THE AUSTIN ENERGY STAR PROGRAM

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ABSTRACT

The Austin Energy Star Program is an Austin-specific energy rating system implemented in July, 1985. Since the first builders joined the program, Energy Star has gone through significant improvements without changing the fundamental marketing theme. This paper presents implementation issues and procedures in the program's evolution to the present, plans for future expansion, and evaluation of the program impact on the local building industry.

The concept of home energy rating systems is well-documented. Although the approaches vary, the ratings in most programs around the country seek to educate buyers and create buyer demand for energy-efficient homes through comparison of the energy value of a particular home. Ratings normally reduce the complexity of energy analysis to a simple gauge of relative energy use with stars, points, gold-silver-bronze, and so forth.

Austin Energy Star uses three-stars in combination with a point system based upon energy cost savings (in percent) over a similar home built to current City energy code standards. The reference, or base home, is zero points. A one-star home is 100 points, or about 7% energy cost savings over a similar home built to code. A two-star home is 250 points, or about 18% savings, and a three-star home is 400 points, or approximately 28% savings. At the level of energy efficiency implied by code minimums, a one-star home is both significant and marketable.

Each home is rated individually, and points are awarded for improvements in the thermal envelope, solar orientation and type of glass, and mechanical system efficiencies. There is flexibility in the software to input various 24 hour schedules for occupants, fan use, HVAC equipment, water heating and miscellaneous internal and external energy usage (pools, spas, lighting, etc.). This level of detail and, yet, relative ease of input allows operators to rate homes quickly without significant loss of accuracy in the reports. With proper attention to input data, resulting predictions of Kwh use on test homes have fallen within 5% of actual consumption.

More than forty local builders are currently participating in the Austin Energy Star Program, representing a strong majority of new homes built in the Austin area. The type of homes represented vary from the lower-priced production homes to the $500,000.00+ homes in exclusive Austin subdivisions. Across the board, builders have responded to the program by modifications as significant as removing or relocating windows to reduce solar gain and modifying mechanical systems. The latest marketing efforts have increased both market awareness and builder participation and have set the stage for a bright future for the Energy Star.

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