ENERGY EFFICIENCY

Energy-efficient building design involves constructing or upgrading buildings that are able to get the most work out of the energy that is supplied to them by taking steps to reduce **energy loss** such as decreasing the **loss of heat** through the **building envelope**.

Energy-efficient homes, whether they are **renovated** to be more efficient or built with **energy efficiency** in mind, pose a significant number of **benefits**. Energy-efficient homes are less expensive to operate, more comfortable to live in, and more **environmentally friendly**.

There are numerous ways to increase the energy efficiency of a building, and many different parts of a building can be improved to **boost** this value. Better **insulation**, more efficient windows, doors, and skylights, as well as high-efficiency air conditioners and **furnaces** can all **contribute to** a more efficient home by keeping warm air inside or outside the home. Being able to properly **regulate** the **temperature** of a home through the use of a thermostat is a major part of having an energy-efficient home, as having the right **equipment** is just as important as using it properly.

Having an energy-efficient building is becoming more and more vital as energy emerges as a critical economic **issue** due to the high **demand for** energy and **unsustainable** supplies of energy. This means that even households must evaluate how well energy is being used to heat and light a home. Energy-efficient buildings offer opportunities to **save money** as well as reduce **greenhouse gas emissions**.

- ✓ **energy efficient building** = ενεργειακά αποδοτικό κτίριο
- ✓ **energy loss** = απώλεια ενέργειας
- ✓ **loss of heat** = απώλεια θερμότητας
- ✓ **building envelope** = “κέλυφος” κτιρίου
- ✓ **renovate** = ανακαινίζω
- ✓ **energy efficiency** = ενεργειακή απόδοση
- ✓ **benefits** = οφέλη
- ✓ **environmentally friendly** = φιλικό προς το περιβάλλον
- ✓ **boost** = ενισχύω
- ✓ **insulation** = μόνωση
- ✓ **furnace** = καυστήρας
- ✓ **contribute to** = συμβάλλω σε …
- ✓ **regulate** = ρυθμίζω
- ✓ **temperature** = θερμοκρασία
- ✓ **equipment** = εξοπλισμός
- ✓ **issue** = θέμα, πρόβλημα
- ✓ **demand for** … = ζήτηση για …
- ✓ **unsustainable** = μη-βιώσιμο , **sustainable** = βιώσιμο
- ✓ **sustainability** = βιωσιμότητα
- ✓ **money saving** = εξοικονόμηση χρημάτων
- ✓ **greenhouse gas emissions** = εκπομπές αερίων θερμοκηπίου

Reading Activity

1. **What is the main goal of energy-efficient building design?**
    A. To increase energy usage
    B. To improve building aesthetics
    C. To decrease building costs
    D. To reduce energy loss
2. **What economic issue has made energy efficiency more vital?**
    A. Low demand for energy
    B. Decrease in energy costs
    C. High demand for energy
    D. Sustainable supplies of energy
3. **Which part of a building can be improved to boost energy efficiency?**
    A. Roof and foundation
    B. Doors and skylights
    C. Furniture and decor
    D. Landscaping and exterior design
4. **What are some benefits of energy-efficient homes?**
    A. More environmentally friendly
    B. Less comfortable to live in
    C. Require more maintenance
    D. More expensive to operate
5. **Why is it important to have the right equipment for energy efficiency?**
    A. To decrease building costs
    B. To increase energy usage
    C. To improve building aesthetics
    D. To properly regulate temperature

6. **What is a strategy for increasing energy efficiency in buildings?**
    A. Using outdated equipment
    B. Decreasing insulation
    C. Installing energy-efficient windows
    D. Increasing energy usage
7. **Why is it important for households to evaluate energy usage?**
    A. To increase energy usage
    B. To save money and reduce emissions
    C. To decrease building costs
    D. To improve building aesthetics

Vocabulary Activity

Fill in the blanks with the appropriate terms:

thermostat, energy loss, insulation, renovate, energy-efficiency, sustainable, equipment, regulate temperature, greenhouse emissions, energy consumption

1. The key to reducing energy loss in buildings is to improve _____.
2. Proper temperature regulation is crucial for maintaining a comfortable indoor environment and minimizing _____.
3. To enhance energy efficiency it's essential to upgrade outdated _____ with more modern and efficient alternatives.

4. A well-designed building can effectively _____ and minimize the need for excessive heating or cooling.

5. One of the primary goals of _____ practices is to create structures that are environmentally responsible and can be maintained over the long term.

6. Installing a programmable _____ allows occupants to set temperature preferences, contributing to overall energy efficiency.

7. Effective insulation involves using materials that prevent the escape of heat, thus reducing unnecessary_____.

8. As part of the effort to combat climate change, it's crucial to reduce _____ from various sources.

9. When deciding to _____ an old building, consider incorporating energy-efficient features to minimize environmental impact.

10. In regions with extreme temperatures, adequate insulation is necessary to mitigate _____ through walls and roofs.