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California Residential Remodeling/ Renovation Market Study

Prepared For:
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Table of contents

I. Executive Summary and Key Findings

I. Executive Summary and Key Findings

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.

▪*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.*

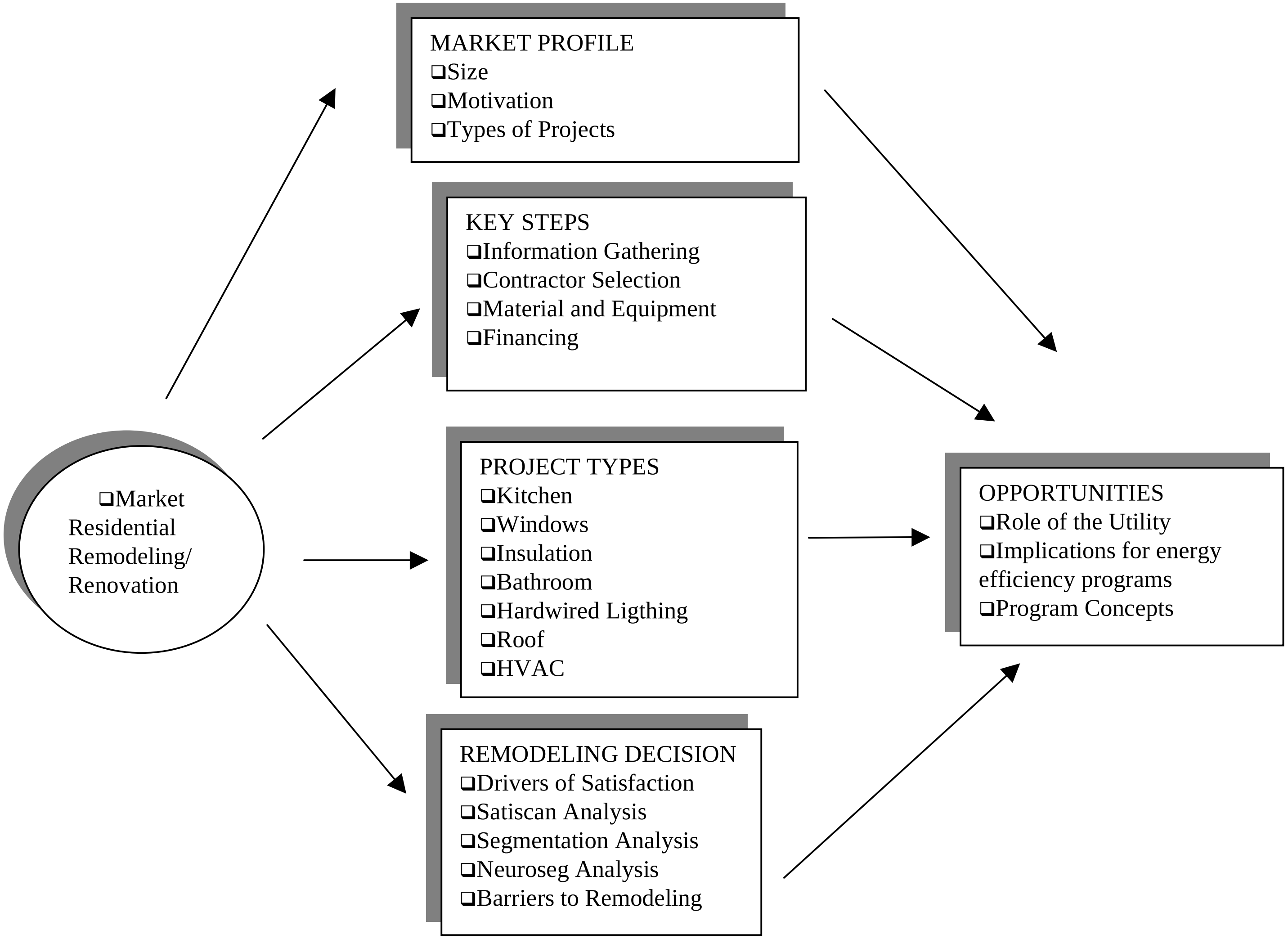
▪*Address information needs by developing specialized materials focusing on topics of interest to remodelers.*

▪*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.

A. Background and Research Objective

When residential homeowners consider a remodeling project, the timing is right to influence their choices of appliances, building design and materials, lighting, and other factors that significantly affect energy efficiency.

The size of the residential remodeling market, together with the importance of other decision influencers, such as architects, contractors, and appliance dealers, suggests that significant opportunities exist for transforming the market to improve adoption of energy efficiency measures. This study assesses the residential remodeling/renovation market, review, verify and identify market barriers for this segment, and model attitudes and behaviors that influence the homeowner's decision-making processes that underlie the selection and implementation of energy efficiency-related alternatives. This project addresses major appliance purchases as part of renovation/remodeling projects, but not as stand alone decisions, hence the use of "remodeling" to designate the market of interest.

B. Overview of the Approach

This research project takes a comprehensive approach in building the understanding of the California **residential** remodeling and renovation market that supports a set of market transformation program intervention recommendations by:

Profiling and segmenting the California residential remodeling/renovation market
↓
Identifying "Key Drivers" to consumers' remodeling decisions and barriers to completion
↓
Identifying potential program interventions and delivery mechanisms

B. Overview of the Approach

A telephone-based survey instrument was administered to 714 residential homeowners in California targeting two distinct segments of the population – homeowners who have completed a home remodeling project and those who have planned and/or started a project and either abandoned it or completed less than 50%. Further details pertaining to these quota groups can be found in the Sample Design and Methodology section of this report.

The overall sample sizes for the project allow for adequate sampling in each of the five California climatic regions (north coast, central valley, south coast, south inland and desert) and analysis of the sample by utility company service territories. Service territories included are Pacific Gas & Electric (inclusive of the common territory with Sacramento Municipal Utility District), Southern California Edison, and San Diego Gas & Electric.

B. Overview of the Approach

To develop extensive segment profiles, the questionnaire instrument includes measures that help to identify the remodeling project components that impact energy consumption (building shell modifications, HVAC system design, selection and installation, major appliances, and room modifications) and to understand the consumer's decision making processes. The questions for this purpose include remodeling needs and preferences, consumer attitudes and behaviors, resources considered (information, contractor and labor supply, etc.), selected, and discarded, and rating importance of various market-related attributes (first costs, operating costs, design and installation practices, availability of appliances and components, etc.).

Information collected from the survey has been analyzed and modeled with statistical analytical methodologies to identify relevant market segments, product and service preferences, demographic profiles, key market barriers and remodeling decision-making processes. The advanced analytics include NeuroSeg™ and Satiscan™. Both are neural network-based techniques that offer a window into market segmentation and key-driver analysis to produce customer preference and decision-making data that more traditional multivariate analyses typically do not uncover.

The research findings delivered in this comprehensive report include detailed remodeling market profiles by geographic region and targeted market segment, and a model of remodeling consumer preferences and decision-making. The results have been used to identify market intervention concepts, information, and potential program offerings. These concepts could be evaluated by fielding a conjoint analysis to a set of respondents similar to initial survey, a step that was not pursued in this study.

C. Study Background and Research Objectives

The goals of this study are:

- Develop profiles for residential customers in California's remodeling market. Particular consideration is given to needs, preferences, and market barriers affecting the remodeling and renovation and appliance efficiency choices in the marketplace given this market event. Residential homeowners who have either expressed serious interest in renovation/ remodeling or who have recently remodeled have been targeted for the study.

- Within this special residential segment, identify the market segments that hold the greatest promise for intervention by energy efficiency programs. Opportunities include, but are not limited to, information and advice, promotion and advertising, financial assistance and incentives, and direct sale of energy efficient products and services.

- Identify the key drivers to consumers' attitudes and behaviors within these segments that stimulate remodeling interest, and their reactions to market barriers that ultimately impact their decision to complete the renovation or remodeling project.

- Review the components of potential residential retrofit and remodeling services and information channels, rank their importance to remodelers and define the key attributes of each service component.

The Study goals can be translated into the following study objects:

- 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.

D. Organization of the Report

The California Residential Remodeling/Renovation Market Study consists of four main information components, primary research with California **single family** homeowners (including townhouses, condominiums and mobile homes) and who recently planned or completed a home remodeling project, including comprehensive data analysis and reporting, a key driver analysis using *The Response Center's* Satiscan™ Analysis, and segmentation analysis using Neuro-Seg,™ and a program concept component based on findings of the data collected Following are brief descriptions of what can be found in remaining sections of this report**:**

- The **Sample Design and Methodology** Section III- In this section you will find the sampling strategy, information about the number of interviews completed, how and when interviews were completed, incidence of qualification, and survey structure.

- The **Satiscan™ Analysis** Section IV includes a comprehensive write-up of the key drivers identified by the Satiscan™ model. This section will explain how Satiscan™ modeling works and provides a graphic view of the inter-relationships of key drivers and overall satisfaction. Key drivers are also discussed in the Detailed Analysis Section where applicable.

- The **NeuroSeg™** Analysis results can be found in the **Segmentation Analysis** Section V. This section explains how market segments are derived and an overview of the remodeling market segments identified as a result of this research. In the Detailed Findings section results by market segment are also graphically displayed and discussed.

D. Organization of the Report

- The **Program Concepts** Section VI discusses the implications of the study results for designing programs to promote energy efficiency in home remodeling. This section briefly reviews existing program designs in California for Residential Retrofit and Renovation targeting single-family homes or individual consumers. It then discusses the findings on satisfaction drivers and barriers to completion that bear on energy efficiency program design. It suggests that viewing remodeling as a unique event with its own particular considerations for consumers could improve program designs targeting that market. It proposes a set of program concepts addressing the particular information, contractor, and financing needs of remodelers.

- The **Detailed Analysis** Section VII provides a comprehensive look at the California remodeling market. In this section you will find information on characteristics of remodeling projects, including satisfaction with the project and individual components of the projects, information gathering aspects of the project, any energy efficiency considerations made in the project, selection of materials and equipment, and contractor, financing and future role of the utility program in these decisions.

- The **Demographics** Section VIII - Includes respondent demographic profiles

- The **Appendix** - Includes survey instruments and proposed concept design.

Sample Design and Methodology

The California Residential Remodeling/ Renovation Market Study consists of 714 telephone interviews conducted using *The Response Center's* Computer Assisted Telephone Interviewing (CATI) system. To qualify for the study respondents must own their home, the age of the home must be one year or older, the cost of the remodeling project must be $5,000 or more, the home must be a detached single-family home, condominium, townhouse, or mobile home. Additionally, the remodeling project must include at least one of the following major remodeling efforts**:**

- Remodeling the kitchen including new appliances
- Remodeling the bathroom
- Window additions or replacements
- Adding or replacing insulation or other weatherization measures
- Adding or replacing hardwired indoor or outdoor lighting fixtures
- Replacing the home roof including plywood and shingles
- A heating and/or air conditioning system addition or replacement

Of the 714 interviews conducted, 502 respondent interviews were conducted with respondents who completed their projects (120 of which were at least 50% complete but less than 100%, and 382 of which were totally finished). Remodelers from in this state are called the “complete group”. 212 interviews were conducted with respondents who are called the ‘Incomplete Projects’ (34 of which seriously considered a project but decided not to do it, 113 of which were still in the planning stage, and 65 of which had started the project but were less than 50% complete at the time of the interview).

Sample Design and Methodology

- Approximately 18% of California homeowners in the five climatic regions (north coast, central valley, south coast, south inland and desert) qualified for this study.
- To control representation by these climatic regions and utility market territory, interviews were conducted using a two-pronged data collection and analysis approach as follows:

Interviews in Completed Group:

Utility Company	Central Valley	Desert	N. Coast	S. Coast	S. Inland	Total
PGE	102	--	104	--	--	282
SCE	--	100	--	54	89	243
SDGE	--	--	--	53	--	53
Total	102	100	104	107	89	**502**

Interviews in Incomplete Group:

Utility Company	Central Valley	Desert	N. Coast	S. Coast	S. Inland	Total
PGE	42	--	41	--	--	83
SCE	--	41	--	20	48	109
SDGE	--	--	--	20	--	20
Total	42	41	41	40	48	**212**

Sample Design and Methodology

California Climate Regions by County (1,672,144 Total Homeowner Universe)

North Coast Region
CEC Climate Zone 1,4,5
(494,329 homeowners)

Alameda	Mariposa	San Mateo
Alpine	Medocino	Santa Barbara
Calaveras	Modoc	Santa Clara
Contra Costa	Monterey	Santa Cruz
Del Norte	Napa	Shasta
El Dorado	Nevada	Sierra
Humboldt	Placer	Siskiyou
Lake	Plumas	Solano
Lassen	San Benito	Sonoma
Marin	San Francisco	Trinity

Central Valley Region
CEC Climate Zone 2,3,6,7
(262,864 homeowners)

Amador	Madera	Sutter
Butte	Merced	Tehama
Colusa	Sacremento	Tulare
Fresno	San Joaquin	Yolo
Glenn	Stanislaus	Yuba
Kings		

South Coast Region	**South Inland Region**	**Desert Region**
CEC Climate Zone 8,11,13	**CEC Climate Zone 9,12,16**	**CEC Climate Zone 10,15**
(455,814 homeowners)	**(291,654 homeowners)**	**(155,219 homeowners)**
Los Angeles* **	Inyo	Imperial
Orange	Los Angeles* **	Riverside
San Deigo	Mono	San Bernardino
Santa Barbara**		
Ventura		

**Some Los Angeles Zip Codes were eliminated from the sample pull.*
*** The borders of Santa Barbara and Los Angeles counties overlapped climate zone regions. For these counties, assignment to a climate region was based on zip code rather than county.*

Sample Design and Methodology

Separate survey instruments were constructed for Completed Group respondents and Incomplete Group respondents. Copies of the survey instruments can be found in the Appendix. The average length of the telephone interview was 25 minutes. Interviews were conducted between September 22 and December 17, 2000.

To gather information about each of the below remodeling projects, the Completed Project instrument was designed in modules with a priority rotation. Respondents may have completed more than one of these projects as part of their remodeling work; however, respondents were asked questions on only one project type. The priority rotation was controlled to insure a sufficient number of each type of project. Additionally, for questions regarding project motivation, information gathering, contractor selection, and financing, respondents were asked questions specific to their project.

	# of Respondents
➢ Kitchens	74
➢ Bathrooms	66
➢ Windows	92
➢ Insulation	87

	# of Respondents
➢ Indoor or outdoor hardwired lighting	80
➢ Roofs	70
➢ HVAC	33

Notes on Analysis

Unless otherwise noted, a 10-point scale with 1 being the lowest possible score on the scale and 10 being the highest possible score is used. A top-3-box score is an 8, 9 or 10 on the 10-point scale and a bottom-3-box score is a 1, 2 or 3 on the same scale.

Differences cited are statistically discernible at the 95% level of confidence. The margin of error associated with each group is as follows:

- Completed Group +/- 4.4 percentage points
- Incomplete Group +/- 6.7 percentage points

Market segments defined by the NeuroSeg™ analysis are noted below. Details regarding these segments and descriptions can be found in the Segmentation Analysis section of this report.

- Segment A – Take-Care-Of-It
- Segment B – Do-It-Yourselfers
- Segment C – Information Seekers
- Segment D – Adding Value

V. Satiscan™ Analysis

V. Satiscan™ Analysis

- A key driver analysis was conducted to identify the drivers of satisfaction relative to a home remodeling project costing at least $5,000 and at least 50% complete. The traditional way of conducting this analysis would be to use multiple regression. However, such a method would only allow us to report on direct impacts (if any) on overall satisfaction. It would not be able to explain the interrelationships among the drivers. Such an explanation is very useful in determining the most effective point of intervention for increasing satisfaction with a home remodeling project.

- To obtain such an explanation, a SATISCAN™ analysis was used. SATISCAN™ is an artificial intelligence based analysis tool developed by *The Response Center* that has the capacity to quickly search through all possible relationships among the key drivers of satisfaction with home remodeling and identify the model that best fits the data at hand.

- If the number of variables used in the analysis is large, the total number of models that could fit the data is enormous. Manually calculating the strengths of the relationships between variables in each of these models would be an impossible task. This is where the power of the artificial intelligence based system becomes useful. Artificial intelligence based systems are inherently suited for repeatedly doing a series of operations quickly and efficiently. Using such a system, SATISCAN™ is able to identify the model that best fits the data in a manner that multiple regression cannot replicate.

- The analysis began with a variable set that consisted of 58 variables from the 'Completed Projects' questionnaire, including Q3, the dependent variable (overall satisfaction with the remodeling project). Independent variables included were:

QH. Types of Remodeling Projects Conducted

Ha. Kitchen including new appliances

Hb. Bathroom

Hc. Window additions or replacements

Hd. Adding or replacing insulation or other weatherization measures

He. Adding or replacing hardwired indoor or outdoor lighting fixtures

Hg. Replacing the home roof including plywood and shingles

Hi. Heating and/or Air Conditioning system addition or replacement

QHf was deleted after the survey pre-test

Q4. Included in the Remodeling Project

4a. Structural changes to the basic living area of your home

4b. Earthquake related structural modifications

4c. Electrical wiring

4d. Conversion to a different energy or fuel source

4f. Water heating system

4g. Adding or converting a room

Q4e was deleted after the survey pre-test

Q66. Overall satisfaction with the information-gathering phase of the home remodeling project

Q67. Used these sources for information

67a. Books

67b. Contractor

67c. Architect or Designer

67d. Utility company

67e. Family or friend

67f. Literature from the store

67g. Internet

67h. Magazines

67i. Newspaper

67j. Sales people

Q71. Satisfaction with finding information on…

71a. which contractors to use

71b. financing options available to you

71c. price comparisons on material or equipment

71d. technical information about material or equipment

71e. quality ratings for equipment or materials

71f. brand comparisons

71g. maintenance options

V. Satiscan™ Analysis

Q72. Satisfaction with the information source itself…

72b. information supplied by the contractor

72e. information supplied by family or friend

72f. The amount of literature available at the store

72j. Information supplied by the sales people at the store

(other questions in this series had too many missing values)

Q76. Length of time spent researching product brands

Q78. Whether or not respondents looked for information on energy efficiency.

Q81. Whether or not respondents installed at least one energy efficient measure.

Q84. Satisfaction with respondents' energy efficiency measure.

Q86. Primary source of labor for the remodeling project.

Q88. Satisfaction with contractors on this project in general.

Q89. Satisfaction with specific components of the contractors' work.

89a. Quality of the work performed

89b. Coordination of schedules

89c. On-time performance

89d. The financial arrangement

89e. Quality of materials used

89f. Contractor knowledge and experience

89g. Being easy to reach

89h. Following up with you after the work is finished

91. Whether or not respondents evaluated contractors by the following measure before the work was performed on their project.

91a. call references

91b. go to a previous job or location

91c. read contractor brochures and other materials

91d. obtain proof of certifications

91e. obtain information on contractor financial stability

91f. check insurance information

The following were not included in the analysis due to too many missing values.

Q94. Overall satisfaction with financing options

Q95. Satisfaction with various components of financing.

V. Satiscan™ Analysis

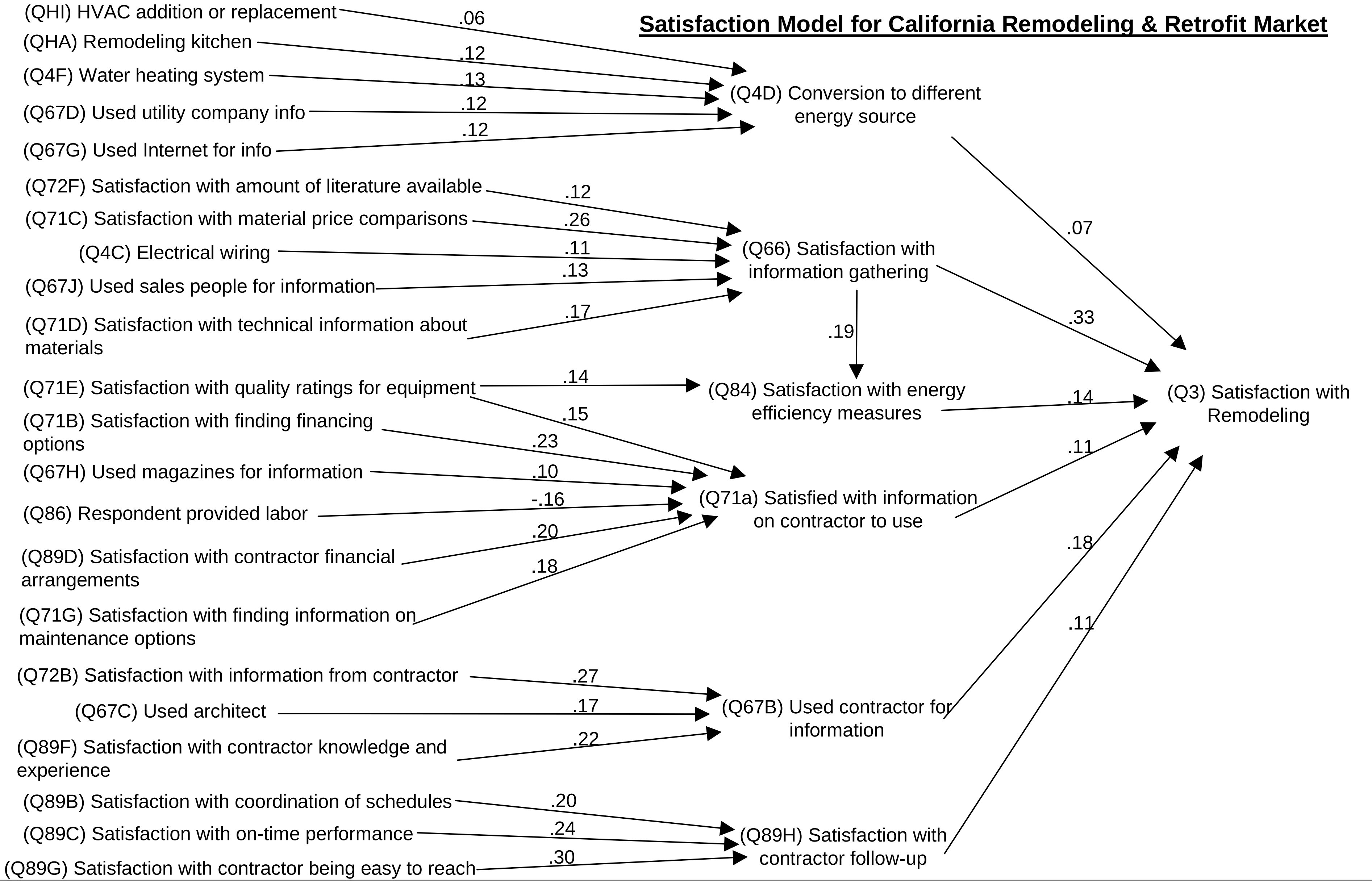
- The analysis reveals that the following variables have an impact on overall satisfaction.

Variables With Impact

- Q66 Satisfaction with information gathering
- Q67b Used contractor for information
- Q84 Satisfaction with energy efficiency measures
- Q89h Satisfaction with contractor follow-up
- Q71a Satisfaction with information on contractor to use
- Q71c Satisfaction with material price comparisons
- Q4d Conversion to different energy source
- Q71d Satisfaction with technical information about materials
- Q72b Satisfaction with information from contractor
- Q67j Used sales people for information
- Q71e Satisfaction with quality ratings for equipment
- Q4c Electrical wiring
- Q89f Satisfaction with contractor knowledge and experience
- Q72f Satisfaction with amount of literature available
- Q71b Satisfaction with finding financing options
- Q67c Used architect
- Q89c Satisfaction with on-time performance
- Q89g Satisfaction with contractor being easy to reach
- Q71g Satisfaction with finding information maintenance options
- Q86 Respondent provided labor
- Q89d Satisfaction with financial arrangement
- Qha Remodeling kitchen
- Q4f Water heating system
- Q67d Used utility company for information
- Q67g Used Internet for information
- Q67h Used magazines for information

- The final model obtained, along with the strengths of the relationships, is given in the figure on page 34. The strength of a relationship can be interpreted in the same way one would interpret an importance weight in a regression analysis. For example, a unit increase in Q66 (satisfaction with information gathering) will lead to a .36 increase in Q3 (overall satisfaction with the remodeling project) [.33+(.19*14)].

Satisfaction Model for California Remodeling & Retrofit Market



V. Satiscan™ Analysis

- SATISCAN™ provides direct and indirect effects on the final dependent variables (Q3). As can be seen on the chart on the previous page, Q71c (satisfaction with materials price comparison) has a direct effect on Q66 (satisfaction with information gathering) but an indirect effect on Q3 (overall satisfaction with remodeling) through its effect on Q66. Q4d, Q66, Q84, Q71a, Q67b and Q89h all have direct effects on Q3 as shown by the direction of the arrows. In addition, Q66 also has an indirect effect on Q3 through Q84.

Total Effects on Overall Satisfaction with Remodeling Project (Q3)

Q66	Satisfaction with information gathering	0.36	Q89f	Satisfaction with contractor knowledge and experience	0.04
Q67b	Used contractor for information	0.18	Q72f	Satisfaction with amount of literature available	0.04
Q84	Satisfaction with energy efficiency measures	0.14	Q71b	Satisfaction with financing options	0.03
Q89h	Satisfaction with contractor follow-up	0.11	Q67c	Used architect	0.03
Q71a	Satisfaction with information on contractor to use	0.11	Q89c	Satisfaction with on-time performance	0.03
Q71c	Satisfaction with material price comparisons	0.09	Q89g	Satisfaction with being easy to reach	0.03
Q4d	Conversion to different energy source	0.07	Q71g	Satisfaction with maintenance options	0.02
Q71d	Satisfaction with technical information about materials	0.06	Q86	Respondent provided labor	-0.02
Q72b	Satisfaction with information from contractor	0.05	Q89d	Satisfaction with financial arrangement	0.02
Q67j	Used sales people for information	0.05	Qha	Remodeling kitchen	0.01
Q71e	Satisfaction with quality ratings for equipment	0.04	Q4f	Water heating system	0.01
Q4c	Electrical wiring	0.04	Q67d	Used utility company for information	0.01
			Q67g	Used Internet for information	0.01
			Q67h	Used magazines for information	0.01

- The above demonstrates that Q66 (satisfaction with information gathering) and Q67b (used contractor for information) have the highest impact on satisfaction.

VI. Segmentation Analysis

VI. Segmentation Analysis

- NeuroSeg™, a powerful approach to market segmentation, was used for this study. NeuroSeg™ is proving more actionable than traditional segmenting techniques. NeuroSeg™ uses a specialized neural network known as a Kohonen Self-Organizing Map to find relevant market segments and to then relate segmentation to relevant outcome variables. NeuroSeg™ evaluates the remodeling consumers' preferences & behaviors, project components, resources considered, demographics and other information gathered in the survey resulting in actionable market segments. NeuroSeg™ addresses the problems faced with traditional methods of segmentation. In particular, NeuroSeg™ does not require a normal distribution of the variables or linear relationships between variables. The technique can effectively handle mixed scales of variables, can incorporate prior knowledge, and does not require prior identification of potential clusters. This is particularly useful in the evaluation of the CA remodeling market since we are considering such a variety of variables in identifying the intervention opportunities.

- The NeuroSeg™ analysis reveals 4 unique segments as described below.

- ***Proportions by segment:***

  - Segment A – Take-Care-Of-It 34%
  - Segment B – Do-It-Yourselfers 30%
  - Segment C – Information Seekers 21%
  - Segment D – Adding Value 15%

- ***Take-Care-Of-It* (Segment A)**– This group is more likely (77% vs. 12% and 54% respectively) than the *Do-it-Yourselfers* or *Information Seekers* to have used a contractor as the primary source of labor for the remodeling work. Moreover, 100% say contractors are used primarily or in part for the project. When *Take-Care-Of-It* respondents request bids from contractors they generally only ask for one. They are also more likely than the *Do-it-Yourselfers* or *Information Seekers* to say they are highly satisfied with the work the contractor did. Interestingly, they are more likely than the *Do-it-Yourselfers* to have actually finished the entire project at the time of the interview. They are less likely than *Information Seekers* to seek out information sources on their own and find the energy efficiency information from the contractors and architects or designers to be useful. This suggests that they rely on the contractors, architects and designers to handle the information issues. *Take-Care-Of-It* is not as likely to be motivated by appearance issues such as 'home appearance,' and 'old fixtures' as are the respondents in *Information Seekers* group.

- They are more likely to have completed a higher cost project of about $30,000 than are the *Do-It-Yourselfers* or *Adding Value.* They also express lower interest in all of the product offerings mentioned in the survey (Q109 series) than do *Information Seekers* or *Adding Value*. *Take-Care-Of-It* respondents are older than *Do-it-Yourselfers* or *Information Seekers*, with an average age of 58 years. Being older may be why respondents in this group want others to 'Take-Care-Of-It' for them. They are more likely than *Do-it-Yourselfers* to have lived in their home for more than 20 years, with the median length of time in the home of 19 years. They are more likely than *Information Seekers* to be White (83%). Median annual household income for this group is $81,000. The median present home value is reported to be $264,000, which is significantly higher than *Adding Value*.

- ***Do-it-Yourselfers* (Segment B)** – What differentiates this group from the others is their greater propensity to say that they, themselves, were the primary source of labor on the remodeling job. Only 21% report using a contractor on the project at all. Not surprisingly, they are not likely to seek information about or from contractors.

- They are also less likely to have obtained information from sales people, newspapers or books than the respondents in *Information Seekers* group. When they do get contractor bids they are more likely than the *Take-Care-Of-It* respondents to request 2-3 of them.

- The cost of the project is reported to be lower than either the *Take-Care-Of-It* or *Information Seekers* groups, with a median cost of about $15,000. They are younger, with an average age of 49 years, which may be a reason why this group chooses to do the work themselves. They are mostly White (82%), with a median annual household income of $80,000. The median reported present home value is about $238,000.

- ***Information Seekers* (Segment C)** – As the name implies, this group is more likely to seek information from a variety of sources. They are more likely to than *Do-it-Yourselfers* or *Take-Care-Of-It* to have sought information from 'sales people,' 'newspapers,' 'books,' and the 'utility company.' They are also <u>less likely</u> than any other group to be highly satisfied with the project overall and <u>less satisfied</u> with information gathering overall.

- They are more likely than the *Take-Care-Of-It* group to live in a house that is 20+ years, and they are more often motivated to do the work by the home appearance and age of the fixtures than are the *Take-Care-Of-It* group. More so than *Adding Value*, they say that they took on the project due to a recent home purchase or sale.

- This group more often reports that the remodeling project includes a 'kitchen' and 'adding or replacing hardwired lighting.' They are more likely than the *Do-it-Yourselfers* to use a contractor as the primary source of labor, but less likely than the *Take-Care-Of-It* to do so. Only 68% of the *Information Seekers* report using a contractor for any of the remodeling work. When they do use contractors they are extremely dissatisfied with the contractors' work, with only 22% who give a top-3-box rating on a 10-point scale compared to 91% and 92% of *Take-Care-Of-It* and *Do-it-Yourselfers* respectively. Contributing to their dissatisfaction with contractors is:

    - Quality of materials
    - Quality of work
    - Knowledge and experience
    - Financial arrangement
    - Being easy to reach
    - On-time performance
    - Coordination of schedules
    - Follow-up

- Across the board *Information Seekers* report a higher level of interest in all proposed product offerings than do *Take-Care-Of-It* or *Do-it-Yourselfers.* They are more likely than *Take-Care-Of-It* or *Adding Value* to have lived in their home for less than 5 years (23%). The median cost of the remodeling project is about $22,000. They are a little younger than *Take-Care-Of-It* group, although the average age is 52 years. 24% report that they are between the ages of 18 and 44, compared with 13% in the *Take-Care-Of-It* group. While the majority (70%) in this group is White, there is a significantly higher proportion that is Non-White (23%), with 7% who say Black or African American and 6% who say they are Asian. Their annual household income is higher than other groups at $91,000.

- ***Adding Value* (Segment D) –** The respondents in this segment are more likely to say the motivation for the remodeling project was to increase the 'value of their home.' They are similar to the *Information Seekers* in that they look for information for their project. However, what differentiates them is they are generally more satisfied with the information gathering phase overall. They are particularly more satisfied than *Information Seekers* with what they found on:
  - Energy efficiency
  - Quality ratings
  - Price comparisons
  - Technical information about materials and equipment
  - Brand comparisons
  - Maintenance options
  - Financing

- Interest in the product offerings (Q109 series) is highest among this group.

- Similar to the *Take-Care-Of-It* group, 99% of *Adding Value* respondents report using a contractor for the project. The *Adding Value* group is more likely to have obtained financing for the remodeling work than are any of the other segments. The median cost of a remodeling project is the lowest of all four groups at about $13,000 (40% in the $5,000-$10,000 range). Interestingly, respondents in this group report lower values on demographic questions such as 'cost of project' and 'household income.' They are more likely than *Information Seekers* to have lived in their residence for more than 20 years (52%) and their average age is 56 years old. They are predominately White (77%). Home values for this group are reported to be lower than either *Take-Care-Of-It* or *Information Seekers*, with 28% reporting that the value is less than $150,000. The median value is about $233,000. Median household income is approximately $73,000.

VII. Program Concepts

VII. Program Concepts

The findings of the California Residential Remodeling/ Renovation Market Study suggest several ways to promote energy efficiency in residential remodeling. In developing these program concepts, four information steps were used, the results of which are presented below:

- Review of current programs offered by the California utilities
- Characteristics of the residential remodeling market
- Assessment of satisfaction drivers in, and barriers to, successful remodeling
- Develop program elements focused on remodelers

Review of Current Programs

All four California Investor Owned Utilities (IOU) currently offer programs for Residential Retrofit and Renovation, some on a statewide basis and others on an individual basis.

While the elements of these program designs can probably influence the remodeling market, the programs themselves do not specifically target home remodelers. Therefore, in proposing program concepts for this market, one must consider specific market barriers and drivers that affect this market and its segments and focus the program elements to address them.

For the purposes of this study, only those programs targeting single-family homes or individual consumers are considered relevant. These programs can be summarized as follows:

Common Current Program Design Elements

Program Type	Residential Contractor Program	Energy Audit Services	Home Energy Ratings	Mass Market Information	Consumer Financing
Target Market Segment	Single family homes	Residential customers	Single family homes	Residential customers	Single family homes
Target End-Use	Whole-house retrofits of energy efficient products and services	Energy efficiency measures	Windows, lighting, water heating, thermal shell	Energy efficient appliances, measures, practices, and resources	Whole-house retrofits of energy efficient products and services
Type of Opport-unity	Increase adoption of existing efficiency measures	Increase adoption of existing efficiency measures	Increase adoption of existing efficiency measures	Increase adoption of existing efficiency measures	Increase adoption of existing efficiency measures
Market Actors	Contractors, installers, repair personnel, community based organizations	Consumers	Consumers, contractors, lenders, mortgage brokers, real estate agents, consultants, local governments	Consumers	Consumers
Market Barriers	Unavailability of information Search costs Bounded rationality	Unavailability of information Search costs	Asymmetric information Search costs Organizational decision-making practices	Search costs, transaction costs, asymmetric information, performance uncertainties, bounded rationality	Access to capital Organizational decision-making practices
Inter-ventions	Training Advertising Rebates Incentive Bonuses	Energy audits	Training Energy Ratings Financing	Energy Guide Information Advertising	Financing Advertising

Significant Characteristics of the Residential Remodeling Market

Approximately 9% of the 8.3 million single-family homes (detached, condominiums, townhouses, and mobile homes) in California have major remodeling projects each year, a market worth at least $20 billion. Many of these projects present significant opportunities for improving energy efficiency because they affect major energy uses in the home and because the remodelers seek information about energy efficiency when planning their projects:

Component	Proportion of Completed Projects Including Component	Proportion of Remodelers Who Looked for Information on Energy Efficiency
Kitchen	64%	61%
Windows	61%	61%
Bathroom	60%	33%
Lighting (hardwired)	58%	61%
Insulation	53%	71%
HVAC	44%	76%
Sources:	*p. 72*	*p. 182*

As is apparent from the discussion of remodeling project satisfaction drivers and barriers, information seeking is a substantial activity in the remodeling process. Remodelers typically use a number of sources for information and report varying degrees of satisfaction with them, as shown in the following table:

Information Source	Proportion of Remodelers Who Used Source	Proportion Who Were Satisfied with Source	Useful sources for Energy Efficiency Information
Contractor	63%	61%	49%
In-Store Literature	61%	42%	42%
Architect/ Designer	-	43%	41%
Family/ Friends	54%	49%	36%
Sales People	48%	41%	36%
Utility	14%	28%	32%
Sources:	*p. 164*	*p. 174*	*p. 184*

This breakdown reveals the importance of trade allies like contractors, architects, and stores, as well as word of mouth, as information sources. Furthermore, utilities overall are not very important as an information source, except as a source of information about energy efficiency. In fact, other data from the study show that utilities are consulted most about insulation and HVAC, but even for those components, less than one-third of respondents used this source. These findings suggest directing energy efficiency information through the most heavily used sources of information by remodelers, contractors and stores. They also suggest there is room for improvement in the delivery of information through these channels since, at best, two-thirds of respondents report being highly satisfied with these information sources.

Assessment of Remodeling Project Satisfaction Drivers and Barriers

The California Residential Remodeling/ Renovation Market Study has addressed both the drivers of satisfaction in completed remodeling projects and the barriers that inhibit completing projects. Findings of the study indicate the pivotal role of information and contractors in a successful remodeling project.

The satisfaction model indicates that satisfaction with information gathering overall is the single most important driver, with a weight of .36. In addition, a number of other drivers related to information have substantial weights:

Information-Related Drivers

Satisfaction with information gathering	0.36	Q66
Used contractor for information	0.18	Q67b
Satisfaction with information on contractor to use	0.11	Q71a
Satisfaction with material price comparisons	0.09	Q71c
Satisfaction with technical information about materials	0.06	Q71d
Satisfaction with information from contractor	0.05	Q72b
Used sales people for information	0.05	Q67j
Satisfaction with amount of literature available	0.04	Q72f

Source: *p. 40*

These drivers fall into two categories, those related to the type of information and those related to the source. Remodelers want information about the price and specifications of materials, and about contractors. They rely heavily on contractors as an overall source of information.

The model also indicates importance of contractors in remodeling satisfaction, with several contractor-related drivers having substantial weights:

Contractor-Related Drivers

Used contractor for information	0.18	Q67b
Satisfaction with contractor follow-up	0.11	Q89h
Satisfaction with information on contractor to use	0.11	Q71a
Satisfaction with information from contractor	0.05	Q72b
Satisfaction with contractor knowledge and experience	0.04	Q89f
Satisfaction with on-time performance	0.03	Q89c
Satisfaction with being easy to reach	0.03	Q89g

Source: *p. 40*

These drivers relate primarily to contractor performance, and they suggest that customers seek information about performance in their selection decision and that contractor performance and credibility are closely related.

The model also indicates that energy efficiency plays a role in satisfaction with remodeling, with an overall weight of .14 (p.40), driven by equipment ratings and information gathering. These drivers suggest that information about energy efficiency can influence satisfaction and perhaps that effective program design could increase the role of energy efficiency in remodeling.

VII. Program Concepts

Findings of the segmentation analysis show that the best targets for utility company sponsored programs are the *Information Seekers* and *Adding Value* remodelers. The most differentiating characteristic that sets apart *Information Seekers* is their quest for information about home remodeling at all levels. They are more likely to seek information from sales people, books, and the utility company. However, *Information Seekers* are also the least satisfied group overall making them the ideal target for program that would seek to address their concerns. Contributing to *Information Seekers'* dissatisfaction is their attitude toward contractors. Specifically, this group provides lower scores on many of the contractor key driver questions.

