The French energy savings certificates system

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National debate on energy and energy law

- 2003: national debate on energy and white paper
- Beginning of 2004: law project
- 4 main orientations
The energy efficiency in the energy law

- **Target**: reduction of energy intensity by -2% per year until 2015, then by -2.5% until 2030

- **Implementation of energy savings certificates or white certificates (WC)**
  - The Law defines the main rules
  - Decrees: precise thresholds, give details, 3 to implement WC, not yet issued
  - Start at the beginning of 2006
Evolution of the final energy intensity in France

- 1973-1982: -3.2% per annum
- 1982-1990: -1.1% per annum
- 1990-2004: -0.9% per annum
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White certificates: why?

- Need to reach existing and important but diffuse potentials of energy savings, in particular in residential and tertiary sectors
- Traditional public instruments difficult to mobilise and not adapted
- New means of financing energy efficiency projects: between 500 and 1000 M€ over three years
- Instrument adapted for liberalised markets
The obliged agents (1/2)

- Obligation to carry out final energy savings imposed to energy suppliers: electricity, gas, domestic fuel (not for transports), cooling and heating for stationary applications
- If annual sales superior to a fixed energy amount
  - From the first litter for domestic fuel suppliers (possibility to gather)
  - Above 400 GWh/year (20 obliged)
The obliged agents (2/2)

- The suppliers must respect their obligation:
  - Over the whole period 2006-2008 – no annual obligation
  - Three ways of fulfilling the obligation
    - To implement energy efficiency programs on site
    - To incite customers to implement energy efficiency actions
    - To buy white certificates

- Costs can be reported on the energy price
The obligation

- **National target**
  - 54 TWh (in final energy) for the first three years (2006-2008) cumulated over the life of the energy efficiency actions with a 4% discount rate

- **Repartition of the target**
  - By energy
  - For each energy, among suppliers depending on their sales (not energy) in residential and tertiary sectors.

- **Expected cost**: < 0,02 €/kWh
- **Penalty**: 0,02€/kWh which is full of discharge
The eligible agents

- Any economic actor can make savings actions and get certificates
  - But a threshold of savings of 1 GWh (?) cumulated and discounted with similar actions
  - Actions must be additional relatively to their usual activity
  - Possibility to gather together to reach the threshold ⇒ a trustee gets the certificates
The eligible actions

- Very open
- All the energies
- All the sectors (including transports and excluding installations covered by ETS)
- Energy substitutions only for heat generation with renewable energies
- Focus on standardised actions but others are possible
Principles for evaluation of standardised actions

- Evaluation of a lump-sum of energy savings for one action
- Simple characterisation of action with two or three criteria (geographical area, dwelling type, ...)
- Limitation of windfall effects: energy savings must be additional
- Possibility to award actions implemented in some geographical regions
Additionality

- An action is considered additional relatively to usual activity:
  - **Action on own equipment or building**
    - For obliged agents: yes if standardised action or action with a long payback time
    - For eligible agents: yes if it doesn’t increase its turnover or if it relates to innovative products
  - **Actions to domestic households**
    - For obliged agents: yes
    - For eligible agents: yes if it doesn’t increase its turnover or if it relates to innovative products

- **For equipment, correction in the evaluation of energy savings by considering current state of the market**
Characteristics of certificates

- Final energy for accounting energy savings
- Unit of account = kWh Cumac (ie cumulated and discounted)

Certificates in kWh Cumac = EE × DV × Ca where
  - EE: annual energy savings; DV: lifetime of the action; Ca: discount factor

- Certificates are delivered after the programs are carried out but before the realisation of energy savings
Example: refrigerator class A+

- **Measure:** To replace a refrigerator representative of current sales by a refrigerator belonging to energy class A+

- **Annual mean consumption**
  - Standard refrigerator = 221 kWh/year
  - Refrigerator A+ = 155 kWh/year
  - Annual gain = 66 kWh/year

- **Lifetime:** 10 years

- **Gain over the lifetime**
  - Total gain without discount = 660 kWh/refrigerator
  - Total with discount of 4% = 557 kWhcumac/refrigerator
A certificates market?

- No formal market organised by the State
- Certainly only over the counter exchanges
- Publication of a list of sellers (maybe at the end of the period)

- Certificates price
  - Depending on the supply and offer
  - Ceiling price = penalty of 2 c /kWh
  - Estimated average cost = 1 c /kWh Cumac
  - Publication of the average price (excluding transaction costs)
Implementation of the system

- Industry Ministry: Allocation of certificates and control of actions
- ADEME: in charge of definition and evaluation of standardised actions (i.e. set methodologies for saving calculation) but final decision of the Industry Ministry
- Definition of standardised actions in progress - Currently planned
  - 32 in residential sector
  - 22 in tertiary sector
  - 14 in industry
  - 3 in transport
Thank you for your attention

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