

Citizens Utilities Company's Successful Residential New Construction Market Transformation Program

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ABSTRACT

Citizens Utilities Company, Arizona Electric Division (CUC/AED) fielded a Residential New Construction Program (RNC) in the fourth quarter of 1994 that had been designed from conception as a market transformation program. The CUC RNC Program encouraged builders to adopt energy efficient building practices for new homes by supplying builders estimates of energy savings, supplying inspections services to assist builders in applying energy efficient building practices while verifying compliance, and posting and promoting the home as energy efficient during the sales period. Measures generally required to qualify for the program were R-38 ceiling insulation, R-21 wall insulation, polysealing of all infiltration gaps during construction, well sealed air-conditioning ducts, and an air conditioner Seasonal Energy Efficiency Rating (SEER) of 11.0 or greater. In less than two years the program achieved over 17% market penetration without offering rebates to builders.

This paper reviews the design of the program, including a discussion of the features felt to be primarily responsible for its success. It reviews the levels of penetration achieved, free-ridership, spillover, and market barriers encountered. Finally it proposes improvements to the program design to carry it the next step toward a self-sustaining market transformation program.

Introduction

Citizens Utilities Company (CUC) is a Delaware corporation doing business in the State of Arizona. The Company generates, transmits, and distributes electrical power in the states of Arizona, Hawaii, and Vermont. The Company also has natural gas operations in the states of Arizona, Colorado, Hawaii, and Louisiana. In late 1996, CUC Arizona Electric Division (AED) contracted with Equipoise Consulting Incorporated (Equipoise) to conduct a process evaluation of the AED's Residential New Construction (RNC) Program. This paper presents the results of that evaluation. CUC's primary requirement for the RNC evaluation was to assess the program effectiveness through interviews with program staff, trade allies, participants and nonparticipants, and a review of program filings. In addition, the CUC staff requested that the evaluation focus on supplying input to improve the program effectiveness and market penetration.

This study concentrated on the design and implementation of the RNC program since October 1, 1995, when CUC took over program implementation from the Master Contractor. While program history prior to that time was reviewed as background for the evaluation, no attempt was made to assess the effectiveness of the program prior to October 1, 1995.

Program Description

The RNC program was originally offered through a Master Contractor commencing the fourth quarter of 1994. CUC staff and a different consultant developed the original plan while the Master Contractor developed and tested policies and procedures, hired and trained field staff, and delivered program services. The Master Contractor also developed, installed, and tested a program tracking system with CUC. CUC staff designed the program Monitoring and Evaluation system. The contract with the Master Contractor was terminated on September 31, 1995, and all implementation and tracking responsibilities were assumed by CUC staff or contract personnel.

The Good Cents homes program offered by CUC was originally licensed from Southern Company Incorporated. Their Good Cents programs offer pre-developed new construction programs nation-wide to assist utilities in implementing energy efficiency programs. The naming convention of Good Cents program and RNC are synonymous throughout this paper.

The RNC program encouraged builders to adopt energy efficient building practices for new homes. As operated, all home savings were determined using a building simulation approach. CUC used this method in a pseudo-prescriptive manner by advising builders on the combinations of equipment that would supply acceptable results, then running the computer simulation to estimate savings. These estimates were followed by a series of inspections that verified installation of the measures, after which the savings estimates were finalized. Measures generally needed to qualify a residence as a Good Cents home were R-38 ceiling insulation, R-21 wall insulation, polysealing of all infiltration gaps, well sealed air conditioning ducts and an air con conditioner Seasonal Energy Efficiency Rating (SEER) of 11.0 or greater. The program provided a Good Cents logo, shown in Figure 1, to the builders for marketing purposes.



Figure 1. Good Cents Logo

Methodology

Data for the evaluation were gathered from three sources; 1) CUC staff and program information, 2) participating builders, and 3) nonparticipating builders.

Review of Program Documentation

As part of the evaluation effort, the evaluation team collected and reviewed all available documentation and background reports.