Top-3-Box Scores on a 10-point Scale

Contractor Performance Ratings	Take-Care-Of-It	Do-It-Yourselfers	Information Seekers	Adding Value
Quality of Materials Used	96%	61%	66%	97%
Quality of Work Performed	95%	49%	37%	91%
Contractor Knowledge and Experience	91%	55%	36%	95%
The Financial Arrangement	85%	64%	36%	91%
Being Easy to Reach	91%	33%	25%	87%
On-Time Performance	85%	39%	16%	84%
Coordination of Schedules	85%	33%	21%	82%
Contractor Follow-up	81%	21%	11%	72%
Source:	*p. 212*			

Adding Value respondents generally give higher scores when rating their attitudes toward contractors' work than do the *Information Seekers*. However, this group is just as interested in utility company sponsored programs as the *Information Seekers* are. The differentiating characteristic that sets this group apart from the others is their greater propensity to be motivated to undergo a home remodeling by 'the value of their home.' 57% of the Adding Value respondents say this is a motivating factor, while only between 35% and 45% of the respondents in other segments say this.

The *Information Seekers* and *Adding Value* segments also express substantial interest in having utilities facilitate certain aspects of their remodeling projects, particularly in helping to reduce risks and hassles associated with contractors. This interest can be used as the basis for utility programs that promote energy efficiency measures in remodeling projects, especially given the significant role contractors play as sources of information and influencers in materials and equipment selection.

	Top-3-Box Scores on a 10-point Scale			
Interest in Program Ideas	Take-Care-Of-It	Do-It-Yourselfers	Information Seekers	Adding Value
Pre-Screen Contractors	15%	14%	74%	76%
Contractors trained and certified by utility company	15%	7%	53%	67%
Maintenance services	14%	11%	40%	56%
Utility company to provide financing resources	4%	6%	43%	68%
On-site installations	8%	3%	50%	53%
Obtaining financing from utility company	7%	10%	41%	56%

Source: p. 227

Do-It-Yourselfers have a greater propensity to say they do their own remodeling and do not hire contractors. Only about two-in-ten *Do-It-Yourselfers* hire contractors for any of the remodeling work. This group is generally not satisfied with the contractor experience, and they are not likely to seek information about them.

On the other hand, Take-Care-Of-It respondents always hire contractors. All Take-Care-Of-It respondents report using contractors and 77% say the contractors are the primary source of labor. Furthermore, this group is generally highly satisfied with the contractor experience.

Turning to the analysis of barriers to completing remodeling, here again information plays a pivotal role. Information gathering takes place early in the remodeling process, with more of those who had not completed projects taking this step than any of the others. Furthermore, those who abandoned projects were more likely not to have taken the various steps than those who are still planning or are in progress.

	Total (n=212)	**Abandoned (n=34*)**	**Planning (n=113)**	**In Progress (n=65)**
Have not looked for information.	32%	35%	33%	30%
Have not identified materials and/or equipment	37%	47% C	52%C	12%
Have not looked for contractors	57%	73%	57%	48%
Have not looked for financing	72%	82%	73%	68%

Source: *p. 94*

***Small sample**

***** Letter denotes significantly higher than the other group***.

Difficulties carrying out these steps represent substantial barriers to completion. While many of those who carried them out found them relatively easy, surprisingly large proportions found them relatively difficult, as shown below:

	Proportion Who Found Easy (Top 3 Boxes)	Proportion Who Found Difficult (Bottom 3 Boxes)
Information	35%	15%
Materials and/or equipment	33%	12%
Contractors	44%	16%
Financing	37%	19%
Sources:	*pp. 152, 162, 204, 222*	

These difficulties appear to result from a variety of factors, but cost and lack of time are frequently cited by those who have not taken these steps, as illustrated in the following table:

	Proportion Citing Cost/ Availability of Funds	Proportion Citing Lack of Time	Other Commonly Cited Reasons
Have not looked for information (32%)	18%	10%	Not that far (16%) On hold (15%)
Have not identified materials and/or equipment (37%)	17%	15%	Not that far (16%)
Have not looked for contractors (57%)	18%	8%	No need (26%) Not that far (13%)
Have not looked for financing (72%)	8%	5%	Using own money (32%) No need (23%)
Source:	*p. 94*		

These observations suggest that while many potential remodelers find it unnecessary to undertake one or more of these steps (especially selecting a contractor or searching for financing), among those that do undertake them, limited time and funds can present barriers to completing them.

The study also suggests that while many remodelers do not need financing, availability of financing presents a barrier to some potential remodelers, especially those in the *Information Seeker* and *Adding Value* segments. Information gaps and lack of time may prevent potential remodelers from connecting with sources of financing.

In summary, both the satisfaction modeling and the barriers analysis indicate that information of particular kinds and relationships with contractors have substantial influence on satisfactory completion of home remodeling projects.

Proposed Program Concepts

Current program designs for residential retrofit and renovation while available to this market do not focus specifically on the home remodeling market. More precisely, they do not address remodeling as an event that has associated with it a specific set of decisions and information needs.

While current program designs may be appropriate for engaging the residential market broadly, some refinements could increase the adoption of energy efficiency measures in home remodeling.

The preceding discussion of the barriers to remodeling and of the satisfaction drivers in remodeling suggests an approach, based on the following three premises:

- The customer's primary goal is to remodel his or her house to achieve benefits related to comfort, appearance, value, etc., with saving energy as a secondary benefit.
- Customers look to various sources for information about remodeling, which could include, but are not limited to, information about saving energy.
- Programs that link customers' desire for information about remodeling with information about energy-saving opportunities and that lower the barriers to completing remodeling projects will increase the adoption of energy-saving measures.

Given the size of the home remodeling market in California, tailoring an energy efficiency program to this segment could represent a significant opportunity.

VII. Program Concepts

Information-Related Program Elements

- **Energy Guide** – Create a specialized version of the Statewide Energy Guide directed to home remodeling. Include advice about undertaking the various steps involved in remodeling – information gathering, contractor selection, materials and equipment selection, and financing. Include information about non-energy-related cost and performance of equipment and materials typically included in remodeling. Include product- and model-specific information. Distribute the Guide through sources typically used by remodelers – contractors, in-store displays, sales people.

- **Audits** – Expand the typical energy audit to include a design-review "pre-audit" of remodeling plans. Assess the plans from the perspective of energy use impacts and energy saving opportunities. Make recommendations regarding how to take advantage of these opportunities in the remodeling project.

- **Home Energy Rating** – Offer the home energy rating service as a follow-up "post-audit" of remodeling projects. Coordinate the assessment with the pre-audit so that the pre-audit identifies factors in the remodeling project that will affect the energy rating.

Contractor-Related Elements

- **Training** – Direct training effort to contractors (and designers and architects) who do substantial remodeling business. Include topics on energy efficient design and construction practices (especially for HVAC, windows and insulation), energy efficient materials and equipment selection, energy auditing and rating practices and standards, financing, and information sources, especially the Energy Guide. Promote use of the Energy Guide, pre-audit, and Home Energy Rating.

- **Certification** – Create an Energy Star Remodeling program for contractors linked with the Home Energy Rating. Train and monitor contractors who do remodeling who participate for adherence to the standards and award an Energy Star Certification to those who pass. Publicize the Energy Star Remodeling certification and those contractors who hold it.

- **Preferred Contractor Network** – Work with Value Star and other consumer products and services rating agencies to recommend remodeling contractors who use energy efficient designs and practices. Couple with the Energy Star certification.

Financing-Related Elements

- **Energy Efficient Construction Loans** – Expand the Energy Efficient Mortgages program to include construction financing for residential remodeling. Couple with the Home Energy Rating and the contractor certification.

- **Rebates** – Target rebates for energy efficiency measures (typically HVAC equipment, insulation windows, and appliances) to remodelers. Publicize through remodeling contractors, home stores, financing companies, and information sources typically used by remodelers.

Although not pursued in this study, it is possible to test the interest and value of these proposed program concepts in a conjoint analysis. The appendix provides a proposed design for such a conjoint analysis. The concepts cover three attributes – information, contractors, and financial incentives. Within each attribute, levels need to be specified that represent increasing intensity with lower levels either incorporated or replaced.

VIII. Detailed Analysis

A. Detailed Findings Introduction

On the following pages appears a detailed discussion for each question asked in the survey instruments (Completed Groups and Incomplete Group).

Statistically significant higher differences are labeled with 'letters.' For example, if a percentage is significantly higher than another group it is labeled with the letter corresponding to that group. On page 64, modules are labeled with A, B, C, D, etc.. If a letter appears with the number than that group is statistically higher than the group(s) signified by letter.

The data is organized in this section by the following areas of interest:

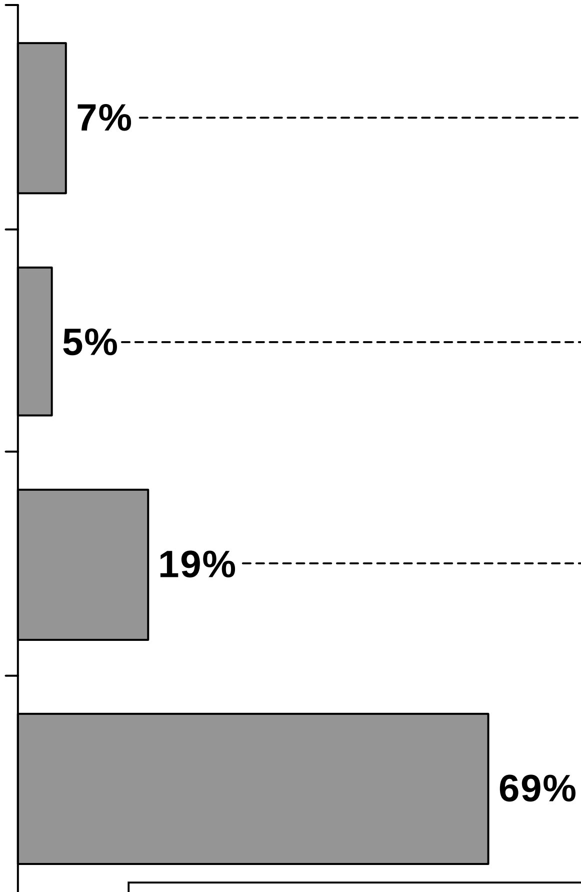
B. Remodeling Profile – provides demographic information for 'completed,' and where of interest 'incomplete' groups, as well as the remodeling market segment. At the end of this section you will find a summary specific to 'incomplete' respondents.
C. Overall Satisfaction Measure – provides overall satisfaction with remodeling project measured for 'completed groups' and by market segment.
D. Modules – provides discussion on satisfaction, materials and equipment, and purchase decisions by project type (e.g. kitchen, bath, etc.).
E. Materials and Equipment – provides discussion for 'incomplete group' respondents on ease and difficulty of finding materials and equipment, types looked for, and importance of several measures to the purchase decision.
F. Information Gathering – provides discussion on satisfaction with the information gathering process in general, sources used for information and satisfaction with those sources,
G. Energy Efficiency – provides discussion on the proportion of remodelers who looked for energy efficiency, to whom and for what they turn to for energy efficiency information, and the usefulness of those sources.
H. Contractor Selection – discusses primary sources of labor for the home remodeling project, how contractor work is evaluated, bid process, and satisfaction with the contractor experience.
I. Financing – provides discussion on obtaining financing and satisfaction with financing options.
J. Role of the Utility Company – discusses interest in possible product offerings from a utility company might consider and how respondents venues for hearing about new product offerings.

Generally, results in the form of charts and discussion in each of the above areas are organized by:
• Total for complete group and module (kitchen, bathroom, windows, insulation, etc.)
• Market segment (Take-Care-Of-It, Do-It-Yourselfers, etc.)
•Where appropriate, charts for the incomplete group are included.

VIII. (B) Remodeling Profile

QG. Age of the Residence
Completed Group

Total



Module

	Kitchen (A) (n=76)	Bathroom (B) (n=66)	Windows (C) (n=92)	Insulation (D) (n=81)	Hardwired Lighting (E) (n=80)	Roof (F) (n=70)	HVAC (G) (n=33)
1-5 Years	5%	6%	2%	12% [C]	9%	6%	15% [C]
6-10 Years	7%	2%	5%	2%	8%	3%	6%
11-20 Years	28% [CD]	36% [CDEFG]	10%	10%	20%	19%	15%
More than 20 Years	60%	56%	83% [ABEG]	76% [AB]	64%	73% [B]	64%
Median Age: 25 Years	23	22	28	27	24	26	24

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (B) Remodeling Profile

Demographic questions were examined to develop a profile of a home remodeling project market in California in which the entire cost of the project was at least $5,000 and the age of the home was at least one year or more. The chart profiles the 'age of the residence' for all respondents who 'completed' their home remodeling project. To the right of the chart, is the age of the home by the type of remodeling work that respondents completed and were asked about.

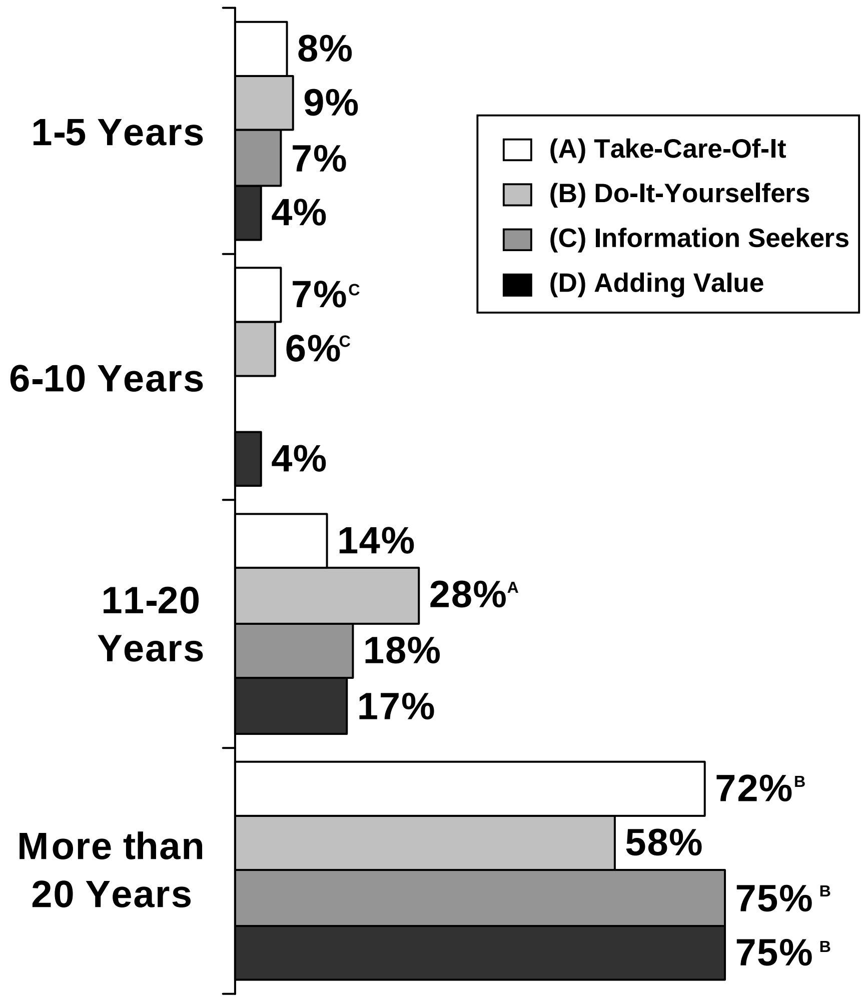
More than two-thirds of the 'completed' respondents report that the age of their home is more than 20 years and the median age of the home is 25 years.

- Interestingly, among 'completed group' respondents, those who were asked about their 'window remodeling' experience, were more likely to say that their home was more that 20 years old than were respondents who were asked about their 'kitchen,' 'bathroom,' 'hardwired lighting,' and 'HVAC' projects. This suggests that window replacement may be more likely in a home 20 years or older.

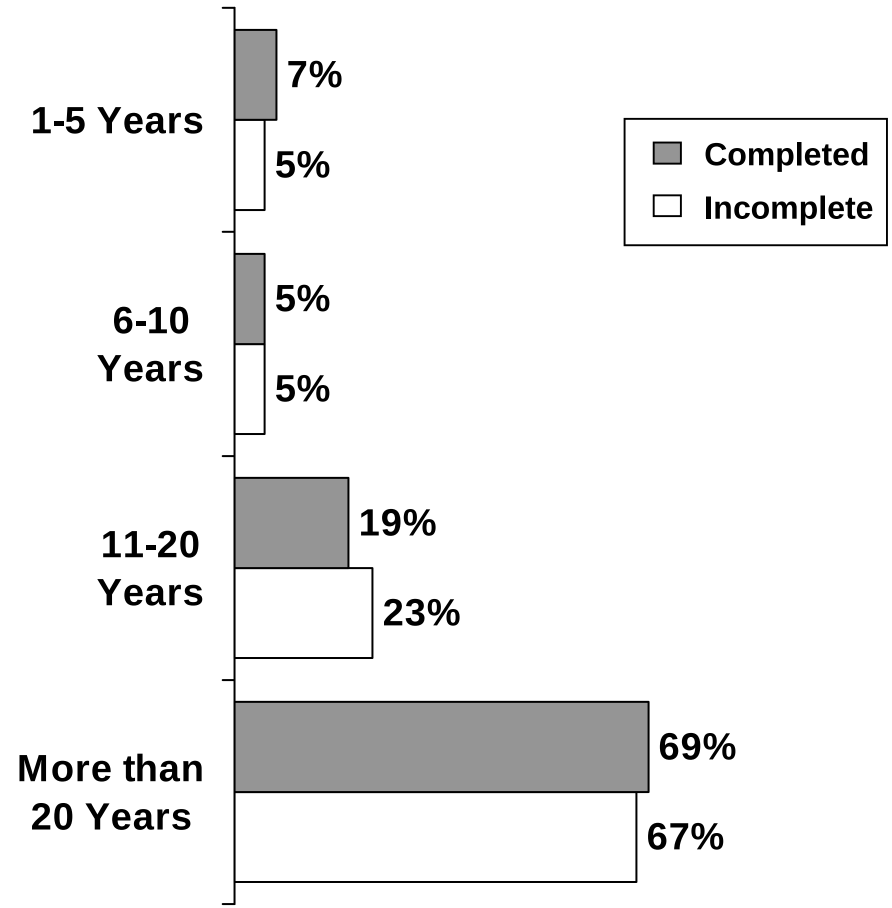
- Similarly, respondents who were asked about their 'bathroom' projects were more likely to say that their home was between the ages of 11 years and 20 years, suggesting that bathroom projects are more likely when the home is in this age range.

VIII. (B) Remodeling Profile

QG. Age of the Residence
Completed Groups By Market Segment



QG. Age of the Residence
Completed and Incompleted Groups Comparison



Mean Age Completed	24 years
Mean Age Incomplete	24 years

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

On next chart the age of the residence is examined by the market segments as defined by the NeuroSeg™ analysis discussed in the Segmentation Section of this report.

- *Do-It-Yourselfers* are more likely to say that their home for the remodeling project is less than 20 years old than any other segment.

- Regardless of whether respondents 'completed' the project or it is considered 'incomplete,' the age of the residence when they consider taking on a home remodeling project is similar.

To the right of this, is a comparison between respondents who 'completed' their home remodeling project and those who are categorized as 'incomplete' with their home remodeling project. Generally, the age of the home for each group is identical. The mean age for each group is 24 years.

QD8. Present Value of the Home
Completed Projects

	Total	Kitchen (A) (n=74)	Bathroom (B) (n=66)	Windows (C) (n=92)	Insulation (D) (n=87)	Hardwired Lighting (E) (n=80)	Roof (F) (n=70)	HVAC (G) (n=33)
		Module						
Less than $150,000	18%	24%[E]	20%[E]	19%[E]	16%[E]	6%	20%[E]	33%[E]
$150,000 to <$300,000	39%	34%	39%	36%	38%	49%	43%	36%
$300,000 to <$450,000	16%	18%[B]	6%	23%[BFG]	16%[B]	24%[BFG]	9%	6%
$450,000 to <$600,000	8%	8%	17%[CF]	4%	10%	8%	3%	6%
$600,000 to <$1 Million	8%	5%	11%	5%	10%	6%	11%	6%
$1 Million or More	2%	--	3%	1%	2%	3%	1%	3%

Mean: $342,000
Median: $254,000

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (B) Remodeling Profile

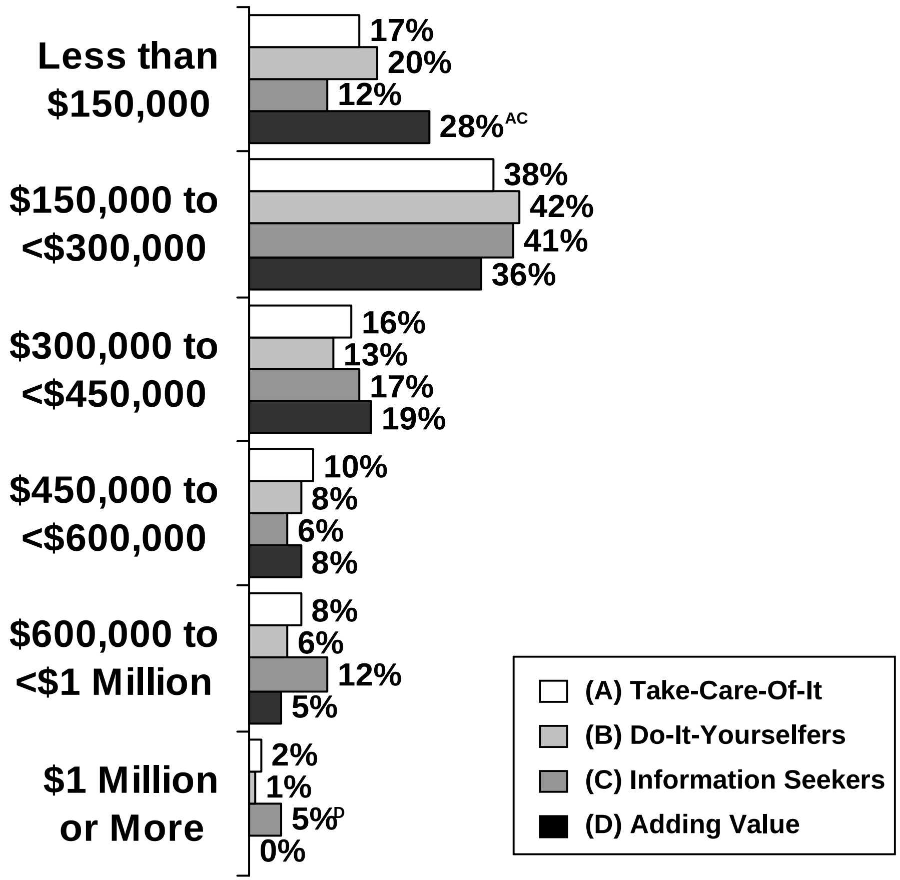
About half of those who 'completed' a remodeling project report that their home is valued at $300,000 or less, with a median value of $254,000.

- Respondents asked about their 'window' projects and 'hardwired lighting' projects are more likely to say their home is valued from '$300,000 to less than $450,000' than are those who were asked about a 'bathroom,' 'roof,' or 'HVAC' project.

- Respondents who were asked about a 'hardwired lighting' project are <u>less</u> likely to say that their home is valued at less than $150,000 than are respondents from any of the other modules.

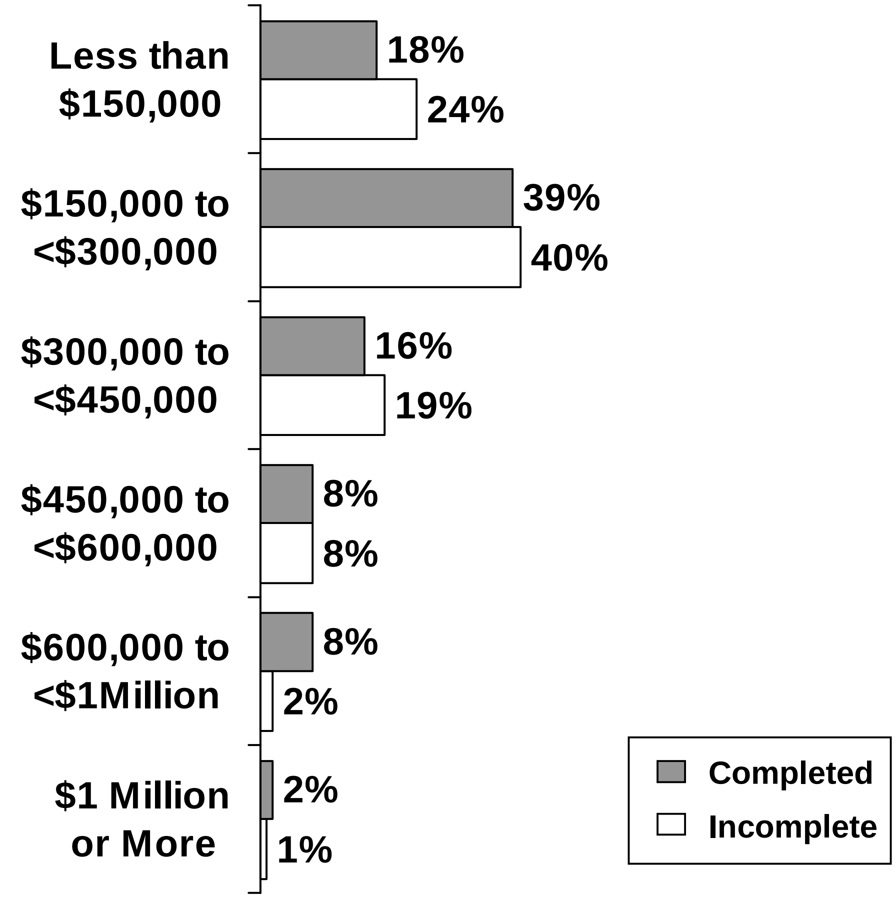
VIII. (B) Remodeling Profile

QD8. Present Value of the Home
Completed Groups By Market Segment



	(A)	(B)	(C)	(D)
Mean:	$354,000 D	$301,000	$424,000 BD	$282,000
Median:	$264,000	$238,000	$276,000	$233,000

QD8. Present Value of the Home
Completed and Incomplete Groups Comparison



	Completed	Incomplete
Mean:	$342,000	$278,000
Median:	$254,000	$236,000

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

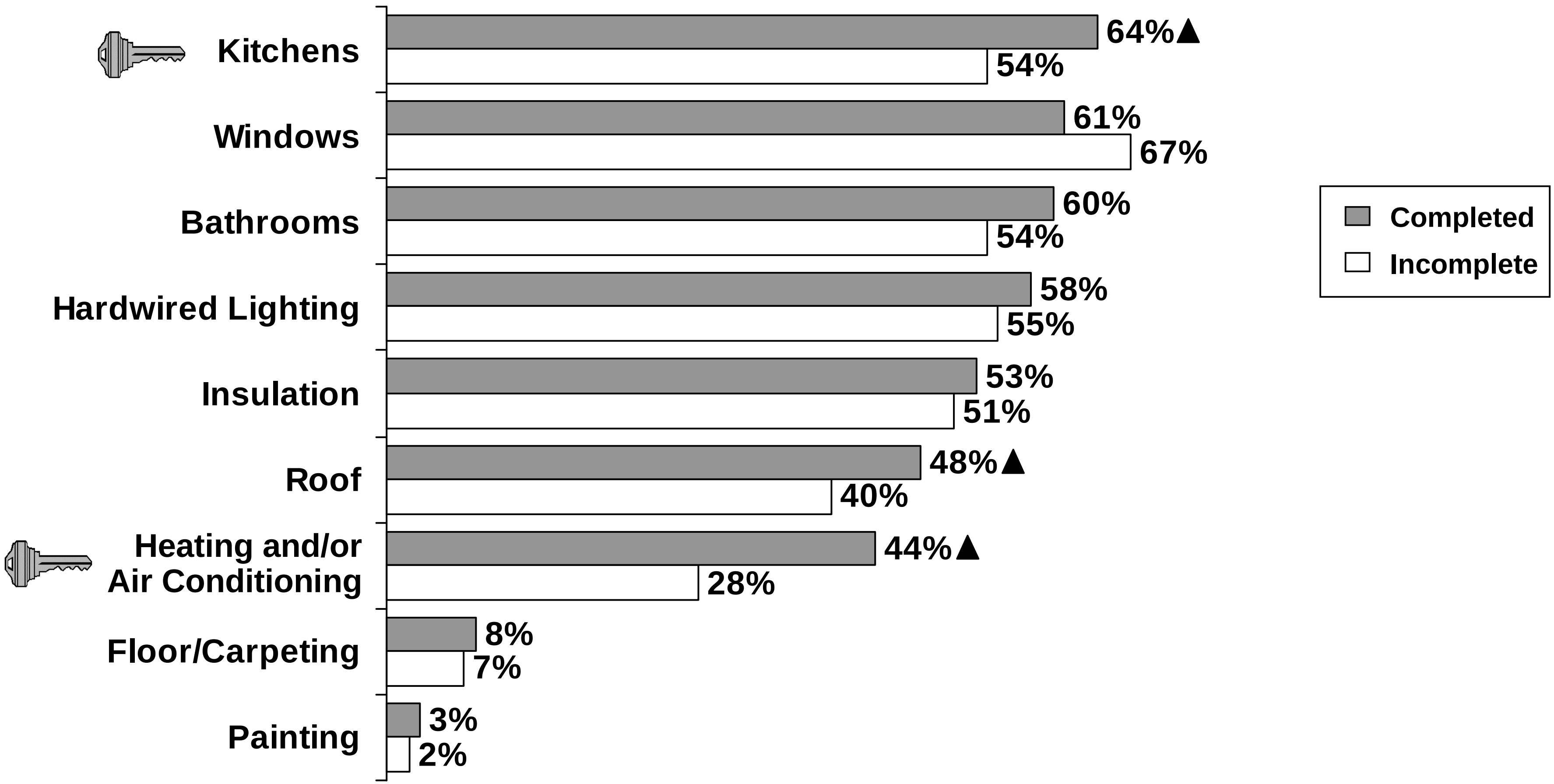
- At the segment level, the mean value of home for the *Take-Care-Of-It* and *Information Seekers* is higher than the *Adding Value* respondents.

- A larger proportion of *Adding Value* respondents say that their home is valued at less than $150,000 than do *Take-Care-Of-It*, or *Information Seekers.*

- There are no discernible differences on the present home value between those who 'completed' their projects and those whose projects are 'incomplete.'

QH. Components of the Remodeling Project

Completed and Incomplete Groups Comparison



Key Driver of Overall Satisfaction

▲ *Significantly higher than the other group*

All respondents (Completed and Incomplete) were asked whether their remodeling project included:

- remodeling the kitchen including new appliances
- remodeling the bathroom
- window additions or replacements
- adding or replacing insulation or other weatherization measures
- adding or replacing hardwired indoor or outdoor lighting fixtures
- replacing the home roof including plywood and shingles
- heating and/or air conditioning system addition or replacement

Completion of a 'kitchen' project or an HVAC project is a key driver of overall satisfaction with a home remodeling project. (see Satiscan™ model on page 34)

Kitchen projects rank highest in terms of types of projects completed. The proportion of 'completed' respondents who report that the project includes a 'kitchen' project is significantly higher than those who are 'incomplete.' This might mean when a kitchen project is started, respondents are more likely to finish it.

- Respondents who used a contractor (52%) are more likely to say they replaced a roof than are respondents who did not use a contractor (42%) for any of the remodeling work. This suggests that contractors are generally used for a roof project.
- Conversely respondents who did not use a contractor (67%) for any of the remodeling work are more likely to say they completed a 'bathroom' project than are respondents who did use a contractor (57%).

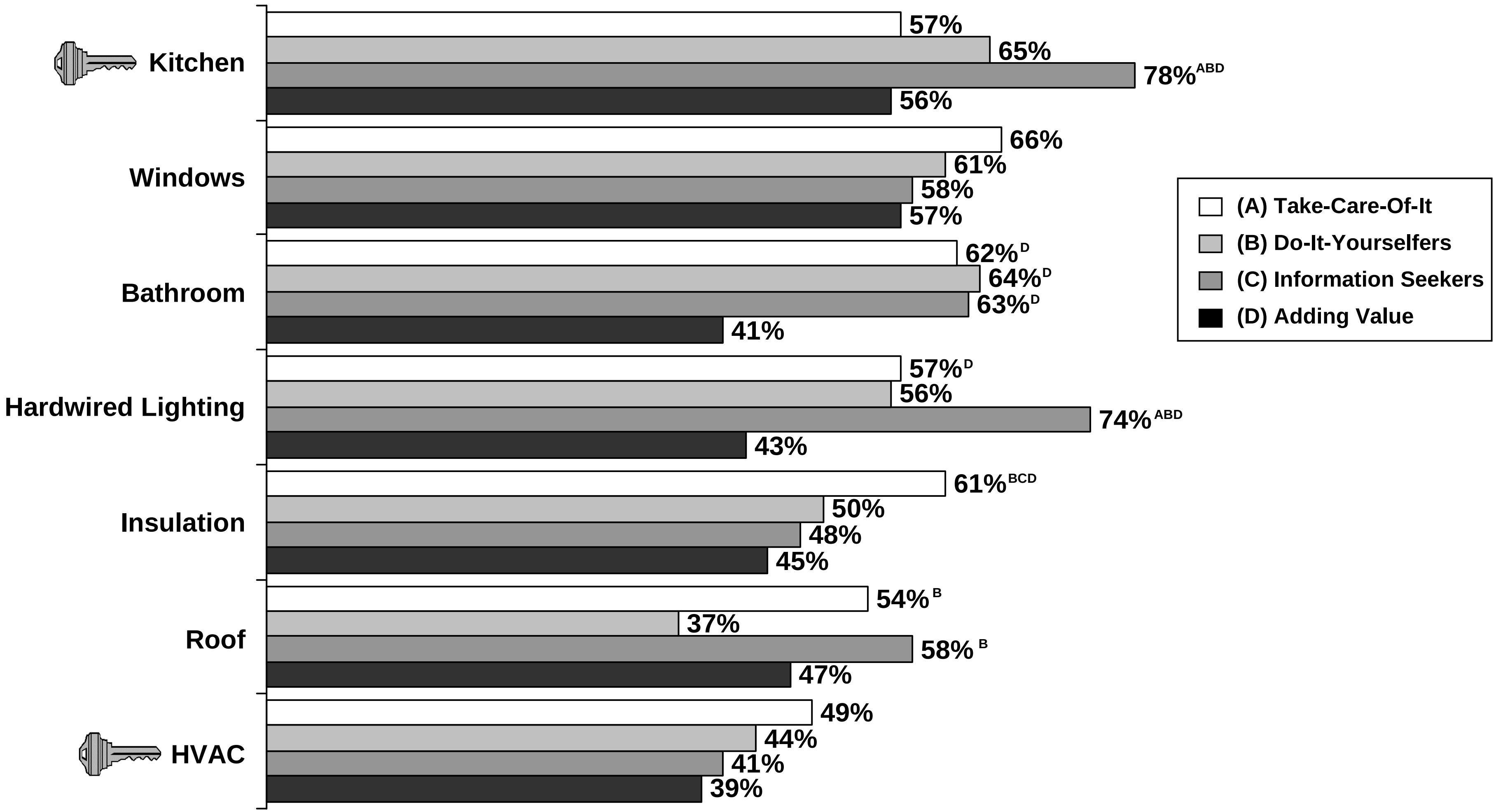
Respondents were asked on an open-ended basis what else the project includes. The most often mentioned items were "floors and/or carpeting," and "painting."

Other Major Mentions:	Completed	Incomplete
Floor/Carpeting	8%	7%
Painting	3%	2%

VIII. (B) Remodeling Profile

QH. Components of the Remodeling Project

Completed Groups By Market Segment



Key Driver of Overall Satisfaction

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (B) Remodeling Profile

- When the types of projects completed are analyzed at the segment level, the *Information Seekers* are more likely to say that they completed a ‘kitchen’ project and ‘hardwired lighting’ project than are respondents in other segments.

- *Adding Value* respondents are less likely to say that the project included a ‘bathroom’ remodeling than respondents in other segments are.

- *Take-Care-Of-It* and *Information Seekers* are more likely to have completed a 'roof' project.

Q4. Other Aspects of the Remodeling Project Completed

	Total	Kitchen (A) (n=74)	Bathroom (B) (n=66)	Windows (C) (n=92)	Insulation (D) (n=87)	Hardwired Lighting (E) (n=80)	Roof (F) (n=70)	HVAC (G) (n=30)
		Completed Groups			Modules			
Electrical Wiring	60%	57%^{F}	44%	58%^{F}	68%^{BF}	81%^{ABEF}	40%	73%^{BF}
Adding or Converting a Room	39%	32%	27%	41%	48%^{ABF}	49%^{ABF}	30%	42%
Structural Changes to the Basic Living Area of Your Home	33%	30%	29%	32%	39%	40%	26%	36%
Water Heating System	27%	26%	18%	20%	39%^{BCF}	29%	24%	42%^{BC}
Earthquake Related Structural Modifications	19%	11%	17%	17%	22%	20%	20%	27%
Conversion to a Different Energy or Fuel Source	16%	15%	14%	21%^{E}	18%	10%	16%	21%

Key Driver of Overall Satisfaction

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (B) Remodeling Profile

On an aided basis, respondents were asked whether or not the remodeling project included:

- Structural changes to the basic living areas of the home
- Earthquake related structural modifications
- Electrical wiring
- Conversion to a different energy or fuel source
- Water heating system
- Adding or converting a room

Almost two-thirds of the respondents say the project includes 'electrical wiring,' and about one-third say it includes 'adding and/or converting a room,' and 'structural changes to the basic living area.'

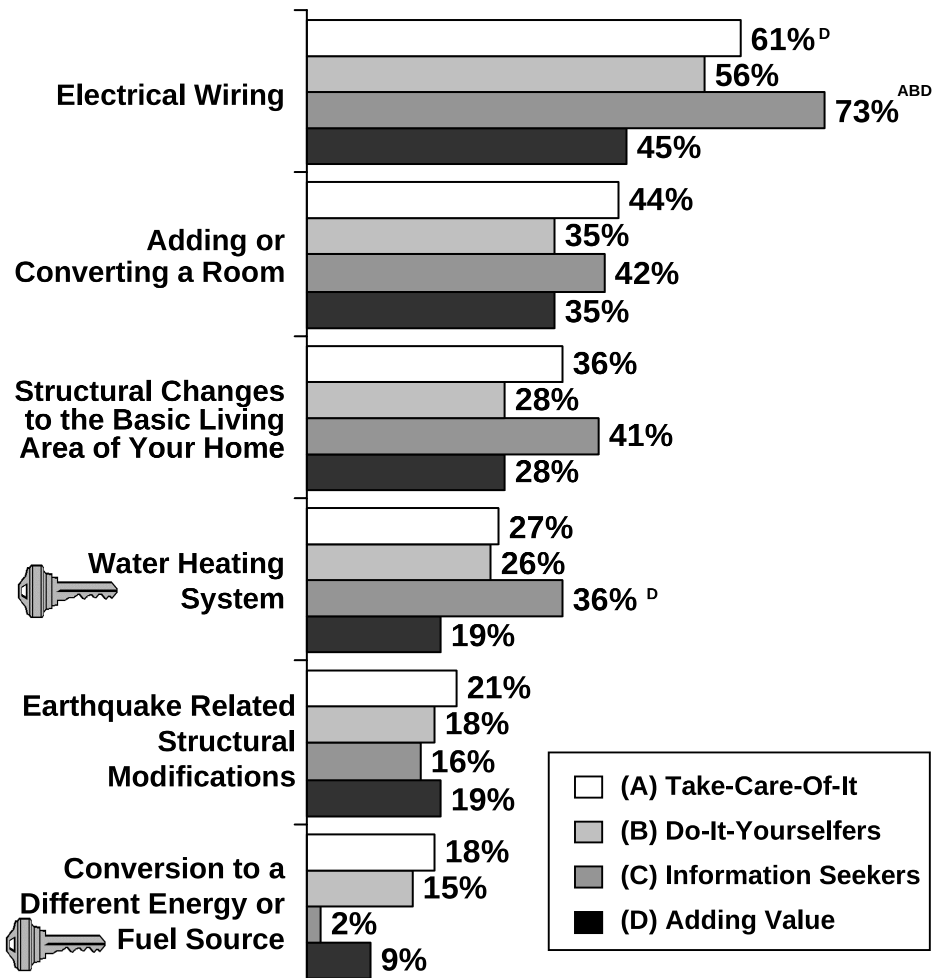
- As expected, respondents who were asked about their 'hardwired lighting' project are more likely to say the project includes 'electrical wiring' than are respondents who did other types of projects. Similarly, those who were asked about their HVAC project are more likely to say the project included 'electrical wiring' than are those who were asked about 'bathrooms,' or 'roofs.'

