

Existing buildings : calculation procedures – certification- labelling

Chair: J.Visier Co-chair E.Maldonado



How to create the necessary conditions in order to make these buildings energy efficient?





Three main challenges identified

1. Define and set up policies applicable to existing buildings (CA 1 presentation)
2. Develop certification and regulation schemes which are applicable to existing buildings (5 presentations)
3. Maximising the impact of certification (3 presentations)





Existing buildings : calculation procedures – certification- labelling Challenge 1 Define polices

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Define and set up policies applicable to existing buildings CA experience



Jens Laustsen replaced by
Eduardo Maldonado

- Learn from each other: existing experience (Denmark, Netherlands, Austria, Germany)
- Certification scheme who does what, and where to report
- Simplified methods for apartment, public buildings and new buildings.
- Asset rating vs. operational rating
- New buildings when to certificate
- What is a public building?
- Public buildings few countries - sets them as priority and others are focus on residential
- Postpone certification the confidential communicate from participants





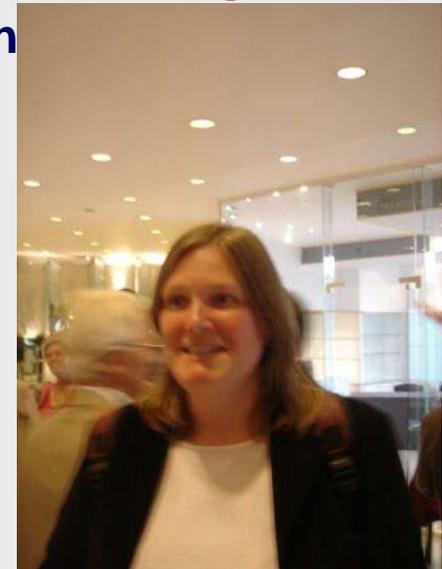
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Challenge 2 Develop certification and regulation schemes

ENPER-exist: Challenge to apply European standards to existing buildings

Maroleen Spiekman
TNO



Technical work:

CEN, national calculation, procedure collect info from other EU projects

Work on legal, economical and organisational problems

Impact of certification procedures: market, human capital and

Better knowledge of the European Building Stock

Roadmap for actions beyond the EPBD

Applying CEN Standard to existing buildings: input data (CEN does not cover this issue), a lot of efforts to thermal bridges and not covered eg. actual operation (probably due asset rating preference), ageing.

Calculation method proposed as an option for those who work on at least for consideration.
more on www.enper-exist.org





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An Energy Performance Assessment method for the Non-Residential building stock in accordance with the EPBD



Bart Poel
EBM Consult



Key issues in development of assessment methods

- Accuracy of the assessment process
- EPA-NR (EPA-ED)

Balance the trade-off's in the assessment process

- Effective and efficient process
(accuracy/reproducibility ~ cost)
(data acquisition/inspection ~ defaults)
- Harmonisation~flexibility in practice
(European - national - regional)

more on www.epa-nr.org

and www.epa-ed.org





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Challenge 2 Develop certification and regulation schemes

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Delivery of energy certificates based on measured energy use for display in Public Buildings

**R.Cohen
ESD Ltd.**



To deliver ‘graduated response’ methodology for display of energy Certificate by Public Buildings in six sectors, based on Operational Ratings:

[more on
www.eplabel.org](http://www.eplabel.org)

Public administration offices

- 1. Higher education (Universities, Colleges)**
- 2. Schools**
- 3. Sports facilities**
- 4. Hospitals and other health facilities**
- 5. Hotels and restaurants**

Summary of the Method

Calculate energy intensity (kWh weighted energy or kgCO₂/m²/yr).

Identify appropriate benchmarks

Grade energy efficiency (eg A to G)

