



Belgian Building Research Institute



Impact, compliance and control of energy Performance Regulations

Information from EU countries
Specific information about Belgian approach

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Belgian Building Research Institute



Belgian Building Research Institute



Structure of the presentation



Info from
ASIEPI project



The Belgian
approach



Conclusions

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ASIEPI
Assessment and Improvement of the EPBD Impact

Intelligent Energy Europe

Welcome
Join us at our last ASIEPI web event and workshop!

Web event: registration is open for the last ASIEPI web event related to [comparing EP requirements](#) (24-02-2010).

Amsterdam workshop: the program of the ASIEPI workshop (03 & 04-03-2010) related to innovative systems is now available.

ASIEPI web events

- 1 - Benchmarking
- 2 - Impact, Compliance and control
- 3 - Thermal bridges

Is it possible to compare EPB requirements across Europe? If yes, are the requirements from one country more severe than those of neighbouring countries?

How do the Member States organise control and compliance with EPB regulations?

Practically, how to effectively handle thermal bridges, stimulate good summer comfort conditions and good building envelope airtightness in EPB calculation procedures?

Are there legal and technical frameworks to assess energy performance innovative systems covered by the standards?

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ASIEPI web event 9
Stimulating innovation with EPBD

3 February 2010, 10:00-12:00 GMT+1 (Paris time)

N°	Topic	Date
9	Stimulating innovation with EPBD	03-02-2010
8	Good Building Practice to avoid Thermal Bridges	19-01-2010
7	How to improve ductwork airtightness	16-12-2009
6	Thermal comfort and cooling demand in the air of climate change	26-11-2009
5	Summer comfort and air conditioning in Europe: Current trends and future perspectives	17-06-2009
4	An effective handling of thermal bridges in the EPBD context	04-03-2009
3	An overview of national approaches for the assessment of innovative systems in the framework of the EPBD	25-02-2009
2	Comparing Energy Performance Requirements Across Europe	27-01-2009
1	Ways to stimulate a market transformation of envelope airtightness - Analysis of on-going developments and success stories in 5 European countries	12-12-2008



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ASIEPI web event 9
Stimulating innovation with EPBD

3 February 2010, 10:00-12:00 GMT+1 (Paris time)



Introduction	REC	PDF
Welcome and introduction to ASIEPI by <i>Nicolas Heijmans, BBRI</i>	here	pdf
Importance of dealing with innovative systems in EPBD by <i>Nicolas Heijmans, BBRI</i>	here	pdf
National presentations	REC	PDF
Advantages and disadvantages of the Danish approach by <i>Jorgen Rose, SBI</i>	here	pdf
Advantages and disadvantages of the Dutch approach by <i>Marleen Spiekman, TNO</i>	part1	pdf
Advantages and disadvantages of the Belgian approach by <i>Nicolas Heijmans, BBRI</i>	here	pdf
Advantages and disadvantages of the French approach by <i>Charles Pele, CSTB</i>	here	pdf
Synthesis, problems and potential solutions by <i>Marleen Spiekman, TNO</i>	here	pdf
Practical experiences	REC	PDF
What does industry see what goes right and wrong in their/other countries related to their market. What would they like to see? by <i>Rick Bruins, Zehnder</i>	here	pdf
Study on the use and control of the principle of equivalence in practice in the Netherlands: results and possible solutions by <i>Tom Haartsen, Climatic Design Consult</i>	here	pdf
Discussions	REC	PDF
Questions	here	pdf
General guidelines, conclusion and closure by <i>Nicolas Heijmans, BBRI</i>		

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Intelligent Energy Europe

- Welcome
- NRWG
- Project summary
- ASIEPI Information Papers
- ASIEPI web events
- ASIEPI Presentations-on-demand
- ASIEPI reports
- ASIEPI workshops
- 1 - Benchmarking
- 2 - Impact, Compliance and control
- Workshop

2 - Impact, Compliance and control

Impact, compliance and control of legislation

the EPBD only requires from MS to set requirement levels, without specifying the minimum requirement level. In practice, it means that EPBD can be implemented without resulting in more severe requirements. Another issue of concern is compliance and control, which can range from a very strict control to no control at all. ASIEPI will give a good view about the impact of the present EPBD on the requirements and how MS handle the respect of requirements.

