

Our innovations make a major contribution to environmental protection

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Siemens Environmental Portfolio

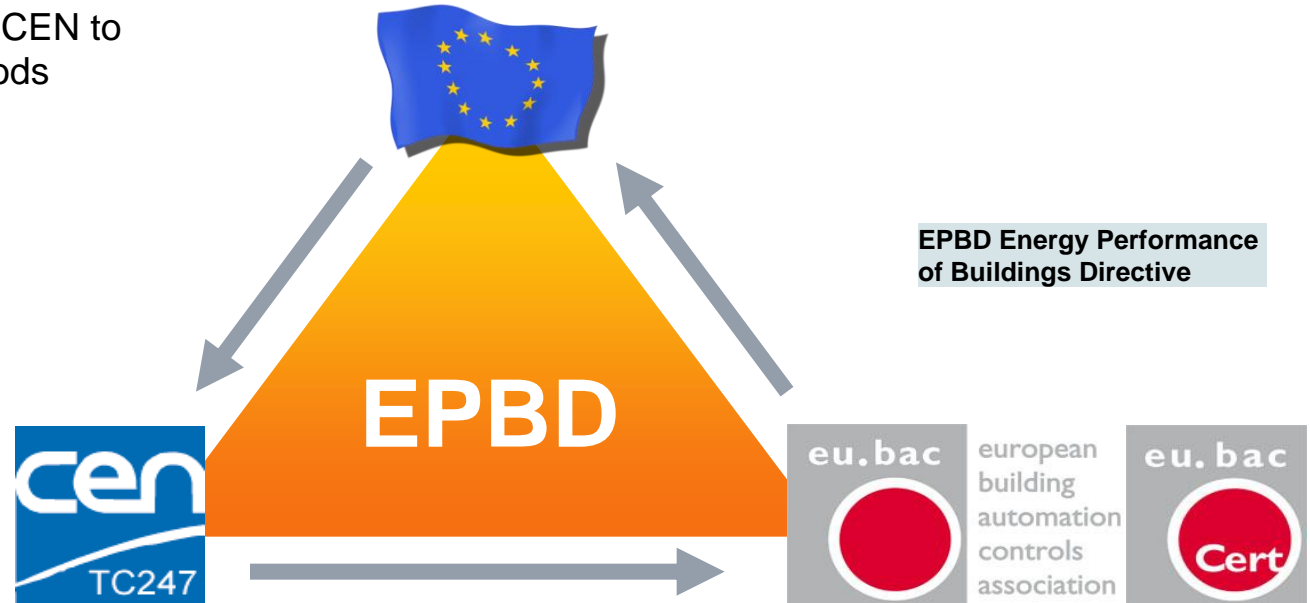
- Nearly one quarter of our revenue is generated by products and solutions that make a direct, quantifiable contribution to environment and climate protection* (~ €19 billion).
 - By 2011, income from our environmental portfolio should grow to €25 billion.
 - In fiscal 2008, products and solutions in our environmental portfolio saved about 148 million tons of CO₂ for our customers...
- ...which equals the total CO₂ emitted by New York, London and Hong Kong

* Status in fiscal 2008, reviewed by PwC



Legislation, standardization & certification

The EU mandated European CEN to standardize calculation methods for improving energy savings



CEN TC247

prepared and approved

- EN15232 impact of BACS functions on energy efficiency
- Product standards with energy performance criteria (e.g. EN15500)

eu.bac prepared the certification procedure and test method and proposed this certification to the European Community

CEN: European Committee for Standardization
 EN: European Norm

Standardization related to energy efficiency



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EU mandate for CEN to standardize calculation methods for energy efficiency improvement

EN 15232 "Energy performance of buildings – Impact of Building Automation"

And

Product standards
(e.g. EN 15500, EN 12098)

- Terminology
- Product data's and **Energy performance criteria**
- Test procedure



The value of BACS = Saving potentials by intelligent use of Building Automation (EN 15232)

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Hotels



Th.32% EI.10%

Education



Th.20% EI.14%

Hospitals



Th.14% EI.4%

Residential



Th.19% EI.8%

Restaurants



Th.32% EI.8%

Shopping C.



Th.40% EI.9%

Offices



Th.30% EI.13%

Determined by means of building simulation / FH Aachen DE



CEN Technical Committee 247 develops European and international standards for Building Automation, Controls and Building Management BACS

- Product standards for electronic control equipment in the field of HVAC applications

→ Basis for product certification related to EPBD (e.g. EN 15500)

- Standard of BACS functions

→ Basis for impact of BACS on energy efficiency

- Open communication data protocols for BACS

→ Prerequisite for integrated functions with impact on energy efficiency

- Specification requirements for integrated systems

→ Prerequisite for integrated functions with impact on energy efficiency

- Impact of BACS on energy efficiency related to EPBD (EN 15232)

Why eu.bac?



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The European BACS industry joined forces and competences to propose practical solutions:

- For the reduction of greenhouse gas emissions in buildings
- For a European Quality Assurance system for energy efficient building automation and controls equipment
- For the introduction of a legal framework for energy savings performance contracting in buildings
 - Based on eu.bac Cert equipment and systems



Initiated by Siemens and first presidency

La experiencia de Siemens y sus resultados. Tres Cantos

RESUMEN ENERGÉTICO

Consumo energético
2007 (kWh):
10.532.000 electricos
+
8.030.000 termicos

Ahorro energético (kWh/año)

571.815

-5,4%

Consumo de agua
2007 (m³):
30.299

Ahorro de agua (m³/año)

2.765

-9,1%

Ahorro económico total (€/ año)

55.316

Emisiones evitadas (kg de CO₂)

196.132