

18.11.11



SESSION 5: Information instruments

***Buildings Energy labels in France: From
profusion to confusion?***

Aurélie CLERAUX- ELAN

Sustainability Department Manager
r.couzens@elan-france.com

French regulation context

Climate Plan 2004

French goal 2050: “Factor 4”

Grenelle de l'Environnement

Thermal regulation

- ▶ RT 2000 Buildings permits - between 01/06/2001 and 01/09/2006
- ▶ RT 2005 Buildings permits – between 01/09/2006 and 26/10/2011
- ▶ RT 2012 Buildings permits – after 28/10/2011*

*Apply only for offices, educating buildings. Hostels, retails and others are coming soon.

- Basic level of RT2005 corresponds to RT 2000 -8%
- Basic level of RT2012 corresponds to RT 2005 -50%

Thermal regulation method

- ▶ $C \leq C_{ref}$

C = conventional energy consumption

C = heating + cooling + hot water + ventilation + lighting

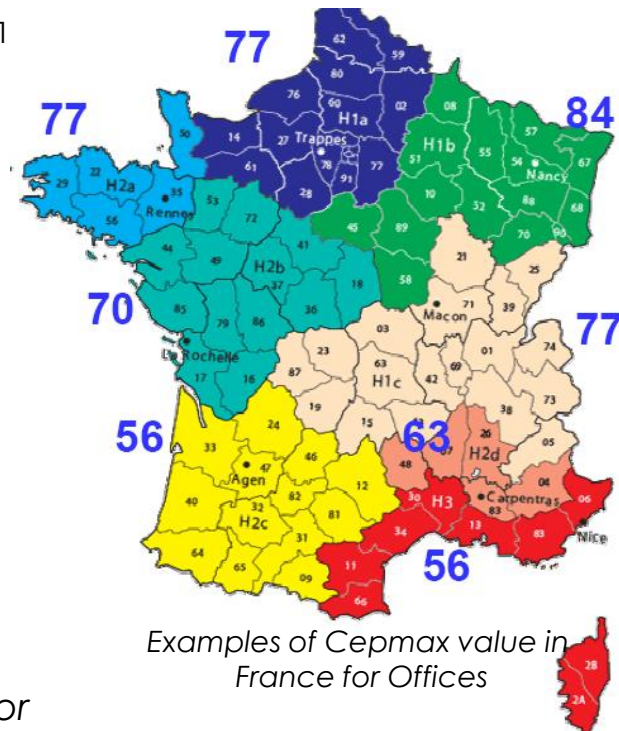
- ▶ $T_{ic} \leq T_{icref}$

Tic = conventional interior temperature (°C)

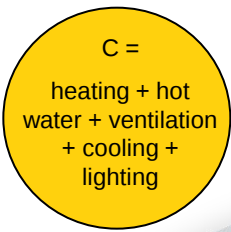
- ▶ Minimum values for Core & Shell: Ubat for RT2005 and Bbio for RT2012

Materials (insulation, windows...) and systems (heating, ventilation...) characteristics must have a better efficiency than some minimum values defined in the thermal regulation.

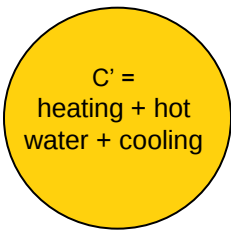
Includes air tightness requirements.



Examples of Cepmax value in France for Offices



RT 2005 – energy labels



	Label	C kWh/m².year	C' kWh/m².year	Renewable energy
HPE	High energy efficiency	C ≤ Cref - 10%	$C' \leq 0,9 C_{max}$	
THPE	Very high energy efficiency	C ≤ Cref - 20%	$C' \leq 0,8 C_{max}$	
HPE EnR	High energy efficiency with renewable energy production	C ≤ Cref - 10% + Renewable Energy	$C' \leq 0,9 C_{max}$	heating system made with 50% of biomass or heating system connected to a district heating produced by 60% of renewable energy
THPE EnR	Very high energy efficiency with renewable energy production	C ≤ Cref - 30% + Renewable Energy	$C' \leq 0,7 C_{max}$	50% of solar hot water + heating system produced with 50% of biomass or 50% of solar hot water + heating system connected to a district heating produced by 60% of renewable energy or 50 % solar hot water + solar heater or more than 25 kWh/m²,year of electricity produced by renewable energy or heat pump respecting minimums defined by thermal regulation or 50% of solar hot water (only for multi residential)
BBC	Low energy consumption building	4 options		Air tightness + 12 kWh/m².max
	Climate Plan of Paris	$C \leq 50 \text{ kWh/m}^2.\text{year}$		

