

*Residential New Construction  
Exemplary Program*

***Green Building Program  
Austin Energy***

**PROGRAM OVERVIEW**

The city of Austin was among the pioneers of green building. Based on the success of an ENERGY STAR<sup>®</sup> Homes Program that Austin initiated in 1985, the scope of the home energy rating was expanded to include the environmental impact of the entire building. In 1990, with support from Austin's City Council and a grant from the Urban Consortium Energy Task Force, funding was received to research and design the first residential green building rating system.

The rating system became the basis for what is now known as the Austin Energy Green Building Program. The program was the first of its kind, and the first to develop a system to rate the sustainability of a home or building. The program's focus continued to expand, eventually including commercial construction, multifamily projects, municipal buildings, and consulting services. The program now rates new and retrofit construction in the areas of energy conservation, water conservation, sustainable materials, health and safety, and community.

Since 1993, the city of Austin's municipally owned electric utility, Austin Energy, has been the primary funder of the program, which currently includes 14 full-time staff. Program managers are able to document sufficient peak load reductions to justify continued budget support from Austin Energy. The City of Austin Water and Wastewater/Solid Waste Department provides important additional funding due to related water conservation efforts. As Austin moves toward noncompliance with clean air standards, the program is developing a system that will track green building's impact on VOC levels and air pollution.

Austin Energy's Green Building Program is a community resource that promotes sustainable building through consumer marketing and education, and technical training of building professionals. The program's mission is to accelerate the integration of sustainable building products and practices with mainstream building through marketing, education, and technology transfer. The Green Building Program is based on a market pull mechanism that involves promoting green building practices to consumers and builders, and rating buildings that feature these practices.

The program conducts public education through advertising, newspaper and magazine articles, and other publications, including technical papers, fact sheets, and brochures, all of which are available on the program's website. Green Building Program staff participate in home and trade shows, and are often asked to give radio and television interviews. The program recently released an interactive CD-ROM, "Green by Design," and is conducting ongoing public workshops based on it.

The Green Building Program offers a membership program for local building professionals who have made a commitment to build green. All members are required to attend training on "Green Building Basics." The program also offers monthly technical training seminars on various topics. Members must attend a minimum of two technical seminars per year and complete ratings or project descriptions on all projects in the Austin Energy service area. Program staff work directly with designers, engineers, and construction professionals on residential, commercial, and multifamily projects. The staff share the latest information on resource-efficient building materials and systems and how to reduce construction and operations waste.

Financial incentives are given to design teams that incorporate sustainable methods and materials into new construction and renovation projects. The city of Austin also offers incentives for installing energy- and water-efficient appliances and systems.

The Public Works Department requires that all architectural firms working on city projects demonstrate a strong working knowledge of green building practices. The Green Building Program acts as a technical advisor and facilitator for Public Works project managers and clients.

## **PROGRAM PERFORMANCE**

Today, the Green Building Program staff is recognized nationally for expertise in "green" construction. Some of the program's accomplishments include:

- In 2002, 57 percent of all new homes constructed in the Austin Energy service area were rated using the Green Building Program's rating system.
- More than 3,100 single-family homes have been rated during the lifetime of the program.
- Commercial projects provided over 1,600 kW of peak energy reduction in 2002.
- Commercial program staff are consulting on over one million square feet of space in 2002–2003.
- Green Building ratings have been performed on more than 6,000 units of multifamily housing.
- Last updated The Sustainable Building Sourcebook in January 2000.
- Published The Sustainable Building Guidelines, a three-volume set for municipal and commercial construction in Austin.
- Developed Memorandum of Agreement with City of Austin Neighborhood Housing and Community Development in 1999 that requires all housing supported by city of Austin funds to achieve a minimum two-star Green Building rating
- Passed City Council Resolution in June 2000 that requires all municipal construction funded by future bond issues to achieve a USGBC LEED (U.S. Green Building Council Leadership in Energy and Environmental Design) Silver rating
- Reduced the peak demand for electricity by 6.5 MW and the electric consumption of customers by 11,698 MWh in FY 2000.
- Reduced emissions from Austin Energy power plants by 9,943 tons of CO<sub>2</sub>, 17 tons of NO<sub>x</sub>, and 37.5 tons of SO<sub>2</sub> in FY 2000.

## LESSONS LEARNED

This pioneering program has evolved and matured over its long duration. It offers numerous lessons for similar programs based on its long program history and record of innovation and accomplishment. These lessons include:

- Start where you are—a small step, well done, will lead to incrementally more steps.
- Keep your eyes on the big picture—green building can't be accomplished with band-aids.
- Design the program to be user friendly, easy entry, and multilevel so that people can participate and then compete with their peers.
- Adapt to your marketplace.
- Be positive and get buy-in without scaring or shaming people into being green.
- “Train the trainer” and mainstream every step of the process.
- Listen, monitor, and make changes as your program and market matures.
- Sell the “benefits” not the “features” by focusing on what the product actually delivers.
- Be inspired every day—program staff feel privileged to be involved in this exciting, important work that provides so many benefits to customers and the city.

Program staff also note past and continuing challenges to the success of the program. These include:

- Lack of education on green building in the industry
- Tradition of linear—rather than integrated—communication
- Changing the way people design, build, buy, and operate buildings, not just affecting a one-time “sale”
- Changing politics, funding, economics, and organization of the program
- Ensuring sufficient documentation of program operation and benefits to justify ongoing support
- Difficulty in analyzing and documenting the non-energy benefits, which can often be the most compelling reasons to go “green”

**PROGRAM AT A GLANCE**

**Program Name**

Austin Energy Green Building Program

**Targeted Customer Segments**

Residential (single-family and multifamily) and commercial/industrial new construction

**Program Start Date**

Planning phase: 1990

First members: 1992

**Program Participants**

FY 2002: 666 single-family new homes rated

1992–2002: 3,100+ single-family homes rated

FY2002: 5 commercial projects rated/consulted on 19 projects with more than 1.1 million square feet total

No cumulative totals available

FY2002: 640 units

2000–2002: 1,911 multifamily units

**Approximate Eligible Population**

1,168 new single-family homes permitted in service area in 2002.

Due to multiyear nature of commercial and multifamily projects, it is very difficult to gauge eligible population.

**Participation Rate**

FY 2002: 57 percent of new single-family construction rated

**Annual Energy Savings Achieved**

FY 2002: 12,321 MWh

1992–2002 cumulative: 94,193 MWh

**Peak Demand (Summer) Savings Achieved**

FY 2002: 6.3 MW

1992–2002 cumulative: 36.9 MW

**Budget**

Year	Utility (Program) Costs
2001	\$1.2M
2002	\$1.2M
2003 (projected)	\$1.2M

**Funding Sources**

Austin Energy: 97%

City of Austin Water and Wastewater/Solid Waste Depts.: 3%

**Best Person to Contact for Information about the Program**

- Richard Morgan, Program Manager
- Phone: 512-505-3709
- Fax: 512-505-3711
- Email: [richard.morgan@austinenergy.com](mailto:richard.morgan@austinenergy.com)
- Postal address: Austin Energy, 721 Barton Springs Rd., 4<sup>th</sup> floor, Green Building Program, Austin, TX 78704
- URL: <http://www.ci.austin.tx.us/greenbuilder>