22 056 €	40%	65%
From 1949 to 1975	9 151	39%	88%	13 879 €	37%	58%
After 1975	3 184	14%	89%	13 763 €	35%	56%
Total	23 222	100%	92%	17 679 €	37%	61%

Source: ANAH (2013) Programme Habiter Mieux – Etat d'avancement mensuel, juin 2013

Energy class of buildings renovated by Habiter mieux (June 2013)

une "aide travaux" pour un logement économe et écologique

Energy class (kWh/m²/yr)	Percentage of homes: Before thermal renovation	Percentage of homes: After thermal renovation
A (less than 50)	0 %	0 %
B (from 51 to 90)	0 %	2 %
C (from 91 to 150)	1 %	14.5 %
D (from 151 to 230)	10.5 %	29.0 %
E (from 231 to 350)	23.0 %	29.0 %
F (from 351 to 450)	26.5 %	16.5 %
G (more than 450)	39.0 %	9.0 %

Source: ANAH (2013) Programme Habiter Mieux – Etat d'avancement mensuel, juin 2013

→ Alleviates worst situations of fuel poverty but does not necessarily eliminate fuel poverty

The functioning of the white certificates system between 2011 and 2013

What the suppliers actually paid

- **A fixed part** : 500 € per home, paid in advance, i.e. 50 million € between 2011 and 2013
- **A variable part**, which depends on the realised renovations : 14 million € (instead of 35)
- Theoretically, the **cost per kWh cumac** was evaluated at 5.5€/MWh (i.e. 20 % more than the market price)
  - ➢ But as the number of renovations was much lower than anticipated, the cost for the suppliers was higher

What the suppliers received

- A **number of white certificates** that depends
  - on their contribution to the national programme
  - on the renovations realised locally, according to what has been defined for each action
- The **price** of the white certificates has been negotiated with the ministry of environment
  - 10 € in 2011
  - 11 € in 2012
  - 12 € in 2013
  - i.e. three times the market price

The limits of the use of white certificates: an insufficient number of thermal renovations

- At the end of 2012, the three suppliers had **paid 60% of the fixed part** for the period 2011-2013
- But **only 20% of the planned renovations have been realised**

➢ Consequence : they suspended their payment for the 1st semester of 2013

- This led to a **reform of the programme "Habiter mieux",** with an objective to increase rapidly the number of beneficiaries

  → announced by Anah in April 2013

  → implemented end of June 2013

PART 3

THE REFORM OF HABITER MIEUX IN 2013

1. Get more people on the train
The evolution of the target population

Eligibility criteria	From 2011 to June 2013	Since June 2013
Types of households	All household types but in priority people aged 65 and more	All household types
Types of homes	Homeowners of single family homes living in these homes	Homeowners of single family homes living in these homes + low income landlords + collective housing (co-ownership) in difficulty
Income thresholds	Very low incomes Ex: single in other regions than Ile de France → 11 811€/yr (January 2013)	Very low and low incomes Ex: single in other regions than Ile de France → 18 262€/yr (January 2014)
Other conditions	Building older than 15 years, no other public subsidies for 5 years, expected energy efficiency gain = 25 %, work done by professionals	

2. Improve the performance of the train by increasing subsidy levels

Funding	From 2011 to June 2013	Since June 2013
Habiter mieux subsidy	1600€	3000€
Subsidy for engineering	300 to 450€, depending on the type of intervention	increases by 100€
Classical Anah subsidy	from 20% to 35% of amount of work	from 30% to 50% of amount of work
Local authorities	500€-1000€	500€-1000€
Charities, pension funds Microcredit,...	Determined individually	Determined individually
Total	Approximately **5 000€**	Approximately **10 000€**

→ Reduces barriers to implementation for households with limited ability to finance work

One complementary measure: the "Energy Ambassadors"

une "aide travaux" pour un logement économe et écologique

- To overcome some identification problems and thus accelerate the realisation of thermal renovations

- **Recruitment of 1000 "Ambassadors"** was announced in 2013
  - To **facilitate the identification** of energy poor households
  - Subsidised jobs (personnel cost are limited) with an **objective of professional integration**
  - Difficulty of that system : people who need to be **trained and qualified (in both technical and social fields)** → not necessarily easy given the difficulty of the task of diagnosing households in energy poverty

3. But problems with rails and train schedules

- **"Train schedule"** modified several times
  - Mid 2013: more potential beneficiaries

  → strong increase of demand and of operators' workload
  - Mid 2014: demand is so high that Anah modifies de facto eligibility criteria (get back to the initial target, i.e. lower income households)

- **"Rails"** adjustment → what credibility of commitments?
  - Adjustments were made to **guarantee a better implementation of the white certificates system**
  - But **loss of visibility** for the households and **loss of credibility** for the operators

Conclusion

- **Realising thermal renovations that benefit low-income people has many advantages**
  - (Ex ante) **energy efficiency gains** are important (38%)
  - Additional benefits: **thermal comfort**, **better health, value of buildings**

- **But implementing this kind of policies is a challenging task**
  1. The **individual household** → how to get them on the energy efficiency train?
  2. The **governance structure** and **properties of the programme**: how to design programmes in an efficient way

     → what is a "good" train ?

     → supply-side perspective: a programme has an investment character
  1. The "political" level → How to make necessary **adjustments** and preserve **credibility of commitments**? (i.e. remain on the "rails")

Thank you for your attention !

Ute DUBOIS, ISG International Business School, Paris
ute.dubois@isg.fr

ECEEE SUMMER STUDY
June 5th, 2015