Zero Energy Project

Strategies for Zero Homes

Risk Analysis and Net Zero Homes

20 Advantages of Living in Zero Energy Homes?

Highly Inefficient Heating or Fuel

In addition to the above, there are two more important points to consider when designing for energy efficiency:

1. Minimize thermal bridging

Thermal bridging occurs when there is a significant difference in temperature between the interior and exterior surfaces of a building. This can lead to increased energy consumption and reduced comfort levels. To minimize thermal bridging, consider the following strategies:

- Choose materials with low thermal conductivity, such as rigid foam board insulation, for exterior walls and roofs.
- Use insulated concrete forms (ICFs) for exterior walls and foundations.
- Install insulation along door and window jams to prevent air infiltration.
- Use insulated concrete forms (ICFs) for exterior walls and foundations.
- Install insulation along door and window jams to prevent air infiltration.
- Use insulated concrete forms (ICFs) for exterior walls and foundations.
- Install insulation along door and window jams to prevent air infiltration.

2. Insulated Basements

An insulated basement can be achieved by installing layers of expanded polystyrene or high-density expanded polystyrene insulation around the perimeter where heat loss is greatest. This can help to improve the energy efficiency of your home and reduce your heating and cooling costs.

Rigid foam board insulation can be used as a reasonable alternative to blown-in fiberglass or cellulose in limited spaces where more R-value is required. However, it is important to ensure that the insulation is properly installed and sealed to prevent air infiltration.

3. High-R Value Insulation

High-R value insulation can be achieved by using I-joists and blowing in fiberglass or cellulose. In colder climates, the most cost-effective method is to use insulated concrete forms (ICFs) for exterior walls and foundations. However, it may not be cost-effective compared to eliminating thermal bridging in the design phase, or just accepting some minor heat losses.

4. Other Energy-Saving Measures

Other energy-saving measures that can be considered include:

- Minimizing air infiltration by sealing gaps and cracks around doors and windows.
- Using energy-efficient windows and doors.
- Installing insulation in the attic and crawl spaces.
- Using energy-efficient heating and cooling systems.
- Using renewable energy sources, such as solar panels or geothermal heat pumps.