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California Residential Remodeling/ Renovation Market Study

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July 2001

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The California Residential Remodeling/ Renovation Market Study provides an understanding of the characteristics of this market and the factors that influence customer decision-making and satisfaction in home remodeling in order to identify opportunities to promote energy efficiency. In particular, the study was designed to:

- Profile the characteristics of the California homeowner remodeling market
- Understand motivating factors and key drivers of overall satisfaction
- Identify barriers that inhibit or delay completing remodeling projects
- Identify and profile market segments with significant differences in needs, attitudes, and practices in remodeling
- Recommend energy efficiency program concepts that address these key drivers and barriers.

Using surveys that reached 714 respondents, the study presents information about the following aspects of the residential remodeling market in California:

- Size and characteristics of the remodeling market
- What motivates remodeling
- Drivers of overall satisfaction with a remodeling project
- Market segments among remodelers
- Barriers to completing a remodeling project
- Information sources used by remodelers
- Role of contractors in remodeling
- How remodelers approach materials and equipment selection, and financing
- Energy efficiency considerations in remodeling projects (kitchen, bathroom, etc.)
- Implications for energy efficiency programs

In achieving the key objectives, this study may enhance residential energy efficiency programs by promoting adoption of energy efficiency in the residential remodeling/renovation market.

I. Executive Summary and Key Findings

A. Study Approach

The study design uses a two-pronged data collection and analysis approach to address the study objectives. The design assumes that remodelers would be found in one of two distinct states at the time of data collection. Remodelers in one state had completed or nearly completed a remodeling project; they are called the “complete” group in this study. Remodelers in the other state had not completed the project at the time of data collection, and either their projects are less than 50% complete or have even been abandoned; they are called the “incomplete” group in the study.

The purpose of using this two-pronged approach is to identify both the factors that lead to successful remodeling projects, using data on the complete group, and also the barriers that inhibit or delay project completion, using data on the incomplete group. Some respondents in the incomplete group will eventually complete their projects, while others either have or will abandon them.

Because of the study’s design, direct, statistical comparisons between the two groups cannot be made (for instance, the study does not identify which remodelers are likely to abandon their projects or why); however, where relevant this report presents parallel findings for the two groups side-by-side so that the reader can infer similarities and differences between the groups. However, in doing so, the reader should keep in mind that the two groups represent different sample populations. In addition to providing a general understanding of the home remodeling market, each of the two groups provides data on specific study objectives:

- The primary findings for the complete group provide insight about remodelers’ attitudes toward the home remodeling process, the key drivers affecting their overall satisfaction with a home remodeling project, and the distinct market segments among remodelers.
- The primary findings for the incomplete group provide an understanding of the barriers prospective remodelers may encounter in remodeling steps such as information gathering and materials and equipment selection.

The California Residential Remodeling/ Renovation Market Study provides a wide range of information to understand the factors that influence remodeling decision-making, and it suggests implications of this information for energy efficiency programs. The study also inquires about specific components involved in remodeling projects and energy efficiency considerations in these components (discussion of these specific components are called “modules” in the report).

B. The Remodeling Story and its Implications In Brief

Home remodeling is a $20 billion annual market in California. Energy efficiency is a significant consideration in about half of remodeling projects, and at least one energy efficiency measure is installed in over 80% of remodeling projects. The most common kinds of remodeling projects, such as kitchens, windows, lighting, and insulation, involve major energy uses in the home.

- *Therefore, remodeling represents a significant event in which the energy efficiency of a home can be substantially improved.*

Information gathering and the use of contractors play substantial roles in remodeling. Satisfaction with information gathering and with contractors are the most important drivers of overall satisfaction with remodeling projects. Contractors, along with other trade allies are important sources of information for remodelers. Over half of remodeling projects use contractor labor. Prospective remodelers with incomplete projects are more likely to have looked for information than to have taken any other steps.

- *Therefore, energy efficiency programs that seek to influence remodeling decisions need to address the information needs and channels and to work with contractors typically used by remodelers.*

Incomplete remodeling projects face barriers that delay or inhibit completion. The study reveals a definite priority in key steps undertaken in remodeling (from highest to lowest) – information gathering, materials and equipment selection, contractor selection, and financing. While substantial numbers of respondents indicated no need to undertake one or more of these steps (especially finding a contractor or financing), many indicate that lack of time or money are major barriers to completing them. Furthermore, although substantial numbers of potential remodelers find these steps relatively easy, surprisingly large numbers find them relatively difficult.