Identify energy saving measures

Produce Energy Certificate





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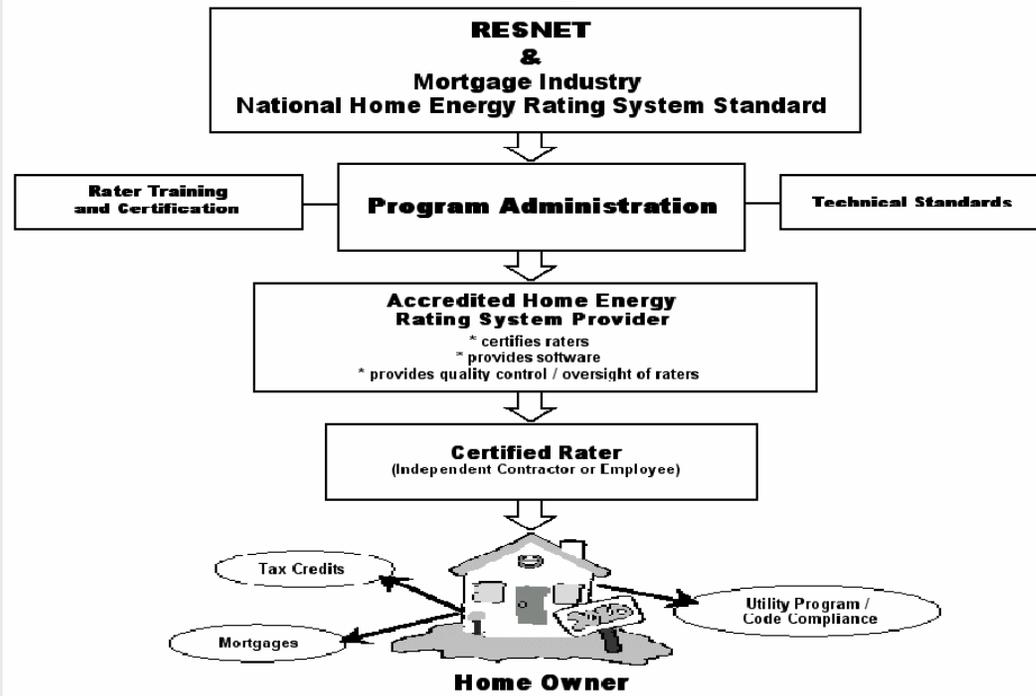
Challenge 2 Develop certification and regulation schemes

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Home Energy Rating Services in the United States

by Steve Baden and Philip Fairey

Home Energy Rating System National Oversight Structure



RESNET's Key Services
 Maintain National Home Energy Rating Standards
 Accredit Rating Providers, Rating Software Programs, & Rater Training Providers
 Work with the Mortgage Industry in Developing and Promoting New Energy Mortgage Products





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Challenge 2 Develop certification and regulation schemes

BESTCert

Building Energy Standards – Tools for Certification

Paul Davidson
BRE



Objectives

Develop and test pilot methodologies for EPBD certification

- Gather data on two building types in each country
- Apply through a range of user interfaces and software tools
- Calculate performance at different benchmark levels
- Demonstrate for schools and offices
- Feed results into national implementation programmes

Calculation tools

EnergyPlus with
DesignBuilder
interface
SBEM with
iSBEM interface
COMFIE
Method DPE
Excel tool





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Challenge 3 Maximising the impact of certification

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BUDI - Pilot actions to develop a functioning market for energy performance certificates

Gerhard Bucar

Graz Energy Agency

Aim is to accelerate the successful introduction of energy performance certificates in different European regions

- Creating **regional information** and **competence centres**
- Carrying out **pilot actions** for **two important target groups**: public buildings and apartment blocks
- Supporting these target groups in the broader **implementation** of energy performance certificates
- Developing **training for independent experts**
- Developing **guidelines and accreditation schemes** to assure the quality level of the certificates and experts
- **Transferring the results** and gained experiences to **interested key actors** in other regions in Europe



Supported by the
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Intelligent Energy - Europe
Programme





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Challenge 3 Maximising the impact of certification

Securing The Take-off of Building Energy Certification: Improving Market Attractiveness through Building Owner Involvement (STABLE)

Timo Husu

Motiva, Finland



OBJECTIVES

- improve market attractiveness of energy certification through developing and disseminating customer quality requirements for certification; and approaches for linking certified high energy performance with financial market incentives
- increase the awareness and interest of European building owners by delivering a targeted information campaign towards major building owner sectors
- increase the competence and knowledge level of qualified energy certification service providers
- transfer best practices on energy certification and building energy auditing between Member States





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Challenge 3 Maximising the impact of certification

IMproving energy Performance Assessment and Certification schemes by Test - IMPACT

- Exchange of experiences and success factors
- Derive recommendations for improvement of tools, certification process, training of experts and communication.
- Support the EPBD implementation process in 6 countries
- Disseminate project results on a National and EU wide scale



Supported by the European Commission under the **Intelligent Energy - Europe** Programme

RESULTS

- Recommendations contributing to the improvement of tools, expert training and communication in EPBD schemes and to the preparation of market actors for EPBD introduction.
- A model / guidelines for implementation of the EPBD, based on European best practice, as a basis for dissemination.
- An EU wide dissemination program aiming at preparing relevant stakeholders for the introduction of the EPBD, including targeted activities in 5 new member states.



Frank Zegers





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	C Action	CEN	Enper exist	EPA NR	Best cert	EP Label	Display	Impact	Budi	Stable
Certification acceptance										
Information campaigns										
Certifiers selection and training										
Certifiers accreditation										
Pilot tests on real buildings										
Building assessment method				AR	AR	OR	OR			
Software tools				Develop	Use	Develop				
Knowledge of Building stock										
Certification organisation and impact										





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THANK YOU ON BEHALF OF

and

myself

Aleksander Panek
a rappouter

