

MEMORANDUM ON ACTION

Good practices to be shared

Energy efficiency in buildings

The building sector is an important source for saving energy and reducing greenhouse gas emissions, two of the public authorities' key objectives. However, its exploitation requires the involvement of all stakeholders, as well as the use of quality marks to identify the best skills and products helping contractors and individuals to make the right choices from a highly diverse commercial offer...

Improving the energy efficiency of all buildings is generally the priority action for achieving massive reductions in national energy consumption and greenhouse gas emissions.

In 2011, the energy consumption of buildings (apartment blocks, houses, offices, etc.) in France represented 44 % of total energy consumption and almost 25% of CO₂ emissions. Heating was the main contributor, accounting for almost three quarters of energy consumption.

Improving the energy efficiency in buildings is therefore one of the main pillars in the fight against climate change in France. In order to reduce the high CO₂ emissions in the building sector, the leading energy consumer in France, the action must primarily focus on existing housing given the low rate of renewal in the French housing sector (less than 1% annually).

The issue of buildings is present throughout the summary of the energy transition discussions, adopted on 18 July 2013. Two issues more specific to this sector were also highlighted: the fight against fuel poverty with six actions to implement this objective, including an emphasis on the priority renovation of inadequate housing and an issue surrounding the building stock that needs to be brought up to a high thermal performance level by 2020.

Meanwhile, the steady increase in regulatory requirements for new buildings will limit their environmental impact.

Energy efficiency requirements for buildings

A particularly ambitious thermal regulation has been put in place by the public authorities; since 1st January 2013, new buildings must be low-energy buildings (BBC) and after 2020, they must be "positive energy" (producing more energy than they consume).

In addition to new construction projects, the challenges and objectives of this plan focus primarily on existing assets. Indeed, the laws resulting from the Grenelle Environment Forum set an objective to reduce the energy



The French Environment and Energy Management Agency (Ademe) is a public agency under the joint authority of the Ministry of Ecology, Sustainable Development, Transport and Housing, the Ministry of Higher Education and Research, and the Ministry of the Economy, Finances and Industry. The agency participates in the implementation of public policies regarding the environment, energy and sustainable development. Ademe provides expertise and advisory services to businesses, local authorities, government bodies and the public at large, to enable them to consolidate their environmental action. As part of this work the agency helps finance projects, from research to implementation, in the areas of waste management, soil conservation, energy efficiency and renewable energy, air quality and noise abatement.

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million: This is the number of homes recorded in France in 2009, 4.5 million of which are social housing.

3.5

million professionals active in the building sector (2009).

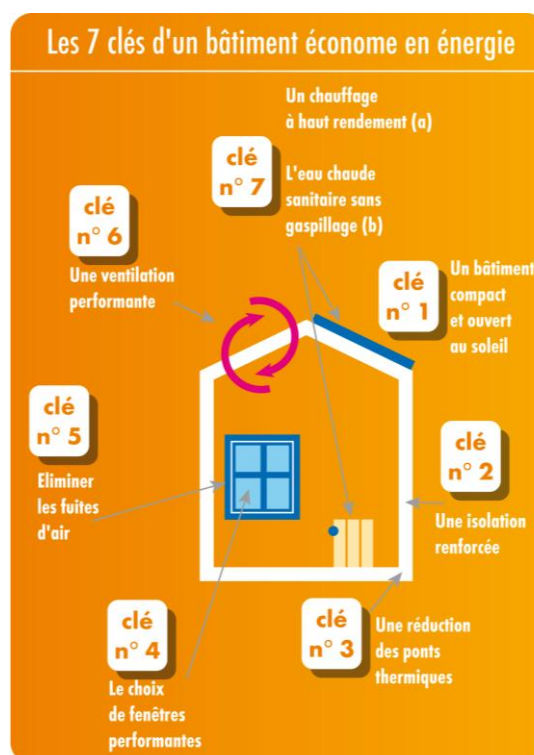
500,000

homes will be renovated every year from 2017

consumption of existing building stock by 38 % by 2020, an objective confirmed by the environmental conference of September 2012 and the housing investment plan (PIL) of March 2013.

With this in mind, the Plan provides that **500,000 private homes must be fully renovated every year beginning in 2017**, along with 120,000 of some of the most energy intensive social housing by 2017. This is a major challenge. Indeed, according to a study conducted by the network of estate agencies, Ex'im in April 2010 on 10,000 apartments and houses, 80% of French homes are labelled D to F in energy performance diagnoses.