I. Executive Summary and Key Findings

- *Therefore energy efficiency programs, if coupled with steps to reduce the difficulty of information gathering and contractor selection, can increase overall success and satisfaction in remodeling as well as increasing the adoption of energy efficiency measures.*

Among remodelers, two market segments – *Information Seekers* and *Adding Value* – appear to represent the best targets for utility-sponsored energy efficiency programs. Together, they constitute over one-third of all remodelers. Information Seekers are more likely than other segments to look for information of many kinds and are less likely to be satisfied overall. The Adding Value segment tends to show high satisfaction overall, but they are especially reliant on contractors. Both segments indicate high interest in using utility services offered in connection with remodeling.

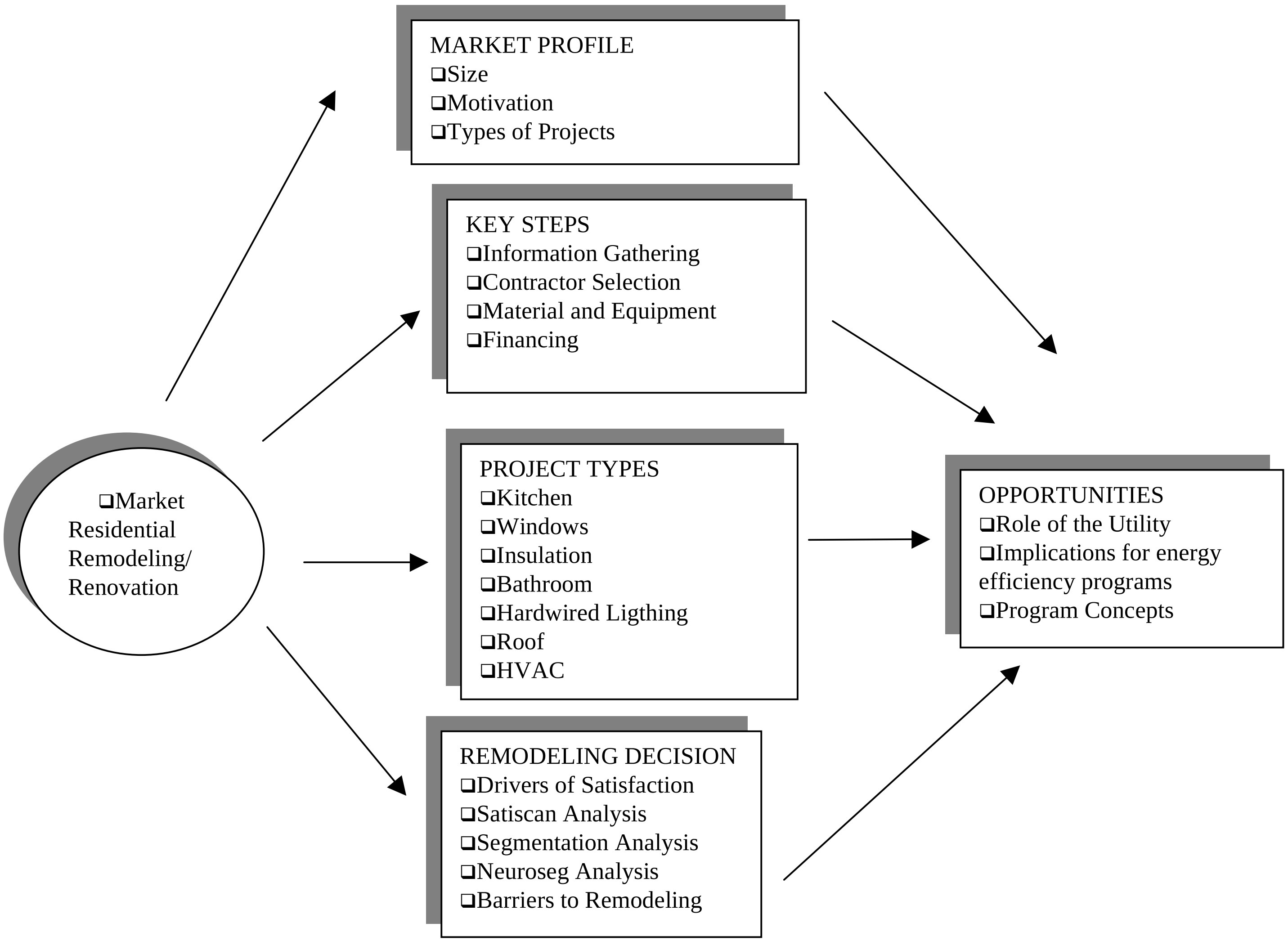
- *Therefore, energy efficiency programs directed toward remodelers are most likely to attract these two segments – Information Seekers and Adding Value.*

