

2010 EUROPEAN ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE AND ITS IMPLEMENTATION IN FRANCE

Jean Carassus

Professor Ecole des Ponts, Paris Institute of Technology

CIB Task Group 66 « Energy and the Built Environment » Coordinator

**“International Perspectives on the Role of Building Regulation
in Responding to the Challenges of Climate Change” Workshop.**
2010 October 20. Boston, Massachusetts, USA



- 1/ The European Climate Change policy
- 2/ Climate change: driver is political
- 3/ Implementation in France: contents of laws and mobilization
- 4/ How to manage existing stock renovation?

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What is Europe?

A political and economic **continental union of 27 countries** based on three institutions:

- a rather powerful **Commission** with active ministers (the “Commissioners”);
- a **State and government heads council**;
- a **Parliament** which plays a more and more important role.

With one **President** elected for two and a half years and one Foreign Affairs Minister (the **High Representative of Europe**).

A market of nearly **half a billion high or rather high standard of living consumers**

Two-fifths the size of the USA but a population over 50% larger

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- European Union, several members of which initiated the two world wars which destroyed large parts of the planet, decided to play a **leading role** to save the planet from the climate change threat.
- Europe played an active role in **1997 Kyoto Agreement** which specified a **decrease of 8 %** in Europe of Green House Gas emissions between **1990 and 2010/2012**.

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December 2008 energy action plan defined three ambitious objectives for **2020**:

- unilateral decrease of **20% of green house gas** emissions between 1990 and 2020

To be compared to the 4 % of the US plan under discussion

- minus 17 % between 2005 and 2020 -*

- decrease of **20% of energy consumption** between 1990 and 2020;

- a share of **20% of renewable energy** in 2020 (9 % today).

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- **“Climate Change is the greatest and widest-ranging market failure ever seen”.**

Sir Nicholas Stern, former World Bank Chief Economist,

“The Economics of Climate Change” Review, London, 2006

- Market is blind because no price signal is still available.
- In Europe, Cape and Trade system is available only for Manufacturing Industry, not for Construction and Property Industry
- Carbon Tax exists only in Sweden.
- **Construction and Property sector represents in European Union 36 % of GHG and 40 % of energy.**

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- **2002 European Energy Performance for Buildings Directive (EPBD
n°2002/91/CE, December 16) imposed:**
 - Thermal **calculation method**
 - Improved **regulations for new and existing** buildings every 5 years
 - **Energy certificates** for new and existing buildings
 - Public information about energy consumption in **public buildings**
 - **Energy feasibility studies** for projects of more than 1000 m²
 - Substantial thermal improvement for **refurbished projects** of more than 1000 m²
 - **Boilers and air conditioning** equipment inspections.

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Eight years after, **2010 Energy Performance of Building
Directive** (EPBD n° 2010/31/UE, May 19) imposed:

- **Nearly Zero Carbon and Energy new buildings in 2020
(2018 for new public buildings)**
- Strengthening the role and the quality of **Energy
Performance Certificates**, which will be **compulsory in
advertisements** for sale or rent
- Display of **Energy Performance Certificates in public
buildings** (compulsory in 500 m² buildings, 250 m² in five
years)

2010 Energy Performance of Building Directive (EPBD) continued:

- Minimum energy performance requirements for **new buildings and major renovations**, with lowering of the 1000 m² threshold for existing buildings when they undergo a major renovation
- Lowering of the threshold for **Energy feasibility studies** in new buildings
- Strengthening the role and the quality of **Heating Ventilation Air Conditioning inspections**
- Benchmarking to achieve **cost-optimal levels**

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- **EPBD implementation support:**
 - EPBD Concerted Action,
 - CEN (European Committee for Standardization) EPBD standards,
 - Build up portal: www.buildup.eu
- **Programmes:**
 - Intelligent Energy Europe
 - R&D FP7 (7th Framework Programme 2007-2013) projects
 - Smart Cities
- **Networks:**
 - Covenant of Mayors
 - Sustainable Energy Europe Campaign
 - ManagEnergy

jean.carassus@immobilierdurable.eu

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Before 2007, France was **late on environmental topics**

