

# Sustainable Design

## PASSIVE SOLAR DESIGN

### Internat Energy

Solutions has worked on a number of passive projects in Europe, the basic concepts of passive design are outlined in the following diagram. From the conception and design phase, we use 3D modeling tools to quantify energy efficiency, passive solar gains, and internal gains. This allows us to find substantial energy savings right from the design phase.

A number of passive energy standards exist in Europe please see the following links for more information on these regulations:

PASSIVHAUS INSTITUTE (Germany)

MINERGIE (Switzerland)

EFFINERGIE (France)

LEED GREEN BUILDING

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the North American standard for sustainable building design. Its universal goal is to stimulate adoption of sustainable practices in building construction and operation. The program achieves this through globally verified analysis methods and evaluative criteria.

The program is used as third-party verification and benchmarking of the design, construction and operation of sustainable buildings. LEED analysis and design can have an immediate and measurable impact on building performance through its appropriate methods of assessment.

LEED employs a comprehensive system of five interrelated standards for human and environmental health that cover all aspects of the building development and construction process:

- sustainable site development
- water efficiency
- energy efficiency
- materials selection
- indoor environmental quality

A cumulative point scoring system determines a building's LEED certification level. A building's score is independently reviewed and an audited before it's assigned one of four certification categories: certified, silver, gold and platinum.

The Canadian Green Building Council's LEED system was modified from the U.S. Green Building Council version to account for Canadian climates, construction practices and regulations. Through a transparent process involving industry experts and stakeholders, this system was adapted to the Canadian market and represents various sectors of the Canadian industry.

For more information on LEED, please visit the [Canada Green Building Council](#)