The program design, implementation and reporting background information formed the basis for the staff interviews, additional data collection, and comparison of the actual vs. planned program implementation that form the core of the evaluation. Many of these documents also supplied the sample sets that were used for builder survey data collection.

Interview of CUC Staff

Following the kickoff meeting held with CUC staff, three key CUC staff members were interviewed regarding their experiences with and impressions of the RNC program. They were asked about their understanding of the goals and operation of the program, their familiarity with various elements of the program, their perceptions of the program's attractiveness and/or limitations to potential participants, and their ideas on how the program could be improved. The interviews were conducted using a prepared interview guide which both provided a systematic structure to the discussions and allowed flexibility to cover areas that turned out to be important.

The interviews were designed to elicit information needed to assemble a complete picture of the program design and implementation. They also provided the staff, who were immersed in the workings of the program on a daily basis, an opportunity to assess the program and to air their thoughts. In addition to furnishing valuable information, they served as the point of departure for recommendations on how the program might be made more effective (e.g., improving the cost effectiveness and penetration of the program).

Builders Surveys

Two telephone surveys of residential builders were fielded. Builders who participated in the RNC program were asked twenty-five questions regarding their experience with the program, characteristics of their company, and their attitudes and building practices regarding installation of energy efficient equipment. For comparison purposes, a fifteen-question survey was fielded among a group of nonparticipating builders (i.e., those who had not been certified as Good Cents builders).

The survey sample group of participating builders was drawn from a list of Good Cents certified builders provided by CUC. A list of sixty-six licensed builders from Lake Havasu and Kingman areas was the basis for the nonparticipant builder sample group.

Builders were called up to five times. When possible, callbacks were scheduled. The evaluation plan called for the completion of twelve participant builder surveys and twelve nonparticipant builder surveys.

Determination of Free-ridership, Spillover, and Retention

A self-report approach to free-ridership was used in the builder surveys. Questions were asked of participant and nonparticipant builders to discern their attitudes toward energy efficiency and to assess their probable building practices in the absence of the program.

To determine the program's spillover effect on the construction of non-certified homes, participants were asked what changes they had made in their overall building practices since participating in the program. For comparison purposes, nonparticipants were queried about their current building practices regarding energy efficiency for equipment and measures analogous to those required by the RNC program.

Measure retention was addressed by reviewing the measures that were installed and determining if there is any likelihood that they were not functioning as expected. As will be discussed later in more

detail, all measures installed as part of the RNC were expected to be functioning as expected into the foreseeable future since these measures are both difficult to remove and have a long expected life.

Data Limitations

The nonparticipant builder survey was difficult to field because this group was hard to reach. While only one nonparticipating builder refused to be surveyed, many survey candidates were unavailable after repeated telephone calls. Although the survey design called for twelve surveys of nonparticipating builders, nine were completed.

Results

As show in Figure 2, a total of three staff interviews and twenty-two surveys were completed, thirteen program participant and nine nonparticipant builders. Results of the participant and nonparticipant builder surveys were compared to discern similarities and differences between the two groups.