The main objectives of ASIEPI regarding this issue are:

- To obtain a good view how EPBD implementation has changed (or is changing) the national requirements (e.g. more severe requirements, widening of the range of buildings covered by the regulations, more requirements, requirements for renovations...),
- To obtain a good overview of the way Member States deal with compliance handling and control measures. Not only actions by governments but also non-governmental actions, e.g. market control by the stakeholders, role of insurance companies, ... will be included in the analysis.
- Identification of interesting approaches and possible bottlenecks for improved control.





INTERNATIONAL WORKSHOP

**Impact,
compliance and
control of energy
legislations**

Brussels, Belgium
1 & 2 September 2009

An initiative of INIVE EERG, in
collaboration with the European SAVE
ASIEPI project

DESCRIPTION OF THE WORKSHOP

This workshop is focused on the impact, compliance and control of energy legislations. Through a series of well structured country presentations, the view of various European associations, synthesis presentations and a panel discussion is envisaged to give the participants a clear view and to give indications of interesting approaches. More specifically, the workshop is focusing on the following issues:

- Evaluation of impact of national EPBD implementation on severity of requirements
- The objective is to obtain a good overview to what extent the implementation of the EPBD by the individual MS did result in more severe requirements in terms of energy efficiency and indoor climate specifications AND whether there is/has been a widening of the type of requirements (other buildings, more global requirements, indoor climate requirements, ...)
- Evaluation of handling of compliance and control in the different member states
- The objective is to obtain a good overview about the direct and indirect market mechanisms contributing to respect of the regulations for new and existing buildings (excluding inspection issues):
 - Direct market mechanisms: e.g. handling of control by the responsible authority, inspections organised by the energy agencies of the MS, possibility (and use) of sanctions by government in case of non-compliance,
 - Indirect market mechanisms: e.g. in some countries the market is organised as such that the role of specialised consultancy firms is important, that the large size of projects results in a better compliance, in other countries may the requirements by insurance companies result in more attention for energy regulations, also financial schemes (subsidies, fiscal deduction,...) may stimulate a better compliance.
- Identification of interesting approaches and possible bottlenecks for compliance and control of regulations. Based on a collection of information from the member states, pros and cons of the different approaches will be presented. This evaluation should be a major reference for the EC and MS when evaluating possibilities (and barriers) for obtaining better compliance with regulations.

HOTEL INFORMATION

A contingent of rooms in hotel Crowne Plaza has been taken until 7 August 2009. To benefit of the preferential rate of 155 € (breakfast included) please mention the following code : Workshop 1-2 September 2009
After the date of 7 August 2009, all reservations will be subject to hotel's availability

Crowne Plaza Brussels City Centre Le Palace,
rue Gineste 3, 1210 Brussels, Belgium
☎ +32 2 203 62 00 - ☎ +32 2 203 55 55
E-mail: reservations@cpbrl.be - info@cpbrl.be
Website: <http://www.crowneplazabrussels.be>

VENUE OF THE WORKSHOP

The workshop will take place in the hotel Crowne Plaza Brussels City Centre Le Palace (address here above).

LANGUAGE

The workshop will be held in English. No translation is foreseen.

FEE

The workshop fee is 363 € (VAT included). This fee includes participation to the workshop, documentation, the lunch on Wednesday and coffee breaks.

REGISTRATION

Participants should enrol by returning the registration form available on www.aivc.org and pay the registration fee before August 21, 2009.

