



# HIGH ENERGY PERFORMANCE BUILDINGS

## Design and Evaluation Methodologies



SUSTAINABLE ENERGY  
WEEK 24-28 JUNE 2013

ONE SMALL STEP FROM YOU  
ONE GIANT LEAP FOR EUROPE



Monday 24 June 14:00 until Wednesday 26 June 13:00, 2013.

### TOPICS

Topics at this event focus on the most important parts of building energy consumption:

- building energy **needs** and the auxiliary gains due to climate boundary conditions.
- aspects of **efficiency** of building energy installations, **energy resources** and technology
- **consumer** behaviour and thermal gains,
- calculation methods, **standards** and regulation (CEN and national standards)
- **optimisation** of energy use using ICT (intelligent environments, urban areas)
- design **case studies** and building simulation for nearly-zero energy buildings



### INVITED SPEAKERS

#### Malcolm Bell (UK)

Achieving near zero carbon housing: The role of performance measurement in design and construction processes.

#### Hans Erhorn (DE)

The age of positive energy buildings has come

#### Jorma Pietiläinen (FI)

Total building energy monitoring – basis for performance verification

#### Dick van Dijk (NL)

Standardized calculation methods in relation to the EPBD

#### Federico Noris (IT)

Net ZEB Monitoring and Verification

#### Jordi Cipriano (ES)

Energy optimization of public and social housing buildings using ICT based-services.

#### Laurent Socal (IT)

New features in EN 15603; overall energy use and definition of energy ratings

#### Paul Strachan (UK)

Modelling of High Energy Performance Buildings

#### Peder Bacher (DK)

Modelling and evaluation of building thermal performance from smart meter readings

#### François Garde (FR)

How to design a Net Zero Energy Building? Solution sets and case studies: experience and feedback of the IEA Task40/Annex52

#### Tin Tai Chow (HK)

Energy Use Aspects of Green Building Assessment in Hong Kong

#### M. J. Jiménez (ES)

Data analysis methods for building energy performance characterisation

#### Paolo Bertoldi (IT)

Example of a High Performance Building from the Green Building Programme

### TARGET AUDIENCE

The target audience for this workshop: decision-makers, researchers, applied mathematicians and statisticians, architects, building energy designers, standard developers and those interested in energy performance assessment of buildings.

**LANGUAGE** The workshop will be held in English

### VENUE

BBRI Conference room (nearby Gare du Midi), Boulevard Poincaré 79, 1080 Brussels (BE)

### REGISTRATION

The registration is free of charge, **but mandatory** (there is a limit on available places). Contact [sd@bbri.be](mailto:sd@bbri.be)

[http://www.eusew.eu/tmp/SustainableEnergyWeek\\_event389.pdf](http://www.eusew.eu/tmp/SustainableEnergyWeek_event389.pdf)



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## Preliminary **PROGRAMME**

### **Monday 24 June**

Registration from 13:00 – 14:00 at BBRI conference room, Boulevard Poincaré 79, 1080 Brussels (BE)

14:00 – 14:30 Welcome and introduction by organisers,  
JRC, Hans Bloem  
ENEA, Salvatore Amico Roxas  
DYNASTEE-INIVE, Luk Vandaele

### **Monday 24 June** 14:30– 18:00

Session 1- Performance **assessment** methodology, including cost analysis

**Malcolm Bell, (UK)** *“Achieving near zero carbon housing: The role of performance measurement in design and construction processes.”*

**Hans Erhorn (DE)** *The age of positive energy buildings has come*

**Marc LaFrance (IEA)** *Transition to Sustainable Buildings – Strategies and Opportunities to 2050*

**Coffee Break**

**Tin Tai Chow (HK)** *Energy Use Aspects of Green Building Assessment in Hong Kong*

**Blanca Pedrola-Vidal (ES)** *Europe: an opportunity to regenerate cities in a holistic manner.*

**Bogdan Atanasiu (BE)** *Nearly zero-energy buildings in Central and Eastern EU*

**R. Enríquez (ES)** *Experimental requirements in building energy performance evaluation*

Conclusion by session chair by Luk Vandaele (BBRI, BE)



### **Tuesday 25 June** 9:30 – 13:00

Session 2- ICT for monitoring and **evaluation** methods for energy performance assessment  
(including intelligent metering environments; ICT).