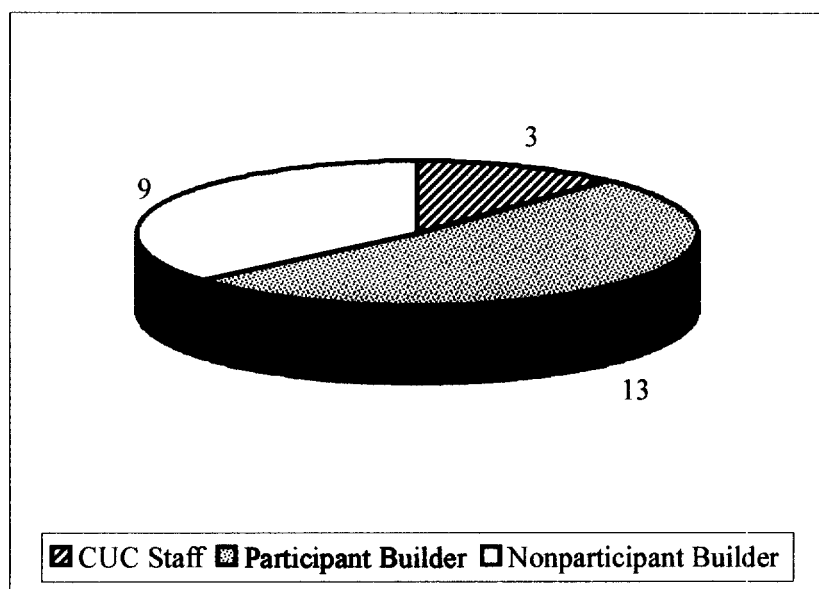


Figure 2. Summary of Data Used in Analysis

The similarities were many and the differences were few. Primarily, builders fell into one of two groups; those who address the higher end of the housing market and are aware of the marketing value of energy-efficient homes and those who address the lower “retirement” end of the housing market where initial cost, not operating cost, is the prime concern.

In general, the housing market in the Kingman/Lake Havasu area of the AED seems to be healthy. Based on the anecdotal evidence gathered during the fielding of surveys, both participating and nonparticipating builders are busy with full construction schedules. Two participant and two nonparticipant builders mentioned that they had relocated to Arizona from California because of the robust business climate.

All participant and nonparticipant builders said their residential building projects were single-family homes. A majority of the homes were built on speculation with only a third of participant and

nonparticipant builders constructing pre-sale homes. When siting new homes on a lot, neither participant nor nonparticipant builders considered solar orientation. Views, customer preference, and lot shape determined a home's position on the lot. About half of both groups of builders also built commercial facilities.

Survey results highlighted differences between participant and nonparticipant builders. The surveys indicated that, on average, participating builders have been building homes slightly longer than nonparticipants (ten versus eight years). Participants build fewer homes per year (nineteen versus thirty) and sell them at a slightly higher average price (\$118,000 versus \$113,000). Participating builders are also more interested in energy efficiency. In response to a survey statement claiming energy efficiency was a low priority for builders, 8% of participant builders versus 89% of nonparticipant builders agreed with the statement. This indicates that participant builders place a higher priority on, or are more aware of, energy efficiency than nonparticipant builders.

Although participant builders seem to have more interest in ensuring that their homes offer high efficiency equipment, nonparticipants also claim to be aware of energy efficiency issues. However, nonparticipants seem to be constructing more lower-priced homes that do not have the perceived margin to include higher than standard efficiency measures. A couple of the nonparticipant builders mentioned that their lower priced homes could not be competitively priced if energy efficient equipment was installed. One builder mentioned that many of his homes are purchased by retirees who “don't appreciate high-priced details with long-term benefits”.

Awareness of energy efficiency and the Good Cents program among the building community was high. Overall, lack of awareness was not an issue that prevented nonparticipants from building efficient homes. Only one of the nine nonparticipant builders was not aware of the Good Cents program. In fact, 56% of nonparticipant builders said they thought the Good Cents program was influencing the way homes are being built in their region. Recapping, the differences between participating and nonparticipating builders were not great, but seem to center on the types of homes they are building (i.e., participants build fewer homes at a higher cost and nonparticipants build more homes at a lower cost).

Free-ridership

In the case of residential builders, free-riders are considered to be those builders who participated in the Good Cents program without changing their building practices. Builders who, previous to the Good Cents program, built homes that met or exceeded Good Cents standards cannot be said to have been impacted by the program.

The results from the analysis of self-reported free-ridership are inconsistent. Builders claim that their building practices were energy efficient prior to the program, however a majority admit to changing their building practices since they began building Good Cents homes. The following discussion highlights these inconsistencies and attempts to extract significant qualitative findings.

