Lessons learned from the European experience in scaling up energy efficiency activities in the building sector

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What bases for a successful energy efficiency policy?

- Clear orientations and political decisions, shared at all levels
- Existing regulatory framework and incitative tools
- Economic sectors, able to provide EE related services & products
- Adequate set of accompanying measures (professional training cursus system, awareness & communication toward all publics…).
Display of a political will with clear objectives

- Europe: took clear commitments in environment & energy, leading to decisions:
  - 2002, EU directive on Energy Performance of Buildings (every Member State requested to apply **minimal performance levels** to new and existing buildings, to develop a **certification** scheme of the energy performance of buildings and to impose the periodical **inspection of heating boilers & A/C systems in buildings**.
  - 2007, the 2020 targets 3x20:
    - **Reduction of GHG by 20%**
    - **Reduction of the energy consumption by 20%**,  
    - **Increase the share of Renewable Energies to 20%** of the final energy consumption.

- EU Member States: obligation to transpose these objectives into their national policies

- Local level: taking into account these national objectives, or better, in the local policies
Programmed increase in severity of the RT

+ 15% in 5 years stage
2005 / 2010 / 2015-2020?

RT Architecture constant

Labels

HPE (+10%)
BBC (RT/3)
BEPOS (RT/4)

Increasing the cumulative effect of savings in new buildings, and offsetting the low renewal rate

Targets: new buildings and - indirectly - existing buildings

Tools

- Regulatory & Incentive tools
  - Thermal régulation (case of France: 30 years energy policy)

- First RT housing (1974)
- PNLCC (2000)
- Plan Climat (2004-2008)
- POPE (2005)
- Grenelle Environnement
Progress of the performance requirements in the French Thermal Regulation
Regulatory tools

- Trends of the Thermal performance requirements in the EU Member States (Individual houses)
Regulatory tools

Measuring the energy performance of buildings

- Thermal regulation (case of France, Energy Performance Certificate)
  - Objectives:
    - Inform the buyer/owner/renter about the energy & environmental performance level and about the annual energy cost (for heating, DHW, A/C or cooling)
    - Issue of recommendations for operation and improvement works
Regulatory tools

- Measuring the environmental quality of buildings
  - Regulation (case of the environmental performance of building materials in France)

Producers & distributors are obliged to display the levels of _VOC emissions (volatil organic compound)_ on their construction materials, including wall & floor coating, paints, varnish....

Environmental Labelling
Incentive tools

- Energy Efficiency and/or Environmental Labels: they are available in nearly every EU Member State, allowing:
  - **the owners of the work:**
    - to enhance the image of their policies, as well as their projects (recognition of the quality, visibility of the commitment, support for communication & valorisation…)
    - to benefit from financial incentives,
    - in case of sale, to obtain added value from the investment in over costs, if any
  - **the public authorities:**
    - to get feedback from various experiences,
    - to evaluate the feasibility of the proposed objectives and associated difficulties,
    - to pre-define the future regulations

- Financial tools (subsidies, loans at reduced rates, reimbursable advances, financing of R/D programmes…),

- Experimental Programmes (call for project proposals, call for interest…)
- Development of new sub-sectors (renewable, eco-materials, eco-industries….)
## Incentive Tools

- **Main EU labelling schemes for EE buildings**

<table>
<thead>
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<th>Tableau Comparatif labels Européens pour l’habitat</th>
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<tr>
<td><strong>Passiv' Haus</strong></td>
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* Surface chauffée
Incentive tools

- **Other labels**
  - « Bio-sourced building » Label (France),
  - The objective of this recent label is (detailed decrees in preparation):
    - valorising local & renewable materials
    - guarantying the environmental quality of projects, incorporating a significant part vegetal or animal materials « bio resources » (wood, cork, straw, feather, wool…).
    - Highlighting the environmental quality of some projects,
    - valorising the voluntary approaches of works owners that are using bio materials.
  - The energy label of electric appliances (Europe)
Accompanying the stakeholders

Training of the stakeholders
- The consulting & engineering firms (architects, urban planner, designers, economists, …)
- The owners of the works, investors
- The contractors, builders, installers
- The official authorities…

Making aware and advising various target groups…
- Setting up over the territories qualified relays for information & awareness (network of over 250 “Espace Info Énergie in France”),
- Promoting environmental education in schools,
- Production and publication of documents for the information and awareness of the general public

Communication
- Organisation of national & regional communication campaigns
Conclusions

Toward a balanced package of complementary measures