Given the substantial opportunities in the California residential remodeling market, the study findings suggest tailoring energy efficiency programs to this segment.

- *Target programs to the segments with the greatest interest in assistance – Information Seekers and Adding Value.*
- *Address information needs by developing specialized materials focusing on topics of interest to remodelers.*
- *Deliver information through channels typically used by remodelers, particularly contractors and stores.*
- *Find ways to allow remodelers to realize the value of energy efficiency improvements.*

C. Roadmap

Since the study collected a large amount of data on a variety of remodeling aspects, the information in this report has been organized to facilitate connecting the study goals with the findings. The following visual roadmap is intended to assist the reader to understand the study approach and organization of the information.



D. Summary of Key findings

This Executive Summary presents the high level findings of the California Residential Remodeling/ Renovation Market Study.

Details of the particular findings are found at the pages reported alongside the findings.

Size and Characteristics of the Remodeling Market

One objective of the study is to characterize the residential remodeling market in California. The findings indicate that home remodeling in California is a big market and a significant opportunity to promote energy efficiency.

About 9% of California's 8.3 million single-family, condominiums, and mobile homes are remodeled each year. It is estimated that the total value of the California remodeling market is about $20 billion annually.

- The average cost of a completed remodeling project is $29,500, and the median cost is $18,400, (p. 232)
- The median value of houses remodeled is $254,000, about 14 times the cost of the remodeling project. (p. 68)
- The median household income in remodeled houses is $80,000, about 4 times the cost of the project. (p. 235)

Most remodeling is done in older houses with long-time residents:

- More than 2/3 of the remodeled houses are more than 20 years old. (p. 64)
- Half the residents who remodel have lived in their homes for a more than 16.5 years. (p. 232)

What Motivates Remodeling?

Another objective key of the study is to identify the motivating factors for a remodeling project.

The study findings indicate that comfort and appearance are the most often cited reasons for remodeling. Energy efficiency is also an important consideration in about half the projects. (p. 80)

- Personal comfort (74%)
- Improve appearance (63%)
- Energy Efficiency (49%)
- Old appliances or fixtures (48%)

Remodeling projects often include components that involve major energy uses in the home: (p. 72)

- Kitchens (64%)
- Windows (61 %)
- Bathroom (60%)
- Hardwired Lighting (58%)
- Insulation (53%)
- Roof (48%)
- HVAC (44%)

Remodeling projects install at least one energy efficiency measure 81% of the time. The measures most often installed are (p. 190)

- Windows (89%)
- HVAC (88%)
- Hardwired Lighting (86%)
- Insulation (85%)
- Kitchen appliances (77%)

Therefore, remodeling represents a significant event in which energy efficiency is an important consideration and in which the energy efficiency of a home can be substantially improved.

Drivers of Overall Satisfaction With a Remodeling Project

One of the study objectives is to develop an understanding of the key drivers of overall satisfaction with remodeling projects.

The study uses an artificial intelligence-based *Satiscan*™ analysis to uncover direct and indirect drivers of satisfaction in a completed remodeling project. This analysis also helps in determining the most effective point of intervention for energy efficiency products and services providers.

The *Satiscan*™ analysis reveals that factors related to information gathering and to use of contractors are the most important drivers of overall satisfaction in remodeling projects:(p. 40)

- Satisfaction with information gathering (0.36)
- Use of Contractor for information (0.18)
- Satisfaction with energy efficiency measures (0.14)
- Satisfaction with contractor follow-up (0.11)
- Satisfaction with information on contractor to use (0.11)

Therefore, energy efficiency programs could influence remodeling decisions by addressing the information needs and channels and by working with contractors typically used by remodelers.

