

## Market Transformation Leadership Award Nomination Southwest Gas Corporation - Energy Advantage PLUS

### Summary of Nomination

Advancement through perseverance best describes the substantial and long-term effect Southwest Gas Corporation's *Energy Advantage PLUS* (EAP) residential energy program has had on housing in Tucson, Arizona. Evolving over ten years from its inception as a primarily prescriptive program to its current position as a leading ENERGY STAR® provider, EAP has partnered with local and national builders in committing nearly 4,000 homes to ENERGY STAR standards in 2005.

Promoting cost-effective measures builders could justify in their budgets and promote to home buyers gave EAP good footing as it developed. From infiltration and proper insulation, through improved windows and thermal bypass, to HVAC tightness and field testing, EAP focused on educating builders and subcontractors issue by issue, year by year. Cooperation with local and state building officials in providing educational opportunities for trades and industry leaders also led to a favorable climate for the adoption of enhanced codes. Thousands of homes were built to those higher standards under EAP well before those standards were codified. Continuing this tradition now as an accredited rating provider, EAP has already begun educating our builder partners on the important enhancements to ENERGY STAR for 2006.

### Significant Events / Quantifiable Impacts

- 1996 At EAP's inception, home ratings in Tucson were found to run from 78-80. EAP called for increased insulation levels, dual-pane windows, improved distribution systems, measures to reduce infiltration, and 11 SEER equipment to achieve scores of 83 or higher
- 1998 EAP begins providing visual inspections, field and classroom seminars
- 2001 EAP's "second tier" requires HERS 85, specifies duct and blower door testing protocols
- 2001 Publishes "A Guide for Builders" for builders and trades (*attachment*)
- 2001 EPA Partner of the Year Award, ENERGY STAR Homes category
- 2003 Market penetration exceeds 60%
- 2004 With builders outperforming MEC in large number under EAP, Pima County, City of Tucson, Towns of Marana, Oro Valley and Sahuarita adopt IECC 2000 based codes
- 2004 EAP moves to support ENERGY STAR standards exclusively
- 2005 Nearly 4000 homes committed to ENERGY STAR in this year. HERS ratings 88.5 - 89.5
  - o Over 225 builder participants (life of program)
  - o Over 23,000 homes built
  - o Rough duct test average leakage exceeded 8% when testing began; now under 4%
  - o Significant market size with 11,000 homes permitted in 2005
  - o Tucson market ranked fourth in overall new home quality by JD Powers for 2005

### Goals

"The overall strategic goal of the Energy Advantage PLUS program in Tucson has been to transform the market to the point where high-efficiency construction has become the standard in new single-family homes."<sup>1</sup>

The success of EAP in its market has been due in large part to this fundamental understanding of what the program was to achieve. Looking back to homebuyer sentiment in the 1990's regarding the efficiency of new homes, one recalls skepticism at best, and properly so. What a difference there is in Tucson today. Recently Jim Green, Tucson Division Vice President for Lennar/US Home, asked about having inspections on 100% of their homes in order to differentiate a new project. This was needed, he explained, because customers now come into the model centers believing they will get an efficient home from most builders they shop in our market. That change in perception has been hard to earn, but is in fact well deserved.

## **Strategic Partnerships**

RESNET, ENERGY STAR, EEBA, Architectural Energy Corporation, Certified Plus Home, EIC Corporation, Arizona Corporation Commission, City of Tucson, Arizona Energy Office, Mark LaLiberte/Shelter Source, CFM Building Science Solutions, Kansas Building Institute and Energy Rated Homes of Utah have all played, or are playing, important roles in our efforts to bring quality and a true hands-on understanding of the issues in home energy efficiency to EAP.

One of the most important relationships has been with the Southern Arizona Homebuilders Association (SAHBA). Working hand in hand with SAHBA on its Technical, Codes, and Sales and Marketing Committees has opened beneficial avenues of communication for the association, member homebuilders, and certainly homebuyers.

## **Activities / Promotion**

EAP has provided group seminars by nationally recognized speakers for builders, site sales people and REALTORS®. These efforts, frequently co-sponsored by governmental agencies, combine with on-site educational sessions for construction supervisors and specific training oriented to trades (*attachment*) to keep the message of quality installation and the home as an energy system active in the minds of those involved. Of key importance is the daily interaction of field personnel with the trades and site supervisors. Refresher seminars for sales people are frequently on the agenda at their weekly staff meetings. Meetings with management from participating and interested builders regarding new projects and specifications are common. Relationships with marketing staffs and purchasing departments among the builders are also well developed.

Customized marketing materials are created emphasizing features and benefits found in the ENERGY STAR labeled home and the partnership between the builder and Southwest Gas / EAP (*attachment*). ENERGY STAR materials are provided to model centers as well. Radio and newspaper advertising were used for several years but those funds are now deemed better spent on home performance verification. Builders, of course, promote ENERGY STAR themselves.

## **Resource Allocation / Transferability / Sustainability**

Initially EAP provided a modest advertising incentive to builders of \$125 per home. The incentive was warmly received, but it did not cover the builder's investment in required upgrades. Currently, the cost of inspection and testing for the ENERGY STAR sampling protocol is the primary subsidy involved in the program. The shift away from advertising incentives did not create a significant long-term decline in participation, as the market trend for more efficient homes is well established.

All of these concepts are transferable, and none are exceptionally costly. Compared to the cost of simply subsidizing more efficient equipment, EAP, while effort intensive, has been remarkably cost effective. We are now working with and encouraging local rating providers, so that an independent rating infrastructure will be available to sustain verification procedures when subsidies end. This effort, along with the commitment of SAHBA, governmental agencies, industry partners and our builder partners themselves bodes well for continued emphasis on the principles of building science which underlie the efforts of EAP, RESNET and ENERGY STAR.

Energy Advantage PLUS is proud of the market transformation we have helped foster. As we at Southwest Gas Corporation and Energy Advantage PLUS look to the future, we foresee ongoing improvement in residential energy efficiency in the Tucson new home marketplace.

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<sup>i</sup> 2005 EAP Program Proposal to the Arizona Corporation Commission