

## ENERGY-CONSCIOUS DESIGN

### Definition

Energy-conscious design and planning refers to the inclusion of energy, embodied-energy and energy efficiency in the planning and design of the built environment. It is relevant to design and planning at different scales, reaching from individual buildings to the regional scale.

The term refers to the ongoing transition towards a low-carbon energy future that is pursued through the increase of energy efficiency as well as the increase in renewable energy sources. Strategies for sustainable energy transition have implications for environmental design.

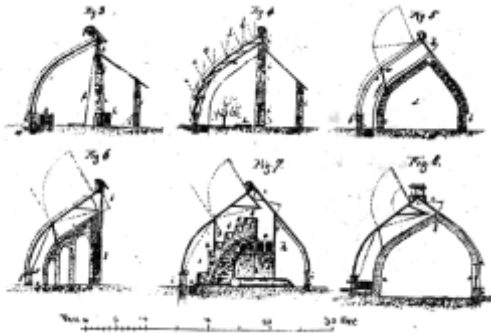
Energy-conscious design can be considered as part of ecological engineering but it also bridges the gap between ecological engineering (mainly in rural/natural surrounding/infrastructure context) and energy efficiency (mainly urban/man-made/building context).

### Related terms

Ecological engineering

### Keywords

Ecological design, Embodied-energy, Energy-efficient landscaping, Environmental design



*Figure 34a:* Sir John Claudius Loudon's designs have been fundamental in the typological and technological definition of greenhouses. His famous "ridge and furrow" roof design is a zigzag glass construction able to maximize the access of sunlight and therefore heat, particularly in the early morning and late evening, when the sun was low in the sky. (Source: <http42>)



*Figure 34b:* Historic-Ecological Education Center Papenburg/Germany, built in 1988: Towards the North there are earth walls as energetic protection, towards the south a winter garden, which serves as semi-tropical greenhouse and as corridor between the accommodation units and common facilities. The bricks which store the temperature have been recycled. (Photo: <http43>)

### Sources

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### Translations

Bosnia and Herzegovina Energetski-svjesno planiranje

Bulgarian Дизайн по отношение на енергийни източници

Croatian Projekt u skladu s očuvanjem energije

Greek Ενεργειακός Σχεδιασμός

Hebrew עיצוב אנרגטי

Hungarian Energiatudatos tervezés

Italian Progettazione energeticamente consapevole

Islandic Önnun með tilliti til orkusjónarmiða

Czech Energeticky uvědomělý design	Latvian Enerģo-effektīvs dizains
Danish Energiebevist design	Lithuanian Eko-energetinis projektavimas
Dutch Energiebewust ontwerp	Montenegrin Dizajn koji uvažava pitanje energije
Esperanto Konsciaj energoprojektoj	Polish Projektowanie świadome energetycznie
Estonian Energiateadlik disain	Portuguese Design que tem em consideração questões energéticas
Finish Energiaa säästävã suunnittelu (closest match)	Romanian Proiectare cu conștiința energiei
French Conception éco-énergétique	Russian Эко-энергический дизайн
German Niedrigenergiebauweise	Slovenian Energetsko zavedno oblikovanje
Greek Ενεργειακός Σχεδιασμός	Serbian Енергетски одговоран дизајн
Hebrew עיצוב אנרגטי	Spanish Diseño ecoeficiente
Hungarian Energiatudatos tervezés	Swedish Energimedveten design