

# **PG&E's 1998 Comfort Home Program Market Baseline and Market Effects Study**

Fred Sebold, Regional Economic Research, Inc.  
Alan Fields, Regional Economic Research, Inc.  
Brenda Gettig, Regional Economic Research, Inc.  
Mary Lou Sutton, Pacific Gas & Electric Co.

The program evaluated is the Pacific Gas & Electric Companies (PG&E's) 1998 Comfort home Program. The PCH Program is designed to increase energy efficiency in new homes through both midstream and downstream market transformation. Two versions of the midstream element were offered in 1998. The Base Program, which was offered in the Central Valley, promotes the use of high efficiency air conditioning, tight duct sealing, natural gas cooking, gas dryer stubs, and high performance windows. The new PCH Plus Program, which is offered system-wide, encourages builders to exceed the Model Energy Code by 30%.

## **Research Questions**

The study was designed to achieve two central objectives: (1) To characterize the residential new construction market in the PG&E service area, particularly as it relates to the market for energy efficiency, and (2) To assess the near-term market effects of the 1998 PCH Program.

## **Research Design, Methodology, Statistical Techniques, Use of Results**

The methodology for this research consisted of four major elements. (1) A thorough literature review was conducted to support the market characterization, identify issues, assess methodologies, and collect evidence with respect to market transformation in general and the specific assessment of market transformation in the residential new construction (RNC) market. (2) Telephone surveys were conducted for 760 residential customers split roughly equally among participants (residents of Comfort Homes), nonparticipants in PG&E's service area, and new home residents in a comparison area consisting of several service areas around the country. The team also conducted in-depth interviews of 31 builders in PG&E's service area and 51 builders in the comparison area, window and HVAC manufacturers, distributors, contractors, Title 24 consultants, architects, lenders, sales agents, building inspectors, and government agency representatives. (3) The baseline market characterization was based on a review of program materials, a review of literature relating to the market, surveys of customers, and interviews with market actors. The characterization includes a full description of the program, a comprehensive market characterization, a description of market barriers, a discussion of indicators that could be used to track market effects, and an analysis of program-related and efficiency-related attitudes and perceptions of key market actors. (4) The assessment of market effects entailed testing a series of distinct hypotheses relating to the potential effects of specific program interventions to reduce key market barriers and the assessment of the sustainability of these effects. The tests of hypotheses relating to market effects are based on the analysis of the interviews and survey information collected from the market actors in the PG&E service area. In addition, surveys of builders and consumers were conducted in a comparison area consisting of various regions of the country. Three kinds of evidence were used to test these hypotheses: self-reported impacts, simple comparisons across groups, and a modeling approach.

## **Research Findings**

The report provides considerable information on attitudes and perceptions of all of the key market actors in the residential new construction market. Further, most of the specific market barriers targeted through the PCH program were confirmed in the course of the analysis. To support the assessment of market effects, a number of market effects indicators, including market shares of relevant high efficiency technologies and baseline attitudes and perceptions of key market actors were collected. Results of the market effects hypothesis testing suggest the program established a number of footholds in the market including increased consumer awareness, acceptance of enhanced duct installation and testing practices, and modified builder marketing practices.

## **Problems Encountered During the Evaluation**

Two main problems were encountered during the study. First, the data available to develop historical shares of high efficiency equipment was sparse. Therefore, the study had limited success in developing historical baseline shares for targeted high efficiency measures. Second, recruitment for in-depth interviews of nonparticipant builders was difficult. An incentive was offered in order to ensure the required completed sample sizes for these market actors.