Diagram - The 7 keys to an energy efficient building



A priority: training

The **Observatoire de la Performance Énergétique (OPEN - French observatory for energy performance)**, created by ADEME, has noticed a delay in upgrading the skills of professionals dealing with current energy performance issues. In 2008, less than one in four tradesmen or businesses had taken part in a full thermal renovation project. In over 80 % of cases, the three quarters of professionals who had not been involved in this type of work mentioned the lack of necessary skills in offering this full renovation.

ADEME has therefore launched a policy to **support the training of building professionals**. The Agency is a stakeholder in the FEEBat scheme (training in energy saving for building tradesmen and businesses). It is also central to the implementation of technical and educational platforms through the Praxibat project, which it initiated to support the regions in the development of initial and further training programmes focused around seven technologies (ventilation, lighting, opaque walls, wood energy,

photovoltaic solar power, thermal solar power and heat pumps). Its action is further illustrated with individuals through, among other things, the **publication of guides for the general public** to help identify the best quality marks relating to construction products (*What materials for building and renovation?* guide) and buildings (*Certifications and labels* guide).

Support individuals and help identify skilled services

There are a growing number of references and quality marks covering professionals' skills, the buildings themselves and construction products. The Agency's approach aims to standardise and improve these quality marks with a dual purpose: to improve the skills upgrading of professionals carrying out the energy performance works, encourage individuals to have these works carried out by guiding them towards the most skilled and exacting companies.

All companies wanting to obtain a quality mark "recognised by the Grenelle Environment Forum (RGE)" should contact a qualification body accredited by the French accreditation body COFRAC. In addition to a documentary audit focusing on the company's methods and the employees' skills, obtaining these quality marks will be subject to an on-site quality control of the works of a current or recently completed operation.

In order to facilitate the completion of renovation works, in September 2013, the government set up a single national telephone number. Depending on the caller's location, this will direct them straight to **the relevant contacts in their region. At the same time, "local energy renovation platforms" are being set up in order to create genuinely local public services to help with energy renovation.**

These platforms will bring together the offers of all the institutional stakeholders in energy renovation: energy audit, technical solutions, "RGE" accredited professionals able to carry out the work and information about available financing solutions. They will also observe practices implemented across the country, not only in terms of price, but also the most frequent types of work and its effectiveness.

Energy efficiency in China: a programme based on co-operation and consultation

The building sector accounts for 28 % of energy consumption in China, which is set to build approximately 10 million homes per year. Such growth requires the implementation of urban design and sustainable buildings. The Chinese authorities, operators and the general public share this concern for improvement and have understood its benefit for the country.

Between 1999 and 2010 ADEME managed the "Energy Efficiency in Construction in China" programme financed by the FFEM.

This programme focused on both new builds and the renovation of existing housing (energy saving objectives of 50 to 65% with additional costs acceptable by the market), while supporting China in its policy of controlling energy use in the building sector.

It is intended in particular to promote the application and development of

local standards and regulations and facilitate the transfer of expertise in order to provide sustained energy savings in construction.

Energy efficiency in buildings in Morocco

The building sector accounts for 35% of Morocco's energy consumption, with a growth of 41% in 8 years.

With over 200,000 homes built every year and over 5 million existing dwellings, there are significant construction and renovation challenges. **The French Development Fund for the Global Environment (FFEM) entrusted ADEME with the implementation of a project to improve the energy efficiency of the built environment in Morocco (2010-2012).**

ADEME is conducting this project in conjunction with its Moroccan counterpart, ADEREE and with the financial support of several international backers (FFEM, UNDP, European Commission).

The project focuses in particular on finalising and implementing an energy efficiency code in Morocco, strengthening the expertise, management and financing of local partners, training Moroccan professionals, creating demonstrator projects and developing good practices.

SUMMARY

The building sector is now positioned as a key sector in resolving the environmental challenges that we are facing. This development is related to a recent awareness that this sector could indeed be the only one that offers opportunities for strong enough progress to meet our national commitments to reduce greenhouse gas emissions.

This is why the government, particularly through ADEME, is encouraging the stakeholders of civil society to build or renovate buildings efficiently and ecologically, while providing ever more innovative methodologies and expertise.

French Development Fund for the Global Environment (Fonds Français pour l'Environnement Mondial - FFEM)

An instrument of the French cooperation and development policy, the FFEM (French Global Environment Facility/Fonds français pour l'environnement mondial) is a bilateral public fund which was created by the French government in 1994 after the Rio Summit. This fund is designed to associate global environmental protection with local development through sustainable development projects.