- 1997: Kyoto agreement
- 2000: Climate Change National Program, Energy Efficiency National Program,
- 2004: Climate Plan,
- 2005: Energy Policy Program Law - “Factor 4 Policy” - (minus 75 % GHG between 1990 and 2050)

But no actual Action Plan

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Low motivation:

- Beginning of 2006: **not a single text to implement 2002 European Energy Performance of Buildings Directive .**
- **First text**, 2005 Thermal Regulation (May 2006) : **not very ambitious** (2000 Thermal Regulation energy consumption minus 15%)

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In **2007**, after Presidential election, “Grenelle de l’Environnement” was an **original national negotiation**:

- Between five bodies: **Government, Local authorities, Employers, Unions and Environmental associations,**
- About four topics: **Climate change, Biodiversity, Environmental risks, Health risks.**

= Mobilization of main national bodies

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First results:

- A lot of ambitious **policy instruments** between 2007 and 2010 for Construction and Property industry
- **“Grenelle One” Law** (n° 2009-967, 2009 August 3)
- **“Grenelle Two” Law** (n° 2010-788, 2010 July 12)

= A coordinated Action Plan

**A huge quantitative (and qualitative) jump for
Construction and Property Sector:**

❑ New buildings

- . **2012** Thermal Regulation = 2005 Thermal Regulation
energy consumption **minus 50 %**
- . **2020** Thermal Regulation = 2005 Thermal Regulation
minus 100 % (“Positive Energy Buildings”) = minus 70 %
+ 30 % renewable energy produced by the building

❑ Existing buildings

- . **2020** stock consumption = 2009 stock energy
consumption **minus 38 %** (from 240 KWh/m²/y to 150
KWh/m²/y primary energy)

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- Existing **public buildings**: minus **40% energy consumption**, minus **50% greenhouse** gas emissions between 2009 and 2020
- From 2011, energy performance in **advertisements** relating to the sale or rental of real estate
- **Compulsory green leases** in more than 5000 m² non residential buildings,
- **Carbon analysis** integrating users transport, for all private firms of more than 500 employees and public bodies of more than 250
- In 2012, **labeling of pollutants**
- Real estate assets consumptions and emissions controlled by local authorities **Climate and Energy Territorial Plans**

France is no more late

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- **Regulation**, especially Thermal Regulation can be, especially if it is controlled, **efficient for new construction**,
 - But new construction impact is **marginal** till 2020-2030
- **90 % of 2020 existing stock and more than 60 % of 2050 existing stock are already built.**
 - Thermal regulation is not sufficient for existing buildings

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A mix of **four kinds of instruments** is needed for existing buildings. What is in progress in France:

–1/ **Control and regulatory instruments:**

- Normative: Appliance standards , Building codes,
- Informative: Mandatory audits,

–2/ **Fiscal instruments and incentives:** Tax exemptions / reductions, grants, subsidized loans

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–3/ **Economic and market-based instruments:** Energy performance contracting, Energy efficiency certificate schemes

–4/ **Support, information and voluntary action:** Voluntary certification and labeling, Voluntary and negotiated agreements, Public leadership programs, Initial and continuous training programs for property and construction professionals, Awareness raising, education, information campaigns

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- With an important potential role of **local authorities**:
 - Most of Construction and Property **actors** are local
 - Renovation works **decisions** are local
 - **Jobs** linked to existing buildings renovation are local

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- Effectiveness will result:
 - from **renovation works**
 - but also from **improved operation** of buildings
 - and users **behavior change**

Challenge is huge!

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Thank you for your attention

More information on bilingual Sustainable Real Estate Blog:

www.immobilierdurable.eu

Any question?