SECRETARIAT

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☎ +32 2 655 77 11 - ☎ +32 2 12 12 12
e-mail: sd@bbri.be





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Workshop

International Workshop on Impact, compliance and control of energy legislations

Brussels, Belgium 1 & 2 September 2009

Introduction	PPT	IP
General welcome INIVE - Presentation of AIVC & ASIEPI by P. Wouters, INIVE	[01]	-
Proof of Performance: Supporting the quest for efficient and effective compliance by A.-G. Sutherland, EACI	[02]	-
Objectives of the workshop by A. Panek, NAPE	[03]	-
The EPBD Concerted Action by E. Maldonado, ADENE	[04]	-

Country presentations	
Belgium by A. Tilmans, BBRI	[BE] P174
Netherlands by M. Spiekman, TNO	[NL] P169
Greece by M. Santamouris, M. Papaglastra, NKUA	[GR] P173
Germany by H. Erhorn, H. Erhorn-Kluttig, Fraunhofer IBP	[DE] P177
Norway by P. Schild, SINTEF	[NO] P170
Portugal by P. Santos, ADENE	[PT] -
Italy by M. Zinzi, G. Fasano, M. Citterio, ENEA	[IT] P168
Spain by J.L. Molina, AICIA	[ES] P172
Poland by A. Panek, M. Popielek, NAPE	[PO] P171
Finland by J. Shemeikka, M. Haakana, VTT	[FI] P167
Denmark by K. Engelund Thomsen, S. Aggerholm, SBI	[DK] P175
France by R. Carrié, G. Guyot, W. Lecointre, CETE de Lyon	[FR] P176
Czech Republic by J. Pejter, ENVROS s.r.o.	[CZ] P166
Hungary by A. Zöld, Budapest University of Technology and Economics	- P182
Lithuania by R. Bludzius, Institute of Architecture and Construction of Kaunas University of Technology	- P184



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Workshop
International Workshop on Impact, compliance and control of energy legislations
 Brussels, Belgium 1 & 2 September 2009

Industry point of view

- EURIMA by R. Bowie
- ES-SO by D. Dolmans
- EuroACE by K.E. Eriksen
- REHVA by M. Virta

Lessons learned from case studies

	PPT	IP
Evaluation of EPBD implementation in the Netherlands by M. Spiekman, NKUA	[21]	-
Evaluation of EPBD implementation in the UK by H. Lahmidi, CSTB	[22]	P180
Evaluation of EPBD implementation in the States by H. Lahmidi, CSTB	[23]	P179
Evaluation of EPBD implementation in the States by M. Papaglastra, NKUA	[24]	P181
Evaluation of EPBD implementation in the States by M. Spiekman, B. Paol, L. van den Brink	[25]	P178




Conclusions
 There is a very wide variation in the national approaches regarding impact, compliance and control

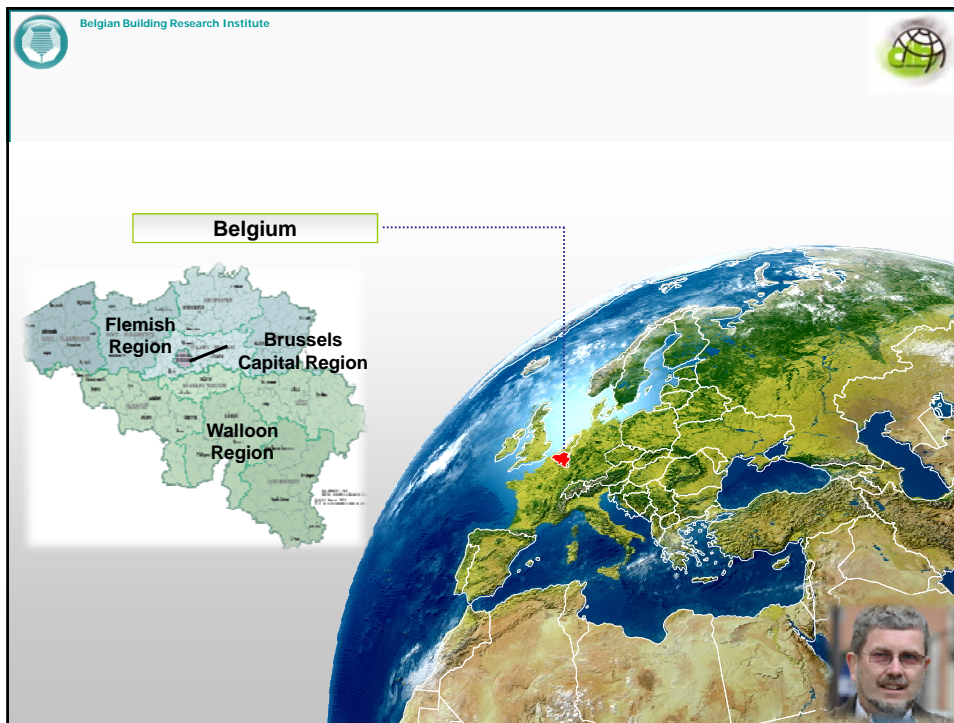
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Structure of the presentation