A self-report of free-ridership reveals that nearly all participating builders claim their pre-program building practices were at or near those required by the Good Cents program. When asked if they would have installed the same equipment in the absence of the Good Cents program, twelve of the thirteen participant respondents (92%) said yes. Twelve of thirteen respondents also said they had been interested in learning how to improve the energy efficiency of the homes they built before learning of the Good Cents program.

Such results would appear to indicate a high level of program free-ridership. However, builders' claims to have made no changes in building practices are somewhat suspect since the majority of

participating builders identified some change in building practices since they began building Good Cents homes. Typically, such a change in building practice was to increase insulation R-value or use of a SEER 12 instead of SEER 10 HVAC system. All the builders believe themselves to have been energy conscious before the program and to have built high efficiency homes. However, from their comments it seems that the program caused them to change their building practices through education about new equipment and techniques. In commenting on the program, six of the thirteen participant respondents (46%) said they had changed their building practices as a result of the Good Cents program, particularly in the installation of higher SEER levels of HVAC equipment.

Besides program requirements, a motivation for builders to improve the energy efficiency of their homes may be customer demand. Although some builders suggested that customers value low first-cost over lower operating costs, half of both participant and nonparticipant builders said that in the past two years they have noticed an increased awareness of energy efficiency among their customers (the other half claimed to have noticed no difference). Both participant and nonparticipant builders said that customers are concerned with a home's overall energy efficiency.

While the scope of this study was not sufficient to quantify a level of free-ridership, the program has likely had some effect on building practices. Primarily, the program seemed to result in installation of HVAC systems with higher SEER values and the use of anti-infiltration sealants. However, given the size of the samples and the contradictory nature of the responses from the builders (all builders indicated that they were already building energy efficient homes, but six of the thirteen said that they changed building practices), the level of free-ridership cannot be conclusively determined. These contradictions are not surprising since the literature is replete with examples of inconsistencies resulting from self-reported free-ridership.

Spillover

Spillover was addressed by asking participants what changes they have made in their *overall* building practices since participating in the program. This query was fielded to determine what effect the program has had on the construction of non-Good Cents homes.

As noted previously, builders claim to have made no changes in their building practices as a result of the Good Cents program. However, these responses are suspect since the majority identified some change in building practices after joining the program. When asked a similar question regarding changes in their post-program building practices, *half* of the respondents said that, since the program began, they had made no change in practices for either Good Cents homes or non-Good Cents homes. The other half said that, since the program began, they had installed more energy efficiency equipment at *all* of their home projects. When asked "was the decision to offer high efficiency equipment a result of the Good Cents program", two of the five builders who said they had increased the efficiency in all their homes said this was a result of the program. For these builders, it can be concluded that the Good Cents program had a spillover effect, inducing them to change their building practices at all their projects.

A few nonparticipant builders claimed that they were building homes that met or exceeded overall Good Cents standards. One-third of the nonparticipant builders claimed to use R-38 insulation or higher in ceilings. Although the number of respondents is too low from which to draw any solid conclusions, a couple of nonparticipant respondents said their use of high-R insulation and high efficiency windows was a result of the Good Cents program, which is evidence of program spillover.

Overall it appears that the efficiency of new homes has improved. However the data collected does not allow determination of whether this is program spillover or a general trend in the market.

Measure Persistence

From a practical point of view, measure persistence is a moot issue for the RNC program, since all measures that are installed are either irremovable or are extremely unlikely to be removed. The wall insulation and the infiltration sealants are measures that cannot be removed without major construction on the home. The ceiling insulation and air conditioner are not likely to be removed except under extremely unusual circumstances. The duct sealing, if properly executed, is likely to have a minimum effective life of ten years. Thus all of the measure are expected to be in place and functioning as expected for at least ten years.

Actual vs. Planned Implementation

Findings from Review of Documents. The October 1994 program implementation plan was developed by a consultant in conjunction with CUC staff and reflects the original implementation approach. A Master Contractor was then hired to execute the plan. The contract with the Master Contractor ended as of September 31, 1995. From that time forward CUC and contract staff implemented the program according to a modified set of goals which reflected reduced DSM program funding as recommended by the Arizona Corporations Commission (ACC) Staff.

