

TCRPC

Planning Toolkit Fact Sheet



Green Building Standards

INTRODUCTION

In the United States, buildings account for 72 percent of electricity consumption, 39 percent of energy use and 38 percent of carbon dioxide emissions. In addition to energy consumption and emissions, indoor air quality, cost of energy, and increased impervious surfaces are also considerations to implementing green building practices.

Addressing the problems surrounding the country's building stock is a challenge being faced by federal, state and local government, which can push for better building stock in two ways: integrating green building standards into the building codes and subdivision ordinance requirements; and promoting existing programs or creating new ones.

The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) uses independent verifiers to score a building or project based on several factors, including the types of construction materials used, siting of the project, use of climate-appropriate insulation, and others. Specific LEED programs have been developed for the different aspects of the built environment, such as neighborhood development as well as residential, commercial and renovations. However, the LEED process and certification does add additional cost to the project.

The National Association of Home Builders (NAHB) operates the National Green Building Standard. This is a similar program but is aimed solely at residential construction. Provisions of the National Green Building Standard have been approved by the American National Standards Institute and certification is more easily attained. Research seems to suggest that the NAHB program adds less of a cost to the project, but may not achieve the same level of environmental performance as LEED-certified buildings.

In order to ensure that new building stock promotes these goals, many municipalities are adopting building codes that integrate some or all of the green building certification rating factors.

The International Code Council produces model codes for local adoption that speak to sustainability factors and can be altered based on local preference. Other development codes like zoning and subdivision and land development ordinances can also be used to promote sustainable building and design.

Municipalities can also promote green buildings through incentive programs. Pennsylvania currently runs a High Performance Building Program through the Department of Community and Economic Development and the Department of Energy. With a budget of \$25 million, the program allocates grants and low-interest loans to home and small business owners whose construction projects receive NAHB or LEED certification.

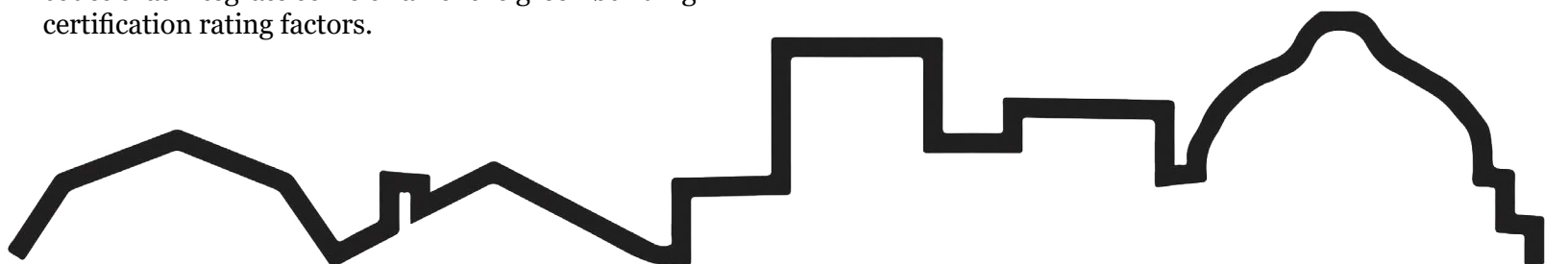
Municipalities can establish their own incentive programs as well. Waiving or refunding application and development fees, expediting permit applications, and public recognition of projects that receive green building program certification are all methods being used to promote sustainable building practices.

BENEFITS

- More efficient use of building materials and land
- Lower greenhouse gas emissions attributable to building stock
- Lower heating/cooling bills for building occupants
- Waste diversion from landfills
- Increased indoor air quality

DRAWBACKS

- Increased building costs up-front
- Can add additional time for project implementation



PRACTICAL TIPS

- Include developer community when strategizing green building techniques
- Identify outside sources of funding for incentive programs including state and federal grants as well as public/private partnerships
- Stay up to date on changes to green building best practices; LEED certification requirements and ICC model ordinances are updated regularly

RESOURCES

Technical Assistance and Certification

- **High Performance Building Program (PA DCED)**
- **U.S. Green Building Council (LEED)**
- **Living Building Challenge**
- **Sustainable SITES**
- **Green Globes Building Certification**
- **Energy Savers (U.S. Department of Energy)**

Guides and Examples

- **Green Building Toolkit for Local Governments**
- **Green Design and Construction Tips**
- **Green Roofs Fact Sheet**

RELATED TOOLKIT FACT SHEETS

- **Community Gardens**
- **Solar Facilities**
- **Stormwater Management**
- **Brownfield Redevelopment**