- Respondents who completed an 'insulation' project are more likely to say the project included structural changes to the basic living area. This suggests home remodelers take up insulation projects as part of adding space to their home.

Q4/5. Other Aspects of the Remodeling Project

Completed Projects By Market Segment

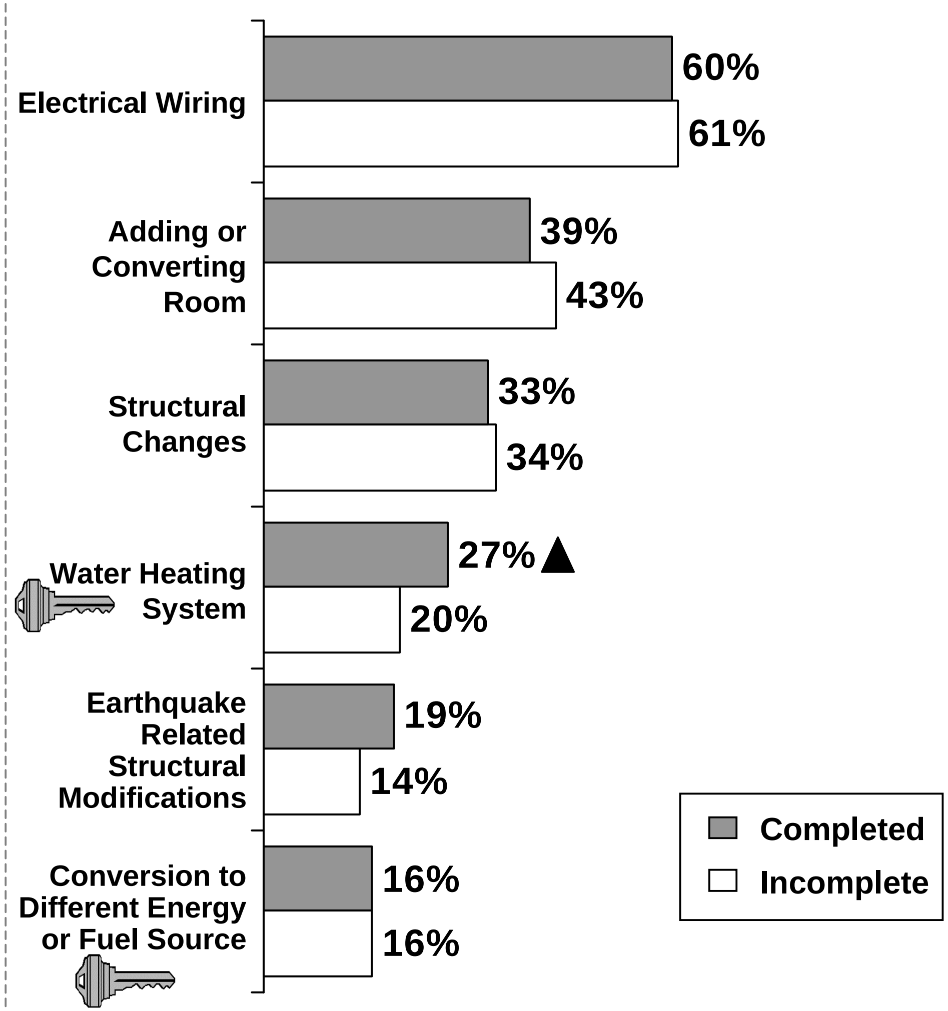
Total Respondents



Q4/5. Other Aspects of the Remodeling Project

Complete and Incomplete Projects Comparison

Total Respondents



Key Driver of Overall Satisfaction

▲ *Significantly higher than the other group*

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

- At the segment level, *Information Seekers* are more likely to say that the project includes 'electrical wiring' compared to the other segments. Information Seekers are also more likely than Adding Value respondents to say their project included a 'water heating system.'

- Respondents who are classified as 'completing' their project are more likely to say that the project includes a 'water heating system' than are those who report their project as 'incomplete.'

Q1. Factors Considered for the Remodeling Project

Major Factor in the Decision (Top-3-Box)

Completed Projects

	Total	Kitchen (A) (n=74)	Bathroom (B) (n=66)	Windows (C) (n=92)	Insulation (D) (n=87)	Hardwired Lighting (E) (n=80)	Roof (F) (n=70)	HVAC (G) (n=33)
		Modules						
Personal Comfort	74%	77%	74%	72%	77%	78%	63%	85% [F]
Improve the Appearance of Home	63%	66%	62%	66%	53%	65%	64%	64%
Make Home More Energy Efficient	49%	38%	36%	64% [ABEF]	55% [ABE]	40%	47%	68% [ABE]
Appliances or Fixtures are Old	48%	65% [CDEG]	52%	42%	37%	41%	57% [D]	42%
Increase the Home Value	41%	45%	35%	39%	41%	45%	41%	39%
Modifications After a Recent Home Purchase	22%	20%	24%	15%	21%	33% [CF]	16%	24%
Emergency Repairs	15%	14%	11%	15%	24% [BE]	10%	17%	15%
Number of People Living in the Home Increased	10%	7%	6%	10%	20% [ABEF]	8%	9%	12%
Modifications for a Health Issue	10%	7%	12%	5%	13%	10%	11%	9%
To Prepare the Home for Sale	8%	5%	5%	11%	14%	6%	6%	35
Number of People Living in the Home Decreased	5%	8% [EG]	3%	9% [EG]	7% [EG]	--	7% [EG]	--

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Both ‘complete’ and ‘incomplete’ project respondents were asked to report on motivating factors that may or may not influence their decision to start the remodeling project. They were asked to rate these factors on a 10-point scale where 1 means it was not at all a consideration and 10 means it was a major factor in their decision to start the project. The measured factors are:

- To make modifications after a recent home purchase
- To prepare the home for sale
- Because the number of people living in the home increased
- Because the number of people living in the home decreased
- To make modifications for a health issue
- Because the appliances or fixtures are old
- For emergency repairs
- To increase the home value
- To improve the appearance of your home
- To enhance personal comfort
- To make the home more energy efficient

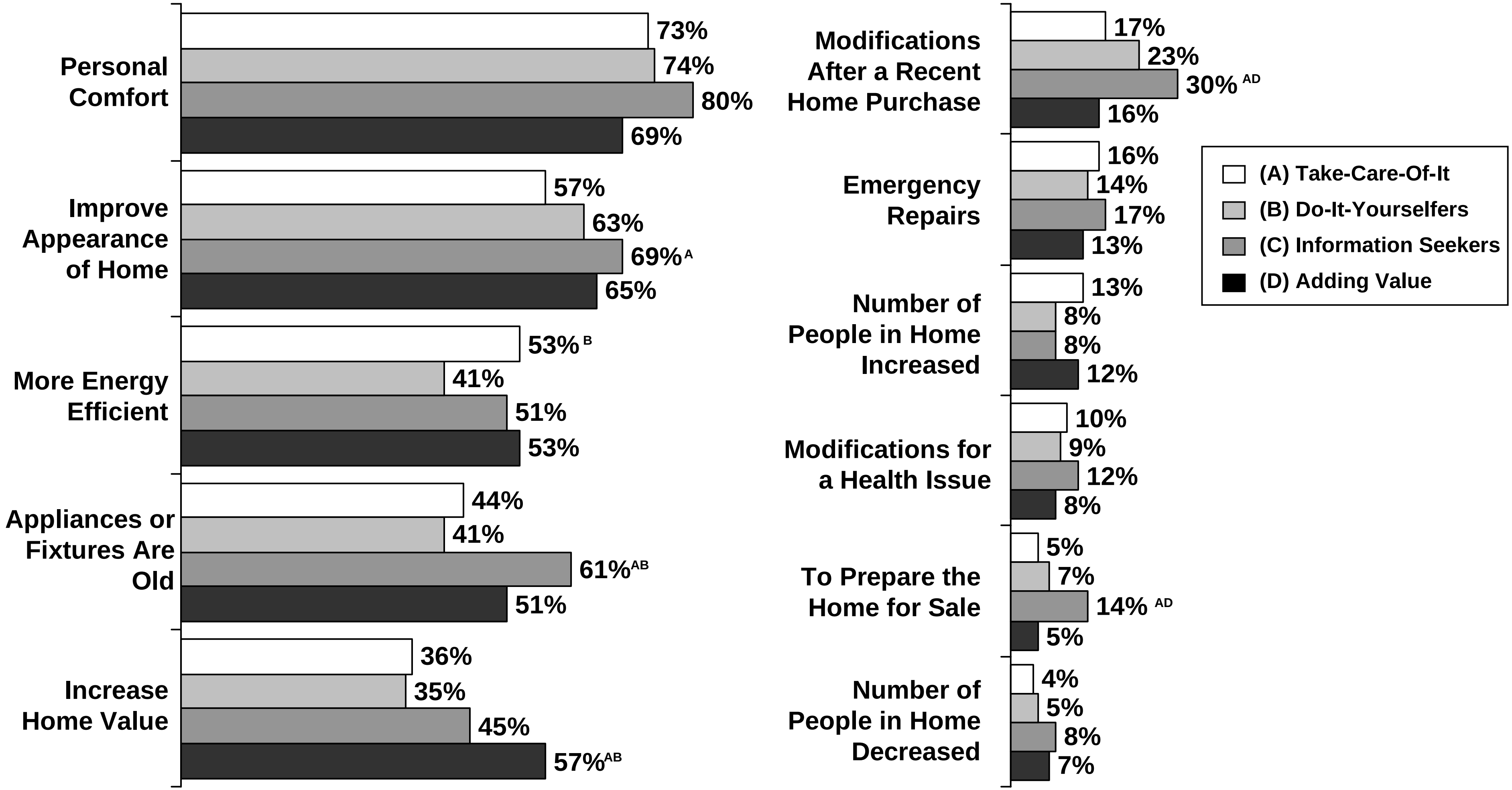
‘Personal comfort,’ and ‘improving the appearance of the home’ rank highest as motivating factors for starting a completed home remodeling project.

- As expected, to make the home ‘more energy efficient’ was rated higher as a motivating factor among those who were asked about ‘windows,’ ‘insulation,’ and ‘HVAC’ than those asked about ‘kitchens,’ ‘bathrooms,’ and ‘hardwired lighting.’

VIII. (B) Remodeling Profile

Q1. Factors Considered for a Remodeling Project

Major Factor in the Decision (Top-3-Box)
Completed Projects By Market Segment
Total Respondents



Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (B) Remodeling Profile

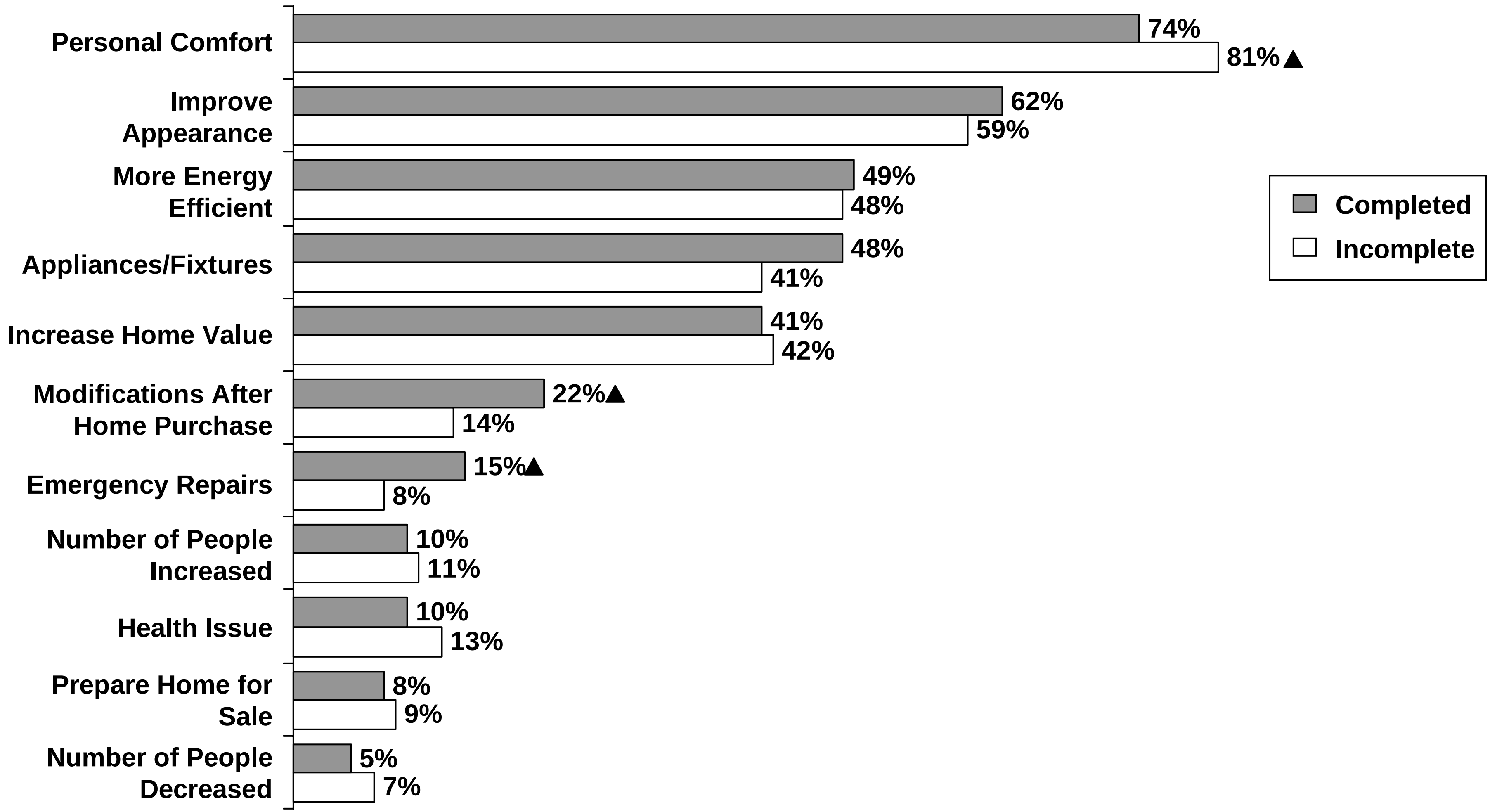
At the segment level*, Information Seekers* are more likely than *Take-Care-Of-It* to say that the following are major factors in their decision to start the remodeling project.

- Improve the appearance of the home
- Appliances or fixtures are old
- Modifications after a recent home purchase
- Prepare the home for sale

As expected, *Adding Value* respondents are more likely to report that 'increasing the home value' is a major factor in their decision to start the remodeling project than are the *Take-Care-Of-It* or *Do-It-Yourselfers.*

Q1/Q2. Factors Considered in the Remodeling Project

Major Factor in the Decision (Top-3-Box)
Completed and Incomplete Projects Comparison
Total Respondents



▲ *Significantly higher than the other group*

When comparing motivating factors between respondents who ‘completed’ their home remodeling project and those who are classified as ‘incomplete,’ there are discernible differences for ‘personal comfort, ‘ modifications after a recent home purchase,’ and ‘emergency repairs’ measures.

- Incomplete project respondents who are ‘less than 50% complete’ are more likely to say ‘energy efficiency’ is a motivating factor than are respondents who ‘abandoned’ their project.

▲ *Significantly higher than the other group*

Incomplete Projects Summary

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 still in planning, 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. This section provides a summary of the key findings for the incomplete group.

A total of 212 interviews were conducted with 'incomplete' project respondents who ultimately fell into one of the following categories:

▪Seriously considered, but abandoned	16%*
▪Still planning	53%
▪Started but less than 50% complete	31%

**Sample size in the 'abandoned' group is small (n=34) and findings should be interpreted with caution.*

VIII. (B) Remodeling Profile

Respondent profiles between the 'complete' and 'incomplete' groups are generally similar, which is expected since many of the incomplete group will go on to complete their projects.

When we examine the profiles for each group within the 'incomplete' projects, demographically, we find that respondent profiles are also similar.

	Total Complete (n=502) A	Total Incomplete (n=212) B	Abandoned (n=34) C	Still Planning (n-=113) D	<50% complete (n=65) E
Median age of home (in years)	25	24	24	24	25
Median present value (in 000's)	$254	$236	$225	$244	$228
Median Household Income (in 000's)	$80	$74	$70	$79	$68
White, Caucasian	79%	68%	68%	69%	66%
Hispanic or Latin	5%	11%[A]	11%	6%	19%[C]
Age	53	50	49	50	49
Average # of people in household	2.7	3.1	3.6[DE]	3.0	2.8
Average # of children	.6	.9	1.4 [DE]	.9	.6

Letters indicate significantly higher than the other group

VIII. (B) Remodeling Profile

Consistent with findings from the 'completed' group, 'incomplete' respondents are most likely to say that 'personal comfort' is a motivating factor for taking on the project. This question was asked on a 10-point scale where 1 means 'not at all a consideration' and 10 means a major factor in the decision. The below scores represent the Top-3-Box scores of 8, 9, or 10 on that scale. There is a 22-point drop between the 'personal comfort' measure and the next highest motivating factor 'to 'improve appearance.' Beyond the age of appliance/fixtures' other motivating factors are generally not important.

Similarly, the motivating factors for 'abandoned' group, are consistent with the total group.

Among the 'less than 50%' group a greater proportion report that 'energy efficiency' is a motivating factor for the project than among the 'still planning' group.

	Total Completed (n=502) A	Total Incomplete (n=212) B	Abandoned (n=34) C	Still Planning (n-=113) D	<50% complete (n=65) E
Personal Comfort	74%	81%A	82%	81%	80%
Improve Appearance	62%	59%	68%	53%	65%
More Energy Efficient	49%	48%	56%	40%	57%C
Increase Home Value	41%	42%	44%	41%	43%
Appliance Fixtures	48%	41%	41%	35%	49%
Modifications After a Home Purchase	22%B	14%	15%	14%	12%
Health Issue	10%	13%	15%	12%	14%
Number of People Increased	10%	11%	14%	12%	6%
Prepare Home for Sale	8%	9%	12%	8%	9%
Emergency Repairs	15%B	8%	12%	5%	11%
Number of People Decreased	5%	7%	9%	4%	11%

Letters indicate significantly higher than the other group

VIII. (B) Remodeling Profile

'Incomplete' respondents were asked various components of a remodeling project they looked for. About two-thirds looked for information and/or materials/equipment. They are least likely to have looked for 'financing.' These findings imply that these steps have a definite priority order, which is reinforced by the observation that the proportion completing each step increases with the progression from abandoned to planning to less than 50% complete.

Respondents who are 'less than 50% complete' are more likely to have looked for 'materials and/or equipment,' and 'contractors.' This implies that respondents who have accomplished these tasks may be more likely to have at least started the project.

	Total Incomplete (n=212) A	Abandoned (n=34) B	Still Planning (n-=113) C	<50% complete (n=65) D
Looked for information	68%	65%	67%	71%
Materials and/or equipment	61%	53%	48%	88% BC
Contractor	43%	27%	43%	52% B
Financing	27%	18%	27%	32%

Letters indicate significantly higher than the other group

Those who did not report accomplishing the above tasks were asked why not. The following results are for the total 'incomplete' group.

Materials and/or equipment (n=79)		***Contractors (n=130)***		***Financing*** (n=154)		***Information (n=67)***	
Did not get that far	37%	Do not need a contractor	26%	Using own money/finances	32%	Project too expensive	18%
Have not had the time	17%	Cost/available funds	18%	Do not need to	23%	Have not gotten that far	16%
Too expensive	15%	Did not get that far	13%	Not that far along	14%	On hold	15%
Project on hold	10%	Using family/friends	13%	Project on hold	7%	No need/know what to do	13%
Contractor handling	12%	Have not had the time	8%	No time	5%	No time	10%
						Contractor handling	6%

Although substantial numbers of respondents indicated no need to undertake one or more of these steps, many indicated that lack of time to identify materials and/or equipment and overall expense of the project are major barriers to completing them. 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. It is also important to note that, in the complete group, a substantial number of respondents indicate that they provided or will provide their own labor for the project *(p 196)*. This is consistent with the finding that in the incomplete group, many respondents report that they do not need a contractor.

Following are reasons why respondents in the 'abandoned' group did not accomplish the above tasks. Data presented is based on small sample and should be considered qualitative.

Materials and/or equipment (n=15)		***Contractors (n=25)***		***Financing*** (n=28)		***Information (n=12)***	
Did not get that far	6	Do not need a contractor	7	Using own money/finances	6	Too expensive	4
Have not had the time	1	Cost/available funds	5			Have not gotten that far	3
Too expensive	4	Did not get that far	3	Not that far along	5	Abandoned/decided not to finish	2
Project on hold	1	Project on hold/abandoned	5	Project on hold	3	Don't know	3
Other	3	Other	3	No time	2		
				Don't want the debt	2		

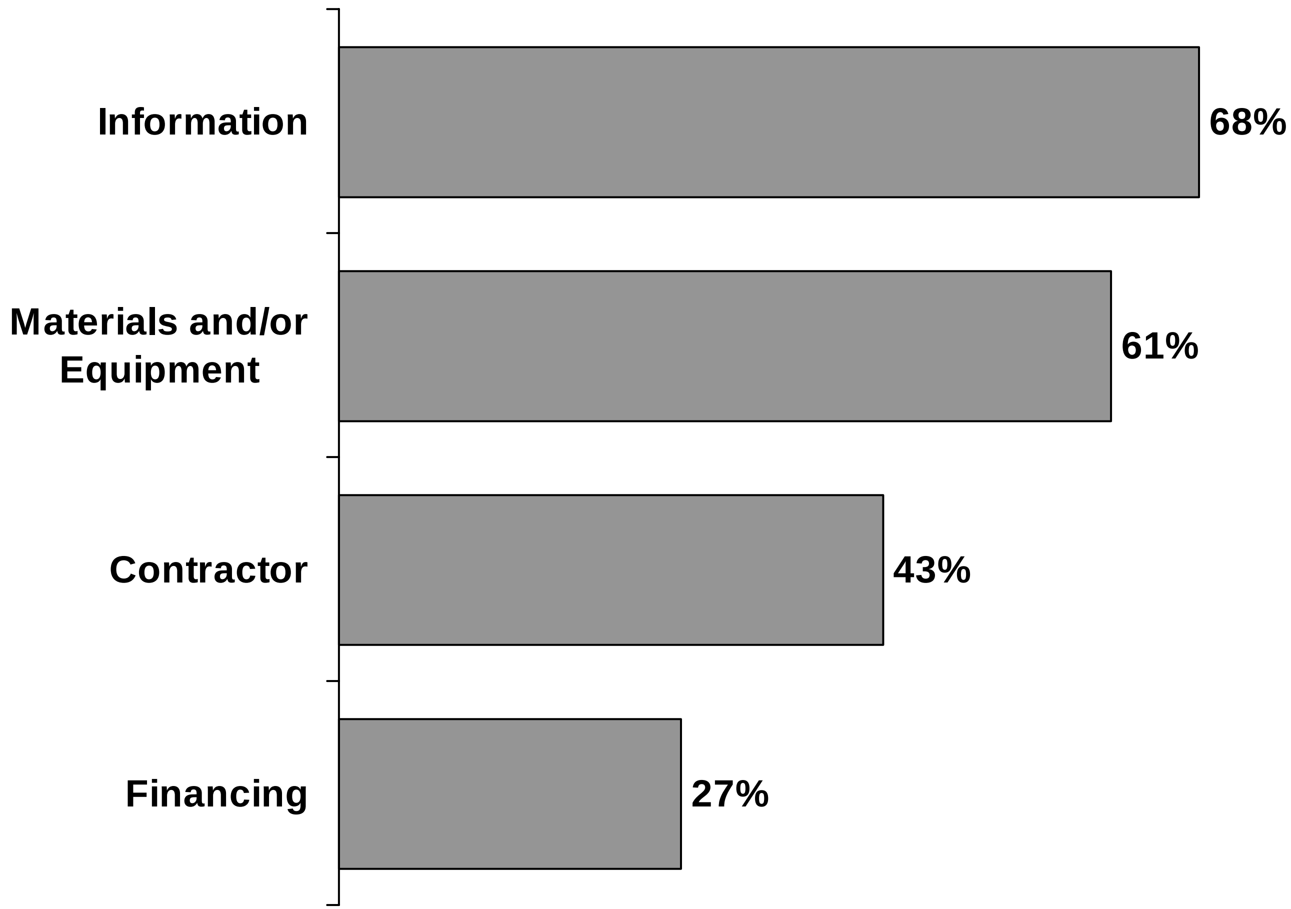
Finally, still focusing on the 'abandoned' group, 'money' issues are mentioned most often as a reason why this group opted not to do the project at all.

- No money/cost is too high 21%
- Personal problems 9%
- Not the right time/time of year 9%

Respondents who did accomplish the information gathering phase, identification of materials and/or equipment, the contractor and/or financing searches were asked to rate the ease or difficulty of the processes on 10-point scale with 1 meaning ‘extremely difficult’ and 10 meaning ‘extremely easy.’ As can be seen from the chart below, about one-third of the ‘incomplete’ respondents find the processes easy. However, a large proportion found the processes difficult. This represents an opportunity to assist home remodelers with these phases of the project.

	% Who Found It Easy (Top-3-Box)	% Who Found It Difficult (Bottom-3-Box)
Information gathering	35%	15%
Identification of materials and/or equipment	33%	12%
Looking for contractors	44%	16%
Looking for financing	37%	19%

Q1. Items Looked For
Incomplete Projects
Total Respondents



Only respondents in the 'incomplete' project category were asked whether or not they had begun to look for information, identify materials and/or equipment for their project, look for contractors, and look for financing. About two-thirds of 'incomplete' respondents started to looked for information and identify their materials and/or equipment at the time of the interview.

To identify market barriers facing consumers who did not start looking for these items, 'incomplete' respondents were asked on an open-ended basis why they had not started these phases of the project. The recurring theme for each of these processes is that respondents do not 'have time,' or the project is 'too expensive' or there was 'no need.'

- Respondents who are 'less than 50% complete' with their project are more likely to have done the following than those who abandoned the project or are still planning.

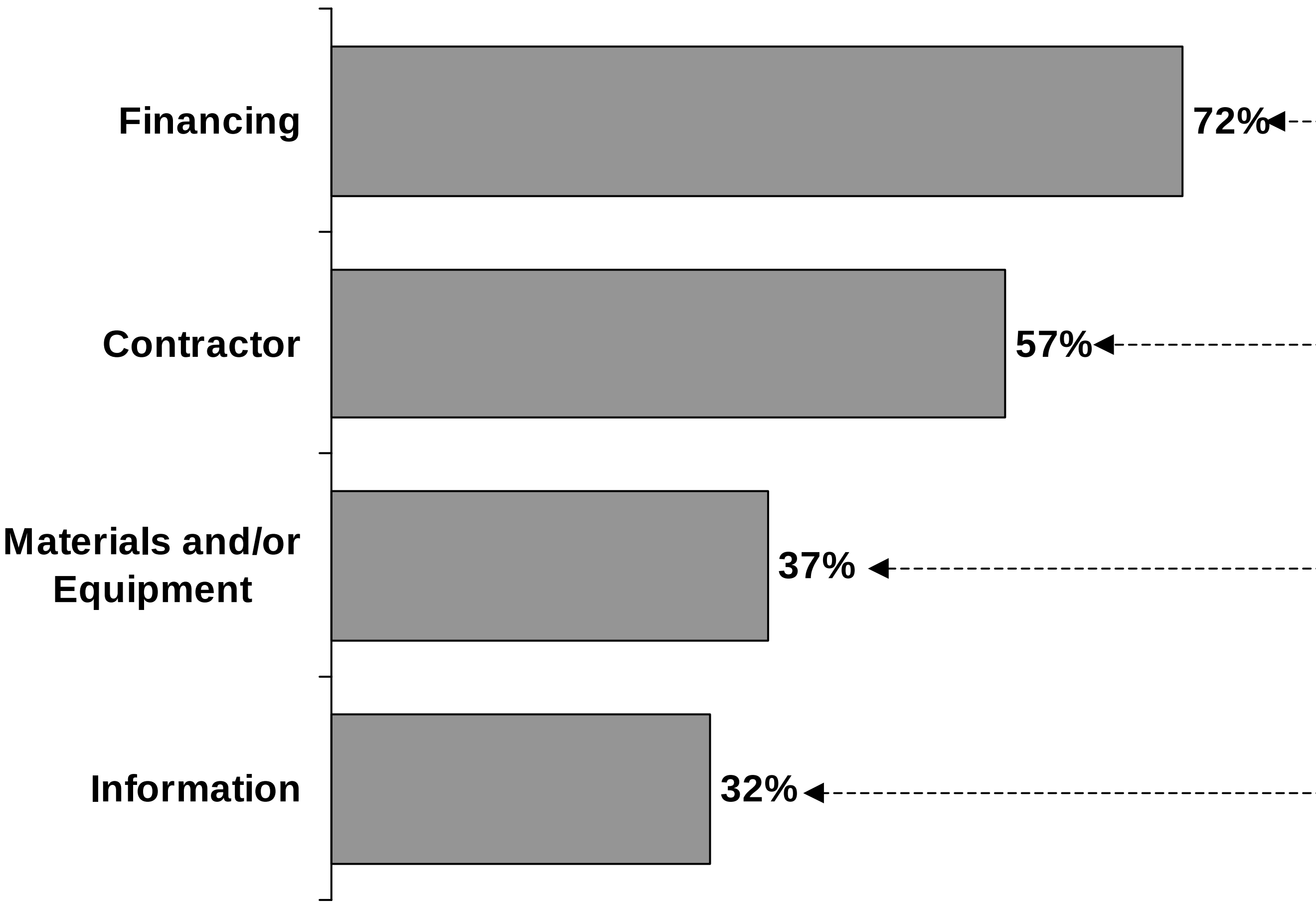
Incomplete Group	Abandoned (n=34)	Still Planning (n=113)	<50% Complete (n=65)
Identify materials and/or equipment	53%	48%	88% ▲
Looked for a contractor	27%	43%	52% ▲

▲ ***Significantly higher than other segment***

Q1. Have Not Looked For…

Incomplete Projects

Total Respondents



Reasons why respondents have not looked for...

Using own money	32%
Do not need to	23%
Not that far	14%
Project on hold	7%
No time	5%

No need to use a contractor	26%
Cost/Available funds	18%
Not that far along	13%
Using family/friends	13%
Have not had the time	8%

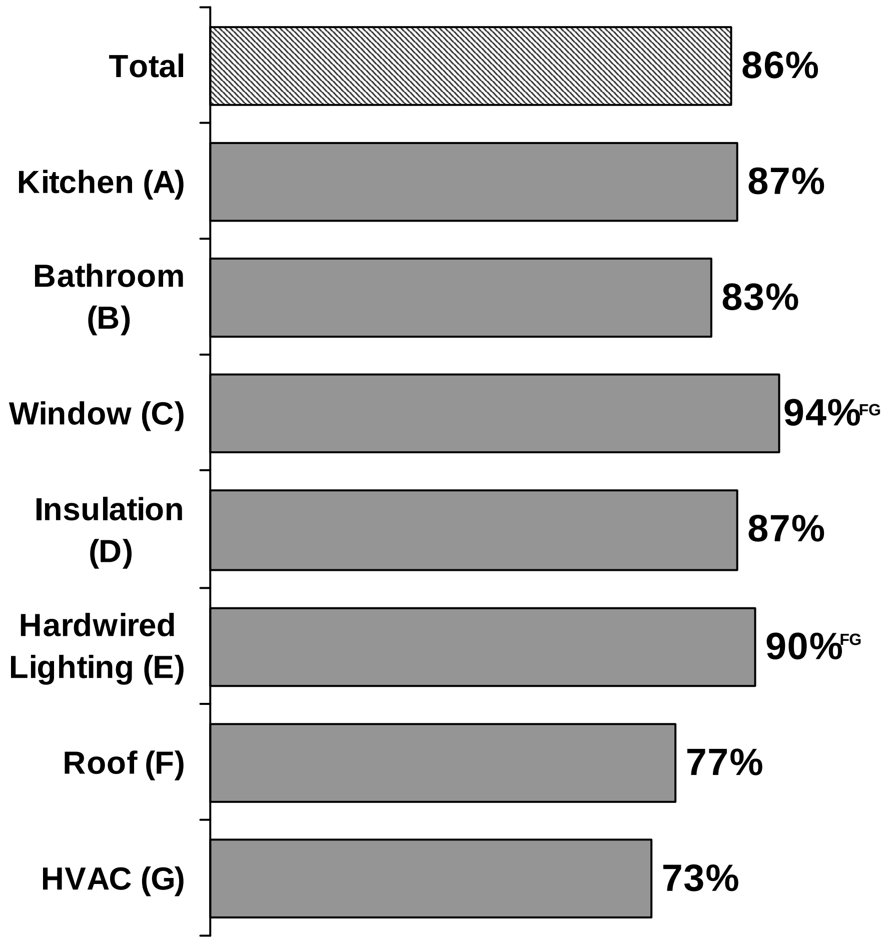
Not that far in the project	37%
Have not had the time	17%
Too expensive	15%
Project on hold	10%
Contractor/other handling	12%

Project too expensive	18%
Have not gotten that far	16%
Project on hold	15%
No need/know what to do	13%
No time	10%
Contractor is handling	6%

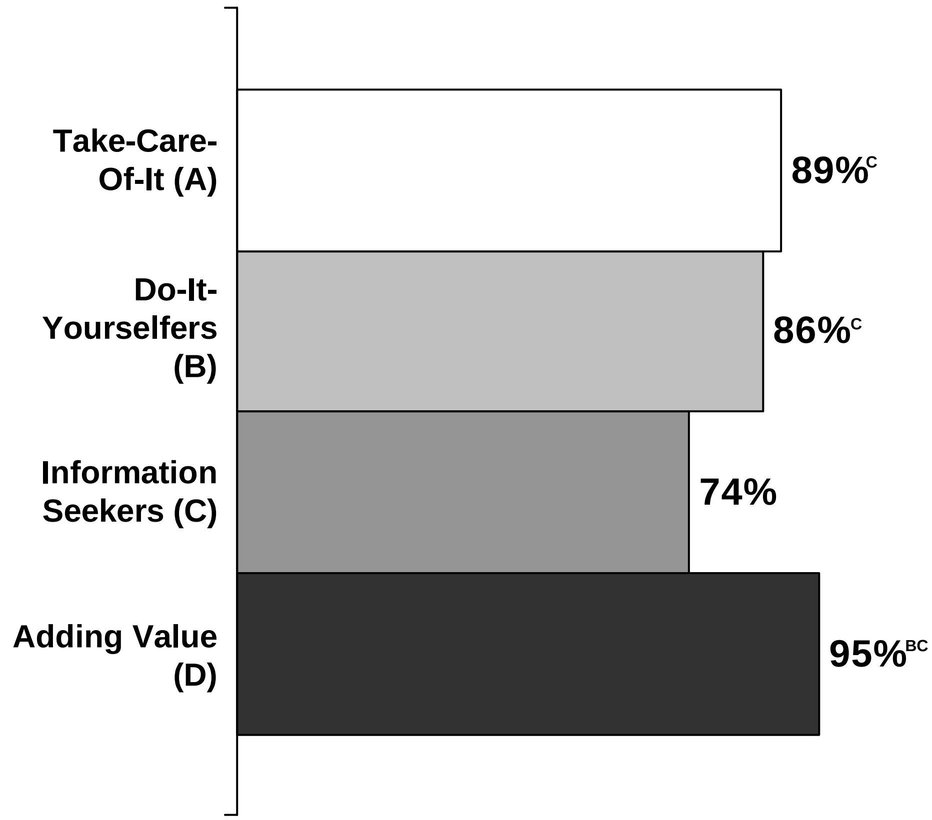
VIII. (C) Overall Satisfaction Measure

VIII. (C) Overall Measure

Q3. Overall Satisfaction with Remodeling Project
Completed Projects



Q3. Satisfaction with Home Remodeling Project by Market Segment
Highly Satisfied (Top-3-Box)
Completed Projects
Total Respondents



Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (C) Overall Measure

Respondents who 'completed' their home remodeling project were asked to rate their overall satisfaction with the project on a 10-point scale where 1 means completely dissatisfied and 10 means completely satisfied. Generally, a vast majority of respondents are highly satisfied with the project overall. Respondents who were asked about their 'windows' and 'hardwired lighting' projects are more highly satisfied than those who were asked about their 'HVAC' or 'roof' projects.

Overall satisfaction with the remodeling project is the dependent variable used in the Satiscan™ analysis.

- *Adding Value* segment members are more satisfied than *Do-It-Yourselfers* or *Information Seekers*. Virtually everyone in this group gave the project a top-3-box score.

- Conversely, *Information Seekers* are the least satisfied of any of the segments.

VIII. (D) Modules

Overview

Very often kitchens are remodeled in a remodeling project. We find that 64% of the respondents who completed remodeling projects include the remodeling of a kitchen as a part of their project. When asked about their overall satisfaction with their kitchen remodeling project, 87% express a high level of overall satisfaction (top 3-box scores).

- There are no discernible differences among the segments relative to overall satisfaction. However, sample sizes are small.

The majority of those asked about kitchen remodeling replaced one or more appliances as a part of their remodeling project. This indicates a great potential to target replacement of appliances when customers remodel kitchens.

- Oven 69%
- Microwaves 65%
- Refrigerators 62%
- Dishwashers 57%

At the segment level a similar pattern of appliance replacement exists with the exception of more *Do-It-Yourselfers* replacing ovens (77%). They and the *Take-Care-Of-It* respondents replaced slightly more microwaves than the other segments (72% & 73% respectively).