The implementation of the plan generally followed the October 1994 plan. The evaluation concentrated on examining the program as implemented since October 1995, while the plan had been designed for a higher level of funding than was apparent during the evaluated period. Given this level of funding, program implementation followed the plan relatively closely.

The savings from the RNC program that were estimated in the original plan were based on inflated estimates of the size of the RNC market. These estimates projected 3,459 new construction starts in 1994 and 3,332 starts in 1995 and anticipated 18% market penetration in both the first and second year of the program. Projections estimate that there are 750 housing starts in the Mohave County during 1996 and the program anticipates about 125 participants in this area. This is a 17% penetration level, a percentage that is in line with original market penetration expectations. The fact that the RNC program achieved a 17% market penetration in its second year is an impressive result.

Additionally, the original ramp up goals were quite optimistic, anticipating growth to equilibrium levels within six months of program initiation. This growth rate was unreasonable even for a program offering rebates to induce participation. Market transformation programs are typically expected to require several years to achieve significant market penetration (Eto, Prah & Schlegel 1996). Given that this program is a non-rebate/market movement type of program, the level and rate of success accomplished to date is very good. The evaluation team agreed with program staff estimates that penetration could potentially be doubled with additional staff availability (e.g., added staff or staff efficiency improvements). Any proposals to increase staff would need to undergo cost effectiveness tests.

While it may be questionable to claim that the full 17% market penetration value can be allocated to the program (since 54% may be free-riders), it is unquestionable that the Good Cents Program was offered purchasers of 17% of the new homes a standard for assessing the homes efficiency. At the same time that standard contributed to consistency in building practices and, although the data is mixed, probably offered an overall improvement in home efficiency.

The rate at which a particular market may be transformed is a strong function of the market sector and the market mechanisms within that sector (Eto, Prah & Schlegel 1996). For example, the residential sector is easier to affect because the majority of the market is driven by speculative builders

in a highly competitive atmosphere. These builders can be placed in competition, causing them to drive the market.

Findings from Builders. Participating builders were asked about their perceptions of CUC's administration of the Good Cents program. None of the respondents said that they had noticed any changes in the way the program was administered during the time of their participation. CUC should receive credit for the seamless transition from Master Contractor to CUC staff.

Overall, participant builders thought CUC's representatives were well-prepared, helpful, and timely when performing required inspections. There was no report of any delay in construction schedules due to inspections.

It is important to note that CUC representatives have played a critical role in penetrating the builder market with news of the Good Cents program. Eighty-eight percent of participant builders and 54% of nonparticipant builders said they had learned of the program through a CUC representative.

Findings from CUC Staff. The staff seems to have a consistent set of steps they use for contacting builders, collecting data for savings calculations, inspecting the homes at appropriate stages, tracking the status of homes in progress, filling out the necessary paperwork, and entering information about each completed project into the DSM tracking system. All of these steps are consistent with the program procedures.

In terms of marketing the program, all agreed that direct contact with builders is the most effective means of recruiting participants and the staff now uses this method primarily. In the past, they also tried increasing awareness through mail pieces and builder shows. The staff said they believe they should also do some of the newspaper advertising they had planned.

Program Strengths and Weaknesses

Findings from Builders. Among participating builders, the primary strength of the Good Cents program is seen to be its potential value as a marketing tool. Most builders think of the Good Cents certification as an opportunity to market their homes as being energy efficient and of high quality construction. Half of the participating builders mentioned that their reason for building Good Cents homes was to improve their marketing by increasing the perceived value of their homes. In the words of one builder, "It (Good Cents certification) offers legitimacy, saying that we build high quality".

CUC representatives were seen as knowledgeable and helpful. No builder indicated that the Good Cents program caused them delays. In fact, one builder said that prompting from his CUC representative to have Good Cents-related inspections done caused him to build faster! Participating builders are satisfied with the nuts and bolts of the program.