Market Segments Among Remodelers

The study also examines the remodeling market to uncover different nuances within the market. The study used an artificial intelligence-based technique called *Neuroseg*™ to address the objective of identifying the market segments within this market.

The study finds four discernable market segments among residential remodelers, of which two – Information Seekers and Adding Value – are particularly good targets for utility programs (pp. 41-46). The four market segments are:

- **Take-Care-of-It** (34%) – are most likely to rely on contractors for information and work. They have the highest project cost and highest age of residents. They also have high term of residency and value of home.
- **Do-It-Your-Selfers** (30%) – are least likely to use a contractor and most likely to be their own primary source of labor. They have the lowest age of residents and lowest term of residency. They also have low project cost and value of home.
- **Information Seekers** (21%) – have the most intense information needs. They have the highest value of home and high project cost. They also have low term of residency and age of residents.
- **Adding Value** (15%) – are most likely to remodel to increase value. They are likely to seek information and most likely to be satisfied with information they receive. They have the lowest project cost and lowest value of home. They also have highest term of residency and high age of residents.

These four market segments are profiled to identify significant differences in needs and attitudes in remodeling:

The Take-Care-of-It and Adding Value segments are most likely to use contractors as their primary source of labor (p. 200)

- Take-Care-of It – 77%
- Do-It-Yourselfers – 12%
- Information Seekers – 54%
- Adding value – 84%

Trade allies and word-of-mouth are the top sources of information used across all segments (p. 166)

- Take-Care-of It – Contractor (84%), Store Literature (57%)
- Do-It-Yourselfers – Store Literature (61%), Family/ Friend (55%)
- Information Seekers – Contractor (68%), Store Literature (68%)
- Adding value – Contractor (81%), Salespeople (67%)

Remodelers in two segments – Information Seekers and Adding Value – indicate the highest interest in utility programs to facilitate remodeling (p. 227)

- Prescreen Contractors (74% and 76% respectively)
- Certify Contractors (53%, 67%)
- Provide Maintenance Services (40%, 56%)
- Provide Financing (43%, 68%)
- Do On-site Installations (50%, 53%)

Detailed characteristics of these segments, presented throughout this study, provide guidance to formulate specific programs and promotion strategies for customer segments that are most likely to participate in utility-sponsored programs.

Barriers to Completing a Remodeling Project

Addressing another of its objectives, the study identifies several barriers that delay or inhibit successful completion of remodeling projects. Remodeling planning steps have a clear set of priorities: (p. 92)

- 68% of potential remodelers have looked for information
- 61% have identified materials and/or equipment
- 43% have looked for contractors
- 27% have looked for financing

Although substantial numbers of respondents indicate no need to undertake one or more of these steps, many indicate that lack of time to identify materials and/or equipment and overall expense of the project are major barriers to completing them (p. 94)

- Have not looked for financing - Using own money (32 %), No need (23%)
- Have not looked for contractors – No need (26%), Too expensive (18%)
- Have not identified materials and/or equipment – Not that far (37%), No time (17%)
- Have not looked for information – Too expensive (18%), Not that far (16%)

It is important to note that 55 % of those who haven't looked for financing either don't need it or are using their own money (p. 94).

In asking respondents to rate level of difficulty in various steps undertaken in the process, the study finds that while a substantial number of prospective remodelers find these steps easy, a significant number find them difficult (pp. 152, 162, 204, 222)

- Identifying materials and/or Equipment – Easy (33%) Hard (12%)
- Information Gathering – Easy (35%), Hard (15%)
- Contractor Bid Process – Easy (44%), Hard (16%)
- Looking for financing – Easy (37%), Hard (19%)

Therefore energy efficiency programs, if coupled with steps to reduce the difficulty of information gathering and contractor selection, can increase overall success and satisfaction in remodeling as well as increasing the acceptance of energy efficiency measure adoption

Information Sources Used by Remodelers

The study further examines the information gathering process used by remodelers, identifying information sources they use and their satisfaction with them.

