Integrated Energy Design in Public Buildings

INTEND

The INTEND project was aimed at promoting the adoption of Integrated Energy Design (IED) in Europe. IED is a design process taking energy demand into account from the very beginning and throughout the whole design process. It is based on the well-proven observation that changes and improvements in the design process that can dramatically reduce the energy demand are relatively easy to make at the beginning of the process, but become increasingly difficult and disruptive as the process unfolds. Using IED allows thus to reach levels of energy performance well above conventionally designed buildings and current EPBD requirements. The main objective of this project was to demonstrate that outstanding results regarding energy efficiency, renewable energy sources and indoor climate can be achieved if architects, engineers, building owners and investors adopt together an Integrated Energy Design approach. Guidelines, an Internet database, literature and the study of at least 12 building projects were part of the project's work plan.

Results

- The INTEND project developed a simple 9-steps guidelines on how to implement IED for building designers, owners and consultant.
- The project's partners applied the methodology in the design of 13 demonstration buildings across the EU (Norway, Denmark, Poland, UK, Greece, Austria, Estonia).
- The project disseminated the concept of IED and the developed guidelines to building designers and real estate organisations through 47 seminars/meetings for real estate organisations with a total of 679 participants; 56 seminars/meetings for architects and consulting engineers, with a total of 1323 participants and 21 articles and presentations at conferences as well as through an international conference on IED.
- The project also developed a wiki internet database of low energy buildings (http://www.ecoarchwiki.net).

Lesson learned

- According to the project's findings, thanks to IED, a 5% higher upfront investment can result in 40-70% lower running costs.
- The public real estate organizations hosting the demo projects will continue to specify specific demands for high-energy performance, indoor climate and renewable energy applications for their coming buildings projects.

Partners and coordinator

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Budget

Overall budget: 1.214.679,00 € (EU contribution: 50,00 %)

Key documents

- IED Guidelines [9]
  ZIP 9.03 MB
- INTEND presentation EUSEW09 [10]
  PDF 1.27 MB

In brief

Sector: Buildings

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Contract number: EISAV/EIE/06/021/2006

Website: http://www.intendesign.com

Tags:
Integrated Energy Design (IED)
design
performance
Related projects

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- [COMMONCENSE] Comfort monitoring for CEN Standard EN15251 linked to EPBD  
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