All of the participating builder survey respondents had a comment when asked what they liked most about the Good Cents program. Most often, their comments related to the positive impact of the Good Cents on sales and marketing efforts.

When asked what they liked least about the program, only one builder responded by saying he would like to see more program advertising. To corroborate this comment, when asked to suggest program improvements, builders pointed to the lack of Good Cents awareness on the part of home buyers. Four of the thirteen participating builders surveyed thought additional advertising of the Good Cents program would help educate the public about what Good Cents signs indicate. "Customers don't know what it means," was the comment from builders.

Findings from CUC Staff. Staff members shared the builders' view that few home buyers knew what a Good Cents label on a home meant. All agreed that increasing the understanding of the Good Cents label among buyers would give the program a boost that simply marketing to builders could not. Staff members had a number of ideas on how to improve public awareness and understanding. These included:

- posting more Good Cents signs and offering trinkets, complete with contact information on how to find out more about the program (which would also reinforce the connection between Good Cents and CUC),
- following through on the planned newspaper ads, including pictures of the different Good Cents features to help customers understand the measures (e.g., what polyseal is),
- allowing field staff time to talk directly with homeowners to discuss benefits of Good Cents features.

Despite the fact that there was room for improvement in the operation of this program, it seems clear that the program has caught on in the building community. With an increase in marketing directed at homeowners, it seemed likely that this RNC program could increase its achievements quickly and significantly. As with any recommendation, careful cost effectiveness testing would need to be conducted before implementing program change.

Decision Making/Barriers to Participation

Usually in this kind of study, lack of program awareness stands out as the prime barrier to participation. However, in the case of the Good Cents program, only one of the nonparticipant builders surveyed was unaware of the program. Awareness and interest among nonparticipant builders was high. A number of builders mentioned that they were planning to get involved in Good Cents “when things slowed down”.

However, 43% (three of seven builders) said that they did not participate in the program because they saw no direct benefit for their company. It seems that the particular market niche addressed by a builder has some impact on whether s/he will participate since inclusion of energy efficiency options may not be economically viable to their company. A few nonparticipant builders said that their homes do not offer enough margin to warrant the increased cost of energy efficiency options. The price of increased efficiency measures has relatively little impact on an expensive home. However, on a modestly priced home, nonparticipants claimed that the increased cost of improved insulation, SEER values, and high efficiency windows is perceived to price the home out of the market. This is a potential market barrier often labeled as “misplaced or split incentives”. The builder has every incentive to increase their profit by minimizing first costs while not bearing the burden of increased utility bills throughout the life of the home. Advertising targeted to “sell” the values of Good Cents Homes to home buyers could potentially overcome this barrier, thus inducing the market to be buyer driven.

Two nonparticipants who specifically decided not to be involved in the Good Cents program were adamant that their current building practices were equal to or better than Good Cents standards. They felt that CUC placed too much emphasis on the efficiency level of specific items and not enough on the structure's overall efficiency. One builder claimed that with R-50 ceiling insulation, R-26 wall insulation, and high efficiency windows he can use a SEER 10 rated HVAC system and still achieve an overall efficiency that exceeds Good Cents standards. (It should be noted that CUC offers four different modeling alternatives to accommodate specific preferences such as this). This could be a demonstration of bounded rationality, where an individuals stated intentions and actions are not aligned. In this case,

the builders state they believe in energy efficiency, appear to have an avenue to participate within the RNC program, yet do not choose to act on those beliefs through inclusion in the program.

The CUC staff seemed to have a good handle on which program attributes attracted or discouraged participation. They independently confirmed that the single largest factor that keeps some builders from participating was a perception that they cannot afford to include the upgraded measures that the Good Cents requires (especially the SEER 11 HVAC system) and still make a profit on the homes. They also echoed the view that some of the builders simply do not value the Good Cents label. One point of departure from the builder surveys is that the staff seemed to think that the terms of the Good Cents builder contract with CUC might have turned some builders away from the program. However, none of the nonparticipant builders mentioned this as a factor.