Label : BBC - Effinergie

BBC NEUF

Commercial Building – NEW

- $C < C_{ep\ ref} - 50\% \text{ kWh/m}^2, \text{ year}$

Residential NEW

- $C < 50 (a+b) \text{ kWh/m}^2, \text{ year}$

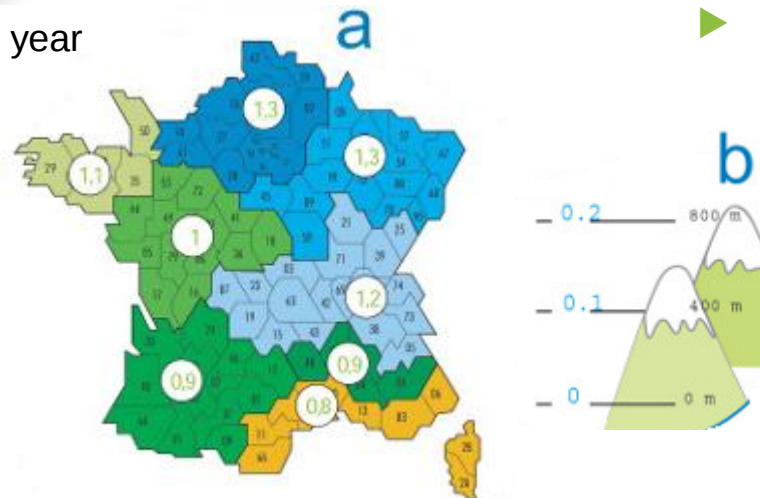
BBC RENOVATION

Commercial Building – RENOV

- $C < C_{ep\ ref} - 40\%$

Residential - RENOV

- $C < 80 (a+b) \text{ kWh/m}^2, \text{ year}$



Other Energy labels

Climate Plan of Paris

- ▶ More restrictive than thermal regulation
- ▶ $C < 50 \text{ kWh/m}^2$, year (NEW)
- ▶ $C < 80 \text{ kWh/m}^2$, year (RENOV)
- ▶ Only for buildings in Paris

Passiv Haus Label

- ▶ Maximum 15 kWh/m^2 per year in heating energy
- ▶ $50 \text{ Pa (N/m}^2)$ below atmospheric pressure $\rightarrow$ leak $< 0.6 \text{ vol / hour}$
- ▶ Total primary energy consumption $< 120 \text{ kWh/m}^2 \cdot \text{year}$

Minergie Label

- ▶ Maximum of $42 \text{ kWh/m}^2 \cdot \text{year}$
- ▶ MINERGIE-P®-Standard : corresponds to the passive house standard.
- ▶ MINERGIE-ECO®-Standard

adds ecological requirements such as recyclability, indoor air quality, noise protection etc.

- ▶ MINERGIE®-Modules

building components and equipments well-energy performing

RT 2012 - Labels

2 Energy labels in addition of RT 2012 Regulation:

▶ HPE 2012* (High energy efficiency):

- ✓ Cep max - 20% according to RT 2012

*not established at the moment, to be confirmed by the French Regulation Authority.

▶ BEPOS: positive energy buildings

- ✓ $> 0 \text{ kWh/m}^2 \cdot \text{an}$
- ✓ Requirements on the 5 energy uses
- ✓ Integration of other energy use for process (lifts, parkings ventilation...)



**THANK YOU FOR YOUR
ATTENTION!**

Rébecca COUZENS - ELAN

Sustainability Department Manager
r.couzens@elan-france.com