

CALL FOR PAPERS

Fifth International Conference

Improving Energy Efficiency in Commercial Buildings (IEECB'08)

Congress Center Messe Frankfurt,

Frankfurt, Germany

10 - 11 April 2008

The commercial buildings sector is one of the fastest growing energy consuming sectors. This is mainly due to the growth of commercial and public activities and their associated demand for heating, cooling ventilation (HVAC) and lighting. Moreover in the new economy, with a wide dissemination of information and communication technologies, information technology equipment and data centres are also an important and growing source of electricity consumption.

Greenhouse gas reduction is a common denominator of many countries' environmental policies and programmes. Commercial buildings are a key area where the CO₂ reduction can, and must be realised, since it makes economic sense for the building owners and occupiers. As a consequence all actors need to take all necessary steps to disseminate good practice, foster investment in energy efficiency and provide technical solutions for the commercial building sector. This includes behaviour changes on how companies, architects, and building occupiers invest, design and operate non-residential buildings.

Not only is every kWh saved avoiding pollution and CO₂ emissions, but it is also reducing peak power requirements; a problem common to many countries. That is the reason why every achievement in the field of demand-side management (DSM), or more generally the improvement of energy efficiency has a direct effect on greenhouse gas emission reduction and on the security of energy supply. The European Directive on the Energy Performance of Buildings will require a major effort to improve building energy performance, including existing building and will bring the energy performance of their buildings to the forefront of building market operators. This simultaneously presents an opportunity and challenge for energy efficiency and will create additional jobs and investment.

The integration of distributed generation, district heating and cooling and renewable energy sources (RES) would enable further CO₂ and energy saving, Energy Service Companies (ESCOs) and facility management companies offer advanced solution to manage and reduce the energy consumption in commercial buildings. Also number of local, regional and national policies and programmes have recently been implemented to achieve a long lasting market transformation, including white certificates, emission trading, and new financial incentives.

Following the success of the previous **IEECB** conferences (**IEECB'98 in Amsterdam, IEECB'02 in Nice, IEECB'04 and IEECB'06 in Frankfurt**) we are pleased to announce the fifth

International Conference on Improving Energy Efficiency in Commercial Buildings (IEECB'08)

jointly organised by **Messe Frankfurt** and **the European Commission DG JRC** in conjunction with the **Building Performance Congress**. The IEECB'08 conference will take place on **10 and 11 April 2008 in Frankfurt during Light+Building**, the International Trade Fair for Architecture and Technology, 6 – 11 April 2008, in Frankfurt, Germany. Light+Building integrates the sectors related to building design – light, electrical engineering as well as home and building automation – at one trade fair. Integrated planning approaches and systems-linking interaction of various technical trades are no

longer just a vision but a growing reality. Light+Building does justice to this with its unique international scope. By presenting the subject in its entire breadth and depth – the 2008 show expands it by additionally dealing with security technology and architecturally relevant systems. From investors to architects and engineers, up to specialist planners, process workers and operators, Light+Building is the number one industry event in 2008 for all experts involved in the conception, planning and management of buildings.

The IEECB conference seeks to bring together all the key players from this sector, including commercial buildings' investors and property managers, energy efficiency experts, equipment manufacturers, service providers (ESCOs, utilities, facilities management companies) and policy makers, with a view to exchange information, to learn from each other and to network.

At the conference key representatives of leading organisations and companies, institutions and equipment industry will present the overall picture and give details of policies, recent advancements and examples of best practice.

The wide scope of topics covered during the IEECB'08 conference includes: macro/micro approaches, state-of-the-art equipment and systems (lighting, HVAC auxiliary equipment, ICT & office equipment, miscellaneous equipment, BEMS, electricity on-site production, renewable energies, etc.) and the latest advances in R&D, tools, regulation & policy, demand-side and supply-side perspectives for all branches of activity (public and private sector, the commerce and retail sectors, hotels and restaurants, banks and insurance companies, local authorities, civil services & public bodies, education, universities & laboratories, hospitals, airport and stations, etc.).

In particular the conference aims to attract property investors, architects, and planners to present and discuss synergies and cooperation in removing existing barriers to energy efficiency. The energy efficiency contribution to shareholder value and corporate social responsibility in publically traded companies, as well as the importance of public buildings as showcase example for energy efficiency solutions and practices.

The IEECB conference aims at attracting high level papers presenting new technologies, techniques, services, policies, programmes and strategies to increase energy efficiency, energy savings and to reduce greenhouse gases emissions in non-residential buildings. The conference covers both new buildings as well as existing buildings. Of particular interest are the existing barriers to energy efficiency investment, and analysis of behaviour of building investors, and occupiers.

Potential authors are invited to submit abstracts in the following topics (indicative lists, other topics related to the main theme of the conference could also be suggested):

1. **Lighting:** technologies (light sources, LEDs, luminaires, control gear, and control systems), daylighting, control strategies, best practices, Green Lights type programmes, lighting quality and energy efficiency, test methods and simulation and design tools. Integrated systems focus
2. **Building envelope, passive techniques and HVAC:** R&D, technologies, ventilation, low energy cooling techniques, passive cooling and natural ventilation, techniques for low energy fluid movement, heat pumps, ground source heat pumps, heat/cool storage, best practices, achieved results, indoor air quality and energy efficiency, test methods and simulation tools. Methodologies for design of buildings in the scenario of climate change and fuel shortage, energy consumption in relation to the definition(s) of comfort
3. **Examples of advanced/demonstration buildings** (two tracks for new constructions and existing building refurbishment): results of new building concepts; successful refurbishment, which minimise energy consumption, provide successful integration renewable energy sources and maintain or improve occupants comfort and productivity. New buildings green, or energy efficient "design guidelines". System integration for energy efficiency. Both private and public tertiary sectors buildings will be covered, including office buildings, supermarkets and commercial centres, hospitals and schools, airport & stations. In this session passive and façade technologies (e.g. double skin facades, roofing, etc.) will also be covered.