The staff was unanimous on what they believed attracted builders to the program. In their opinion no builder wanted to be at any disadvantage and many joined because their competitors had joined. While the builders did not put it exactly this way, it seems clear that the builders and staff agree that participant builders value the Good Cents label because it helps them sell their homes.

Trade Ally Activity Effect on Measure Adoption

Both participant and nonparticipant builders had established long-term ties with equipment vendors. One nonparticipant builder said that the only reason he was not building Good Cents homes is that his HVAC vendor did not yet offer SEER 11 equipment. As soon as the vendor offered the equipment, the builder said that he would join the program. Such tight ties between builder and supplier seem to be the norm. Many builders depend on vendors to learn of new equipment and its application. This builder/vendor relationship appears to offer opportunity as an effective conduit through which to communicate information on programs and equipment.

Conclusions

Citizens Utilities Company, Arizona Electric Division fielded a residential new construction program designed from conception as a market transformation program. The evaluation of that program indicated that CUC succeeded in penetrating the RNC market without rebates, determined key points which lead to that success, and provided recommendations to move towards self-sustaining energy efficient building practices within the RNC market.

The program did a good job of spreading the word to builders as shown by the high awareness among all builders surveyed. Based on this, the implementation of the program can be said to have reduced the market barrier associated with the cost of identifying or learning about energy-efficient products. The builders appear to believe in the benefits of the energy efficient measures promoted by the program as seen by incorporation of these measures in buildings outside of the program. They see the inclusion of these energy efficient measures as adding value to their product and enabling them to market their homes more successfully. The degree to which this can be associated with the program is open to debate. However, there appear to be market barriers that need to be reduced before more builders will join the program. Specifically, it would help to determine whether the promotion of the energy efficient features to the lower end “retirement” community would actually make changes in the home buyers decisions to go with the lowest first cost home rather than a home with lower operating costs. This may potentially help reduce the split incentives market barrier. The program may or may not be able to affect the market barrier of bounded rationality which potentially exists in some of the nonparticipant builders. If, over time, the builders who built Good Cents homes are shown to actually

have an increased demand for their homes, then the market would most likely force builders to participate just to keep competitive.

The RNC program had many successes within the first two years of operation. The program successfully used contractors to help begin the program and jump-start start the process. CUC was able to take over the running of the program such that the participants did not notice any change in service. Using no rebates, the program achieved a 17% penetration rate during that two year period within the residential new construction market, although half of these could be considered free-riders.

Key attributes of the program included the ability of the program to set specific energy efficient standards that could be met by the builders. The CUC staff were instrumental in promoting the program to the builders in a professional manner. The staff were able to inspect construction as it progressed within a timeline which met the builders expectations. Additionally, the program provided signs for posting in front of Good Cents homes and supplied brochures within the homes which outlined the key features of the energy efficient homes built under the program.

The evaluation determined a few areas of potential improvement in the program implementation. Advertising to the home buyers was seen as a key point by both the builders and the CUC staff. Supplying information to potential buyers in an easily readable format could lessen any performance uncertainties the buyer may have and could potentially increase the demand for Good Cents homes. Similarly, a Good Cents Seal posted in a visible location near the breaker panel was viewed as highly useful to promote the resale value of the home and to attract secondary home buyers.

There are steps which the RNC program could take to help move the program closer to becoming self-sustaining. The program could begin development of a group of inspection contractors to supply the inspection services that are being provided by CUC. The utility could provide the certification of these inspectors. By moving this service outside of the utility, the cost of inspecting to meet the Good Cents level of efficiency would be met by the market and not subsidized by the utility. Under this scenario, CUC could continue to set specific standards that the RNC market must meet to gain a Good Cents Seal. This would slowly move other market actors into the current role taken by the utility employees.

Acknowledgments

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