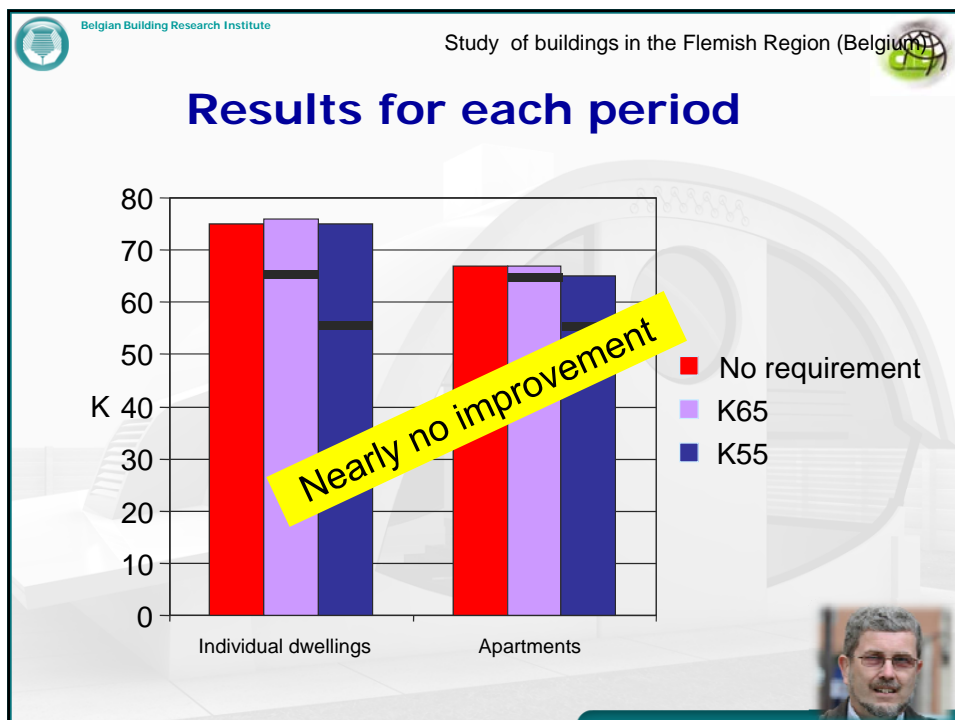
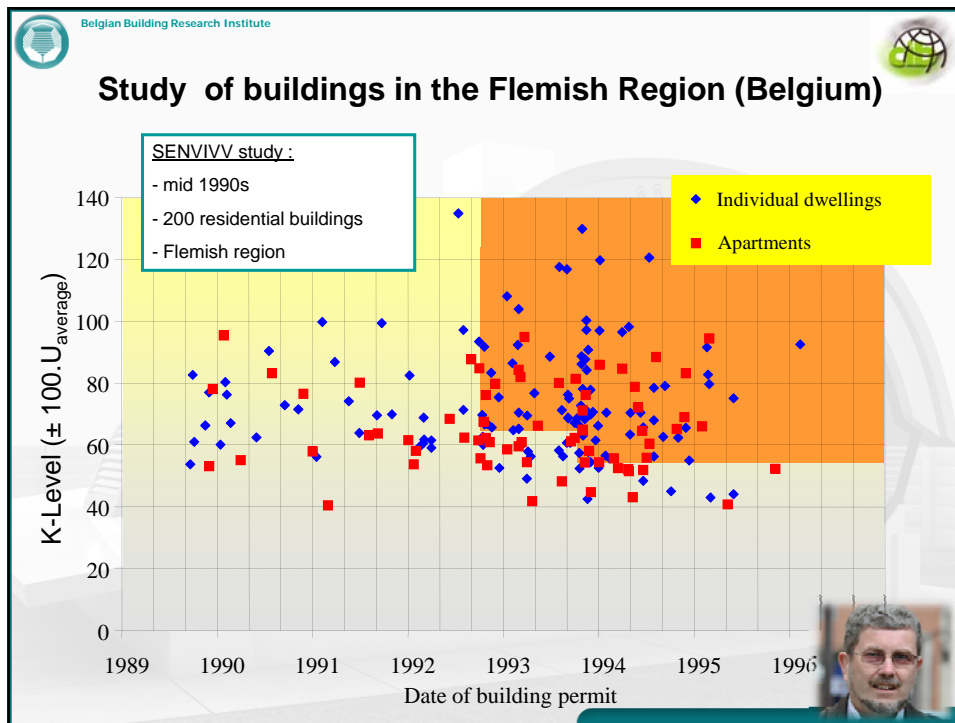
-  Info from ASIEPI project
-  The Belgian approach
-  Conclusions