The study findings indicate that trade allies and word-of-month are far more significant sources of information used by prospective remodelers than utilities. The study analyzes separately data for the complete and incomplete groups to determine whether there are any differences between these two groups regarding information sources used. Generally, both groups use similar information sources. ‘Contractors’ and ‘literature in store’ were used as information sources by respondents in the complete group most often regardless of the type of remodeling project completed (p. 164):

- Contractor (63%)
- Store Literature (61%)
- Family/ Friends (54%)
- Sales People (48%)
- Utility (14%)

Information sources used by respondents in the incomplete group: (p. 168)

- Family/ Friends (69%)
- Magazines (69%)
- Sales People (59%)
- Contractors (59%)
- Utility (14%)

When it comes to satisfaction with the information gathering process, the study indicates that there is room for improvement with both the sources and content of information, since at best, less than two-thirds of respondents indicate satisfaction with the information sources they used: (p.174):

- Contractor (61%)
- Family/ Friends (49%)
- Architect/ Designer (43%)
- Store literature (42%)
- Sales people (41%)
- Utility (28%)

Satisfaction with information gathering is a key driver of overall satisfaction with a remodeling project. The study findings indicate that the proportion of respondents satisfied with information on topics of interest is greatest for energy efficiency, but again there is room for improvement since less than two-thirds of respondents indicate satisfaction with the information they received: (p. 170)

- Energy efficiency (64%)
- Equipment quality (60%)
- Price (55%)
- Financing (55%)
- Technical for equipment/ materials (54%)
- Contractors (54%)

Therefore, utility programs could make a difference by promoting energy efficiency in remodeling through the use of information channels typically used by remodelers.

Role of Contractors in Remodeling

Role of contractors in residential retrofit and remodeling/renovation has received much attention and support in the existing utility program called Residential Contractor Program (RCP). It is important to understand remodelers' needs, attitudes, and practices related to use of contractors in remodeling projects. The study findings reinforce this conclusion by indicating that contractors are key allies for reaching the remodeling market. Among the primary sources of labor for remodeling projects, contractors are used most often (p. 196):

- Contractor (54%)
- Self (30%)
- Friends/ Family (11%)

Contractors are especially important in two of the remodeling market segments – Take-Care-Of-It and Adding Value. These two market segments use contractors for any remodeling work most of the time (p 200):

- Take-Care-Of-It (100%)
- Adding Value (92%)
- Information Seekers (34%)
- Do-It-Yourselfers (11%)

Contractors often make purchasing decisions for equipment and materials in some of types of projects (pp. 104, 111, 120, 129, 136, 143):

- Roof (58%)
- Windows (29%)
- Insulation (25%)
- Bathroom (23%)
- Hardwired Lighting (16%)
- Kitchen (7%)

In terms of proportion satisfied, a smaller proportion of the Do-It-Yourselfers and Information Seekers are satisfied with contractor experience than in the other two segments: (p.208):

- Adding Value (92%)
- Take-Care-Of-It (91%)
- Do-It-Yourselfers (46%)
- Information Seekers (22%)

Therefore, utility programs that reassure remodelers regarding contractor quality and performance could improve overall success and satisfaction with remodeling as well as increasing the adoption of energy efficiency measures.

How Remodelers Approach Materials and Equipment Selection and Financing

To profile the practices of remodelers, the study probes their experiences with materials and equipment selection as well as their experiences regarding financing options. The study finds that half of prospective remodelers consider energy efficiency an important factor in selecting materials and equipment among other more important factors such as price, style, and warranty (p. 156):

- Price (68%)
- Style (61%)
- Warranty (57%)
- Energy efficiency (48%)

Therefore, energy efficiency programs targeting remodelers can translate their interest in energy efficiency into actual adoption of efficiency measures.

Financing

Financing is usually perceived to be a tool that utilities promoting energy efficiency can use to address the first cost barrier in energy efficiency adoption. However, in examining remodelers' practices, the study finds that less than half of remodeling projects use financing and usage varies widely among the four segments (p. 216):

- Adding Value (47%)
- Information Seekers (32%)
- Take-Care-Of-it (20%)
- Do-It-Yourselfers (18%)

Additionally, the study finds that among the market segments, a smaller proportion of two of the segments are satisfied with financing options – Information Seekers and Do-It-Yourselfers than in the other two segments: (p. 218):

- Take-care-Of-it (85%)
- Adding Value (80%)
- Information Seekers (62%)
- Do-It-Yourselfers (52%)

The study also finds that 55% of the prospective remodelers who haven't looked for financing either don't need it or are using their own money (p. 94). As discussed under barriers to remodeling, a significant number of respondents (19%) find looking for financing difficult. While financing does not appear to be a significant concern to many remodelers, some targeting of financing programs may attract those who do find financing relatively difficult.

