

ECONOMIC ASPECTS OF SUSTAINABLE DESIGN IN CONCEPTION OF SUSTAINABLE DEVELOPMENT

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After the world energetic crisis of 1973-1974 in the world building and architectural practice a great attention has spared to the problem of fuel and energy resources saving, expended on heat providing of buildings. It was an answer for criticizing of specialists of the International energetic conference (MIREC) of UNO that modern buildings possess enormous reserves of increasing thermal efficiency, but researchers haven't studied enough the features of forming their thermal conditions and designers don't use achievements of fundamental disciplines, possibilities of untraditional energy. These events became preconditions for development of sustainable concept.

Sustainable construction is defined as "the creation and responsible management of a healthy built environment based on resource efficient and ecological principles". It includes the following principles:

- minimising non-renewable resource consumption;
- enhancing the natural environment;
- eliminating or minimising the use of toxins.

"Sustainable building" can be defined as those buildings that have minimum adverse impacts on the built and natural environment, involves considering the entire life cycle of buildings, taking environmental quality, functional quality and future values into account. Accordingly, policies that contribute to the sustainability of building practices should be implemented, with recognition of the importance of existing market conditions. Both the environmental initiatives of the construction sector and the demands of users are key factors in the market. The OECD project has identified five objectives for sustainable buildings:

- Energy Efficiency (including Greenhouse Gas Emissions Reduction);
- Pollution Prevention;
- Harmonisation with Environment;
- Integrated and Systemic Approaches (including Environmental Management System).

Sustainable design is the thoughtful integration of architecture with electrical, mechanical, and structural engineering. The Rocky Mountain Institute outlines five elements for sustainable design:

- Planning and design should be thorough.
- Sustainable design is more of a philosophy of building than a prescriptive building style.
- Sustainable buildings don't have to cost more.
- Rejection from integrated design.
- Minimizing energy consumption and promoting human health.

Sustainable architecture foresee using one's imagination and technical knowledge to engage in a central aspect of the practice designing and building in harmony with our environment. The smart architect thinks rationally about a combination of issues including sustainability, durability, appropriate materials and sense of place. The challenge is finding the balance between environmental considerations and economic constraints.