4. **Appliances and Equipment** (commercial refrigeration, vending machines, office equipment, UPS, lifts, etc.): R&D, technologies, power management, labelling and standards.
5. **Information and communication technology (ICT) equipment and data centres:** data centres design and optimisation, servers, the impact of internet on commercial building consumption, data networks, telecom and broadband networks energy efficiency, Energy Star programme.
6. **Renewable energy sources, distributed electricity and heat generation:** R&D, technologies for co-generation and poly-generation, micro turbines, heat pumps, fuel cells, boilers and renewable energy sources (solar thermal, PV, biomass, etc.). Successful implementations.
7. **Control systems and Building Energy Management Systems (BEMS):** R&D & technologies, successful implementation, impact on energy consumption and indoor quality.
8. **Energy and facility management:** commissioning, energy audits, optimisation of building operation for energy efficiency, energy management techniques, the role of the energy manager, operation and maintenance, outsourcing of building energy management, successful examples of retro-commissioning, education and training of building managers.
9. **Energy services:** energy service companies (ESCOs), Third Party Financing and Energy Performance Contracting, the role of financial institutions, successful examples, public-private partnerships, new financial options.
10. **Measurement & Verification (M&V):** the importance of M&V, international M&V protocols, case studies and examples, energy simulation tools, risk analysis tools.
11. **Policies and Programmes (local, national or International):** building codes, building certification, test methods, best practice programmes, energy audits, white certificates, national and local energy efficiency funds, Green Buildings programmes, Energy Star programmes, building rating and benchmarking, building quality labels, Life Cycle Costing (LCC), sustainable cities, programme evaluation, green and public procurement, role of public authorities, emission trading CDM&JI as new opportunities for the building sector. Role of the non-residential buildings in national carbon targets. International climate policies as drivers for efficiency in the commercial building sector.
12. **Implementation of the Directive on Energy Performance in Buildings:** best practices in national implementation, needs for standardisation, results in standardisation, building certification programmes, building and equipment inspection, regular inspections of boilers and HVAC, enforcement issues. Adoption of CEN norms into national norms and legislation. Early results.
13. **Energy consumption monitoring and benchmarking:** recent surveys, technologies and techniques, data analysis and assessment of total consumption of specific equipment at national and/or international level, overall building standby consumption assessment, energy efficiency indicators for high electric-load buildings, benchmarking.
14. **Metering and Demand response:** Demand Response programmes and dynamic tariffs, results and evaluation, practical implementation in non residential buildings. Impact of real time energy consumption information. Demand response/peak load conservation opportunities
15. **Investors' motivation towards green buildings.** Financial analyst and shareholder focus on the value of energy efficiency. Marketing and selling energy efficient buildings. Costs and benefits evaluations. Indoor comfort. Non energy benefits resulting from investments in energy efficiency. Market impact of the energy performance certificates. CO2 emission reductions and corporate social responsibility. strategic value of green buildings and energy efficiency; financial benefits; aesthetics & image; green buildings & branding; teams' motivation; demand; organizational culture; competitive advantage.

16. **Behaviour and barriers to energy efficiency:** Facilitation of planning process for low energy buildings, interaction between the investor, planner, architect, engineer, and user. Non-technical barriers to progress efficiency in commercial buildings. Analysis of behavioural aspects that are exclusive to the commercial buildings sector, and ways to overcome them.
17. **Efficient non-residential buildings as an integrated element in sustainable community design:** challenges and opportunities with integrating energy efficient buildings into wider community energy planning; commercial buildings and district energy systems; community demand balancing; innovative economic and business models to share risk and benefits across community energy structures

Instructions for Authors

Papers that cover practical examples and successful implementations, new technologies, market assessments, investors' views and integrated planning (i.e. addressing the interactions between different actors building equipment and components), barriers and organisation behaviour for existing a new buildings are particularly welcomed. Authors interested in submitting papers for the concurrent sessions are requested to send a maximum two-page abstract of at least 200 words in length and a maximum of 400 words. The abstract must be in English, typed, and shall contain the following information:

1. Main author name and affiliation, authors for correspondence with full postal address, tel. and fax numbers, and e-mail, and co-authors names and affiliation.
2. The relevant topic
3. Up to five keywords

Abstracts will be reviewed by an International Programme Committee

Abstracts are due by 30 September 2007

Abstracts shall be e-mailed to:

paolo.bertoldi@ec.europa.eu

Conference Information

For further information please send a fax to +39 0332 78 9992 or call +39 0332 78 9299

Or visit the conference website at: <http://energyefficiency.jrc.cec.eu.int/events.htm>

Conference Deadlines:

2007 September 30: abstracts are due.

2007 October 31: notification of abstract acceptance to selected authors

2007 November 30: confirmation of participation by accepted authors

2007 January 20: draft papers are due at the conference secretariat

2008 February 20: comments on draft paper by reviewer will be sent

2008 March 20: final papers are due at the conference secretariat for inclusion in the conference proceedings.

2008 April 3: final power point presentations are due at the conference secretariat