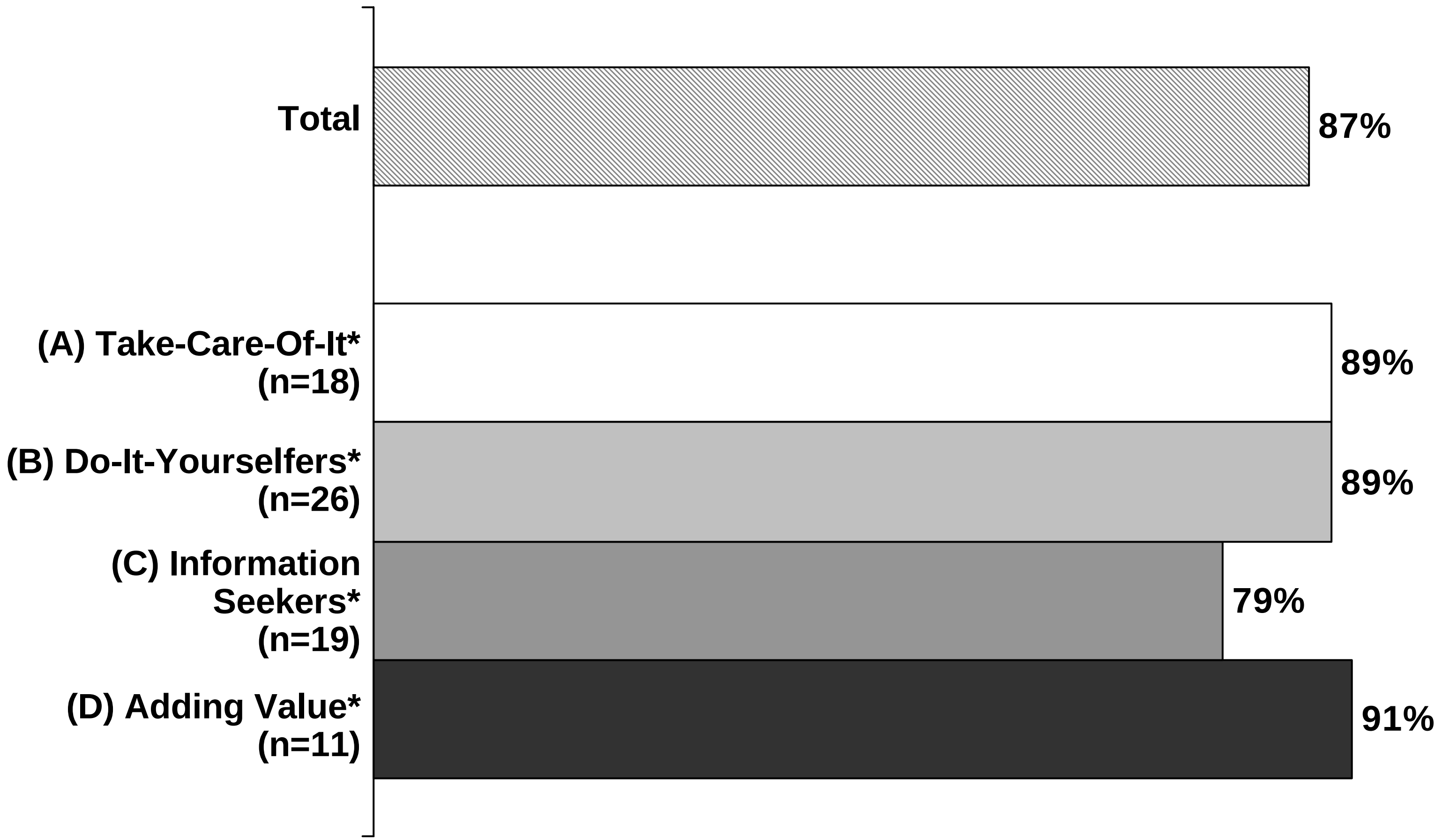
- The *Take-Care-Of-It* are also somewhat lower on dishwasher replacements (50%).

A vast majority of the kitchen remodelers are the sole purchaser of appliances involved in the project (86%). A significantly smaller number (7%) left the choice solely up to the contractor. On average, 7% of the kitchen respondents worked jointly with the contractor on the decision regarding appliances.

Color, style and energy efficiency are rated most important.

Q6. Overall Satisfaction with Kitchen Remodeling

Highly Satisfied (Top-3-Box)
Total and by Market Segment
Asked About Kitchen Remodeling
(n=74)



*** Sample size is small***

VIII. (D) Kitchen Module

Seventy-four of the 319 respondents whose project included a ‘kitchen’ remodeling were asked questions relative to the kitchen project. First, respondents were asked to report their overall satisfaction with the kitchen project using a 10-point scale where 1 means completely dissatisfied and 10 means completely satisfied.

Generally, the vast majority of respondents are highly satisfied with their kitchen project overall.

- At the segment level, there are no discernible differences with all respondents reporting a similar level of satisfaction. Sample size at the segment level is small, therefore, findings should be interpreted with caution.

VIII. (D) Kitchen Module

Q7. Added or Replaced…

Asked About Kitchen Remodeling
(n=74)

	Total	Market Segments: Take-Care-Of-It* (A) (n=18)	Do-It-Yourselfers* (B) (n=26)	Info Seekers* (C) (n=19)	Adding Value* (D) (n=11)
Oven	69%	67%	77%	63%	64%
Microwave	65%	72%	73%	53%	55%
Refrigerator	62%	61%	69%	68%	36%
Dishwasher	57%	50%	65%	63%	36%
Plumbing	55%	50%	42%	74% B	64%
Hardwired Lighting	37%	39%	35%	42%	27%
Windows	32%	44%	27%	26%	36%
Insulation	22%	50% BCD	15%	11%	9%
Walls or Structures	20%	39%	19% D	16%	--

** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Kitchen Module

More than half of the 'kitchen' remodelers added or replaced home appliances, with no difference reported at the segment level.

- *Information Seekers* who were asked about their 'kitchen' remodeling are more likely to report that the 'kitchen' project included plumbing than are *Do-It-Yourselfers*.
- Take-Care-Of-It respondents are the most likely group to add or replace insulation as part of their 'kitchen' project.
- Due to small sample size the following should be interpreted with caution. Respondents who report that the entire cost of the project is '$30,000 or more' are more likely to say that they added or replaced appliances than are those whose projects cost between '$5,000 and $10,000.' Additionally, the higher the cost of the project, the more likely respondents are to report that they added or replaced windows, insulation and walls or structures.

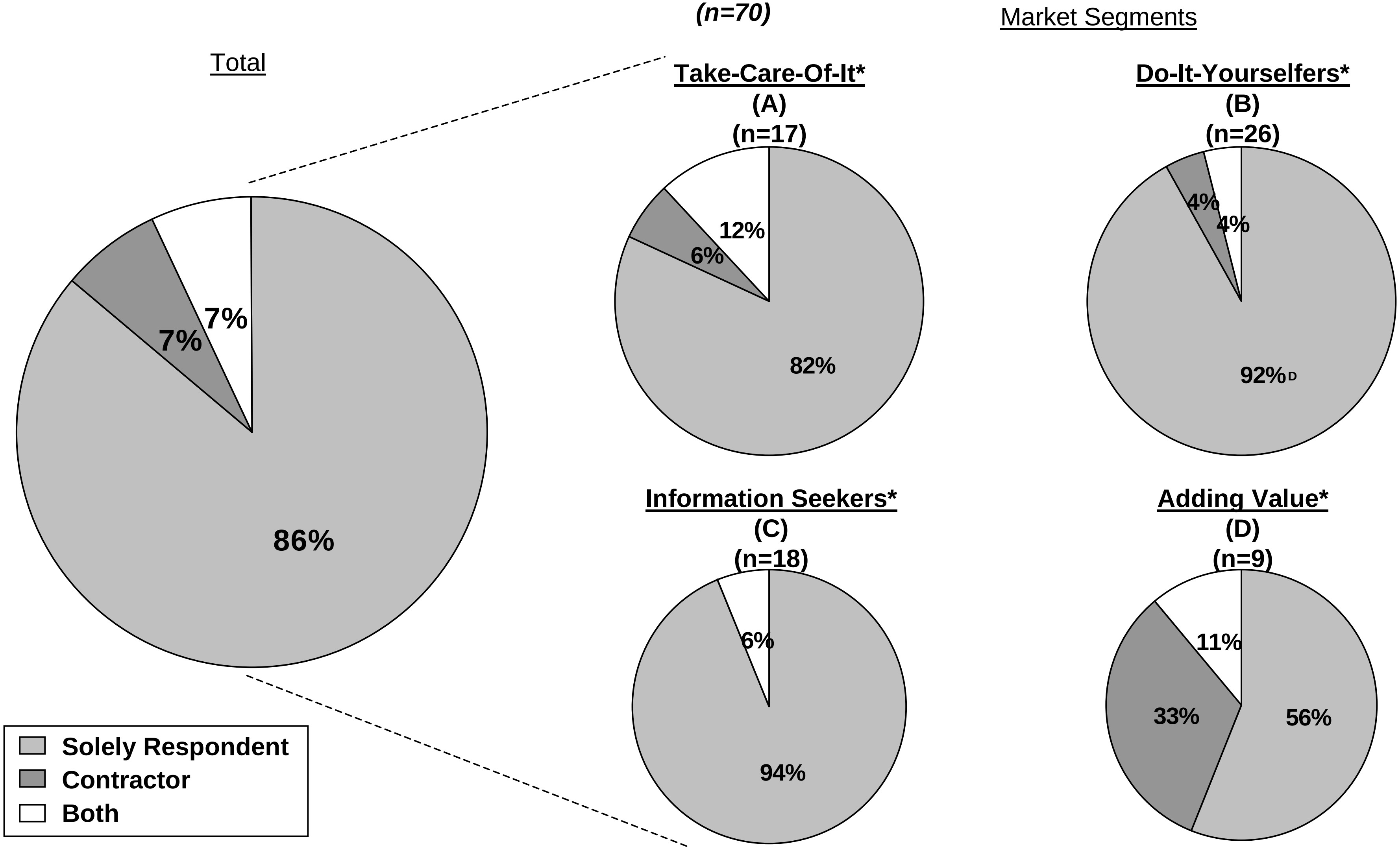
	$5k to <$10k (n=24) A	$10k to <$30k (n=25) B	$30k or more (n=18) C
Stove including oven	58%	64%	94%^{AB}
Refrigerator	42%	68%	78%^{A}
Dishwasher	42%	60%	78%^{A}
Hardwired Lighting	21%	44%	61%^{A}
Windows	17%	36%	50%^{A}
Insulation	0%	24%^{A}	33%
Walls or structures	4%	16%	50%^{AB}

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Q8. Who Made the Appliance Purchases

Asked About Kitchen Remodeling and Made Appliance Purchase

(n=70)



** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Kitchen Module

Generally, the vast majority of respondents are either the sole purchaser of appliances or are jointly involved with the purchases with the contractor. Only 4 of the 74 respondents who were asked about their 'kitchen' remodeling did not yet make their appliance purchases.

- Virtually all *Information Seekers* and *Do-It-Yourselfers* are the sole purchasers of appliances compared with only about half and two-thirds of the *Adding Value* respondents who say this.

- Only 3% of ‘kitchen’ remodelers report making appliance purchases over the Internet

Q11a. Major Factor in Decision to Purchase

Asked About Kitchen Remodeling and Made Appliance Purchase
(n=70)

	Total	Market Segments: Take-Care-Of-It* (A) (n=18)	Do-It-Yourselfers* (B) (n=26)	Info Seekers* (C) (n=19)	Adding Value* (D) (n=11)
Color	79%	82%	73%	78%	89%
Style	70%	71%	65%	78%	67%
Energy Efficiency	64%	53%	77%	56%	67%
Brand	54%	65%	42%	67%	44%
Price	51%	65%[B]	35%	50%	78%[B]
Availability	41%	59%[B]	23%	50%	44%
Warranty	40%	41%	35%	50%	33%
Cost of Installation	11%	12%	4%	22%	11%

** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Respondents who made their appliance purchases where asked to rate various items relative to their importance in the decision to purchase. A 10-point scale was used, where 1 means was not at all a consideration and 10 means it was a major factor in the decision process.

Color, style, and energy efficiency rank highest in importance for buying appliances.

- *Take-Care-Of-It* respondents rate price and availability higher in importance than do *Do-It-Yourselfers*.

- Price and availability are more important to kitchen remodelers whose homes are 20 years or older (62% and 50%) than those whose homes are between 11 and 20 years (30% and 50% respectively).

Overview

86% of window remodelers are highly satisfied (top 3-box) with the window project overall.

Respondents who made their window purchases where asked to rate various items relative to their importance in the decision to purchase. Energy efficiency and style ranked highest in influencing the decision to remodel (80% & 71% respectively).

Across all segments, the remodeling contractor plays a significant role in the purchase decisions. 76% of the decisions involve the contractor. 29% rely solely on the contractor for the decision.

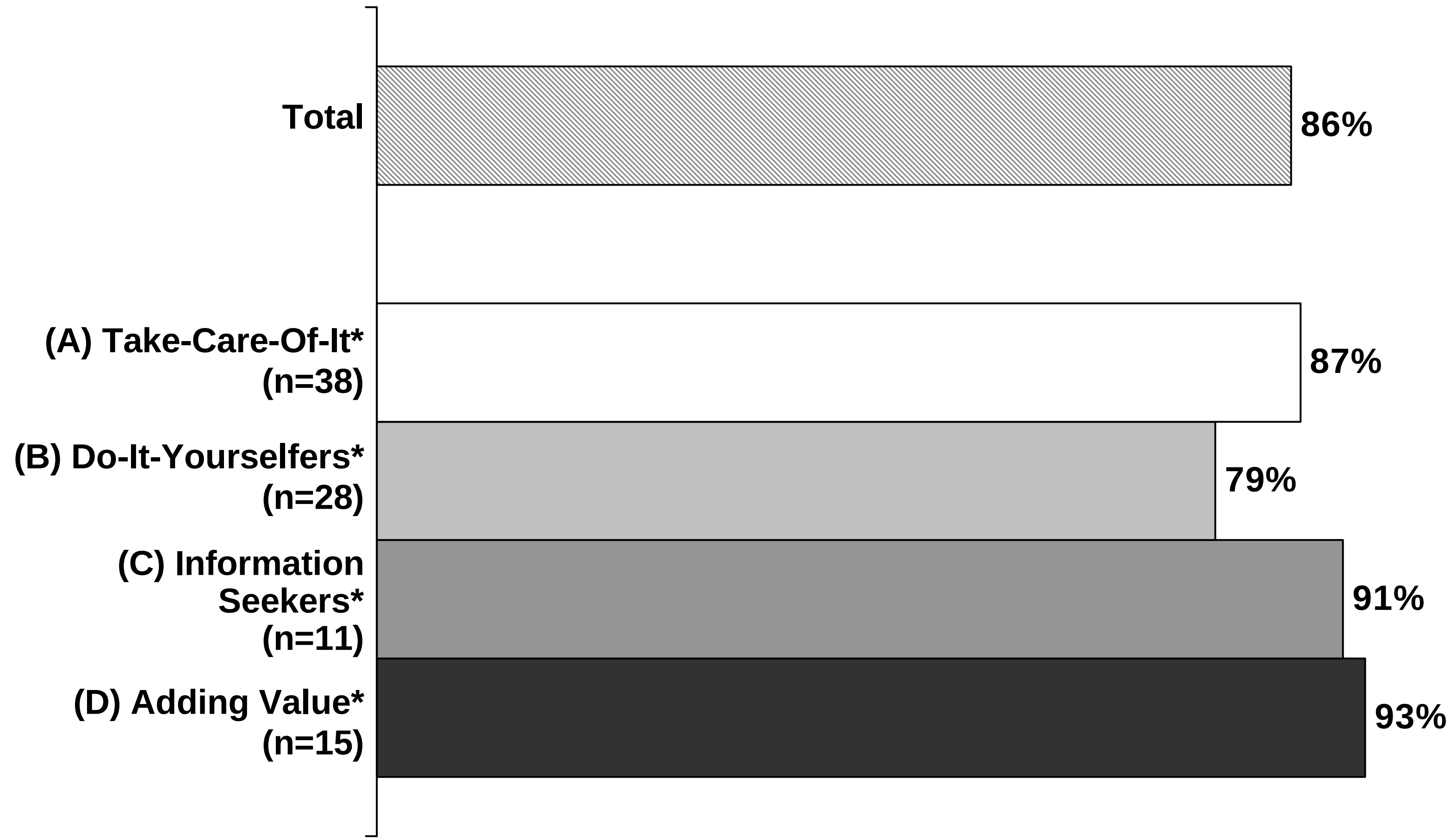
At the segment level, sample is small and findings should be interpreted with caution.

Q13. Overall Satisfaction with Window Remodeling

Highly Satisfied (Top-3-Box)

Asked About Window Remodeling

(n=92)



*** Sample size is small**

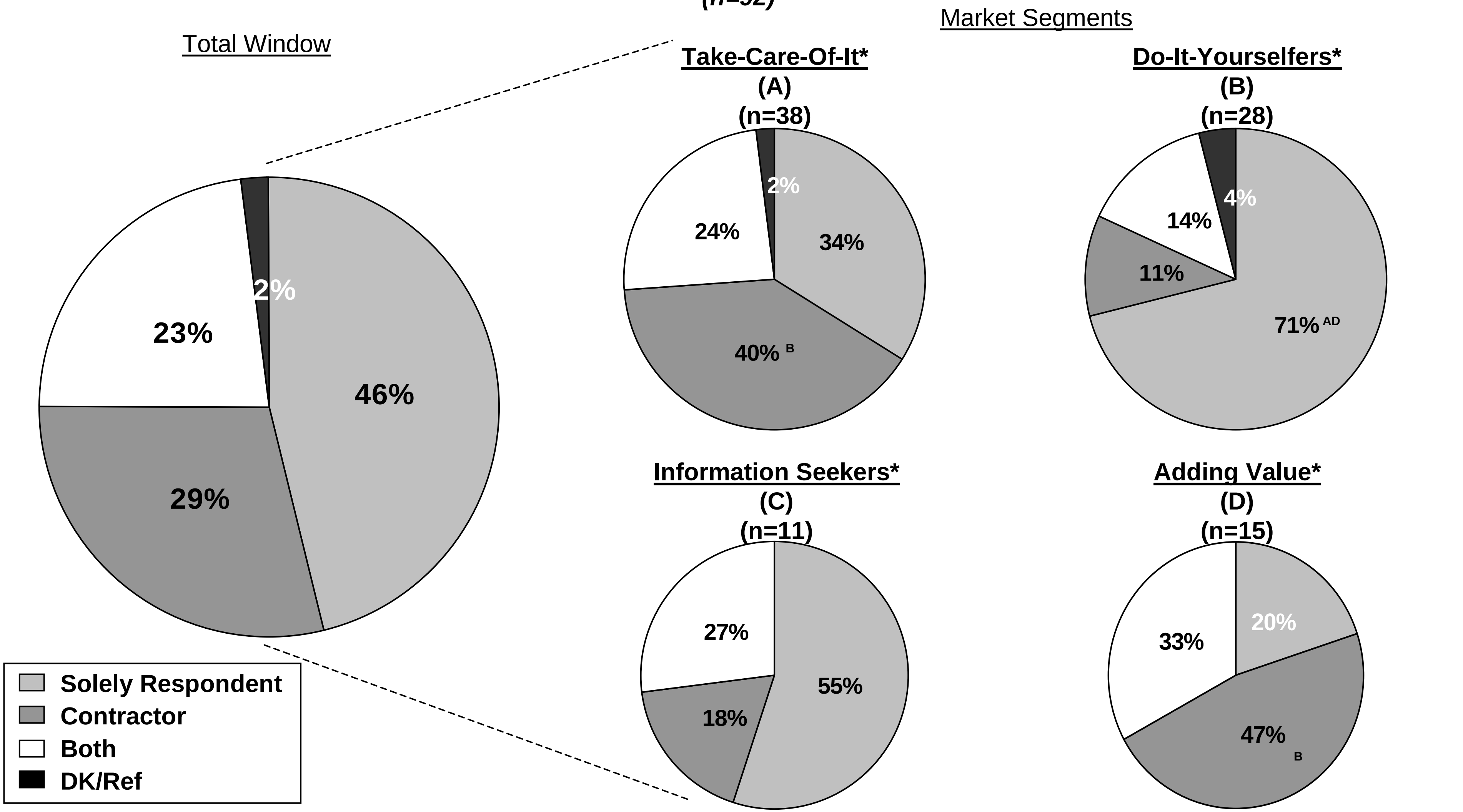
VIII. (D) Window Module

Ninety-two of the 308 respondents who completed a 'window' project were asked to report on their experience with window remodeling.

- Similar to the kitchen module, respondents were asked to rate their overall satisfaction with the window project on a 10-point scale with 1 meaning completely dissatisfied and 10 meaning completely satisfied. Generally, the vast majority of the respondents are highly satisfied with their window project overall regardless of segment.

Q15. Who Made the Window Purchases

Asked About Window Remodeling and Made Purchase
(n=92)



** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

About one-quarter of the 'window' project respondents report that the contractors make the window purchases. About one-quarter also say that windows are purchased by both the respondent and the contractor. This proportion is significantly higher than the proportion of respondents who were asked about 'kitchen' projects.

Made purchases	Kitchen Appliances (n=70) A	Windows (n=92) B
Solely Respondent	85%[B]	46%
Contractor	7%	29%[A]
Both	7%	23%[A]

- Not surprisingly, *Do-It-Yourselfers* are more likely than *Take-Care-Of-It* or *Adding Value* respondents to make the window purchase themselves. This means that the primary channel for providing information on a window remodeling project would be through the Do-It-Yourselfers themselves while the primary channel for information for the other segments would be the contractor.

- Only 2% of the respondents who were asked about their window project made their purchases over the Internet.

- Only 1 of the 92 respondents who were asked about their window project had not yet purchased their windows.

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Q18a-g. Major Factor in Decision to Purchase

Asked About Window Remodeling and Made Window Purchase

	Total Window *(n=90)*	Market Segments: Take-Care-Of-It* (A) (n=18)	Do-It-Yourselfers* (B) (n=26)	Info Seekers* (C) (n=19)	Adding Value* (D) (n=11)
Energy Efficiency	80%	87%	67%	73%	94% B
Style	71%	73%	70%	64%	73%
Warranty	54%	41%	35%	50%	67%
Price	53%	35%	67% A	64%	67% A
Availability	43%	49%	30%	55%	47%
Brand	38%	27%	30%	73% AB	53%
Cost of Installation	34%	19%	33%	46%	67% AB

** Sample size is small*

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Window Module

As expected, energy efficiency is the most important factor when making decisions about window purchases. Not surprisingly, window style is also important since windows add to the home's appearance and is important relative to functionality.

- Energy efficiency is more important to *Adding Value* respondents than it is to the *Do-It-Yourselfers.*
- Surprisingly, brand is one of the least important decision factors for window purchases. However, brand is more important to *Information Seekers* than it is to the *Take-Care-Of-It* or *Do-It-Yourselfers*.
- As can be seen below, compared with purchase decisions from the 'kitchen' remodelers 'energy efficiency', 'warranty,' and 'cost of installation' is more important to 'window' remodelers. Brand is more important when purchasing appliances than it is when purchasing windows.

	Kitchen (n=70) A	**Windows (n=92) B**
Color	79%	N/A
Style	70%	71%
Energy Efficiency	64%	80%[A]
Brand	54%[B]	38%
Price	51%	53%
Availability	41%	43%
Warranty	40%	54%[A]
Cost of Insulation	11%	34%[A]

ntly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Insulation Module

Overview

82% of respondents who complete an insulation project are highly satisfied overall.

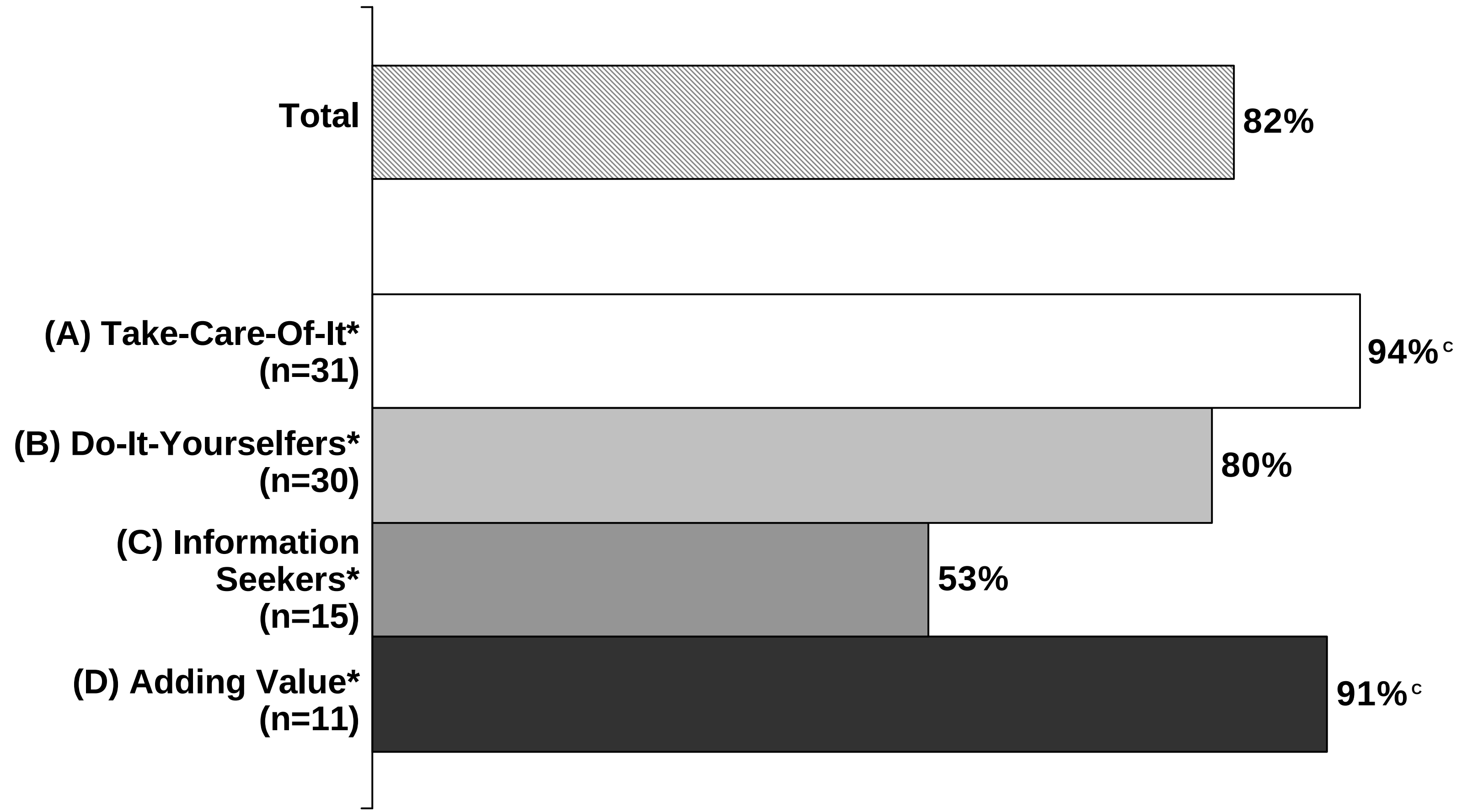
More than three-quarters added or replaced seals around the windows, and more than two-thirds added or replaced ceiling insulation and/or wall insulation.

Not suprisingly, energy efficiency is a major factor in their purchase decision. This likely points to the remodelers' efforts to manage HVAC operating costs through better insulation. The type of insulation, availability and the price are mid-range factors influencing the decision. This observation is consistent across all segments, however the *"Adding Value"* segments places the highest emphasis on energy efficiency (100%) out of the four.

The contractor is involved in about half of the buying decisions for insulation projects. On average, only one-quarter are left solely to the contractor. Results vary greatly among segments.

At the segment level sample is small and findings should be interpreted with caution.

Q20. Overall Satisfaction with Insulation/Weatherization Remodeling
Highly Satisfied (Top-3-Box)
Asked About Insulation/Weatherization Remodeling
(n=87)



** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Insulation Module

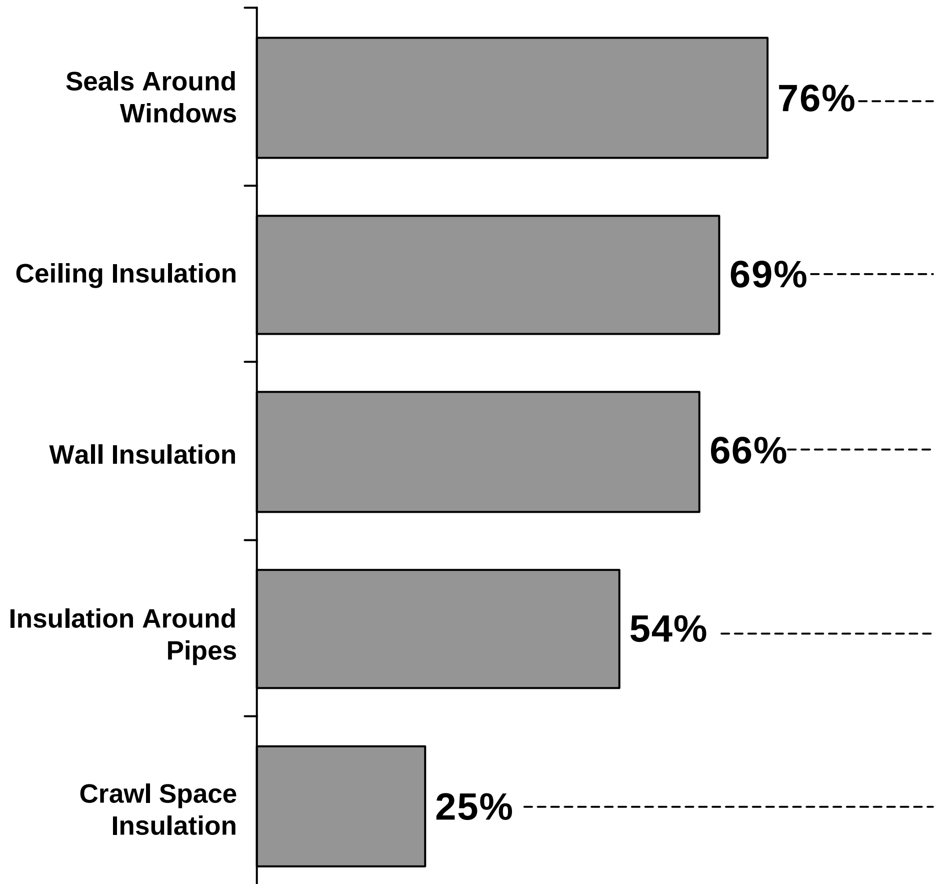
Eighty-seven of 265 respondents who completed an 'insulation' or weatherization project were asked to rate their insulation project on the 10-point scale where 1 means completely dissatisfied and 10 means completely satisfied. Again, the majority of respondents who were asked about this work are highly satisfied (top-3-box) overall.

- Virtually all of the *Take-Care-Of-It* and *Adding Value* respondents are highly satisfied with their insulation project. However, only about half of the *Information Seekers* are highly satisfied. As will be demonstrated throughout this report, satisfaction on several measures is lower among the *Information Seeker* group. Since this group is more likely than any other to thoroughly investigate a project, it may be that once a project is complete respondents feel it is not up to par with their expectations.

Q21. Added or Replaced...

Asked About Insulation/Weatherization Remodeling (n=87)

Total Insulation



Market Segments

	Take-Care-Of-It* (A) (n=31)	Do-It-Yourselfers* (B) (n=30)	Info Seekers* (C) (n=15)	Adding Value* (D) (n=11)
Seals Around Windows	71%	77%	80%	82%
Ceiling Insulation	52%	80% [A]	87% [A]	64%
Wall Insulation	58%	63%	80%	73%
Insulation Around Pipes	55%	57%	47%	55%
Crawl Space Insulation	29%	30%	13%	18%

** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Insulation Module

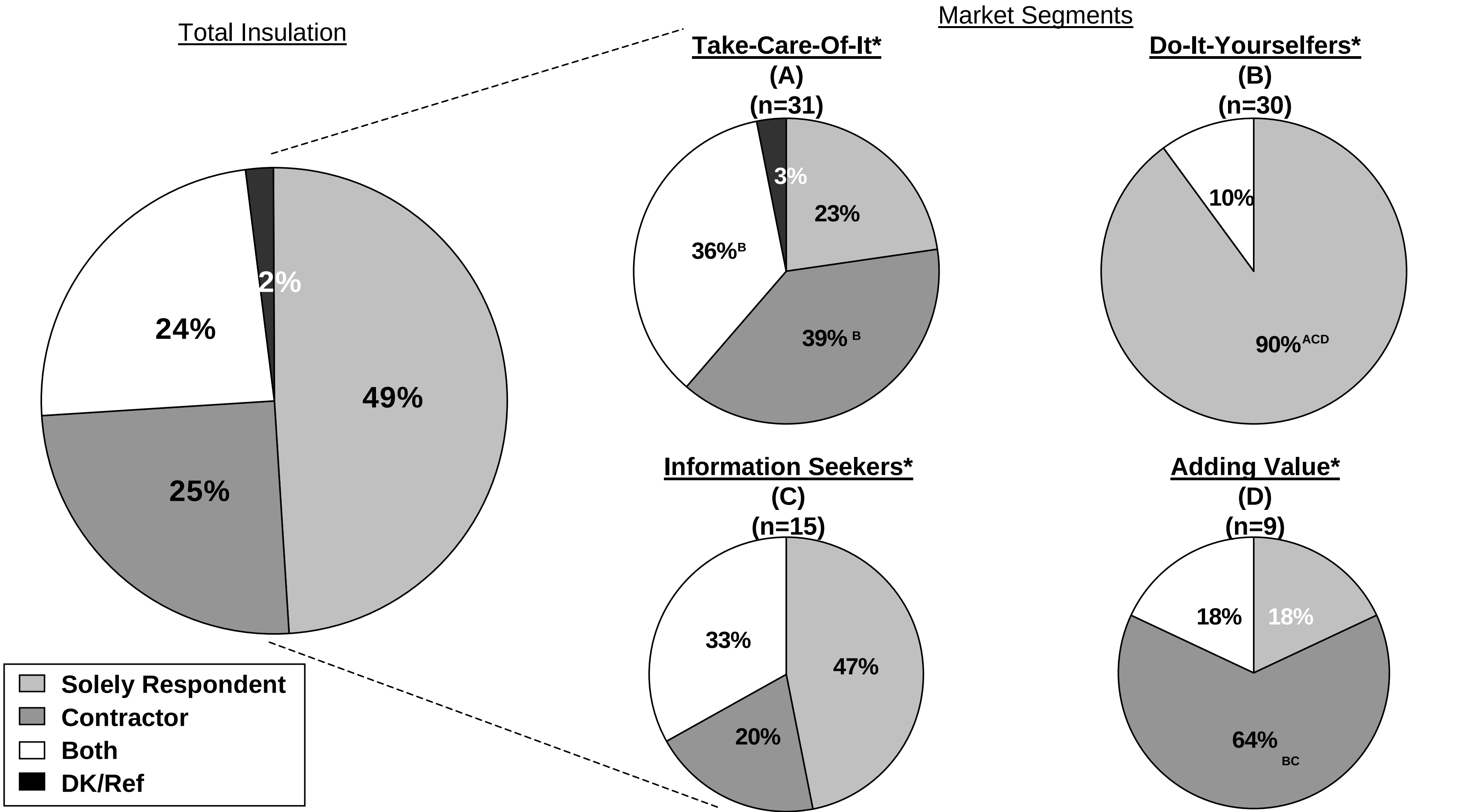
More than three-quarters of the respondents who were asked about their 'insulation' project report that seals were put around the windows. More than two-thirds added or replaced ceiling insulation and/or wall insulation.

- Interestingly, *Do-It-Yourselfers* and *Information Seekers* are more likely to say that they added or replaced the ceiling insulation than are *Take-Care-Of-It*. It may be that *Do-It-Yourselfers* and *Information Seekers* are more aware of what the insulation project included since *Take-Care-Of-It* respondents generally leave the project in the contractors' hands. It could also mean, however, that contractors are not generally including ceiling insulation for weatherization projects unless consumers specifically ask for it.

- Respondents whose projects are in the $30,000 plus range (85%) report include seals around the windows more often than do respondents whose projects cost between $5,000 and $10,000 (62%).

Q23. Who Made the Insulation/Weatherization Purchases

Asked About Insulation/Weatherization Remodeling
(n=87)



** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

About three-quarters of the respondents who were asked about their 'insulation' or 'weatherization' project were involved in the purchasing of the materials either solely (49%) or with the contractor (24%).

- Not surprisingly, the *Do-It-Yourselfers* are involved with the insulation purchases more often than any of the respondents in the other segments, with 90% making the purchases themselves.
- As expected, respondents who did not use a contractor (90%) for the remodeling work are more likely to report that they made all the purchases themselves than are respondents who did use a contractor (29%).

None of the insulation purchases were made via the Internet.

Compared with 'kitchens' the contractor is more involved with the purchase.

Made Purchases	**Kitchen Appliances (n=70) A**	**Windows (n=92) B**	**Insulation (n=87) C**
Solely Respondent	85%[BC]	46%	49%
Contractor	7%	29%[A]	25%[A]
Both	7%	23%[A]	24%[A]

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Q26a-f. Major Factor in Decision to Purchase

Asked About Insulation Remodeling and Made Purchases (n=86)

	Total Insulation	Market Segments: Take-Care-Of-It* (A) (n=30)	Do-It-Yourselfers* (B) (n=30)	Info Seekers* (C) (n=15)	Adding Value* (D) (n=11)
Energy Efficiency	77%	73%	70%	80%	100% AB
Type	51%	60%	50%	47%	36%
Availability	42%	50%	33%	53%	27%
Price	41%	37%	40%	53%	36%
Cost of Installation	38%	43%	30%	47%	36%
Brand	29%	30%	23%	53%	9%

** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Not surprisingly, energy efficiency ranks highest in the purchase decision importance ratings. Interestingly, the type of insulation is rated highly important (top-3-box) by only half of these respondents. Care was taken to frame this question so respondents understood that 'type of insulation' included foam, fiberglass or wool blown. This means that for half of the respondents 'type' of insulation is not that much of an issue. Insulation brand is highly important to just under one-third of these respondents.

- Respondents whose entire project costs $30,000 plus are more likely than those whose projects costs $5,000 to $10,000 to say that brand is highly important (44% and 15% respectively). This may mean that when more money is spent on the project brand is more of an issue.

- Compared with 'kitchen' appliances, brand is less important.

	Kitchen (n=70) A	Windows (n=92) B	Insulation (n=86) C
Color	79%	N/A	N/A
Style	70%	71%	N/A
Energy Efficiency	64%	80%[A]	77%
Brand	54%[BC]	38%	29%
Price	51%	53%	41%
Availability	41%	43%	41%
Warranty	40%	54%[A]	N/A
Cost of Installation	11%	34%[A]	38%[A]
Type of Product	N/A	N/A	N/A

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Bathroom Module

Overview

80% of bathroom remodelers are highly satisfied (top-3-box) with the project overall.