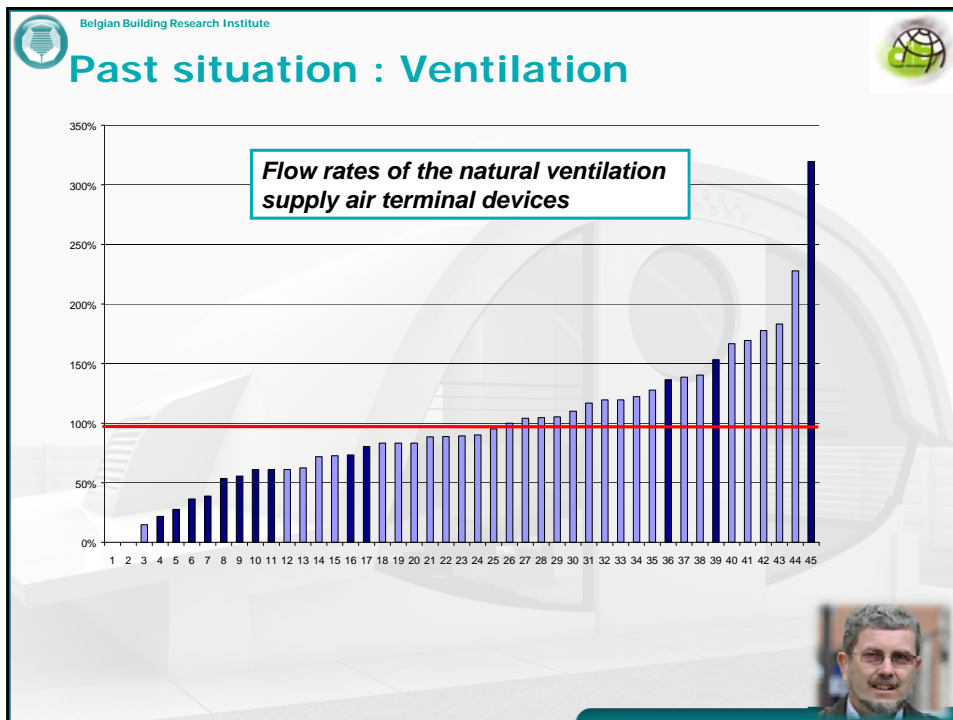


History of the EPB-regulations in Belgium

Belgium = 3 regions
→ 3 EPB regulations

- 1985 (1/5) : 1st regulation in the **Walloon Region**
K70 or Be <500 (only dwellings)
- 1992 (1/9) : 1st regulation in the the **Flemish region**
K65 and U_{max} (only dwellings)
- 1993 (1/9) : Tightening in the the **Flemish Region**
K55 and U_{max} (only dwellings)
- 1996 (1/12) : 2nd regulation in the **Walloon Region**
K55/K65 or Be <450 and U_{max} + ventilation (dwellings, offices and schools)
- 2000 (1/1) : 1st regulation in the the **Brussels Capital region**
K55/K65 and U_{max} (dwellings, offices and schools)
- 2002 (16/12) : EPBD
- 2006 (1/1) : EPB-regulation in the Flemish Region
- 2008 (2/7) : EPB-regulation in the Brussels Capital Region
- 2008 (1/9) : Extended insulation and ventilation in the Walloon Region
- 2009 or 2010 : Full EPB-regulation in the Walloon Region





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Priorities for new legislation

Correct information

- Correct description of building performances
- Appropriate boundary conditions to motivate people
- Wrong declarations will be sanctioned



Better procedures

- More attention to overall energy consumption
- More attention to indoor climate conditions
- Performance based and stimulating innovation

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Challenges in terms of calculation procedures

1. Attention for total energy use (EPBD)
2. Attention for indoor climate (summer, IAQ, ...)
3. Performance oriented procedures
4. Procedures in line with European standards
5. Principle of equivalence (stimulate innovation)
6. Attention for quality of execution
7. Software

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Challenges in terms of regulations and implementation

8. Management of complexity (many SMEs)
9. Concertation with the building sector
10. Working conditions of individual partners
11. Easy access to reliable product data
12. Realistic requirements (societal support)
13. Principle of equivalence – legal framework
14. Procedures allowing control