Energy Efficiency Considerations in Remodeling

Many kinds of remodeling projects involve major energy uses in the home, and the study finds that energy efficiency is an important consideration in the selection of equipment and materials.

Overall, about 60% of remodelers look for information on energy efficiency, with somewhat smaller proportion of bathroom remodelers looking energy efficiency (p. 182)

- HVAC (76%)
- Insulation (71 %)
- Windows (61%)
- Hardwired Lighting (61%)
- Kitchen (61%)
- Roof (57%)
- Bathroom (33%)

The study findings indicate that the majority of the remodelers think trade allies and word of mouth are the most useful sources of information on energy efficiency. One-third of the respondents also indicate the utility is a useful source of information on energy efficiency (p. 184):

- Contractor (49%)
- Store literature (42%)
- Architect/ Designer (41%)
- Sales people (36%)
- Family/ Friends (36%)
- Utility (32%)

Major energy-consuming appliances are added or replaced in most kitchen remodeling projects with changes in oven, microwave, and refrigerators having the highest occurrences (p. 102):

- Oven (69%)
- Microwave (65 %)
- Refrigerator (62%)
- Dishwasher (57%)

In windows selection, energy efficiency is the major consideration (p. 113):

- Energy efficiency (80%)
- Style (71%)
- Warranty (54%)
- Price (53%)

Energy efficiency is a major factor for more than three-quarters of respondents who complete an insulation project (p.122).

- Energy efficiency (85%)
- Type (51%)
- Availability (42%)

Changes in major water-using fixtures have high occurrences in most bathroom remodeling projects (p. 127):

- Faucets/ shower head (85%)
- Sink/ Tub/ Shower/ Toilet (82%)

Energy efficiency is a major factor half the time in hardwired lighting decisions (p. 138):

- Style (81%)
- Energy Efficiency (50%)
- Price (38%)

Energy efficiency is a major factor about half the time in roofing decisions (p. 145):

- Warranty (63%)
- Color (61%)
- Style (59%)
- Cost (56%)
- Energy Efficiency (54%)

Energy efficiency is the most important factor in HVAC decisions (p. 148):

- Energy efficiency (75%)
- Availability (59%)
- Price (50%)

Implications for Energy Efficiency Programs

Developing energy efficiency program intervention concepts is one of the key objectives of this study. The information collected and analyzed through the usual and state-of-the-art techniques like *Satiscan*™ and *Neuroseg*™ provide program intervention insight. Given the size of California's remodeling market, the study findings suggest tailoring energy efficiency programs to the residential remodeling market. The study recommendations for utility energy efficiency programs provide a combination of targeted and broad-based program design and delivery strategies for remodeling market. Some of the recommendations parallel the current energy efficiency program designs in place in the residential portfolio for California. Other recommendations suggest new, more targeted strategies towards remodelers.

I. (B) Key Findings

Recommendations:

- Target programs to the segments with the greatest interest in assistance – Information Seekers and Adding Value. In addition, target information components to Information seekers.
- Address information needs by developing specialized materials focusing on topics of interest to remodelers.
- Deliver information through channels used by remodelers, particularly contractors and stores.
- While financing is not a significant concern to most remodelers, some targeting of financing programs may attract those who do find financing relatively difficult.

New strategies tailored to remodeling that could be incorporated in existing residential programs include:

- Specialized energy guide with advice and information about key remodeling steps, contractor selection, and information about non-energy-related cost and performance characteristics of equipment and materials.
- Pre-audit of home that includes review of remodeling plans and recommendations on how to improve energy efficiency
- Home energy rating after remodeling, follow-up to pre-audit.
- Training of remodeling contractors and designers promoting use of energy guide, pre-audit, and home energy rating.
- Certification of remodeling contractors on energy efficiency practices linked to home energy rating.
- Energy efficient construction loans, linked to pre-audit and home energy rating
- Rebates for efficient appliances and materials targeted through suppliers normally used by remodelers.

In summary, utility energy efficiency programs have real opportunities to target interventions to remodelers in areas where these will be most effective. The recommendations from this study can be used by program managers wherever relevant in enhancing the design of residential energy efficiency programs. Since the current emphasis of energy efficiency utility programs in California has shifted toward resource acquisition, these recommendations may need to be adapted to these circumstances.