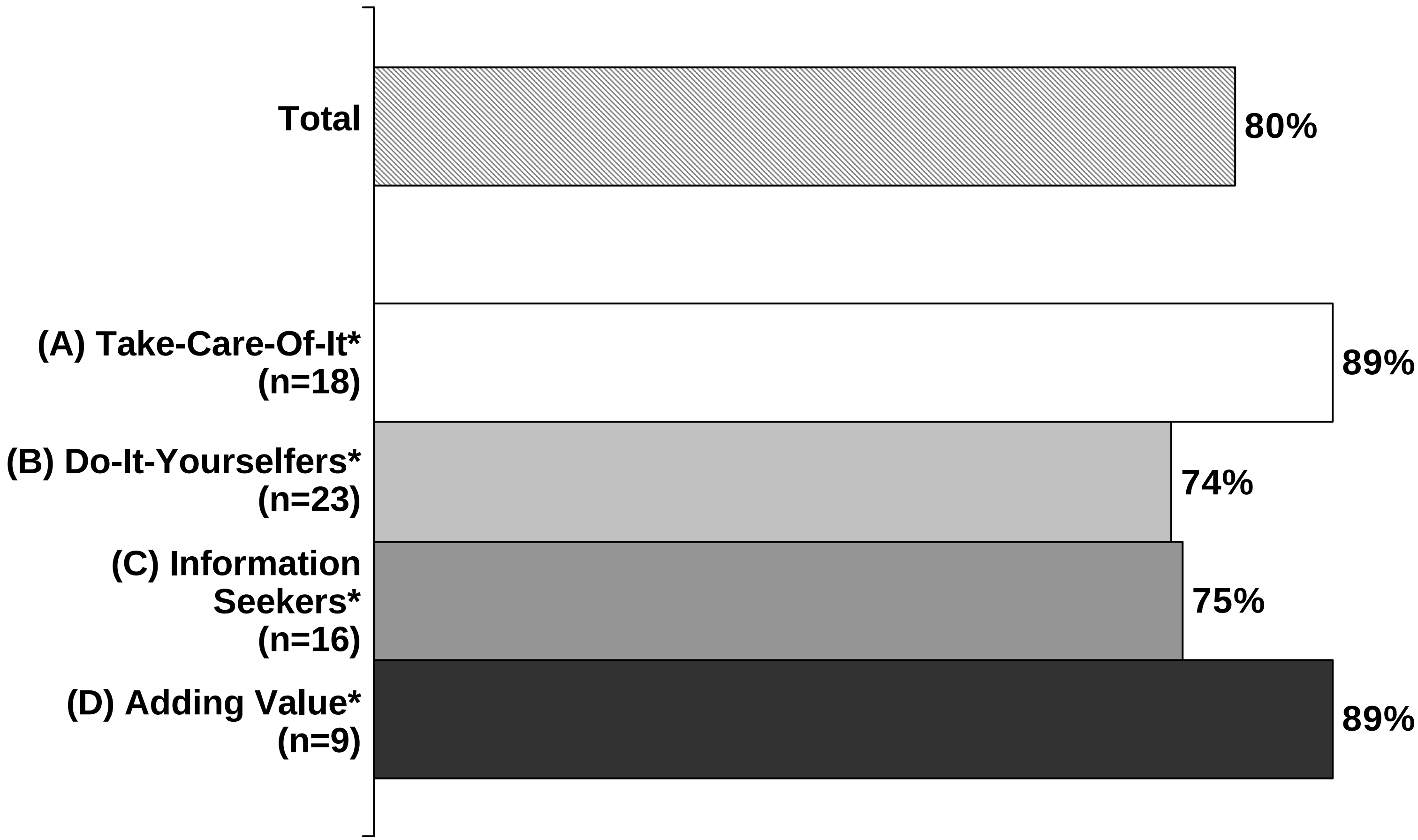
Bathroom remodelers most often replaced of faucets and/or shower heads, sinks, tubs, shower & toilets, and/or floors. 46% of the projects include wall of structural changes. Plumbing replacement was more likely a part of the project for the higher cost projects ($30,000 plus).

In almost 60% of the bathroom remodeling projects, the respondent served as the sole purchase decision-maker. Contractors were the sole-decision maker on slightly less than one-quarter of the projects.

Style and color are the most important factors on the bathroom-related purchase decision. Mid-range factors are availability and price. Brand and cost on installation play the lowest role in respondents' decisions.

At the segment level sample size is small and findings should be interpreted with caution.

Q28. Overall Satisfaction with Bathroom Remodeling
Highly Satisfied (Top-3-Box)
Asked About Bathroom Remodeling
(n=66)



**** Sample size is small***

VIII. (D) Bathroom Module

Sixty-six of the 300 respondents who reported completing a 'bathroom' remodeling project were asked to specifically comment on the bathroom remodeling. As with all other types of remodeling, most respondents are highly satisfied with the bathroom project overall.

- While it appears that *Do-It-Yourselfers* and *Information Seekers* are less satisfied, the proportional differences are not discernible.

VIII. (D) Bathroom Module

Q29/Q30. Added or Replaced...

Asked About Bathroom Remodeling

(n=66)

	Total Bathroom	Market Segments: Take-Care-Of-It* (A) (n=18)	Do-It-Yourselfers* (B) (n=23)	Info Seekers* (C) (n=16)	Adding Value* (D) (n=9)
Faucets and/or shower heads	85%	83%	87%	94%	67%
Sink, Tub, Shower, Toilet	82%	78%	87%	75%	89%
Floors	80%	78%	74%	88%	89%
Plumbing	61%	56%	61%	69%	56%
Walls and/or Structures	46%	39%	61% D	50% D	11%
Windows	23%	22% D	22% D	38% D	0%
Jacuzzi	8%	11%	4%	13%	0%

** Sample size is small*

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Bathroom Module

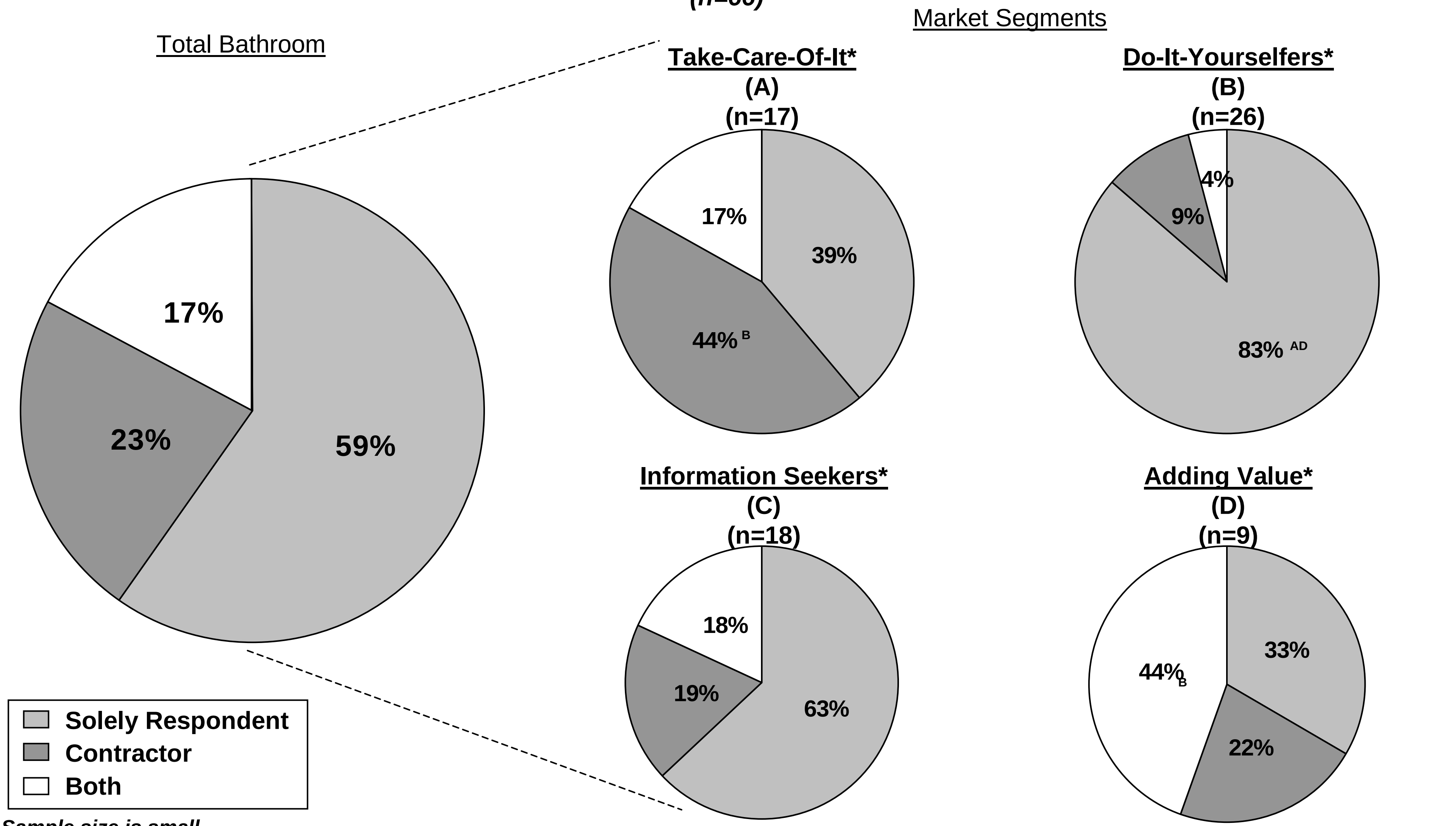
Most of the 'bathroom' remodeling projects include adding or replacing ‘faucets and/or shower heads,’ sinks, tubs, showers and/or toilets, and floors,

- Respondents whose entire project was $30,000 plus are more likely to say that the bathroom project included adding or replacing plumbing than are respondents whose project was in the $5,000 to $10,000 range (76% and 44% respectively).

Q31. Who Made the Bathroom Purchases

Asked About Bathroom Remodeling and Made Purchase

(n=66)



** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

More than half of the respondents asked about 'bathroom' remodeling made all the bathroom purchases themselves.

- Similar to all other project purchases, *Do-It-Yourselfers* are more likely to say that they made all the bathroom purchases themselves than are *Take-Care-Of-It* or *Adding Value.*

Similar to other project purchases, only 2% of the bathroom remodelers made purchases over the Internet.

Less than 2% of the respondents who were asked about the bathroom did not make any of the bathroom purchases at the time of the interview.

Similar to 'windows' and 'insulation,' 'bathroom' remodelers consumers are less involved in the actual purchase decisions than they are 'kitchen' remodelers for appliances.

Made Purchases	**Kitchen Appliances (n=70) A**	**Windows (n=92) B**	**Insulation (n=86) C**	**Bathroom (n=66) D**
Solely Respondent	85%[ABC]	46%	49%	59%
Contractor	7%	29%[A]	25%[A]	23%[A]
Both	7%	23%[A]	24%[A]	17%

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Q34a-h. Major Factor in Decision to Purchase

Asked About Bathroom Remodeling and Made Bathroom Purchase

	Total Bathroom *(n=65)*	Market Segments: Take-Care-Of-It* (A) (n=18)	Do-It-Yourselfers* (B) (n=22)	Info Seekers* (C) (n=16)	Adding Value* (D) (n=9)
Style	66%	61%	55%	81%	78%
Color	65%	50%	50%	88% AB	89% AB
Availability	48%	39%	36%	63%	67%
Price	39%	17%	36%	50% A	67% A
Warranty	37%	39%	23%	56% B	33%
Water Conservation	32%	28%	27%	43%	33%
Cost of Installation	27%	17%	23%	38%	44%
Brand	22%	17%	27%	25%	11%

** Sample size is small*

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Bathroom Module

Style and color rank highest in importance when deciding about bathroom purchases.

Only about one-third of the respondents who were asked about their bathroom project report that they looked for information about water conservation.

	Kitchen (n=70) A	Windows (n=92) B	Insulation (n=86) C	Bathroom (n=65) D
Color	79%	N/A	N/A	65%
Style	70%	71%	N/A	66%
Energy Efficiency	64%	80%[A]	77%	N/A
Brand	54%[BCD]	38%	29%	22%
Price	51%	53%	41%	39%
Availability	41%	43%	41%	48%
Warranty	40%	54%[AD]	N/A	37%
Cost of installation	11%	34%	38%	27%
Type of Product	N/A	N/A	51%	N/A
Water Conservation	N/A	N/A	N/A	32%

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Hardwired Lighting Module

Overview

Of the eighty respondents who answer module questions related to 'hardwired lighting', 88% are highly satisfied overall with their hardwired lighting project.

More than two-thirds of the hardwired lighting remodelers are the sole-purchasing-decision makers.

Style and energy are the most important factor to the purchase decisions.

Warranty, brand, cost of installation are the least important factors influencing the purchase decision.

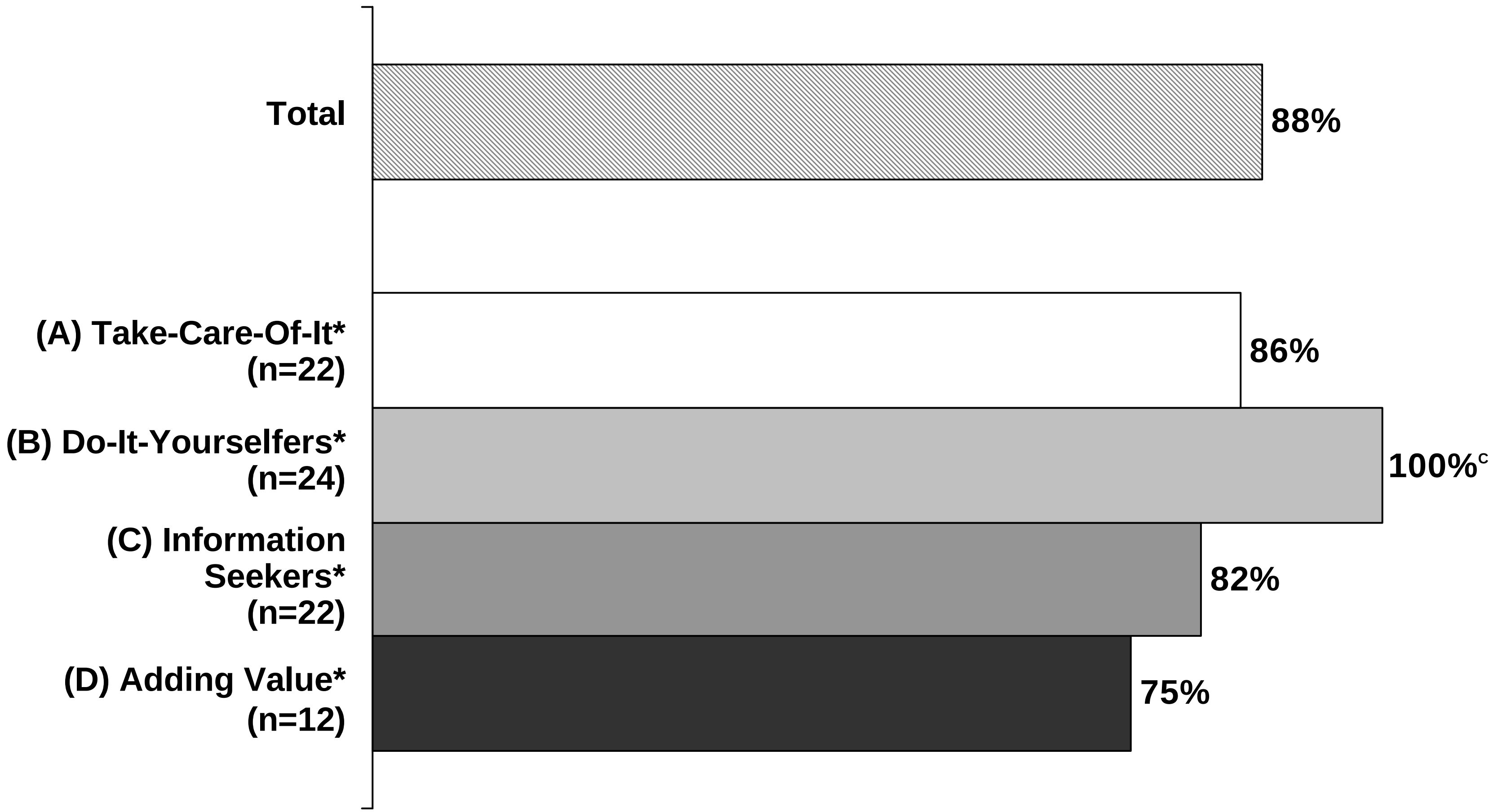
At the segment level sample size is small and findings should be interpreted with caution.

Q37. Overall Satisfaction with Hardwired Lighting

Highly Satisfied (Top-3-Box)

Asked About Hardwired Lighting Remodeling

(n=80)



** Sample size is small*

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Hardwired Lighting Module

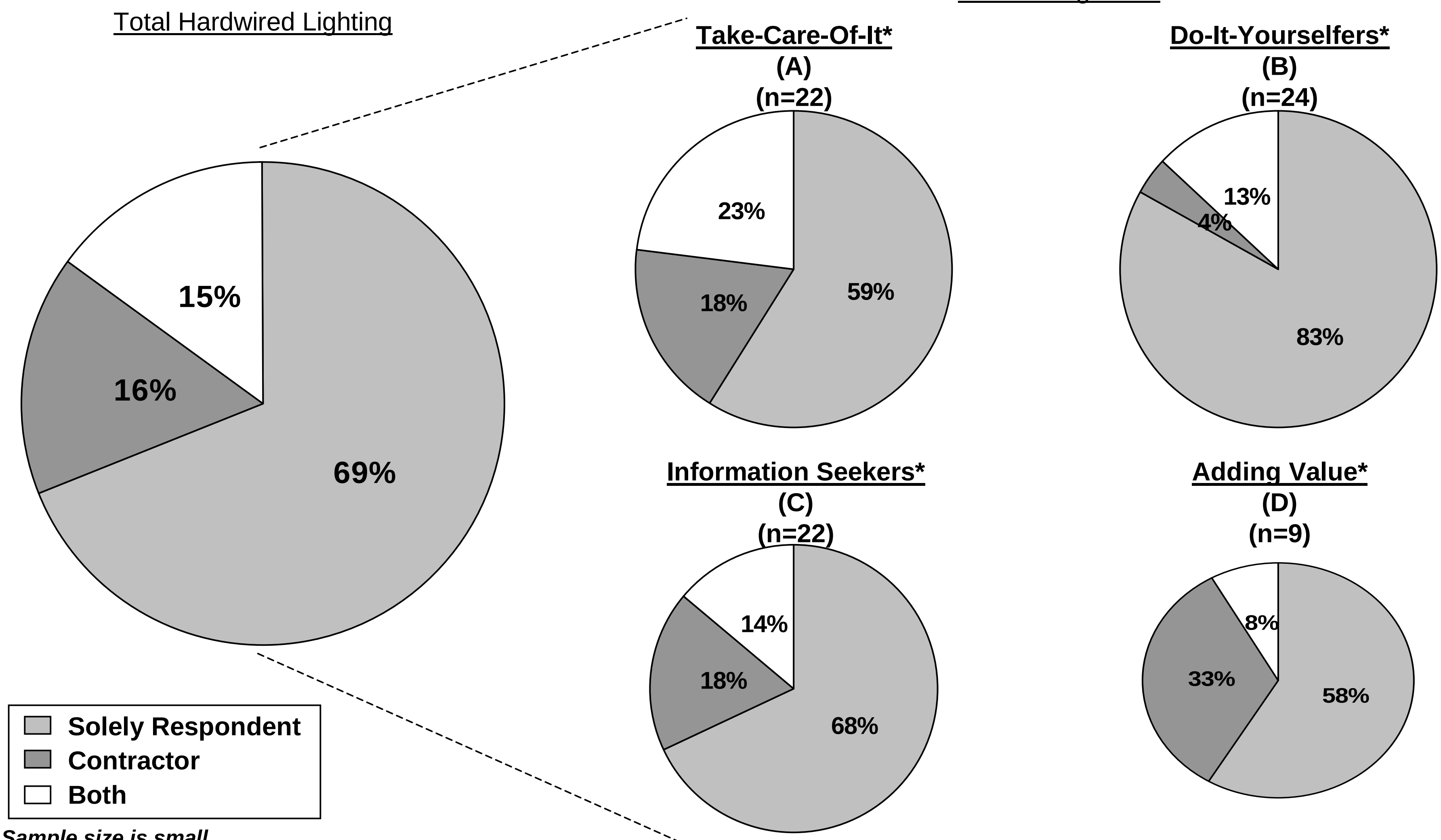
Eighty of the 290 respondents whose project includes indoor or outdoor 'hardwired lighting' were asked to specifically comment on this aspect of the project.

Similar to the other types of projects, most of these respondents are highly satisfied with the hardwired lighting project overall.

- *Do-It-Yourselfers* are more satisfied than *Information Seekers* with their hardwired lighting. Again this underscores the notion that *Information Seekers* are harder to please, likely because their expectations are higher.

Q39. Who Made the Hardwired Lighting Purchases

Asked About Hardwired Lighting Remodeling and Made Purchase
(n=80)



** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Regardless of segment, about two-thirds of the respondents report that they make the hardwired lighting purchases themselves.

- Only about 3% make hardwired lighting purchases over the Internet.
- The median number of lights purchased for a home remodeling is 5.

Number of lighting fixtures added or replaced	%
One-two	24%
Three – five	30%
Six - ten	18%
Eleven or more	28%
Average number	11
Median number	5

- Hardwired Lighting purchases are similar to 'kitchen' appliances in that the respondent is more involved with the purchase.

Made Purchases	Kitchen Appliances (n=70) A	Windows (n=92) B	Insulation (n=86) C	Bathroom (n=66) D	Hardwired Lighting (n=80) E
Solely Respondent	85%[ABCD]	46%	49%	59%	69%[BC]
Contractor	7%	29%[AE]	25%[A]	23%[A]	16%
Both	7%	23%[A]	24%[A]	17%	15%

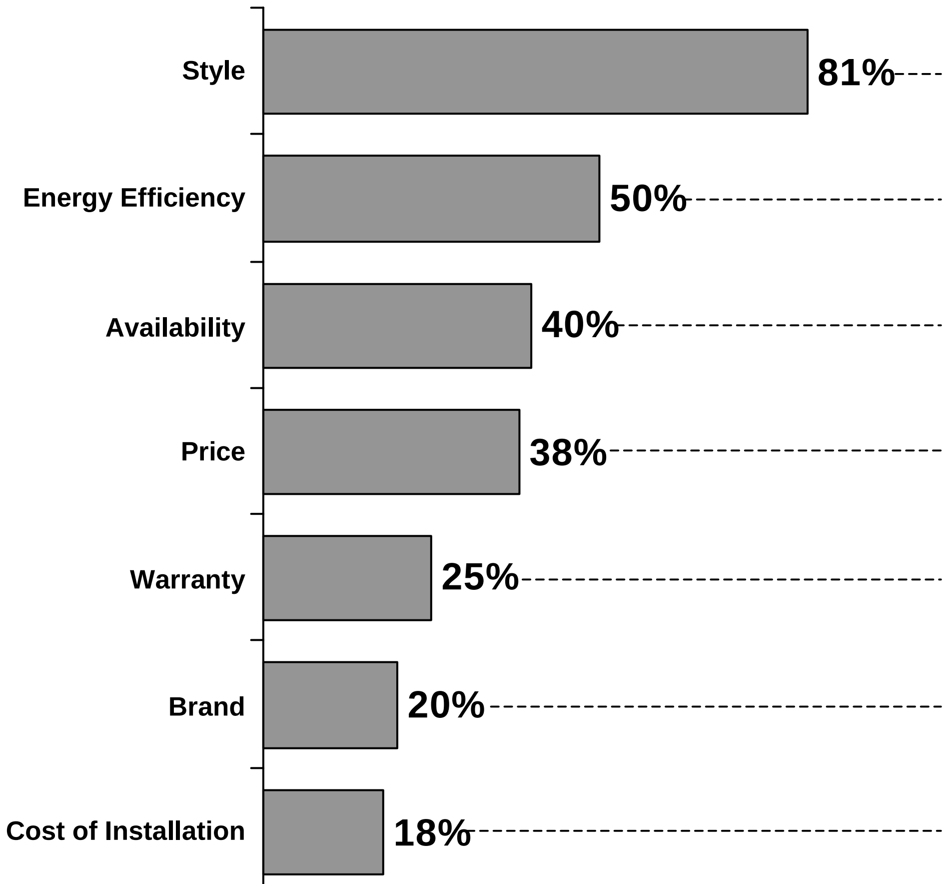
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Q42a-g. Major Factor in Decision to Purchase

Asked About Hardwired Lighting and Made Purchase

(n=80)

Total Hardwired Lighting



Market Segments

	Take-Care-Of-It* (A) (n=22)	Do-It-Yourselfers* (B) (n=24)	Info Seekers* (C) (n=22)	Adding Value* (D) (n=12)
Style	82%	71%	91%	83%
Energy Efficiency	41%	46%	50%	75%[A]
Availability	50%	25%	41%	50%
Price	23%	38%	50%	42%
Warranty	32%	25%	14%	33%
Brand	27%	21%	18%	8%
Cost of Installation	23%	13%	14%	25%

** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Style of lighting fixture is ranked as most important when respondents who were asked about this aspect of their project were asked to rate the decision-factors. Beyond style, about half report that energy efficiency is highly important (top-3-box) followed by availability and price.

- Style is more of a priority to 'hardwired lighting' purchases than to 'bathroom' purchases.

	Kitchen (n=70) A	Windows (n=92) B	Insulation (n=86) C	Bathroom (n=65) D	Hardwired Lighting (n=80) E
Color	79%	N/A	N/A	65%	N/A
Style	70%	71%	N/A	66%	81%[D]
Energy Efficiency	64%	80%[AE]	77%	N/A	50%
Brand	54%[BCDE]	38%	29%	22%	20%
Price	51%	53%[E]	41%	39%	38%
Availability	41%	43%	41%	48%	40%
Warranty	40%	54%[ADE]	N/A	37%	25%
Cost of Installation	11%	34%	38%	27%	18%
Type of Product	N/A	N/A	51%	N/A	N/A
Water Conservation	N/A	N/A	N/A	32%	N/A

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Roof Module

Overview

80% of roof remodelers are highly satisfied overall.

More than half of the respondents say that the purchase decision is left solely for the contractor on roof projects.

Generally, all measured importance factors are considered equally important with the exception of brand which is generally unimportant to the purchase decision.

- Warranty 63%
- Color 61%
- Style 59%
- Availability 59%
- Cost of Installation 56%
- Price 56%
- Brand 23%

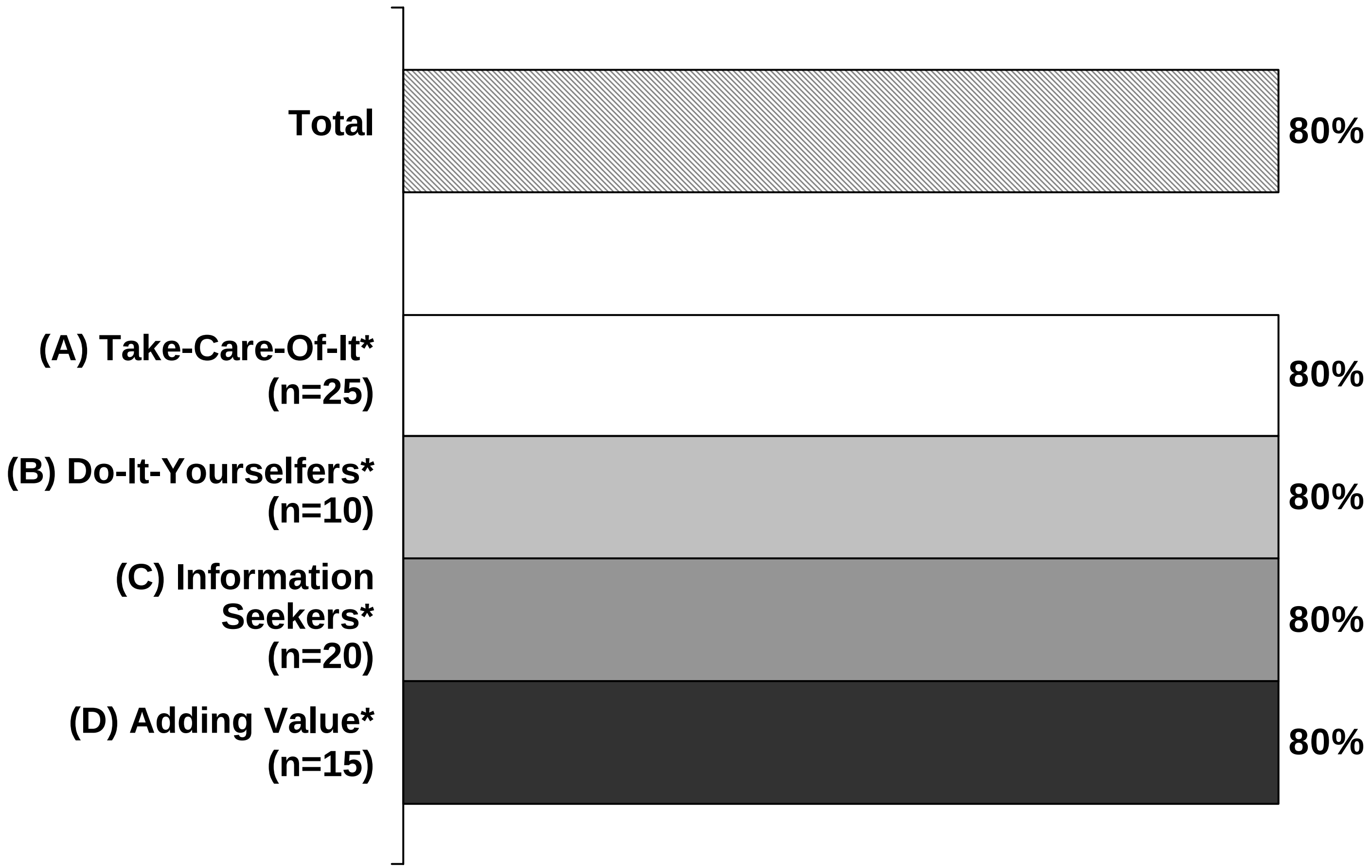
At the segment level sample size is small and findings should be interpreted with caution.

Q51. Overall Satisfaction with Roof Remodeling

Highly Satisfied (Top-3-Box)

Asked About Roof Remodeling

(n=70)



*** Sample size is small**

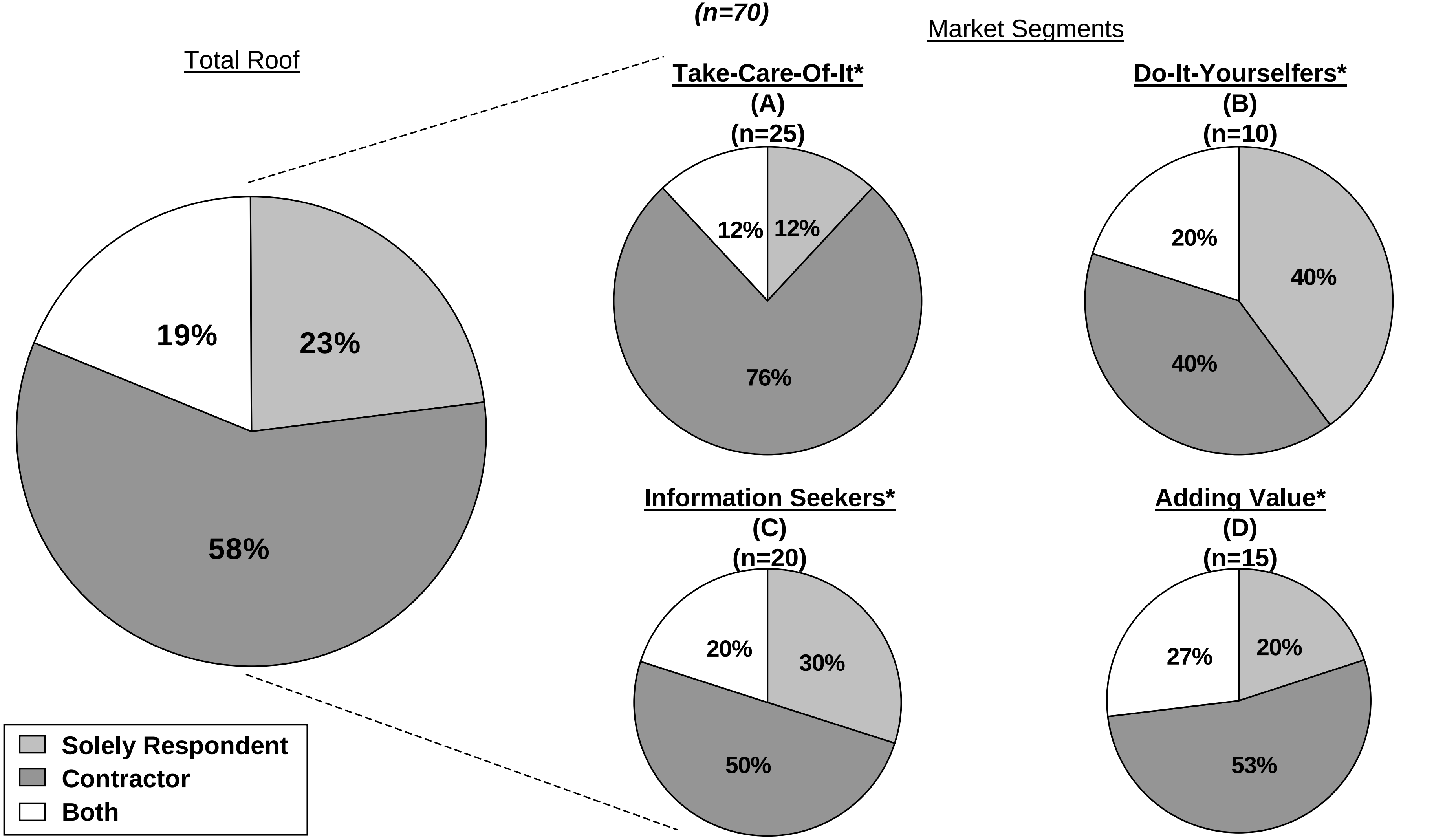
VIII. (D) Roof Module

Of the 232 respondents who report that their home remodeling project included the replacement of the 'roof' including plywood and shingles 70 were asked questions specifically related to roofs.

Similar to all responses in other remodeling modules, the majority of these respondents are highly satisfied (top-3-box) with their roof project.

Q55. Who Made the Roof Purchases

Asked About Roof Remodeling and Made Purchase
(n=70)



** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Not surprisingly, over half of the respondents who were asked about their 'roof' project report that the contractor made all the roof purchases.

- Also not surprisingly, a greater proportion of respondents who are classified as *Take-Care-Of-It* (76%) report that the contractor made all the purchases compared with *Do-It-Yourselfers* (40%) who say this.

- What is interesting is 40% of the *Do-It-Yourselfers* let the contractor make all the purchases. This suggests *Do-It-Yourselfers* generally use contractors for this type of work.

3% of the roof purchases were made via the Internet.

- More often than any other project type noted below, the contractor makes the roof purchases.

Made Purchases	**Kitchen (n=70) A**	**Windows (n=92) B**	**Insulation (n=86) C**	**Bathroom (n=66) D**	**Hardwired Lighting (n=80) E**	**Roof (n=70) F**
Solely Respondent	$85\%^{ABCD}$	$46\%^{F}$	$49\%^{F}$	$59\%^{F}$	$69\%^{BCF}$	23%
Contractor	7%	$29\%^{AE}$	$25\%^{A}$	$23\%^{A}$	16%	$58\%^{ABCDE}$
Both	7%	$23\%^{A}$	$24\%^{A}$	17%	15%	19%

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction0

Q58a-h. Major Factor in Decision to Purchase

Asked About Roof Remodeling and Made Roof Purchase (n=70)

	Total Roof	Market Segments: Take-Care-Of-It* (A) (n=25)	Do-It-Yourselfers* (B) (n=10)	Info Seekers* (C) (n=20)	Adding Value* (D) (n=15)
Warranty	63%	64%	30%	60%	87%[B]
Color	61%	56%	50%	60%	80%
Style	59%	44%	50%	65%	80%[A]
Availability	59%	60%	50%	50%	73%
Cost of Installation	56%	60%	50%	45%	68%
Energy Efficiency	54%	64%	30%	55%	53%
Price	54%	44%	70%	40%	80%
Brand	23%	24%[B]	--	20%[B]	40%[B]

** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) Roof Module

While warranty ranks highest in importance for a 'roof' project, color, style, availability, cost of installation, energy efficiency and price are not far behind.

- Cost of insulation is more important on a 'roof' project than other projects noted.

	Kitchen (n=70) A	Windows (n=92) B	Insulation (n=86) C	Bathroom (n=65) D	Hardwired Lighting (n=80) E	Roof (n=70) F
Color	79%	N/A	N/A	65%	N/A	61%
Style	70%	71%	N/A	66%	81%[DF]	59%
Energy Efficiency	64%	80%[AEF]	77%	N/A	50%	54%
Brand	54%[BCDEF]	38%	29%	22%	20%	23%
Price	51%	53%[E]	41%	39%	38%	54%[E]
Availability	41%	43%	41%	48%	40%	59%
Warranty	40%	54%[ADE]	N/A	37%	25%	63%[ADE]
Cost of Installation	11%	34%[A]	38%[AE]	27%[A]	18%	56%[ABCDE]
Type of Product	N/A	N/A	51%	N/A	N/A	N/A
Water Conservation	N/A	N/A	N/A	32%	N/A	N/A

- Although sample size is small, brand is more important to an HVAC project than to a Hardwired Lighting Project.

***** Sample size is small*
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (D) HVAC Module

Overview

More than three-quarters of respondents completing a HVAC project are highly satisfied overall.

- Since less than half of the respondents who reported a change to the HVAC system included the addition or replacement of ducts, the absence of this work may have influenced the top 3-box satisfaction scores for HVAC projects.

Energy efficiency ranks highest in factors affecting the purchase decision. This is not surprising since energy efficiency has such a significant impact on system operating costs. Mid-range factors are 'availability' and 'price.' Interestingly, 'brand' and 'warranty' are the lowest of the factors measured.

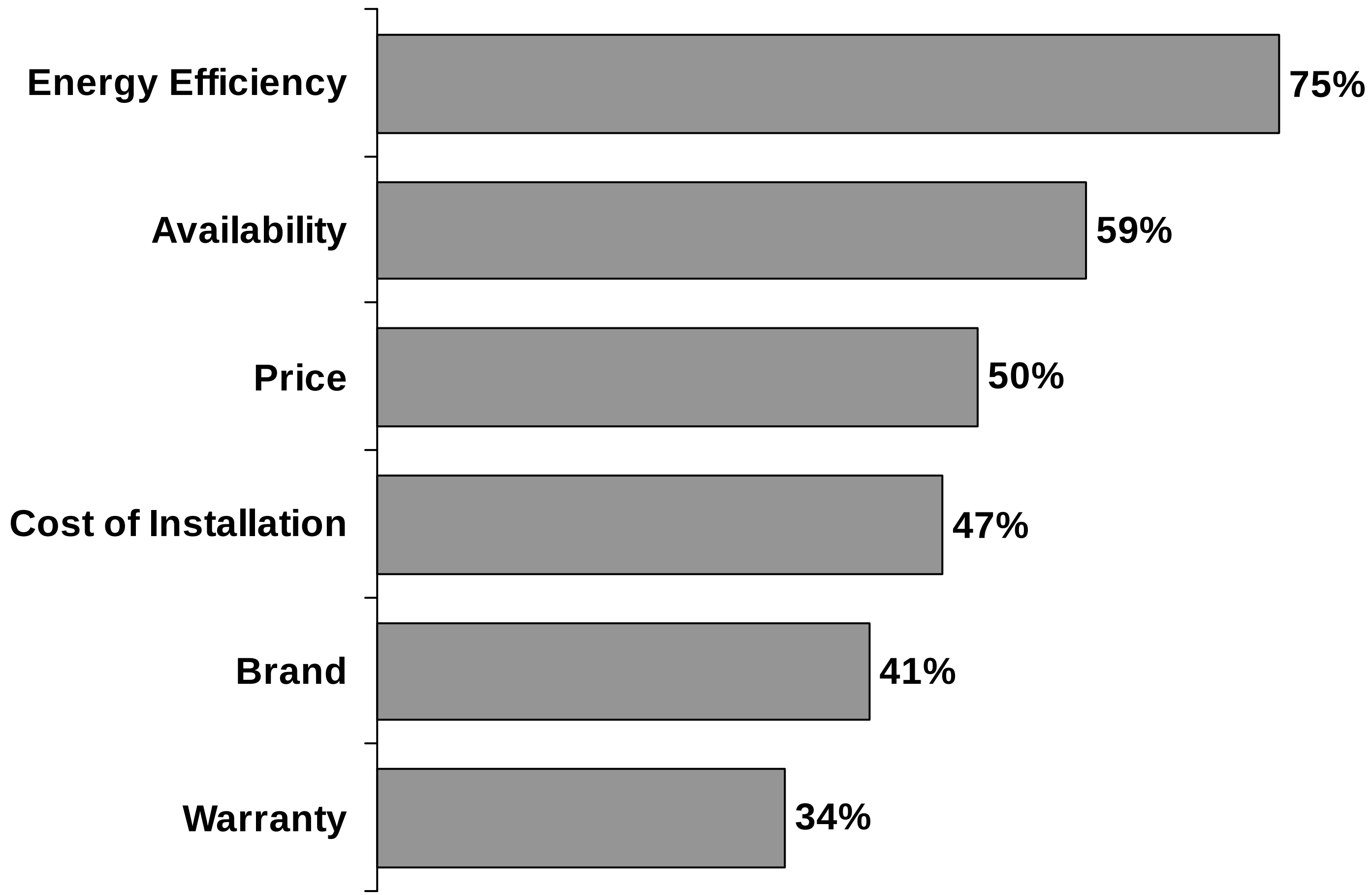
Slightly less than half of the respondents report themselves as the 'sole decision-maker' in the HVAC purchase. Contractors are reported as the decision-maker by almost one-third of the respondents. The balance report shared decision-making.