**Jorma Pietiläinen (FI)** *Total building energy monitoring – basis for performance verification*

**Peder Bacher (DK)** *Modelling and evaluation of building thermal performance from smart meter readings*

**Gilles Flamant (IEA ECBCS-Annex 58)** *Characterisation of thermal performance of building fabric based on full scale experiments*

**Coffee Break**

**Federico Noris (IT)** *Net ZEB Monitoring and Verification*

**Jordi Cipriano (ES)** *Energy optimization of public and social housing buildings using ICT based-services.*

**Leen Peeters (BE)** *Zero Energy House Renovation in Oud-Heverlee, Belgium*

**Thomas Müller (BE)** *Promoting Energy Efficiency with Building Automation and Control Systems*

Conclusion by session chair by Peder Bacher, (DTU-IMM, DK)



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**Tuesday 25 June** 14:00 – 17:30

Session 3- European energy **standards** related to the EPBD (TC371)

**Dick van Dijk (NL)** *Standardized calculation methods in relation to the EPBD*

**Johan Zirngibl, (FR)** *Fundamental definitions for the assessment of the energy performance*

**Gerhard Zweifel, (CH)** *Routing and Modular Structure – Filling the Gaps in the CEN Standards for High Performance Buildings.*

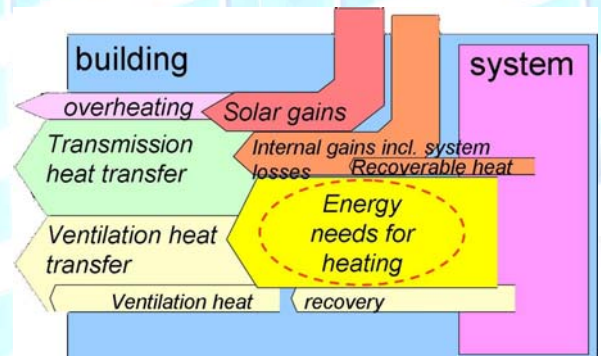
Coffee Break

**Laurent Socal (IT)** *New features in EN 15603; overall energy use and definition of energy ratings*

**Hans Bloem (JRC);** *The future for standardisation in the building sector; Assessment of high energy performance buildings.*

**M. J. Jiménez (ES)** *Data analysis methods for building energy performance characterisation*

Conclusion by session chair Laurent Socal, (IT)



**Wednesday 26 June** 9:30 – 13:00

Session 4- High performance buildings design: solution sets, case studies, processes, open issues

**Francois Garde (FR)** *How to design a Net Zero Energy Building? Solution sets and case studies: experience and feedback of the IEA Task40/Annex52*

**Gaetano Fasano (IT)** *The challenge to reach the NZEB in Italy*

**Paul Strachan (UK)** *Modelling of High Energy Performance Buildings*

**Paolo Bertoldi (JRC);** *Example of a High Performance Building from the Green Building Programme*

Coffee Break

**Attia Shady (CH)** *Identifying and Modeling the Integrated Design Process of Net Zero Energy Buildings*

**Jan Hensen, John Bynum (NL)** *Building Level Energy Anomaly Detection and Monitoring at TU/e*

**Lee Siew Eang (SG)** *The Design, Development and Performance of a Retrofitted Solar-powered Net Zero Energy Building in Singapore*

**DYNASTEET, Open Competition for Building Energy Design**

Conclusion by session chair Alessandra Scognamiglio (ENEA, IT)

For further information contact Hans Bloem. E-mail to: [hans.bloem@jrc.ec.europa.eu](mailto:hans.bloem@jrc.ec.europa.eu)

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