15. Effective control system
16. Awareness raising and training

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Framework for compliance and control

- Declaration **AFTER** the works**
 - You declare what has been done (no intentions!)
- Very clear allocations of responsibilities**
 - No discussions as far as administration is concerned
- Fine system managed by civil servants**
 - No court involved, short procedure
- Very clear rules for fines**
 - Very limited margin for interpretation
- Clear rules**
 - Precise calculation procedures
 - Approved database on product data





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Framework for compliance and control

Essential element : **consultation**


A full involvement of stakeholders is very important

- ... To inform them of the objectives and envisaged approach
- ... To check if proposed procedures applicable and effective
- ... To optimise the procedures

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Compliance and control : fines



Various fines are possible :


- ❖ Not respecting the procedures :
 - delay, no EPB-declaration, incorrect EPB-declaration,...
- ❖ Not fulfilling EP-requirements :
 - Proportional to the difference between the real values and the EP-requirements
 - Based on the EPB-declaration or on the on-site control

Example :

Fine for not fulfilling U_{\max} requirement : 60 €/ (W/K)


- 90m² roof with $U = 0.55$ W/m²K
- $U_{\max} = 0.3$ W/m²K

→ Fine = 90 x (0.55 – 0.3) x 60 = 1350 €




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Structure of the presentation



Info from ASIEPI project



The Belgian approach



Conclusions



Conclusions

1. Primary aim of (energy) regulations is to improve the performances of the building stock
2. It is in many countries not evident to assume that legislation is automatically respected (a lot of information in ASIEPI)
3. Large variation between European countries
4. The Belgian approach is characterised by a specific focus on achieving correct performance declarations



Thank you for your attention!

Questions?