Sample size is too small to report at the segment level.

Q65. Major Factor in Decision to Purchase

Asked About HVAC Remodeling

(n=32)



*** Sample size is small**

Only 33 of the 221 respondents who report that their home remodeling project includes heating and/or air conditioning system addition or replacement were asked questions specific to 'HVAC', 32 of which actually started their HVAC projects.

Only two-thirds of these respondents report that they are highly satisfied with their HVAC project overall. While this overall top-3-box score appears to be lower than scores reported in other modules, there is no discernible difference between ratings in this module and top-3-box ratings in other modules.

- A little less than half of these respondents report that their HVAC project included the addition or replacement of ducts.
- 30% report that the contractor made all the purchases for the HVAC project, 46% report that they made the purchases themselves, and 21% report it was both.
- Only one of the 22 respondents who already made their HVAC purchases made the purchase via the Internet.
- As expected, when asked to rate various aspects that may be important to the decision to purchase, 75% rate energy efficiency as highly important (top-3-box).

	Kitchen Appliances (n=70) A	Windows (n=92) B	Insulation (n=86) C	Bathroom (n=65) D	Hardwired Lighting (n=80) E	Roof (n=70) F	HVAC (n=32) G
Color	79%	N/A	N/A	65%	N/A	61%	N/A
Style	70%	71%	N/A	66%	81% DF	59%	N/A
Energy Efficiency	64%	80% AEF	77%	N/A	50%	54%	75%
Brand	54% BCDEF	38%	29%	22%	20%	23%	41% E
Price	51%	53% E	41%	39%	38%	54% E	50%
Availability	41%	43%	41%	48%	40%	59%	59%
Warranty	40%	54% ADE	N/A	37%	25%	63% ADE	34%
Cost of Installation	11%	34% A	38% AE	27% A	18%	56% ABCDE	47%
Type of Product	N/A	N/A	51%	N/A	N/A	N/A	N/A
Water Conservation	N/A	N/A	N/A	32%	N/A	N/A	N/A

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (E) Materials and Equipment

Overview

'Incomplete' respondents ('less than 50% complete,' 'still planning,' 'abandoned') were asked a series of questions regarding their experiences with materials and equipment identification and selection. Respondents with completed remodeling projects were asked specific questions targeting their particular type of project. Those results are reported in the individual module sections of this report.

This section works to identify any market barriers associated with the identification and selection of materials and equipment.

Survey results indicate that one-third of the incomplete project respondents found the process of identifying materials and equipment easy (top-3-box), while 12% found it difficult.

When considering the relative importance of factors considered in the purchase decision, price and style are rated most important (68% and 61% respectively). Given the importance of price, it is not surprising that 85% of these respondents indicate their search included a price comparison. However, only 39% are satisfied (top 3-box) with the experience.

Considerations of warranty, installation, product availability and energy efficiency are of mid-range importance in the purchase decision. Brand is the lowest importance factor at 29%.

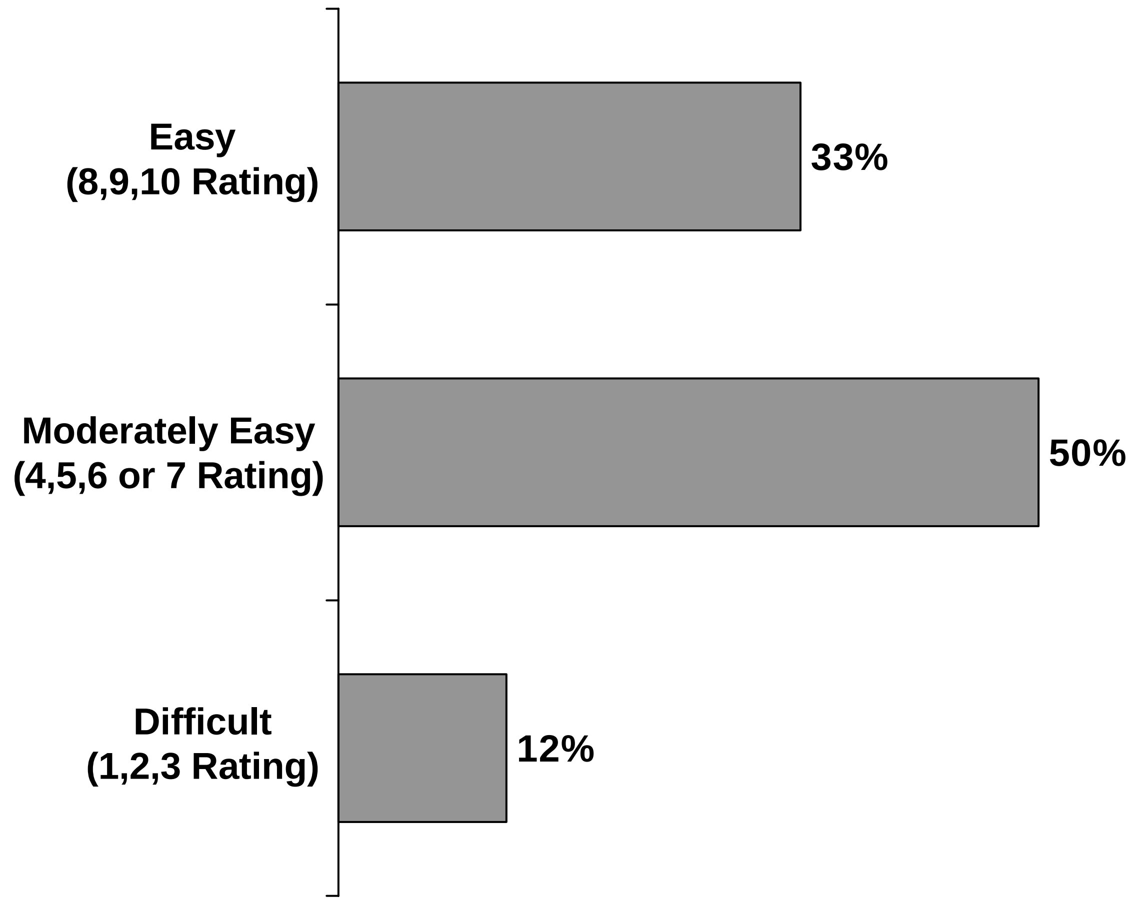
When considering the responses of this group relative to those who have 'completed' their remodeling projects, the 'incomplete' project respondents more closely resemble the *“Information Seekers”* and *“Do-It-Yourselfers”* segments.

Q16. How Easy or Difficult It Is to Identify Materials and/or Equipment

Incomplete Groups

Respondents Who Identified Materials and/or Equipment

(n=129)



VIII. (E) Materials and Equipment

‘Incomplete’ respondents who identified materials and/or equipment for their home remodeling project were asked a series of questions to better understand the market barriers that might exist in this process.

First, respondents were asked to rate the ease of finding materials and/or equipment on a 10-point scale where 1 means extremely difficult and 10 means extremely easy. As can be seen on the corresponding chart, only about one-third of the respondents rate this process as easy (top-3-box) and 12% rate it as difficult (bottom-2-box).

- It is comparable to results on 'ease of finding information' and 'ease of finding materials and equipment.'

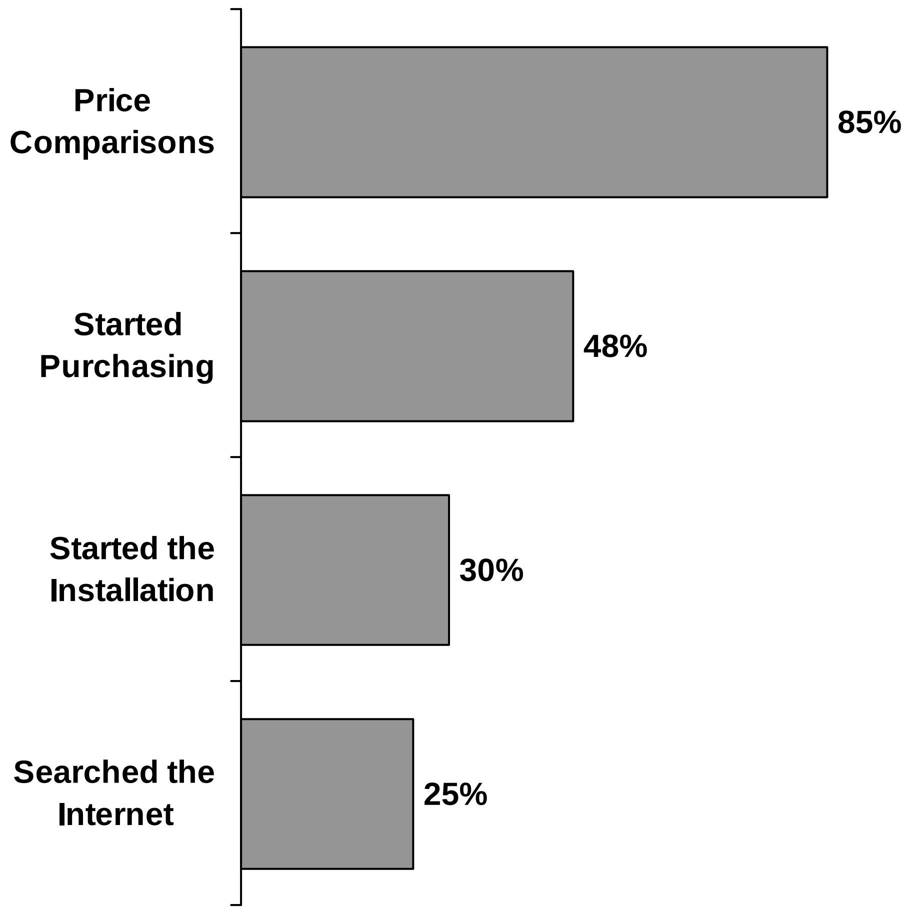
	Information	Materials and Equipment
Easy	35%	33%
Moderately Easy	44%	50%
Difficult	15%	12%

VIII. (E) Materials and Equipment

Q17. Specific Components of the Material/ Equipment Search Accomplished

Incomplete Groups

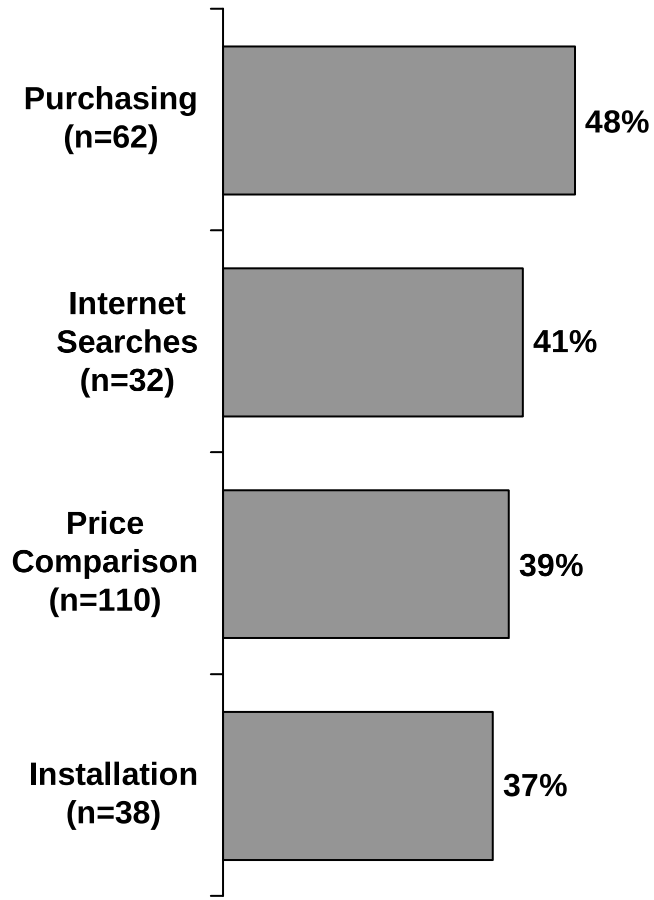
Respondents Who Identified Materials and/or Equipment (n=129)



Q18. Materials and/or Equipment Experience Ratings

Highly Satisfied (Top-3-Box)

Respondents Who Performed this Function



Next, 'incomplete respondents' were asked what specific components of the material and/or equipment identification process they accomplished. If they performed the function, they were asked to rate ease of performing that function on the same 10-point scale where 1 means extremely difficult and 10 means extremely easy.

Most of the respondents had conducted price comparisons, yet only about one-third rate this process as easy. About half of the respondents started to make their purchases for the home remodeling and less than half of those respondents rate the process as easy. This suggests that there is an opportunity to help make these processes easier.

More than two-thirds of the respondents say that they are <u>not</u> likely to purchase material and/or equipment for their home remodeling project over the Internet. This is consistent with findings from ‘complete’ project respondents where less than 3% report actually purchasing items over the Internet.

Likelihood of purchasing materials and/or equipment over the Internet	%
Likely (top-3-box)	7%
Moderately likely	20%
Not Likely (bottom-3-box)	71%

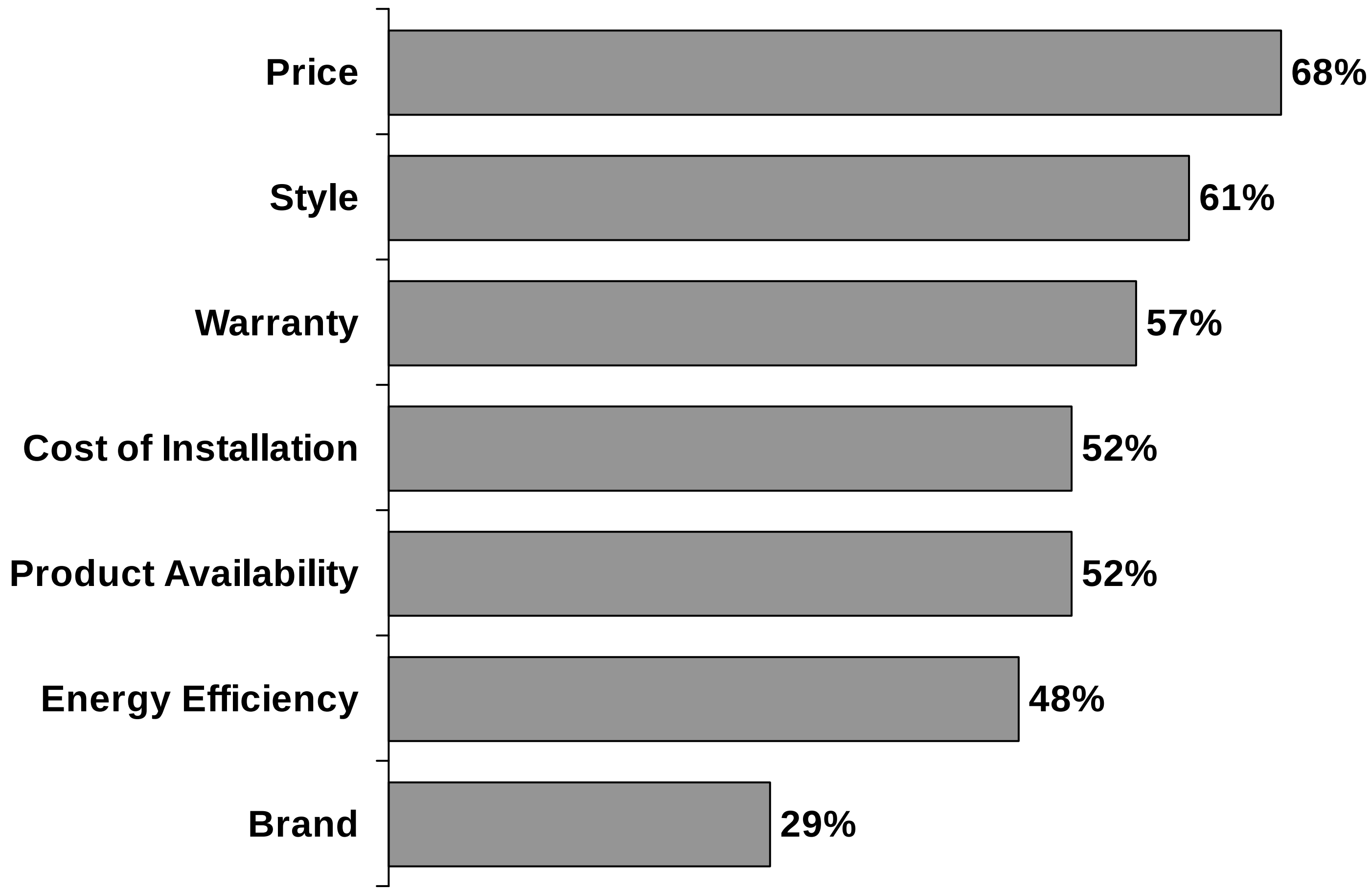
Q19a. Importance of Items to the Purchase Decision

Highly Important (Top-3-Box)

Incomplete Groups

Respondents Who Started to Purchase

(n=62)



VIII. (E) Materials and Equipment

Similar to the ‘completed’ projects, ‘incomplete’ project respondents were asked to rate the importance of various items relative to the purchase decision. Items were rated on a 10-point scale where one means not at all important and 10 means extremely important. ‘Brand’ is rated as important (top-3-box) by less than one-third of the respondents.

On an open-ended basis, ‘incomplete’ project respondents who started to purchase their materials and/or equipment (n=62) were asked what could be made easier with this process.

- Major Mentions:
  - 8% Cheaper prices
  - 5% Provide better information

VIII. (F) Information Gathering

VIII. (F) Information Gathering

Overview

Satisfaction with information gathering is one of the most important drivers of overall satisfaction in 'completed' remodeling projects (p. 34).

Most remodelers (68%) indicate high overall satisfaction with information gathering but there is room for improvement.

More than half of respondents report spending 'more than 10 hours' researching brands for their projects.

While a substantial number of prospective remodelers find information gathering easy (35%), a surprisingly large number find it difficult (15%).

Trade allies and word-of-mouth are the major information sources used in by remodelers. Utilities are not frequently used.

Information Seekers and Do-It-Yourselfers have the lowest satisfaction scores for information gathering.

Respondents who use contractors are generally satisfied with them. Beyond contractors, respondents are generally <u>not</u> satisfied with their information sources.

While respondents are most satisfied with being able to find information on energy efficiency (64%), satisfaction ratings are generally low when compared to other measures. This suggests that there may be opportunity to provide information to home-remodelers.

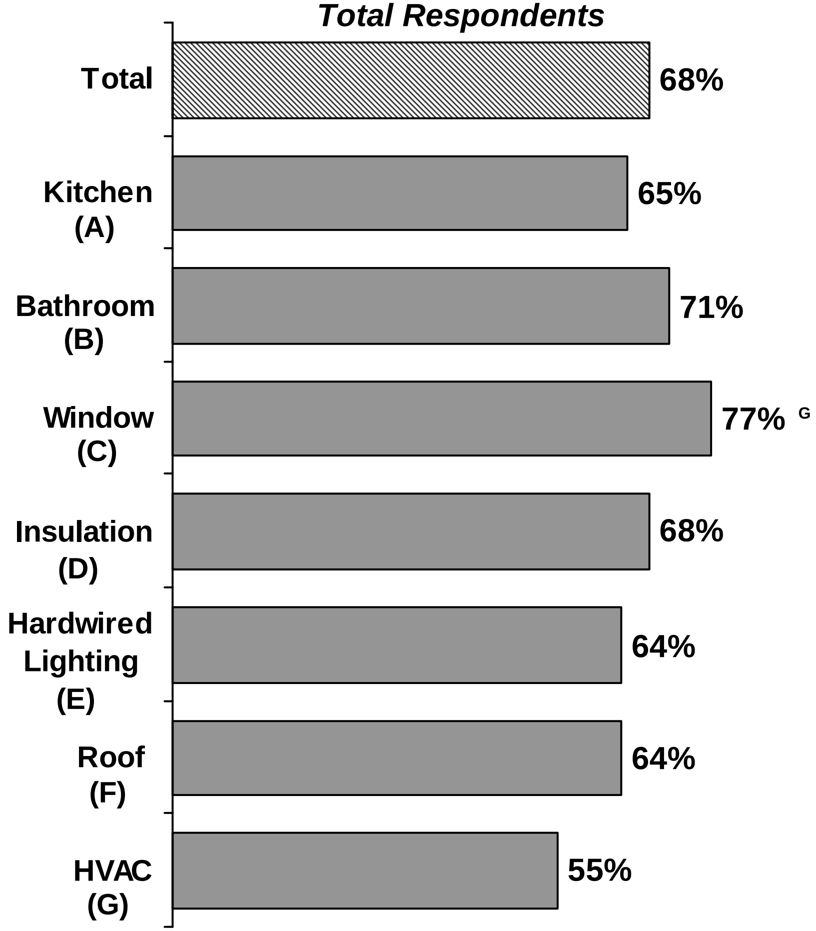
Adding Value and *Take-Care-Of-It* respondents use contractors as a source of information more often than respondents from other segments.

The *Take-Care-Of-It* group is the least likely to use the utility company as a source of information.

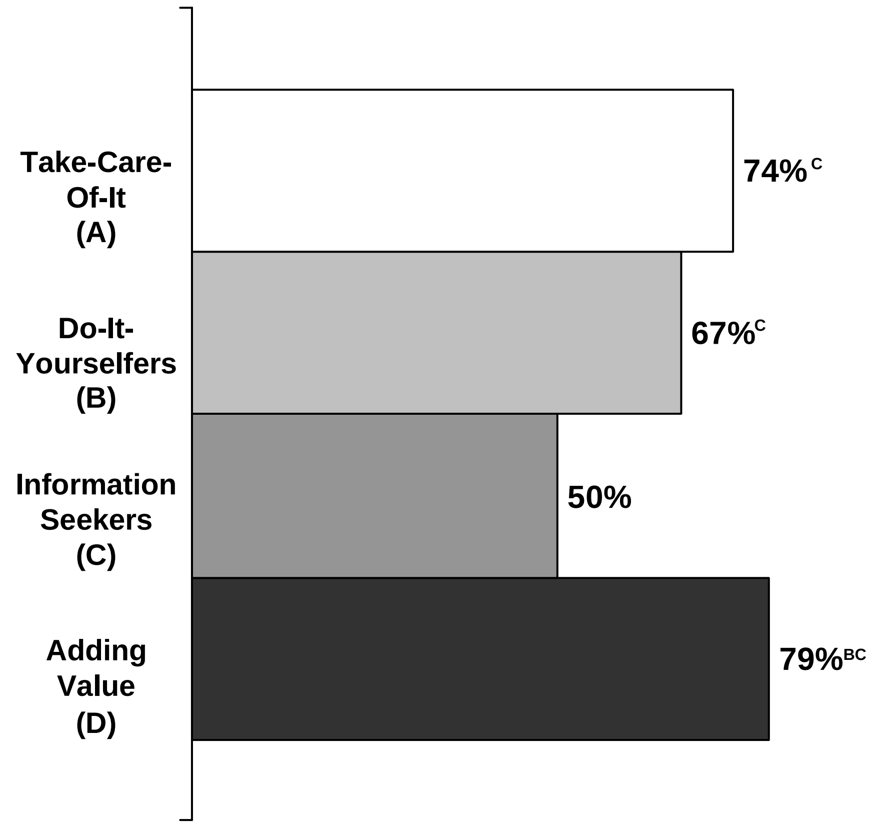
Information Seekers and *Do-It-Yourselfers* are <u>not</u> satisfied with information sources.

VIII. (F) Information Gathering

Q66. Overall Satisfaction with Information Gathering
Highly Satisfied (Top-3-Box)
Completed Projects
Total Respondents



Q66. Overall Satisfaction with Information Gathering
Highly Satisfied (Top-3-Box)
Completed Projects By Market Segment
Total Respondents



Key Driver of Overall Satisfaction
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (F) Information Gathering

All respondents were asked questions relative to information gathering for their home remodeling project. Respondents who 'completed' their projects were asked to rate the information gathering phase overall on a 10-point with 1 meaning completely dissatisfied with the process and 10 meaning completely satisfied.

Only about two-thirds of the respondents give this process a top-3-box score overall. Respondents who were asked about their 'window' projects are more highly satisfied than respondents who were asked about their 'HVAC' projects.

- Respondents whose projects are in the $10,000 to less than $30,000 range are more satisfied than respondents whose projects are in the $30,000 plus range (72% vs. 59%).
- *Information Seekers* are the least satisfied with this phase of the home remodeling project overall, with only 50% giving the process a top-3-box score and 12% who say they are highly dissatisfied (bottom-3-box).

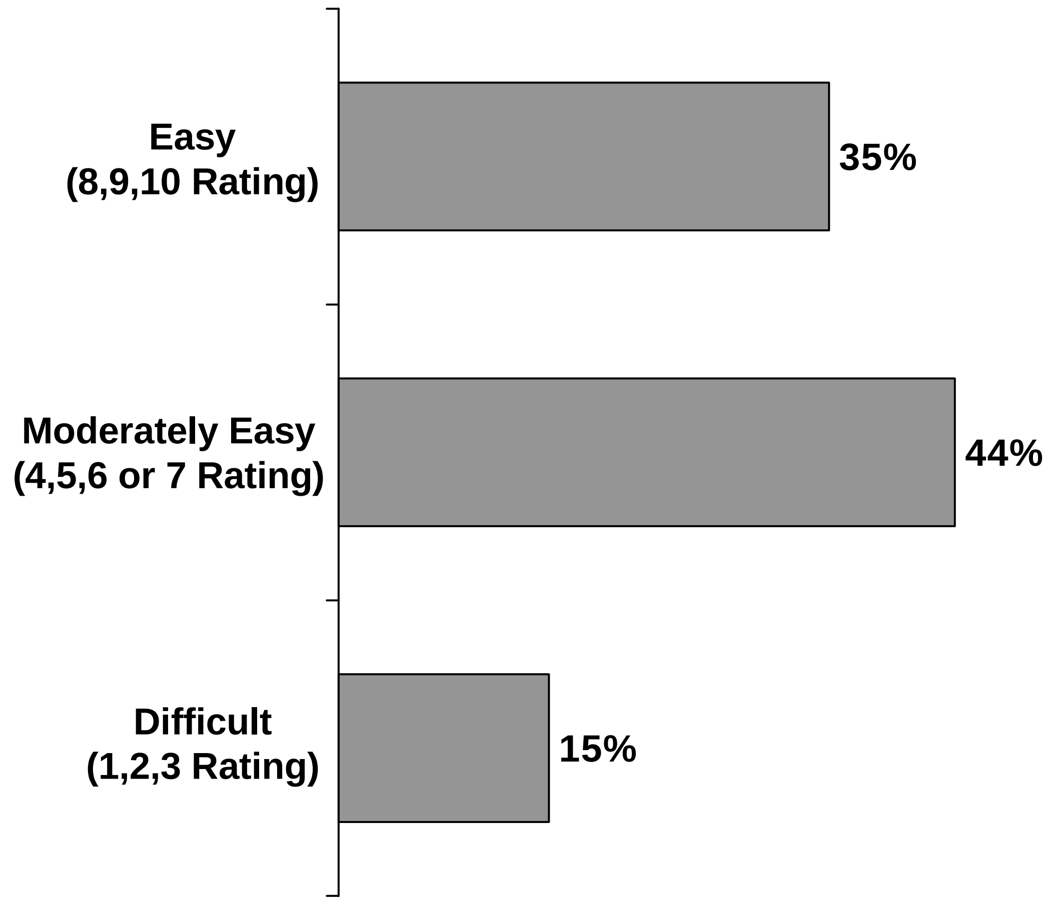
Generally, more than half of the respondents report that they spend more than 10 hours researching brands for their home remodeling project.

Hours Spent Researching	***%***
Less than 1 hour	8%
1-3 hours	13%
4-6 hours	16%
7-9 hours	6%
More than 10 hours	57%

Focusing on resources that can help to increase satisfaction with information gathering will directly impact overall satisfaction with a home remodeling project.

VIII. (F) Information Gathering

Q6. How Easy or Difficult Information Gathering Is
Incomplete Groups
Respondents Who Looked for Information
(n=144)



VIII. (F) Information Gathering

Respondents who were classified as 'incomplete' were asked to report on the ease of information gathering. For this question a 10-point scale was used with 1 meaning extremely difficult and 10 meaning extremely easy.

Only 35% report that the process was easy (top-3-box) and 15% say it is difficult (bottom-3-box).

Q67/Q68. Information Sources Used for Project

Completed Groups

	Total	Kitchen (A) (n=74)	Bathroom (B) (n=66)	Windows (C) (n=92)	Insulation (D) (n=87)	Hardwired Lighting (E) (n=80)	Roof (F) (n=70)	HVAC (G) (n=30)
		Modules						
Contractor	63%	57%	62%	62%	66%	60%	70%	70%
Literature in Store	61%	64%	64%	63%	60%	69%[F]	50%	58%
Family/Friends	54%	53%	46%	59%	54%	58%	56%	46%
Sales People	48%	61%[DFG]	50%[D]	57%[D]	32%	50%[D]	44%	39%
Magazines	43%	43%[G]	52%[CG]	35%	43%[G]	58%[CFG]	36%	24%
Books	41%	38%	42%	33%	40%	50%[C]	44%	42%
Newspapers	27%	30%	27%	25%	31%	30%	21%	21%
Internet	19%	23%[F]	18%	20%	18%	24%[F]	10%	18%
Utility Company	14%	10%	9%	11%	28%[ABCEF]	6%	10%	33%[ABCEF]

Key Driver of Overall Satisfaction

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

‘Contractors’ and ‘literature in the store’ are used as information sources most often regardless of the type of remodeling project completed. About half of the ‘completed’ project respondents use their ‘family and friends’ as a source of information for home remodeling.

- Respondents who completed an ‘insulation’ or 'HVAC' project use the 'utility company' as an information source more often than do respondents who completed other types of projects.

- Respondents who completed a 'kitchen' remodeling project are more likely to get information from ‘sales people’ than are respondents who completed an ‘insulation,’ ‘hardwired lighting’ or 'HVAC' project.

- Magazines are consulted more often for ‘bathroom,’ ‘hardwired lighting,’ and ‘insulation’ than they are for 'HVAC' projects.

- Interestingly, respondents whose project costs $30,000 plus were more likely than those whose projects cost less than $30,000 to use information from 'magazines' and 'books'.

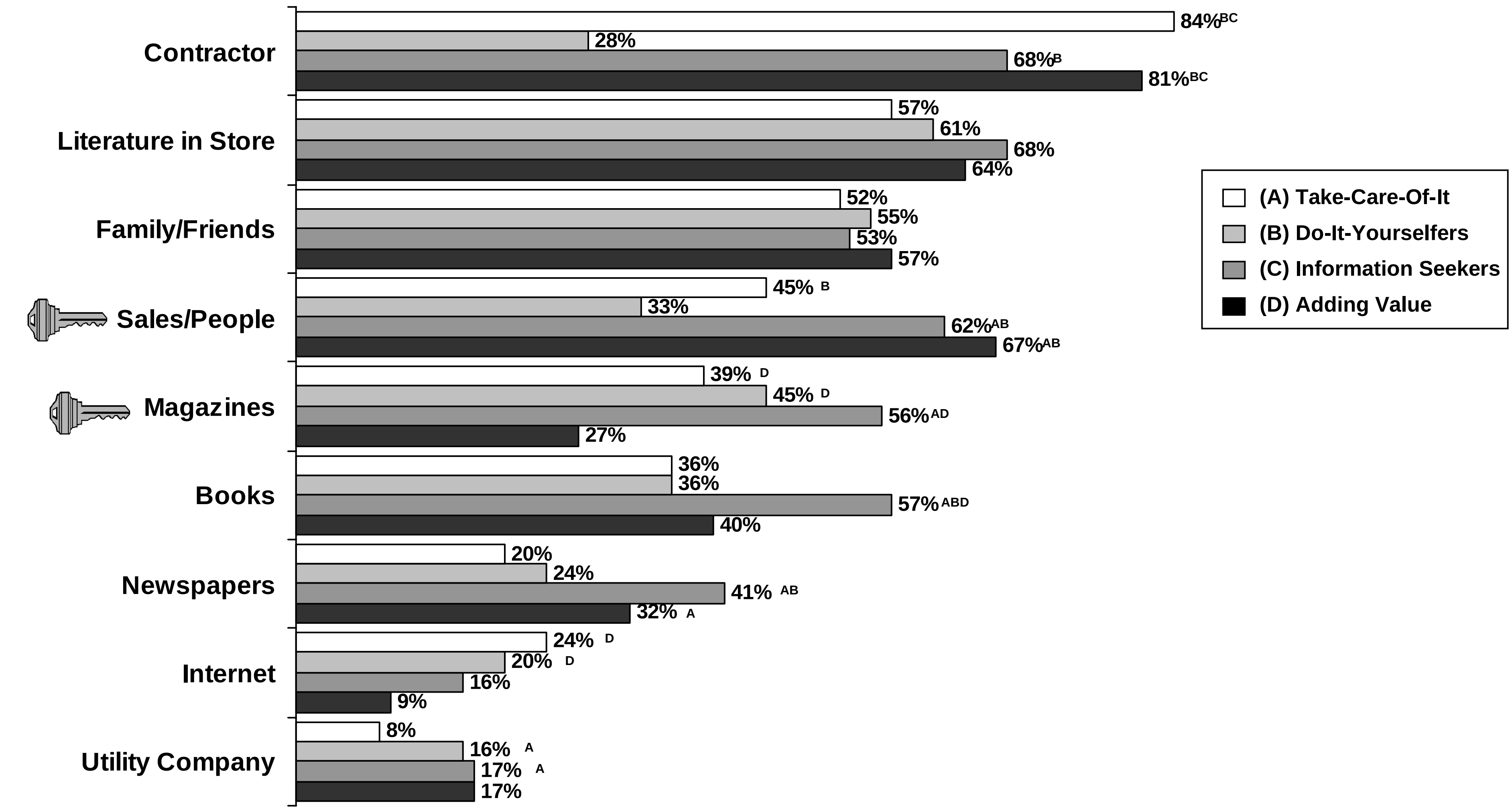
	$5,000 to <$10,000 n=142	**$10,000 to <$30,000 n=189**	**$30,000 or more n=128**
Magazines	30%	41%	58% ▲
Books	35%	40%	54% ▲

▲ Significantly higher than the other groups

Q67/68. Information Sources Used for Project

Completed Groups By Segment

Total Respondents



Key Driver of Overall Satisfaction

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Adding Value and *Take-Care-Of-It* respondents use 'contractors' as a source of information more often than do *Do-It-Yourselfers* or *Information Seekers*. While one might expect this finding for *Do-It-Yourselfers* because they generally do not use contractors, it is unusual for the *Information Seekers* since they more often use many of the other sources such as ‘sales people,’ ‘books,’ and ‘newspapers.’ However, what begins to emerge here and is underscored elsewhere in this report is that *Information Seekers* are generally not satisfied with the contractor experience.

Do-It-Yourselfers and *Information Seekers* are more likely than the *Take-Care-Of-It* group to use the 'utility company' for information.

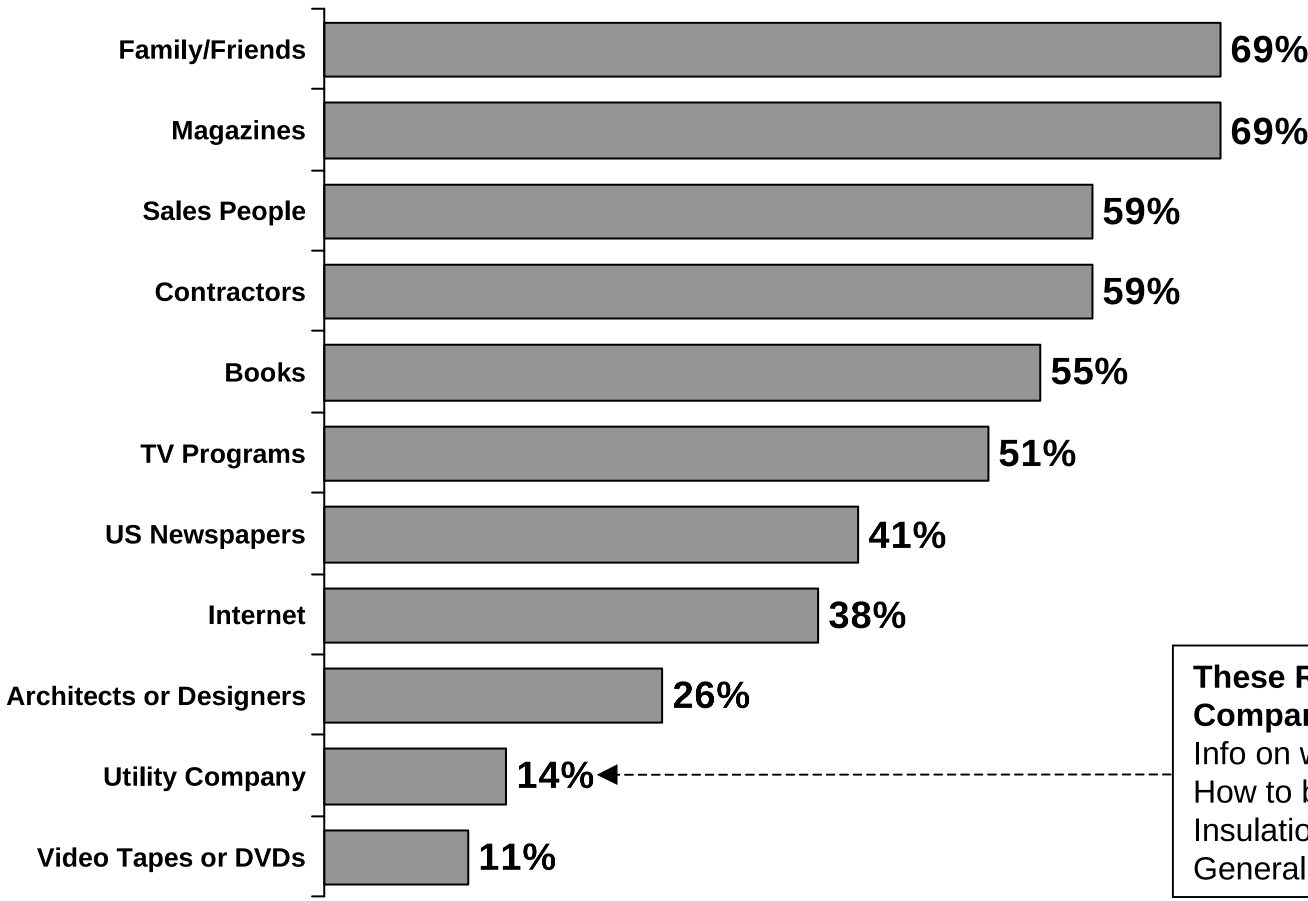
VIII. (F) Information Gathering

Q7. Items Looked For

Incomplete Groups

Respondents Who Looked for Information

(n=144)



These Respondents Ask Utility Company for:

Info on window/rating	15%
How to be more energy efficient	10%
Insulation concerns	10%
General Information	15%

VIII. (F) Information Gathering

To better understand differences between those respondents who ‘completed’ a home remodeling project and those who did not, ‘incomplete’ respondents were also asked if they looked for information from these same sources.

