



Green design is not merely the use of energy-efficient materials. It also involves the creation of products and systems that leave a light footprint on the environment over the full life-cycle—from production to transportation, installation, use and renewal. As such, sustainable green design should be thought of as a process, not just a goal—allowing for a broader evaluation of the environmental, economical and societal impacts of product, as single units and as part of their environment.

When considering environmental issues in construction and life cycle, some focus on evaluation of manufactured products in terms of waste disposal (although a product's end-use can account for as much as 90 percent of a product's impact on the environment). Instead, a host of factors and influences of a product's impact on society should be evaluated and contrasted to the product's performance. A systems approach allows for determination of the environmental impact of a product in terms of energy consumption at each state of a product's life cycle, beginning at the point of raw materials extraction from the earth and proceeding through processing, manufacturing, fabrication, end-use and disposal. Transportation of materials and products to each process step should also be included.

In support of this systems approach to sustainable and green building design, the Plastics Division of American Chemistry Council (ACC) has drafted the following guidelines for building design, systems and products:

- Environmental considerations and energy efficiency should be part of building design and purchasing criteria, balanced appropriately with other important criteria, such as product safety, price, performance and availability.
- Energy efficiency and environmental performance should be evaluated using a “systems” approach, focusing on how individual components interact within the building system and identifying options with the greatest potential for improving energy efficiency and reducing overall environmental effects.
- Any process for establishing “sustainable” building/product criteria should be

science-based, transparent, open to all stakeholders, and should consider any new and significant information.