

Energy efficient private service buildings with ProEcoPolyNet

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The current approach to the design of modern office buildings is dominated by glazed façades and comprehensive building installations such as air conditioning systems to achieve proper indoor working conditions. This, however, leads to high energy consumption and, subsequently, high energy costs. Furthermore, the resultant high maintenance efforts for installations lead to increased operating costs.

Simultaneously, economic pressure on building owners is increasing because of high energy prices on the one hand and the implementation of the Energy Performance of Buildings Directive on the other. In the future, minimum requirements on the overall energy efficiency of buildings will be mandatory and the energy demand of a building will be an additional factor of competition due to the energy certificate.

The integrated energy design process supports building developers in order to face both requirements: developing cost effective and energy efficient buildings. The service for building developers is based on a modular concept to give support in every planning and construction phase: In the first planning stages, this process contains activities such as the definition of criteria regarding energy efficiency, assessment of draft, calculations of heating and cooling demands and suggestions for improvements. During the detailed design phase, assessments with the help of simulations of energy performance and life-cycle costs calculations are carried out. Quality assurance during the construction phase with newly developed warranty models completes the process.

In every single stage of the planning and construction process, information about energy efficient solutions for components and the whole building concept is essential. There are many research projects on national and on European level that are dealing with energy efficient buildings. However, it is very difficult to use the results of these projects directly in planning or construction phase of a building. The project ProEcoPolyNet establishes a link between research results and architects and planners and disseminates actual know how for practical use in planning buildings.

The project “Network for the Promotion of RTD results in the field of Eco-building technologies, small Polygeneration and renewable heating and cooling technologies for buildings” (ProEcoPolyNet) within the sixth framework programme of the European Commission transfers know how between researchers and planner: Developing technology profiles for energy efficient building components, carrying out pilot actions with building developers as well as informing and instructing architects and planers in sustainable, energy efficient buildings are the basis for a successful introduction of an integrated energy design process in a standardised procedure.

On the website www.proecopolynet.info technology profiles and guidebooks about energy efficient buildings will be published. Furthermore, there will be substantial information about polygeneration systems and renewable heating and cooling systems.

Contact Data

<http://www.proecopolynet.info/>

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