Generally, 'completed' project and ‘incomplete’ project respondents look to similar information sources. Information from contractors ranks fourth by the ‘incomplete’ respondents; however, this might be a function of how far along the ‘incomplete’ respondent is in the process.

VIII. (F) Information Gathering

Q71. Satisfaction with Being Able to Find Information on…

Completed Groups
Total Respondents

	Total	Kitchen (A)	Bathroom (B)	Windows (C)	Insulation (D)	Hardwired Lighting (E)	Roof (F)	HVAC (G)
		Modules						
Energy Efficiency	64%	64%	53%	70%[BE]	68%	54%	61%	85%[ABEF]
Quality Ratings for Equipment or Materials	60%	61%	63%	67%[E]	59%	47%	65%[E]	64%
Price Comparison on Materials or Equipment	55%	63%	52%	60%	56%	48%	49%	58%
Financing Options Available to You	55%	61%	38%	61%	63%[B]	53%	54%	52%
Technical Info on Equipment and Materials	54%	51%	48%	61%[F]	59%	51%	45%	63%
Which Contractors to Use	54%	62%	53%	53%	55%	47%	52%	62%
Brand Comparisons	46%	47%	48%	49%[E]	49%	32%	48%	40%
Maintenance Options	44%	43%	44%	52%	41%	37%	45%	44%

Key Driver of Overall Satisfaction

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (F) Information Gathering

In addition to understanding what respondents use as information sources for home remodeling projects, it is also necessary to understand how easy or difficult it is to find these information sources.

'Completed' projects respondents were asked to rate their level of satisfaction on being able to find these sources using a 10-point scale where 1 means completely dissatisfied and 10 means completely satisfied.

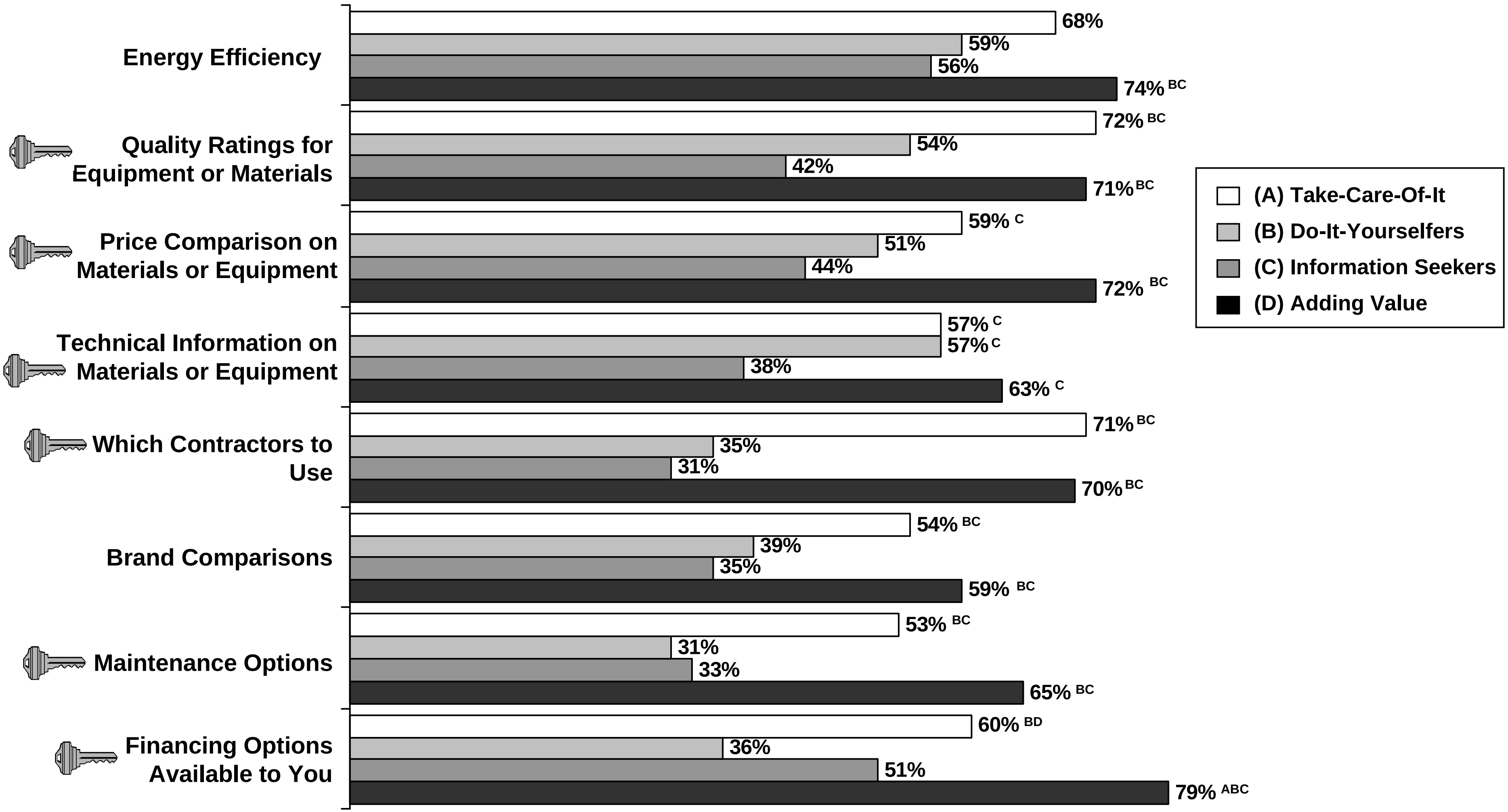
As can be seen on the chart on the opposite page, respondents are generally not highly satisfied (top-3-box) with being able to find information. They are most satisfied with finding information on 'energy efficiency;' however, this is mainly due to the satisfaction ratings from respondents who were asked about their 'HVAC' project.

Being able to find information is critical to overall satisfaction with a home improvement project. Moreover, finding information on which contractors to use has a direct impact on overall satisfaction as explained in the Satiscan™ section of this report. Other key drivers with respect to finding information have an indirect impact on overall satisfaction.

Q71a-h. Satisfaction with Being Able to Find Information...

Completed Groups By Segment

Total Respondents



Key Driver of Overall Satisfaction

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (F) Information Gathering

Information Seekers and *Do-It-Yourselfers* are generally not satisfied with being able to find information for a home remodeling project. These two segments generally provide the lowest satisfaction ratings on being able to find information.

VIII. (F) Information Gathering

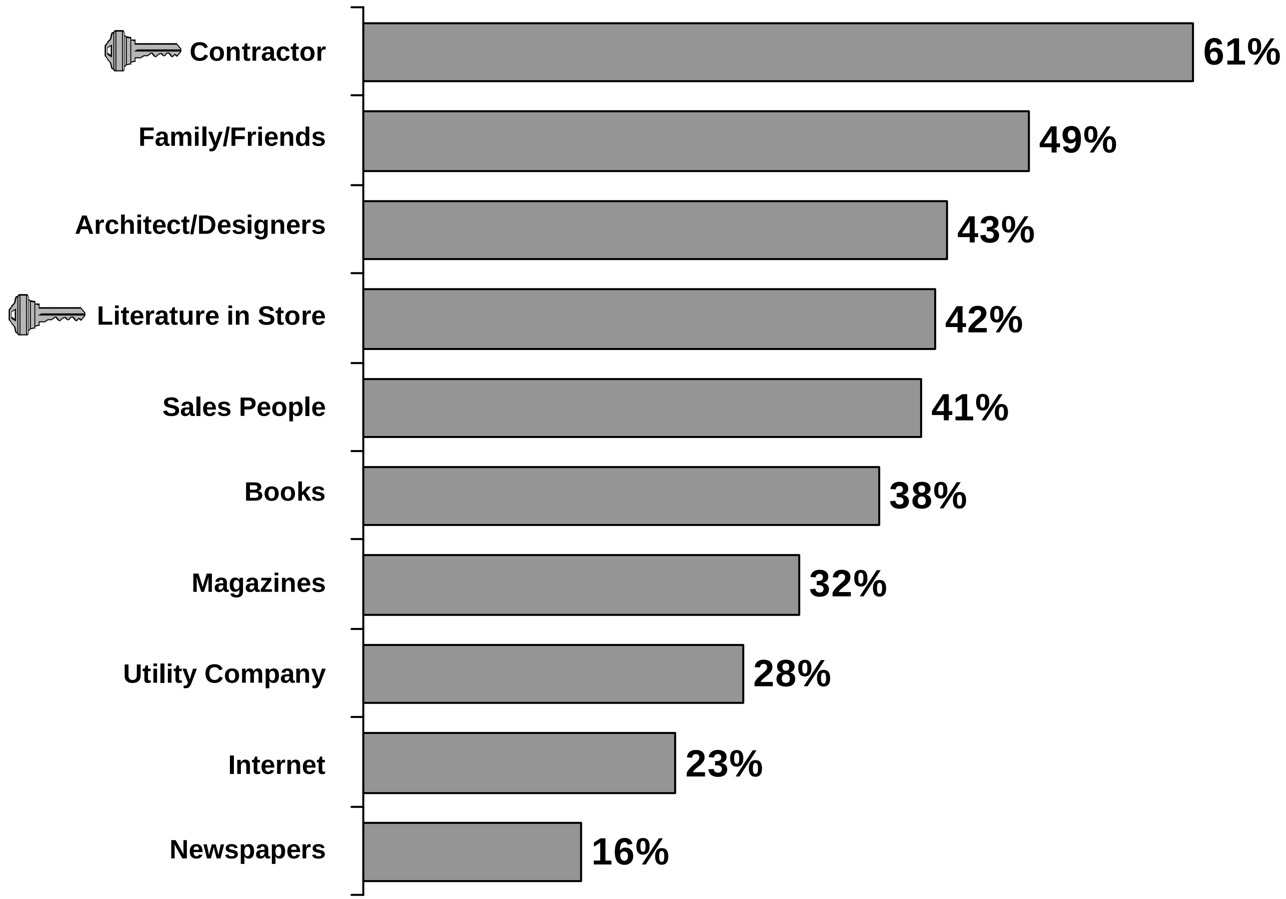
Q72. Satisfaction with Information Sources

Highly Satisfied (Top-3-Box)

Completed Groups

Respondents Who Used this Information Source

(n's vary from 248 to 426)



Key Driver of Overall Satisfaction

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

‘Completed’ project respondents were then asked to rate their level of satisfaction for the information source they used. For example, if they used contractors as an information source, they were asked to rate them as a source on a 10-point scale where 1 means completely dissatisfied and 10 means completely satisfied. Since this series of questions is based on respondents who used a particular source the number of respondents varies from 248 to 426. The percentages are based on the actual number who used each source.

Generally, respondents are not highly satisfied with information sources used. They are more satisfied with information used from the 'contractor' than any other information sources. However, even satisfaction ratings for 'contractors' are low, with 16% who say they are dissatisfied (bottom-3-box). This is very important since satisfaction with information from the 'contractor' is a key driver of overall satisfaction with the remodeling project.

- Another key driver of overall satisfaction with a home remodeling project is ‘literature available at the store.’ Only 42% of the respondents who used this information are highly satisfied with this source. 16% are highly dissatisfied (bottom-3-box) with this measure.

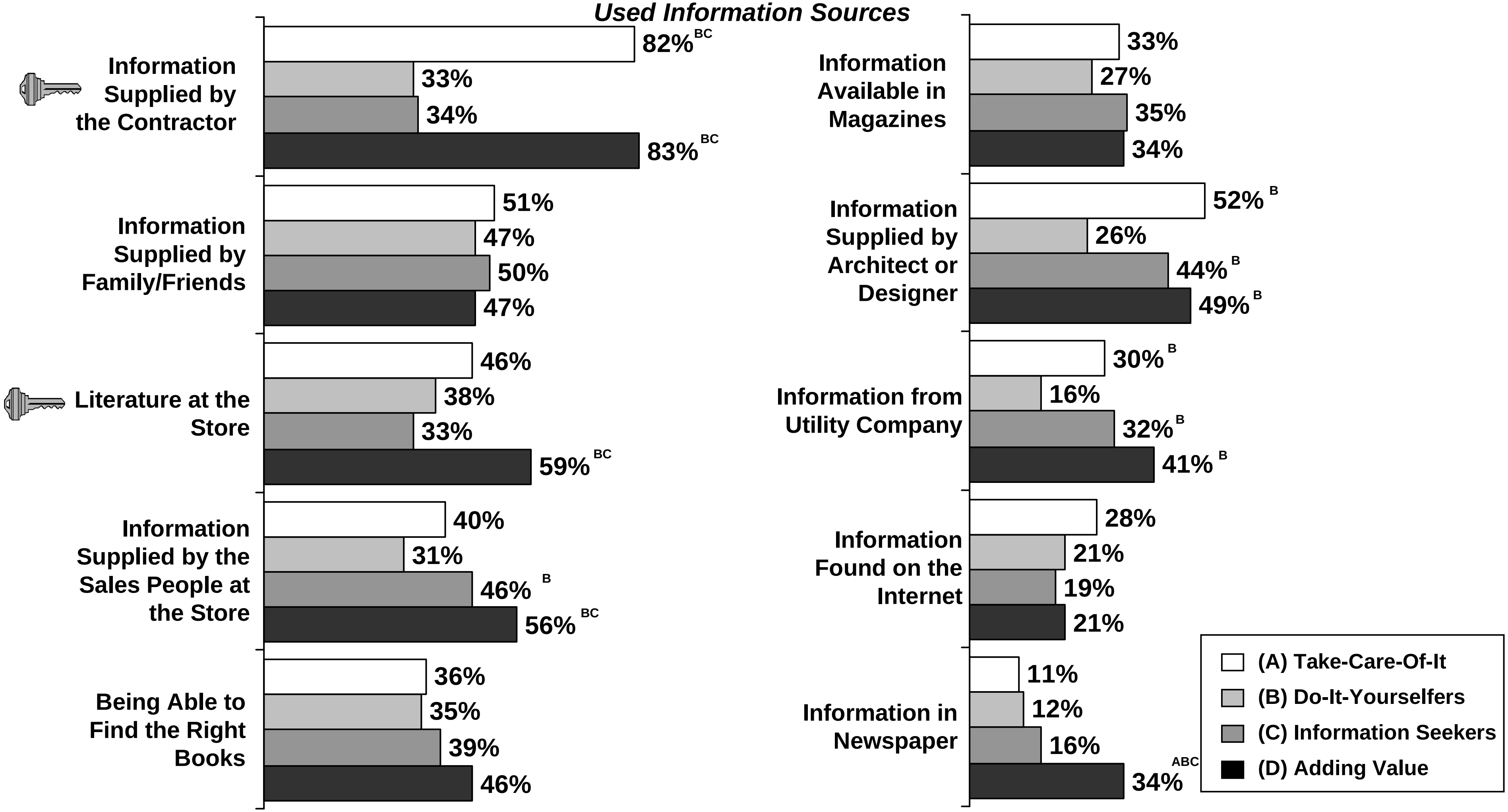
VIII. (F) Information Gathering

Q72a-j. Satisfaction with Information Sources

Highly Satisfied (Top 3 Box)

Completed Groups

Used Information Sources



Key Driver of Overall Satisfaction

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (F) Information Gathering

- *Take-Care-Of-It* and *Adding Value* respondents are generally satisfied with information received from the 'contractor.' However, *Do-It-Yourselfers* and *Information Seekers* are <u>not</u>.

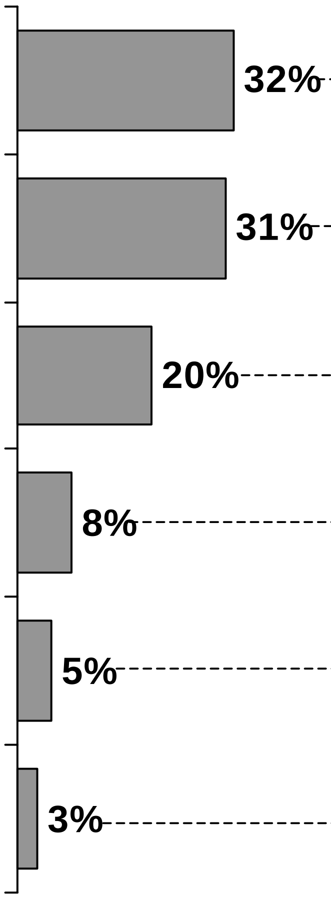
- Similarly, *Information Seekers* are generally not satisfied with the 'literature available in the store.'

Q73. Source of Information from Utility Company

Completed Groups

Used Information from the Utility Company

(n=256)



	Total	Kitchen (A) (n=29)*	Bathroom (B) (n=35)*	Windows (C) (n=41)*	Insulation (D) (n=55)*	Hardwired Lighting (E) (n=36)*	Roof (F) (n=35)*	HVAC (G) (n=25)*
		Modules						
Phone Call to Company	32%	28%	26%	32%	31%	29%	37%	44%
Bill Insert	31%	28%	26%	51%[ABEFG]	33%	28%	23%	24%
Print Ad	20%	--	14%[A]	37%[AB]	24%[A]	19%[A]	20%[A]	20%[A]
Utility Website	8%	--	9%	10%[A]	9%[A]	17%[AF]	3%	4%
Radio Ad	5%	3%	6%	--	4%	3%	14%[C]	8%
Billboard	3%	--	6%	--	--	8%	6%	4%

*** Sample size is small***

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (F) Information Gathering

‘Completed’ project respondents who used the utility company as a source of information were asked how they obtained the information. Regardless of the type of project (e.g. kitchen, bath, etc.) about one-third of the respondents called the utility company directly. About one-third got the information from their bill inserts. Bill inserts are used more often by respondents completing a ‘window’ project than any other type of project.

Upon examining where respondents get their information from the utility company by segment, the only discernible difference found is that more *Take-Care-Of-It* (6%) and *Information Seekers* (10%) get information from utility company radio ads than the other two segments.

VIII (G). Energy Efficiency

VIII. (G) Energy Efficiency

Overview

60% of remodelers who complete projects look for information on energy efficiency.

- They are most likely to seek energy efficiency information for HVAC (76%), insulation (71%), and kitchen, windows, and roof (all 61%).
- The *Adding Value* and *Information Seekers* segments are most likely to seek this information.

Only 46% of those with 'incomplete projects' look for energy efficiency information.

- Those who do not, most often say “it doesn’t apply to the project” (31%) or “there is no need” (15%).

The most useful information sources for energy efficiency are contractors (49%), store literature (42%), and architects/ designers (41%). Utilities are cited by 32% of respondents.

- The *Adding Value* and *Information Seekers* segments are most likely to cite utilities as useful information sources for energy efficiency.

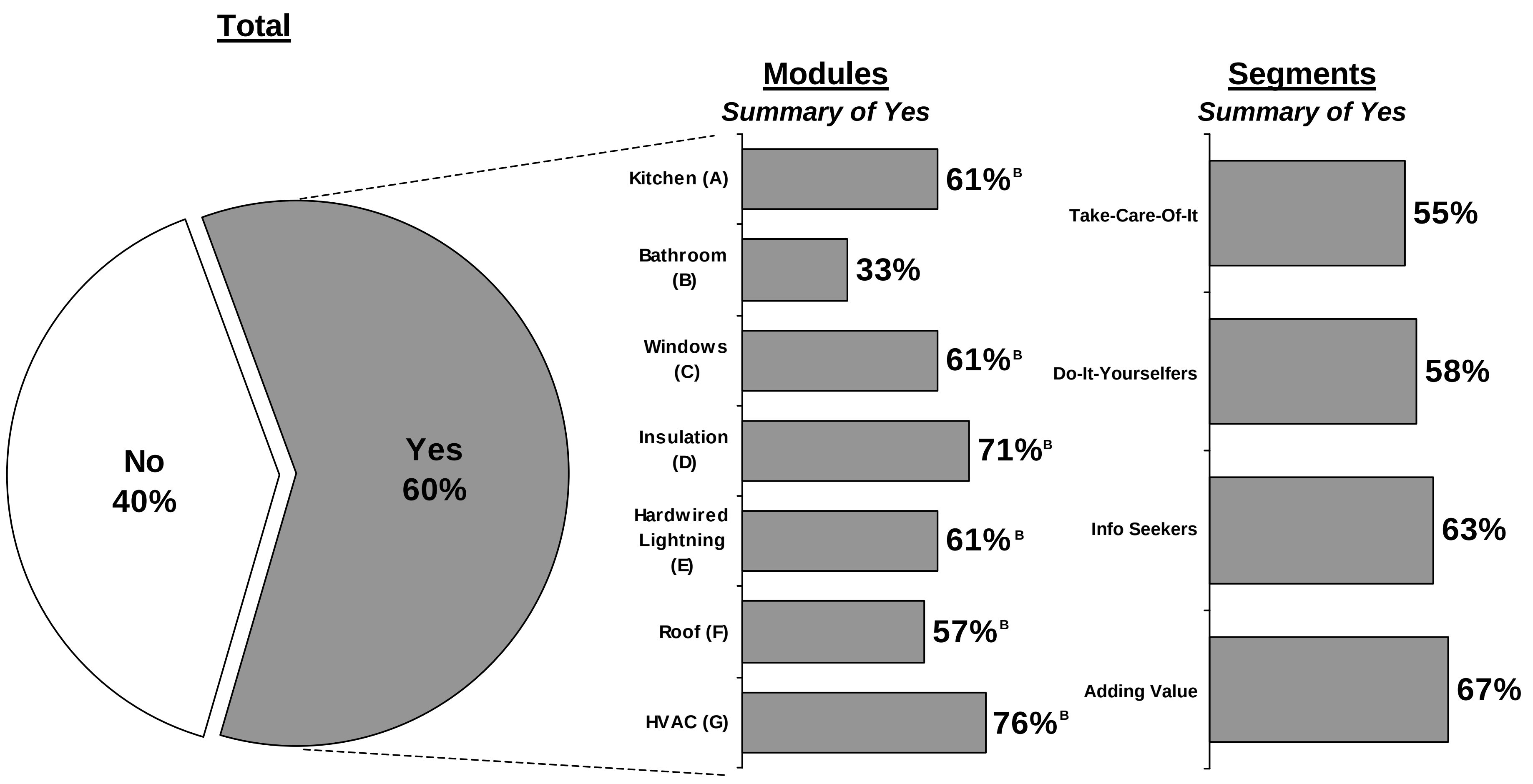
81% of those who complete projects install at least one energy efficiency measure.

- Most commonly installed are windows (89%), HVAC (88%), hardwired lighting (86%), and insulation (85%).
- The *Information Seekers* and *Do-It-Yourselfers* segments are most likely to install energy efficiency measures.

79% of those who complete projects report high satisfaction with energy efficiency measures.

- The *Take-Care-Of-It* and *Adding Value* segments are most likely to report high satisfaction with energy efficiency measures.

Q78. Looked for Information on Energy Efficiency
Completed Groups
Total Respondents



Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

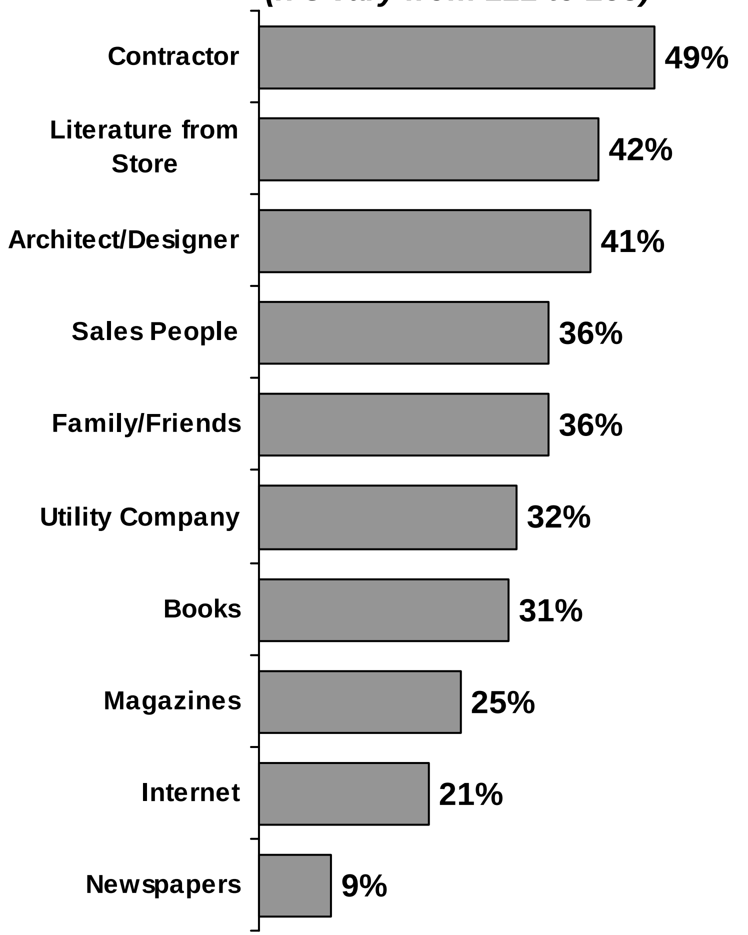
VIII. (G) Energy Efficiency

All respondents were asked if they specifically looked for information on energy efficiency for the home remodeling project. Only a little more than half of the respondents did.

There are no discernible differences among the segments. Respondents who are asked about their 'bathroom' project are less likely to look for information on energy efficiency. To affirm that respondents who completed a 'bathroom' project understood this energy efficiency question, the findings were compared to water conservation. This proportion is identical to the proportion of respondents who report that they looked for information regarding water conservation for their bathroom project. Therefore, one can conclude that respondents who complete a bathroom project are not as likely to seek information on energy efficiency or water conservation.

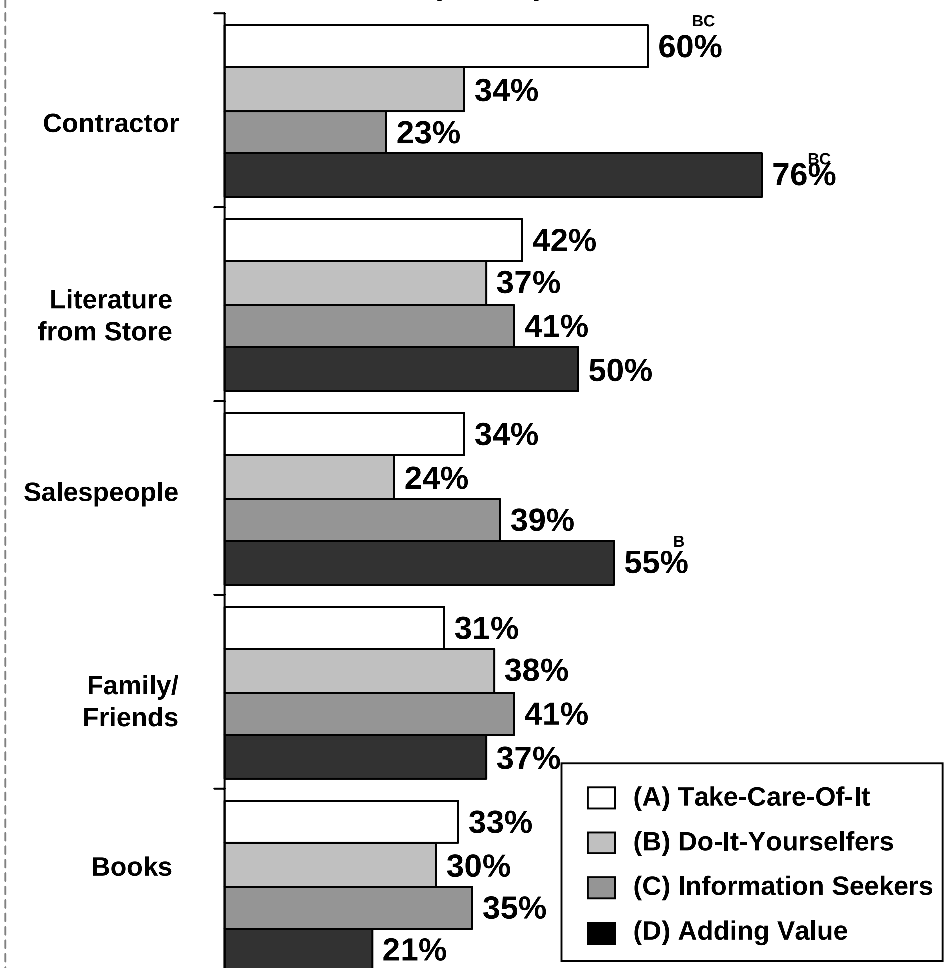
Q79. Useful Sources for Information About Energy Efficiency

Highly Useful (Top 3 Box)
Completed Groups
Respondents Who Used this Source
(n's vary from 111 to 258)



Q79 a-j. Useful Sources for Info. on Energy Efficiency

Highly Useful (Top 3 Box)
By Market Segment
Respondent Looked for Information on Energy Efficiency
(n=299)



Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Respondents who used the above sources of information were asked to rate it on a 10-point scale where 1 means that the source was not at all useful and 10 means the source was extremely useful. Similar to findings about general information sources, less than half of the respondents rate the information sources useful (top-3-box).

- As expected, respondents who used a contractor for their home remodeling (48%) are more likely to say that contractors are a useful source of information about energy efficiency than are respondents who did not use a contractor (15%).

- Again, *Information Seekers* are not satisfied with the information received from the contractor.

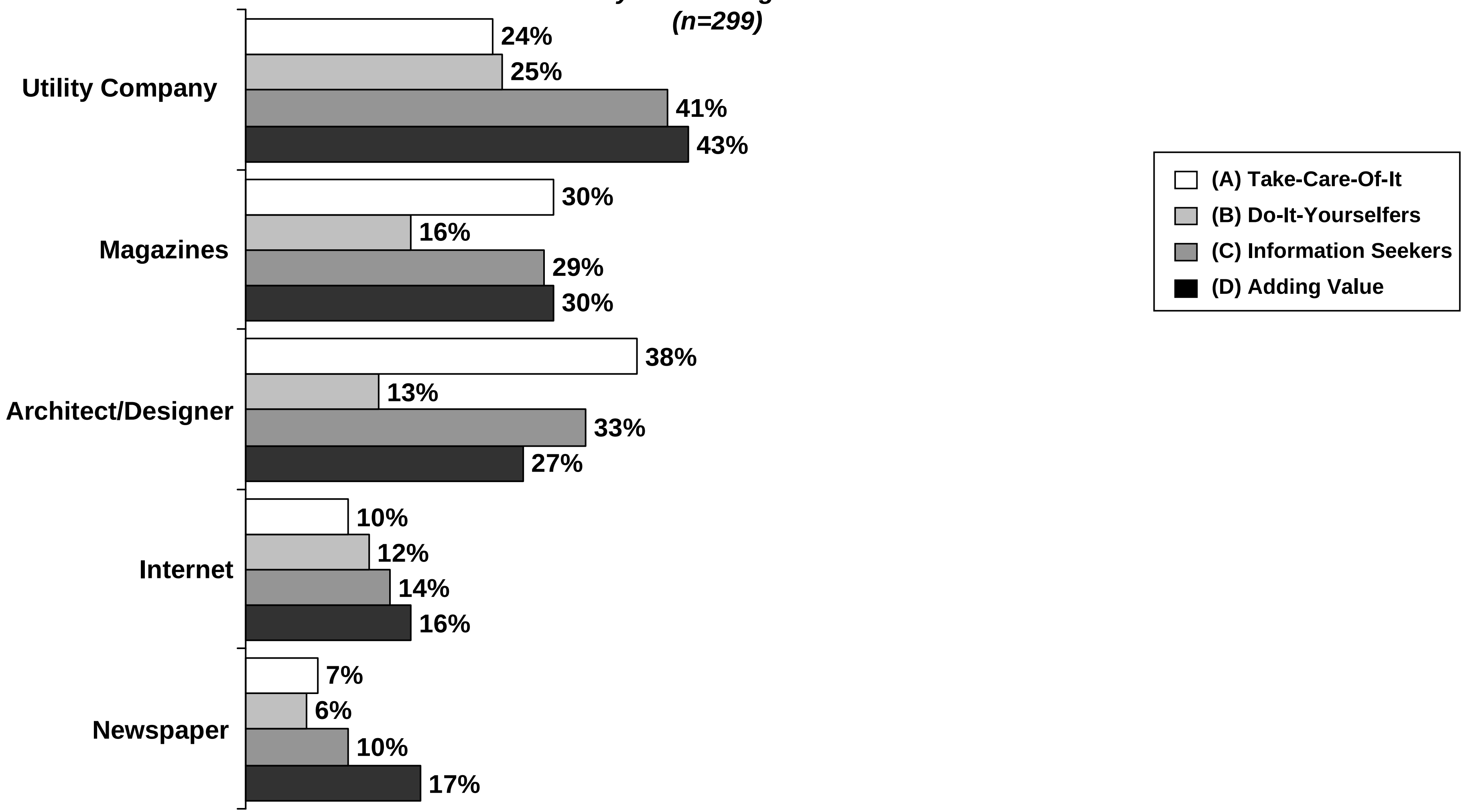
Q79 a-j. Useful Sources for Information on Energy Efficiency

Highly Useful (Top-3-Box)

Respondent Looked for Information on Energy Efficiency

By Market Segment

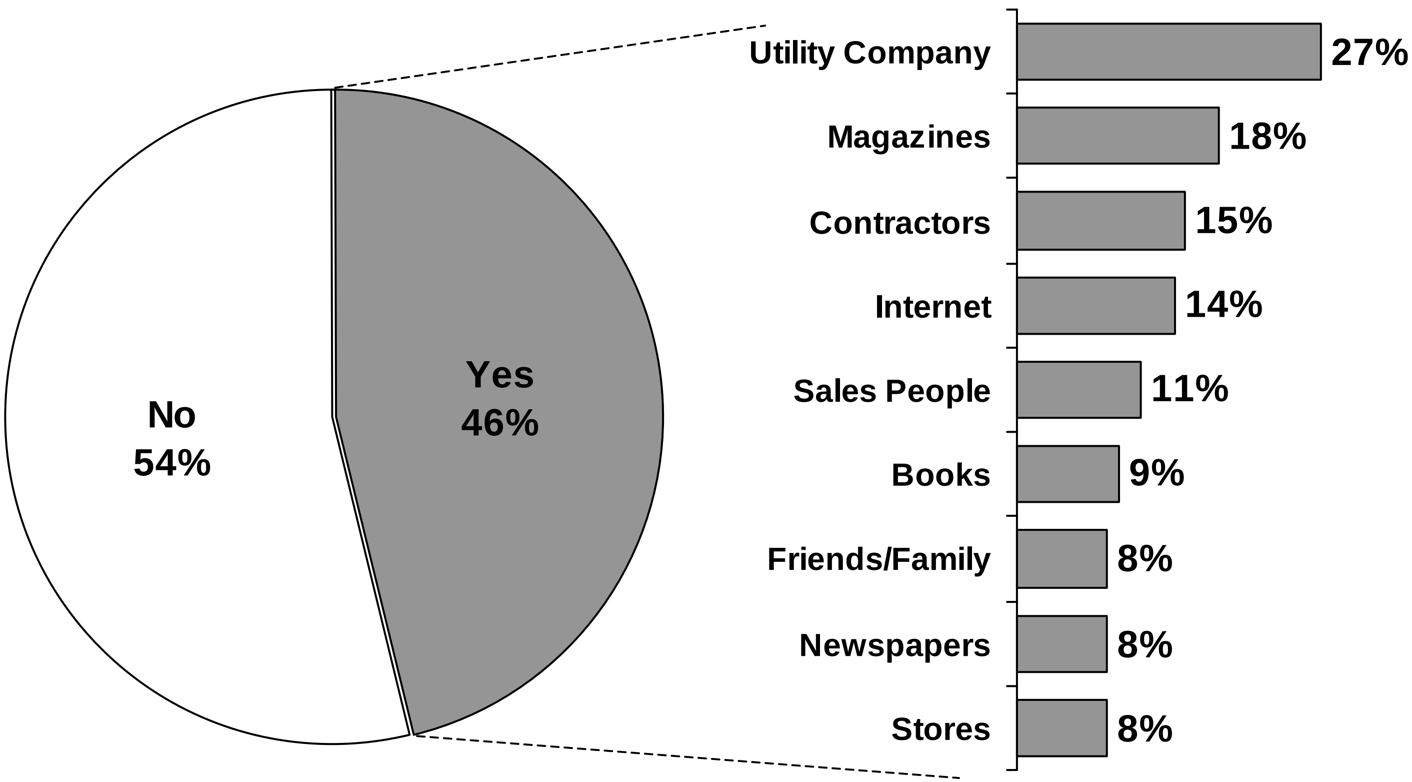
(n=299)



Incomplete Groups

Q11. Looked for Information on Energy Efficiency
Respondents Who Started the Information Gathering Process
(n=144)

Q12. Sources for Energy Efficiency Info.
Looked for Energy Efficiency Information
(n=66)
Major Mentions



VIII. (G) Energy Efficiency

Less than half of 'incomplete' project respondents looked for information on energy efficiency. When they do, about one-quarter turn to the utility company.

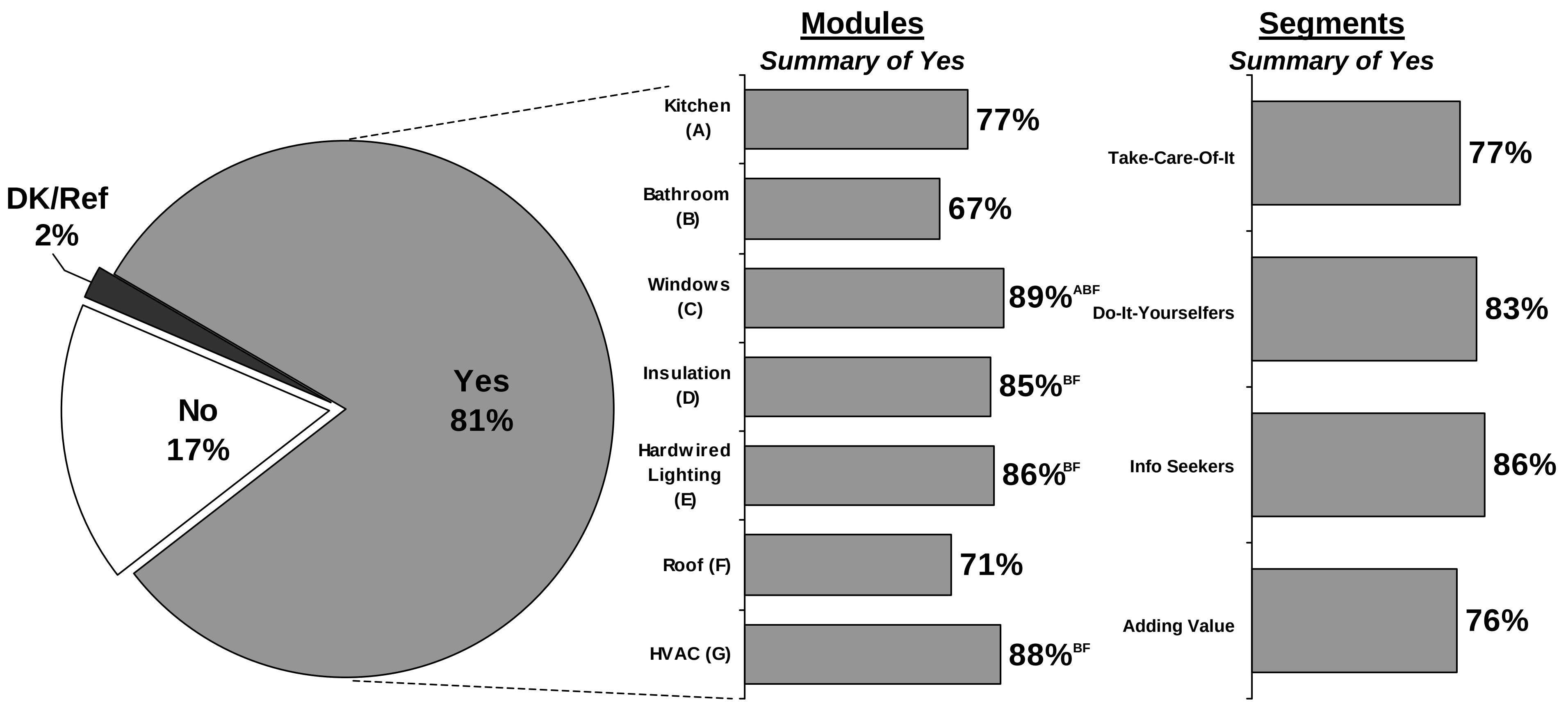
'Incomplete' respondents were also asked if they looked for information on energy efficiency. A significantly lower proportion of 'incomplete' respondents took this step.

Looked for information on energy efficiency	**%**
Incomplete Projects	46%
Completed Projects	60%

When 'incomplete' respondents are asked why they have not looked for information on energy efficiency about 31% say it "does not apply to their project" or there is "no need", 15% say they are "not that far along in the project," 10% report that the "appliances or home energy unit is new," and 9% say the "contractor takes care of it."

Q81. Installed at Least One Energy Efficiency Measure

Completed Groups



Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (G) Energy Efficiency

The majority of respondents installed at least one energy efficiency measure during their home remodeling project. Respondents who were asked about their 'window,' 'insulation,' and 'HVAC' project are more likely to say this than respondents who completed a 'bathroom,' or 'roof' project.

It is surprising that respondents who completed a 'window' project are more likely to say that they installed at least one energy efficiency measure than are respondents who completed a 'kitchen' project since there may be an opportunity to install energy efficient appliances.

Types of energy efficiency measures installed Major Mentions	**%**
Windows/double pane windows	30%
Insulation	21%
Furnace/heater	15%
Refrigerator	13%
Air Conditioner	10%
Water Heater	10%
Lighting	10%
Dishwasher	9%
Stove/Oven	9%

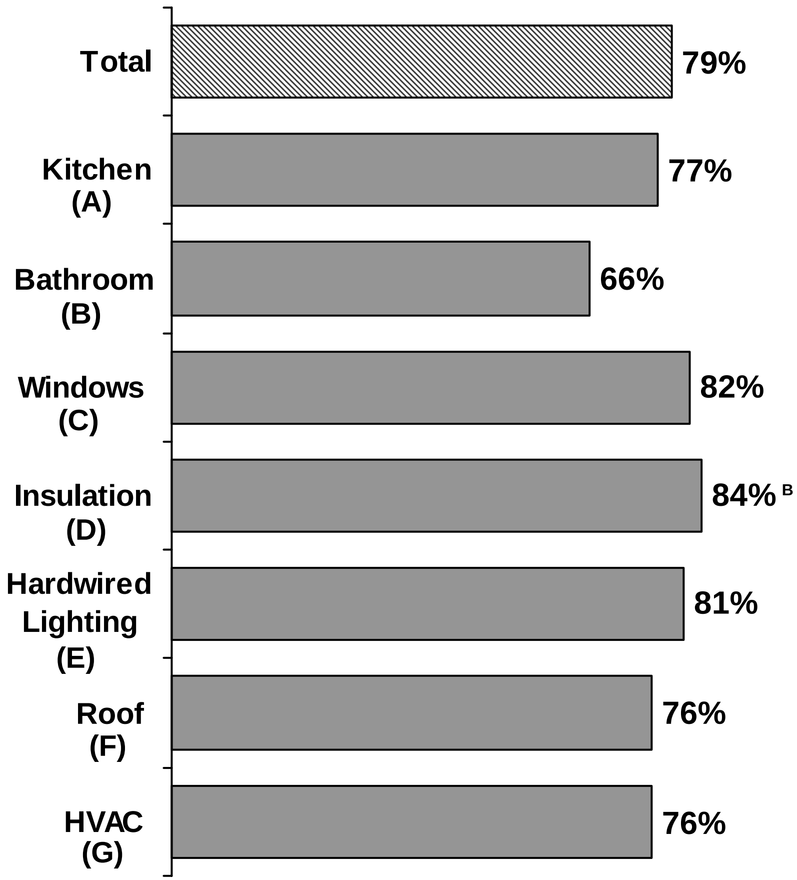
Q84. Satisfaction with Installed Energy Efficiency Measures

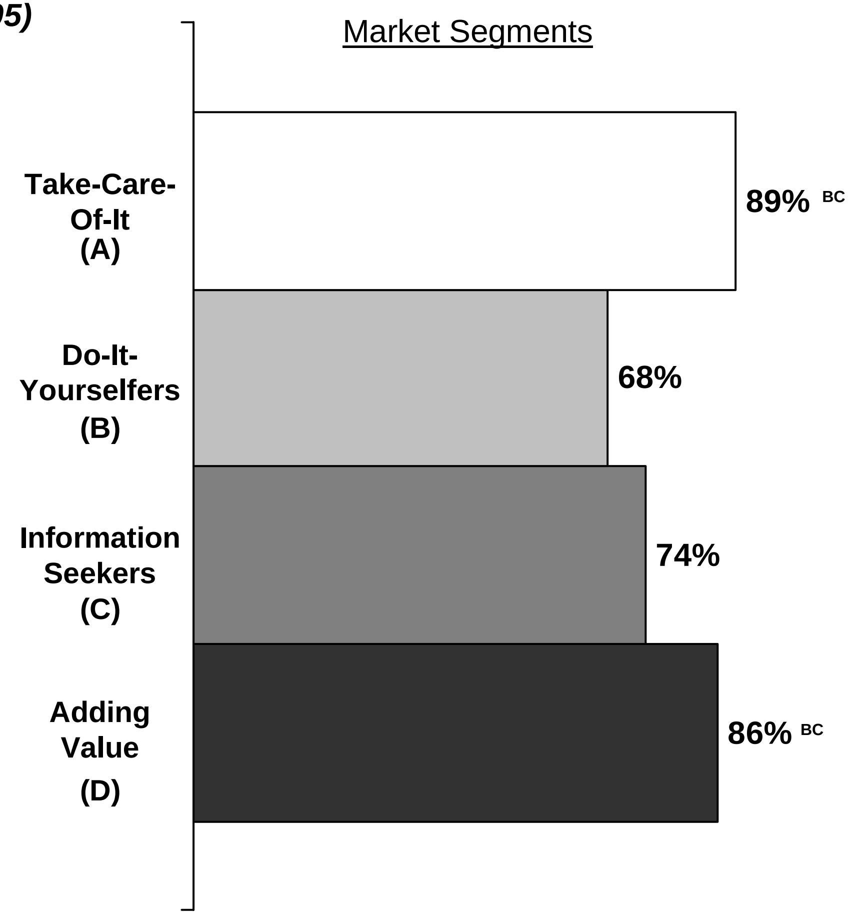
Highly Satisfied (Top-3-Box)

Completed Groups

Respondents Who Installed at Least One Energy Efficiency Measure

(n=405)





Key Driver of Overall Satisfaction

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (G) Energy Efficiency

Respondents who installed at least one energy efficiency measure were asked to rate their level of satisfaction on a 10-point scale where 1 means completely dissatisfied and 10 means completely satisfied. Majority of respondents are generally satisfied with their installed energy efficiency measure. Respondents who were asked about their 'insulation' project are more satisfied with their energy efficiency measure than respondents who completed a 'bathroom' project.

Adding Value respondents are more satisfied with their energy efficiency installation than are *Do-It-Yourselfers*.

VIII. (H) Contractor Selection

VIII. (H) Contractor Selection

Overview

Use of a contractor for information, satisfaction with contractor follow-up, and satisfaction with information on which contractor to use are among the most important Key drivers of overall satisfaction in completed remodeling projects (p. 34).

About half of completed remodeling projects use a contractor. About 60% of prospective remodelers have looked for a contractor.

The *Take-Care-Of-It* and *Adding Value* segments are the most likely to use a contractor.

Certification, references, and visits to previous jobs are the most common factors in evaluating contractors.

Two or three bids are most commonly sought by those who completed a project, but a substantial number seek only one bid.

While a substantial number of prospective remodelers find the contractor bid process easy (44%), a surprisingly large number find it difficult (16%).

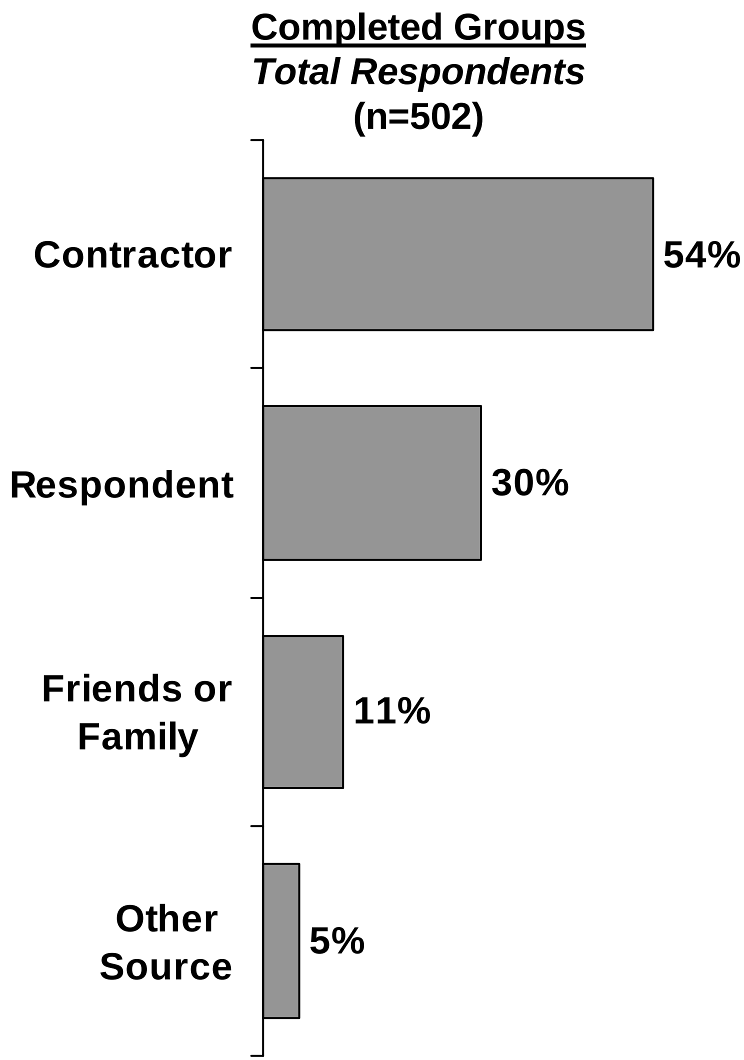
Most remodelers indicate high overall satisfaction with contractors (72%).

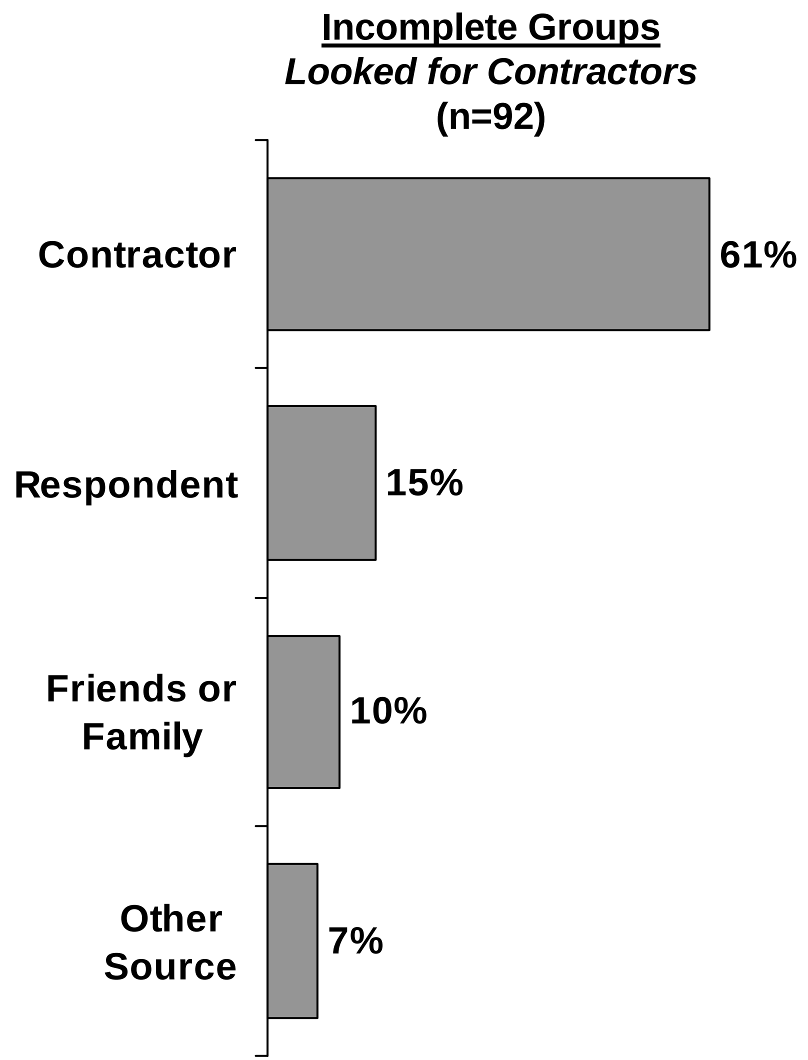
Information Seekers and *Do-It-Yourselfers* have the lowest satisfaction with contractors.

Contractors rate most highly on quality of materials, quality of work, and experience. They rate lowest on on-time performance, scheduling, and follow-up after work is finished.

VIII. (H) Contractor Selection

Q86/Q23. Primary Source Used or Planned
Completed and Incomplete Groups Comparison





VIII. (H) Contractor Selection

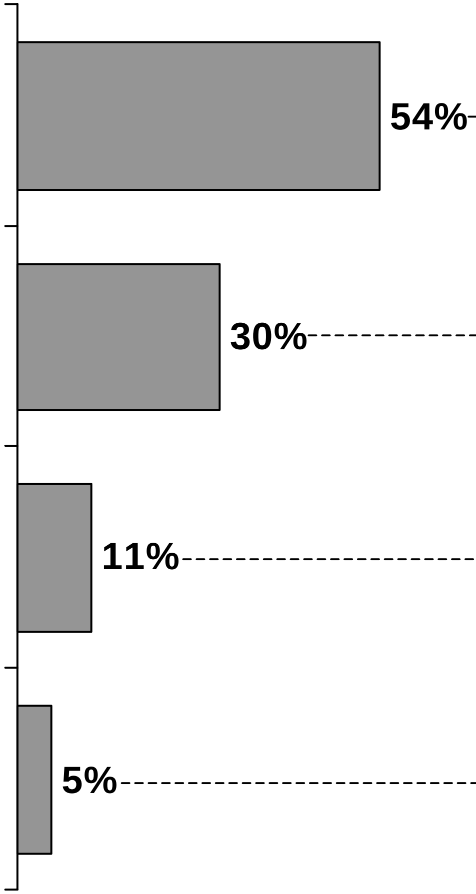
‘Completed’ project respondents were asked whether the primary source of labor for the home remodeling project was a contractor, them, friends or family, or some other source. Similarly, ‘incomplete’ respondents who looked for contractors were asked who they planned to use as the primary source of labor for the home remodeling project.

Generally, more than half of the respondents in both groups used or plan to use a contractor as the primary source of labor.

Among the ‘completed’ project respondents, 69% used a contractor for remodeling work (primary and other work) compared with 83% of the ‘incomplete’ project respondents who say this.

Q86. Primary Source of Labor on Remodeling Project

Completed Groups
Total Respondents



	Total	Kitchen (A) (n=74)	Bathroom (B) (n=66)	Windows (C) (n=92)	Insulation (D) (n=87)	Hardwired Lighting (E) (n=80)	Roof (F) (n=70)	HVAC (G) (n=30)
Contractor	54%	47%	46%	49%	54%	51%	71% [ABCDE]	64%
Respondent	30%	38% [CF]	39% [CF]	21%	32%	33%	20%	30%
A Friend or Family Member	11%	10%	11%	16% [F]	13% [F]	13% [F]	3%	6%
Some Other Source	5%	5% [G]	5%	10% [DF]	1%	4%	4%	--

Modules: Windows, Insulation, Hardwired Lighting, Roof, HVAC

Key Driver of Overall Satisfaction (Respondent)

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (H) Contractor Selection

‘Completed’ project respondents were asked whether the primary source of labor for the home remodeling project was a contractor, them, friends or family, or some other source. Similarly, ‘incomplete’ respondents who were asked who they planned to use as the primary source of labor for the home remodeling project.

Generally, more than half of the respondents in both groups used or plan to use a contractor as the primary source of labor.

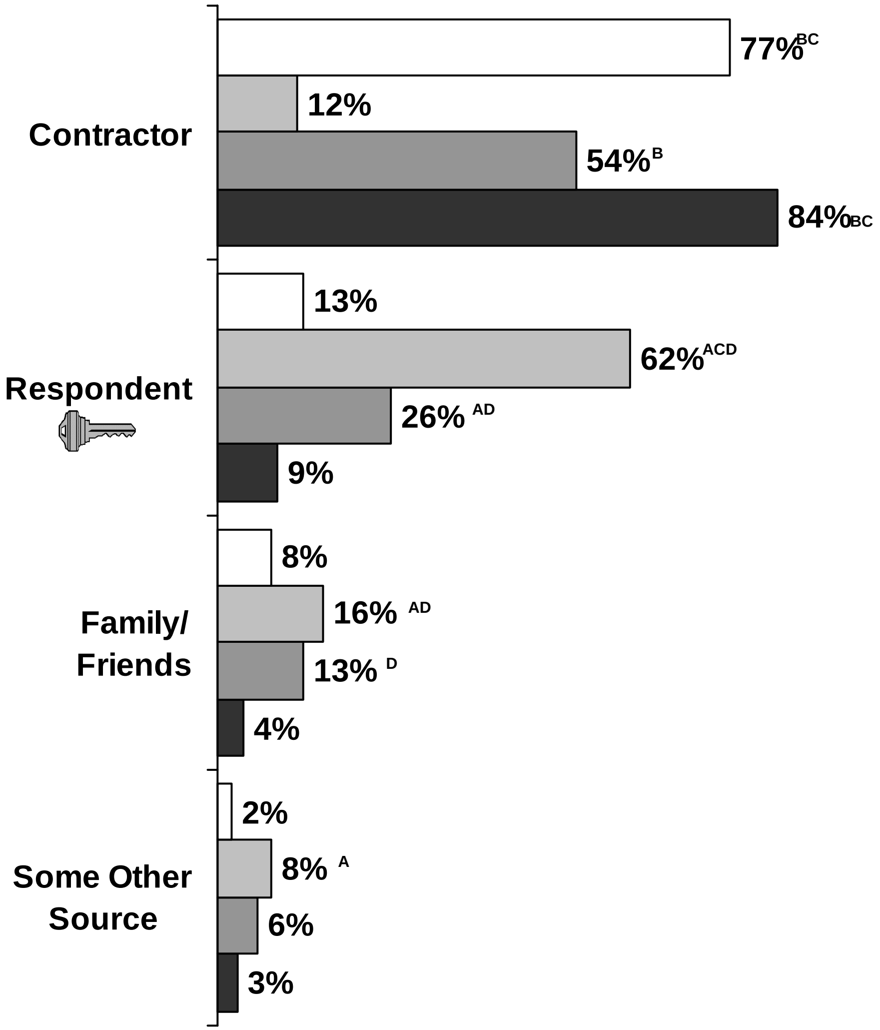
Among the ‘completed’ project respondents, 69% used a contractor for remodeling work (primary and other work) compared with 83% of the ‘incomplete’ project respondents who say this.

VIII. (H) Contractor Selection

Q86. Primary Source of Labor for Completing Project

Completed Groups

Total Respondents

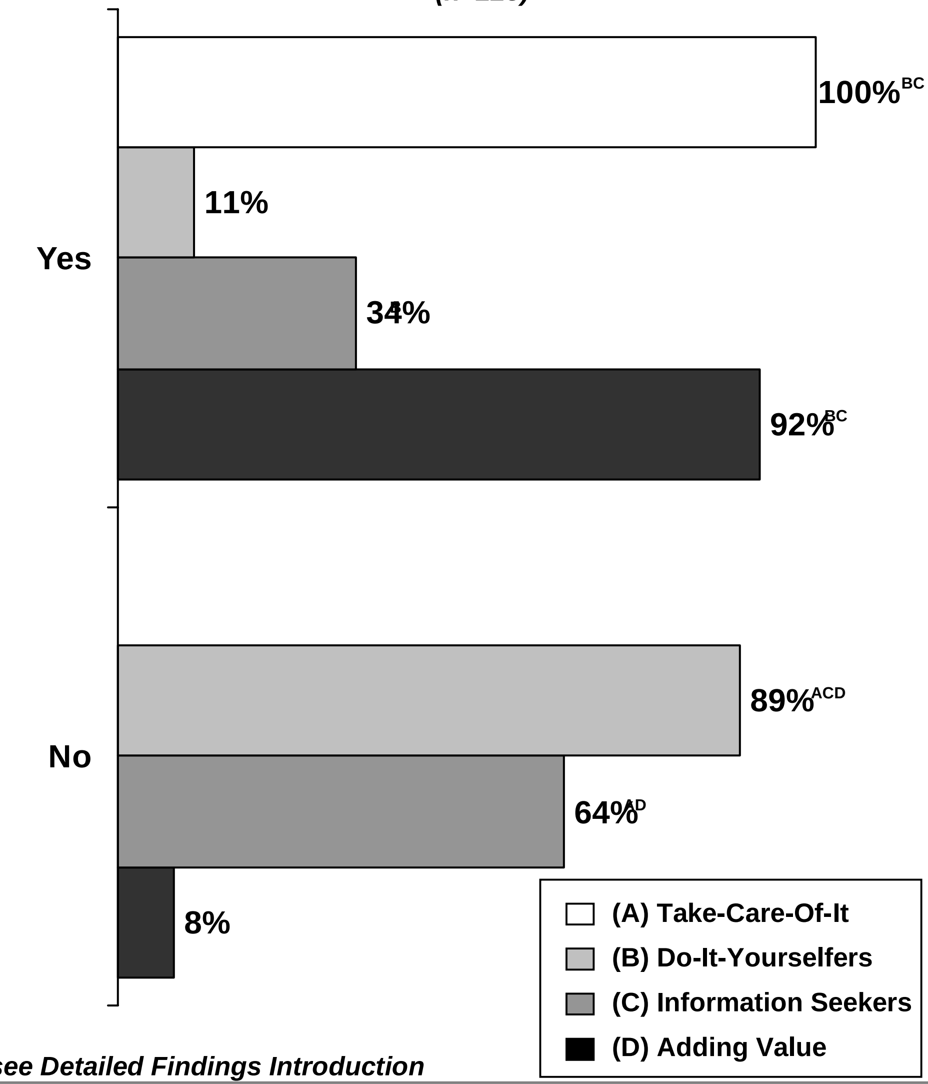


Q87. Used Contractor for Any of Remodeling Work

Completed Groups

Respondents Did Not Mention Contractor as Primary Source

(n=228)



Key Driver of Overall Satisfaction

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (G) Contractor Selection

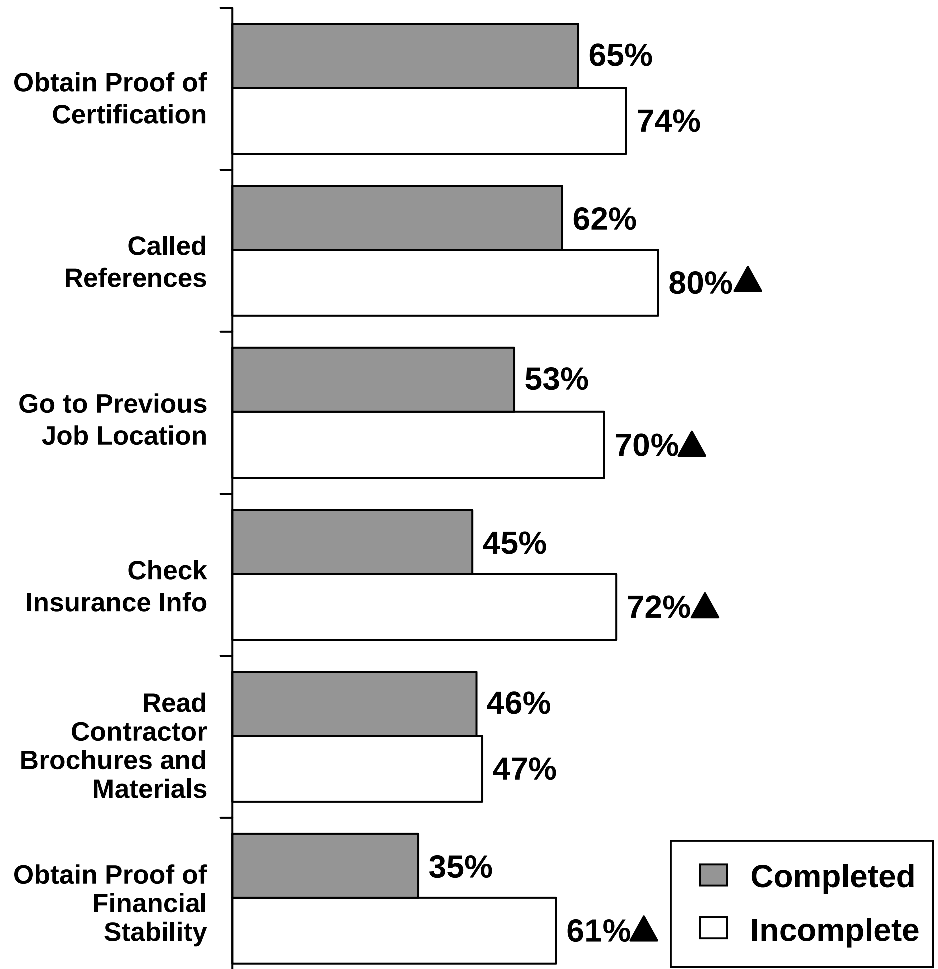
Take-Care-Of-It and *Adding Value* respondents are more likely to say that they use contractors as the primary source of labor or for any of the home remodeling project than are *Information Seekers* and *Do-It-Yourselfers*.

VIII. (H) Contractor Selection

Q91/Q30. How Contractor Work is Evaluated

Complete and Incomplete Projects Comparison

Respondents Who Used (n=348) or Plan to Use (n=76) a Contractor



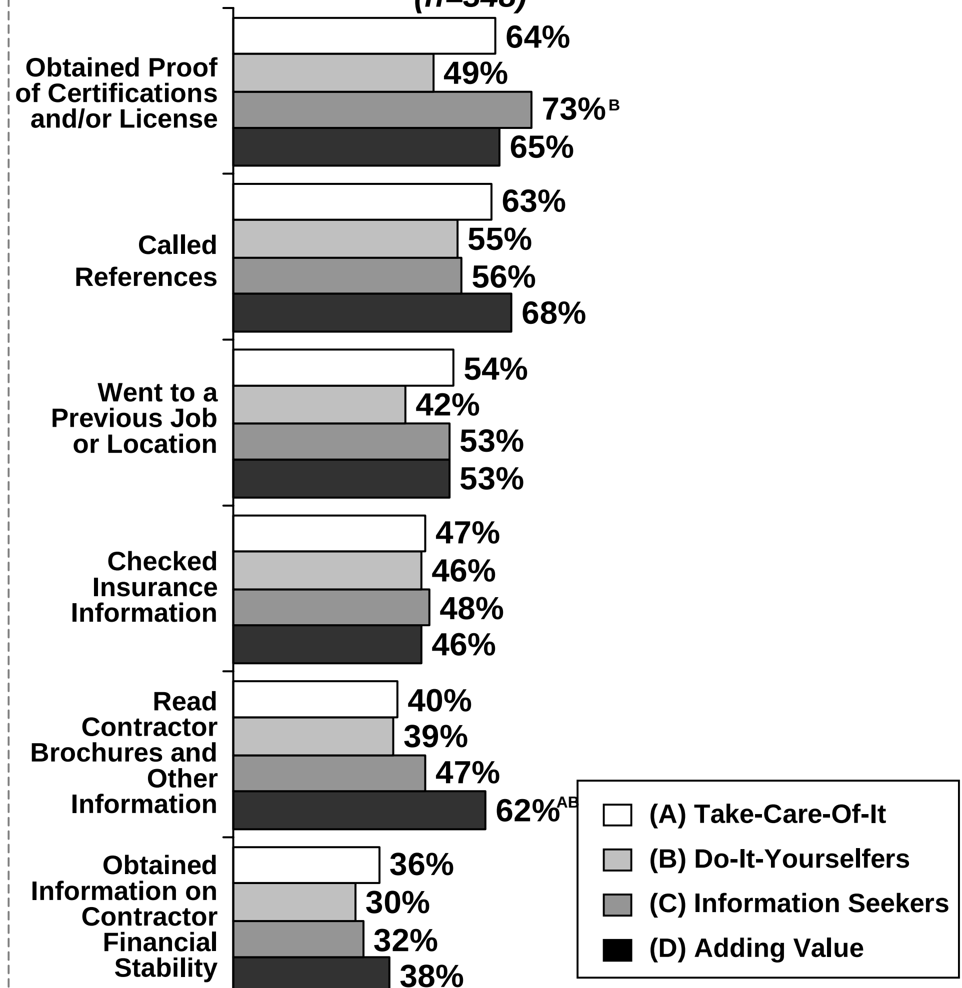
▲ *Significantly higher than the other group*

Q91. Evaluated the Contractors Previous Work

Summary of Yes

Completed Projects By Market Segment

Respondents Who Used a Contractor (n=348)



Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

'Completed' project respondents who used a contractor and 'incomplete' project respondents who plan to use a contractor were asked how contractor work is evaluated prior to selecting the contractor.

Information Seekers obtain proof of contractor certification and/or licenses more often than do *Do-It-Yourselfers*. *Adding Value* respondents read contractor brochures and other materials more often than do *Take-Care-Of-It* or *Do-It-Yourselfers.*

About two-thirds of respondents request at least 2 bids from contractors.

Number of Contractor Bids Requested	**Completed Projects (n=348)**
One	34%
Two-Three	42%
Four or more	19%

Number of Contractor Bids Requested	**Take-Care-of–It (n=168) A**	***Do-It-Yourselfers (n=33) B**	**Info Seekers (n=73) C**	**Adding Value (n=74) D**
One	40%[c]	24%	19%	38% [c]
Two-Three	35%	55% [A]	55% [A]	42%
Four or more	18%	18%	23%	16%
None	7%	3%	1%	3%

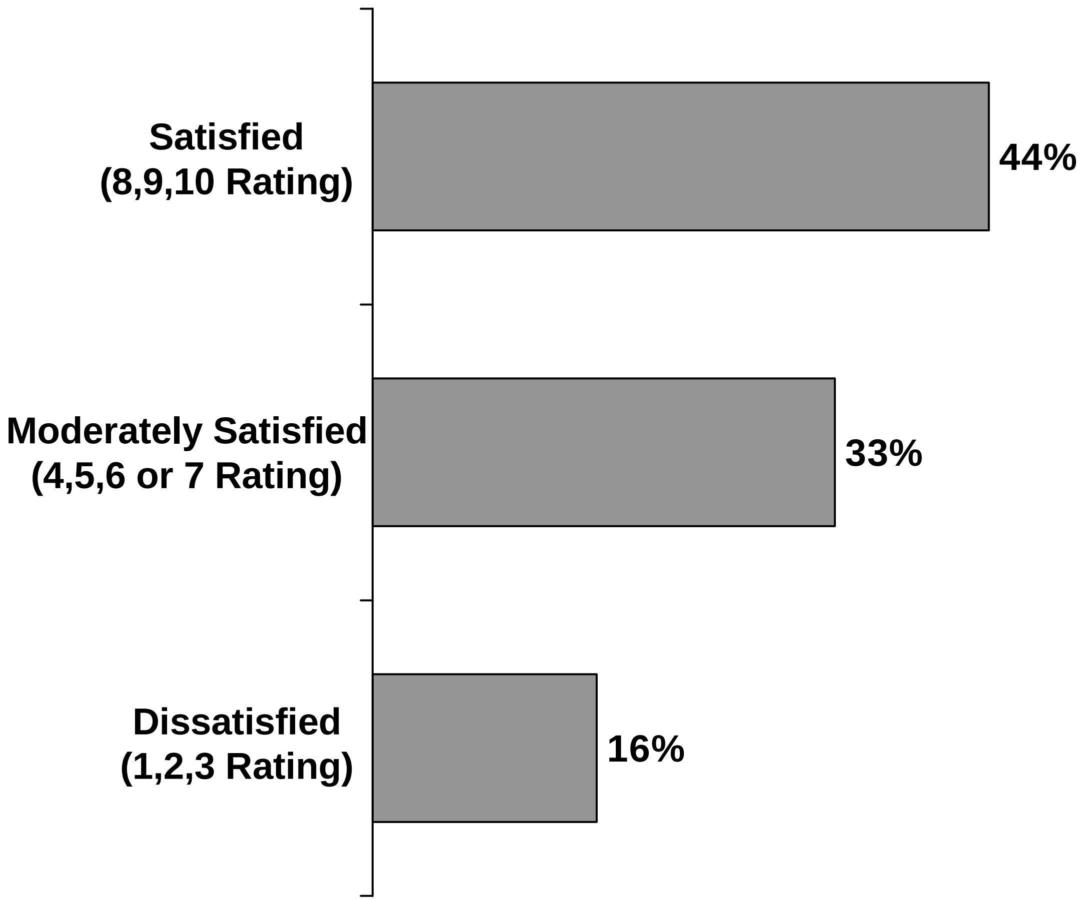
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Q27. Satisfaction With the Bid Process

Incompleted Projects

Requested Bids

(n=45)



VIII. (H) Contractor Selection

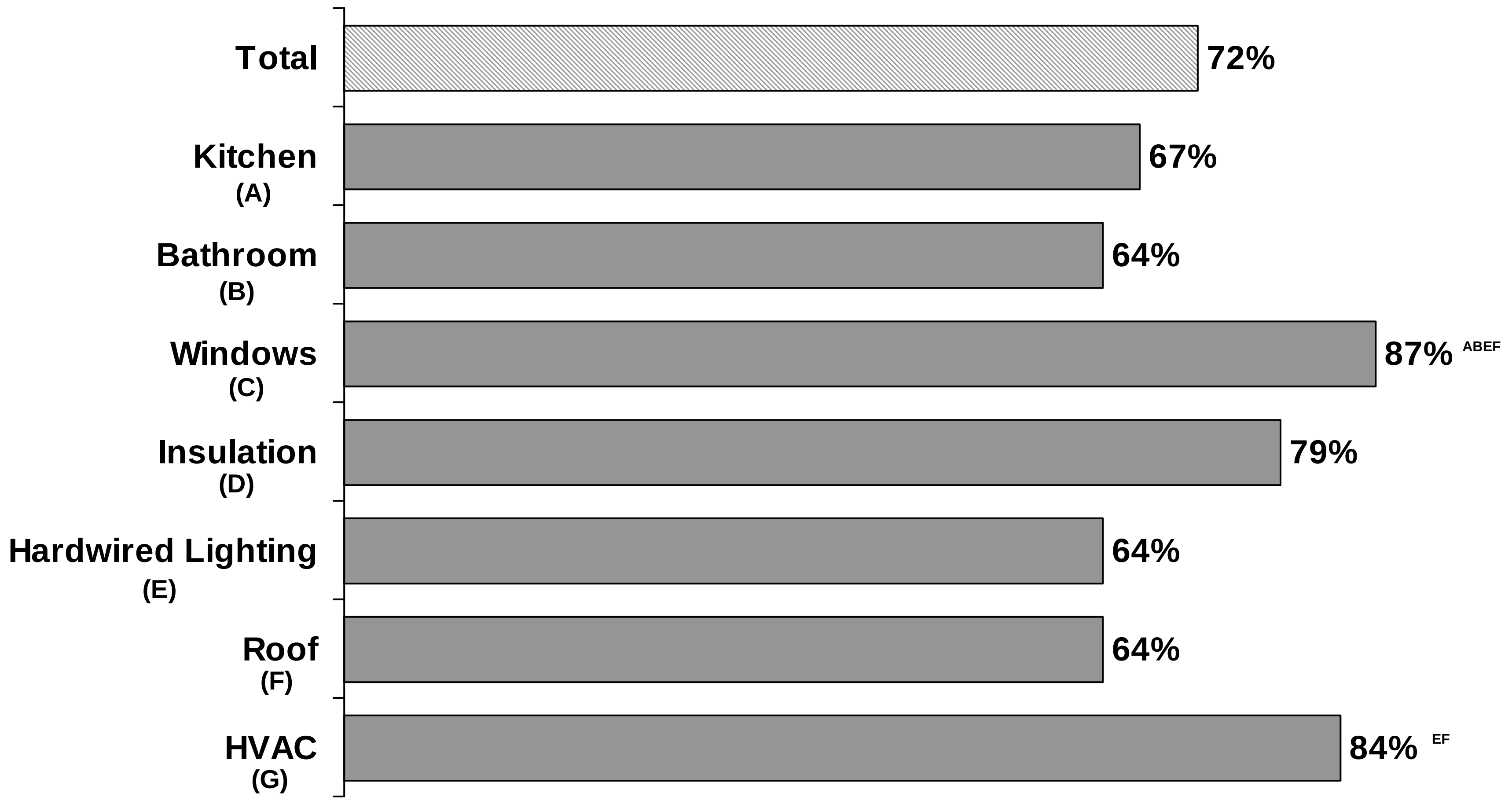
‘Incomplete’ project respondents were asked to rate their level of satisfaction with the contractor bid process on a 10-point scale with 1 meaning completely dissatisfied and 10 meaning completely satisfied.

Less than half of the ‘incomplete’ project respondents are highly satisfied with the process. Moreover, 16% report that they are dissatisfied with the process.

On an open-ended basis, 'incomplete' project respondents who requested bids are asked what could be made easier. About one-third say “nothing.” 7% say “get more information about contractor work history.”

Q88. Overall Satisfaction with Contractor Experience

Completed Groups
Highly Satisfied (Top-3-Box)
Respondents Who Used a Contractor
(n=348)



Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Less than three-quarters of the 'completed' project respondents are highly satisfied (top-3-box) with the contractors they used for their project.

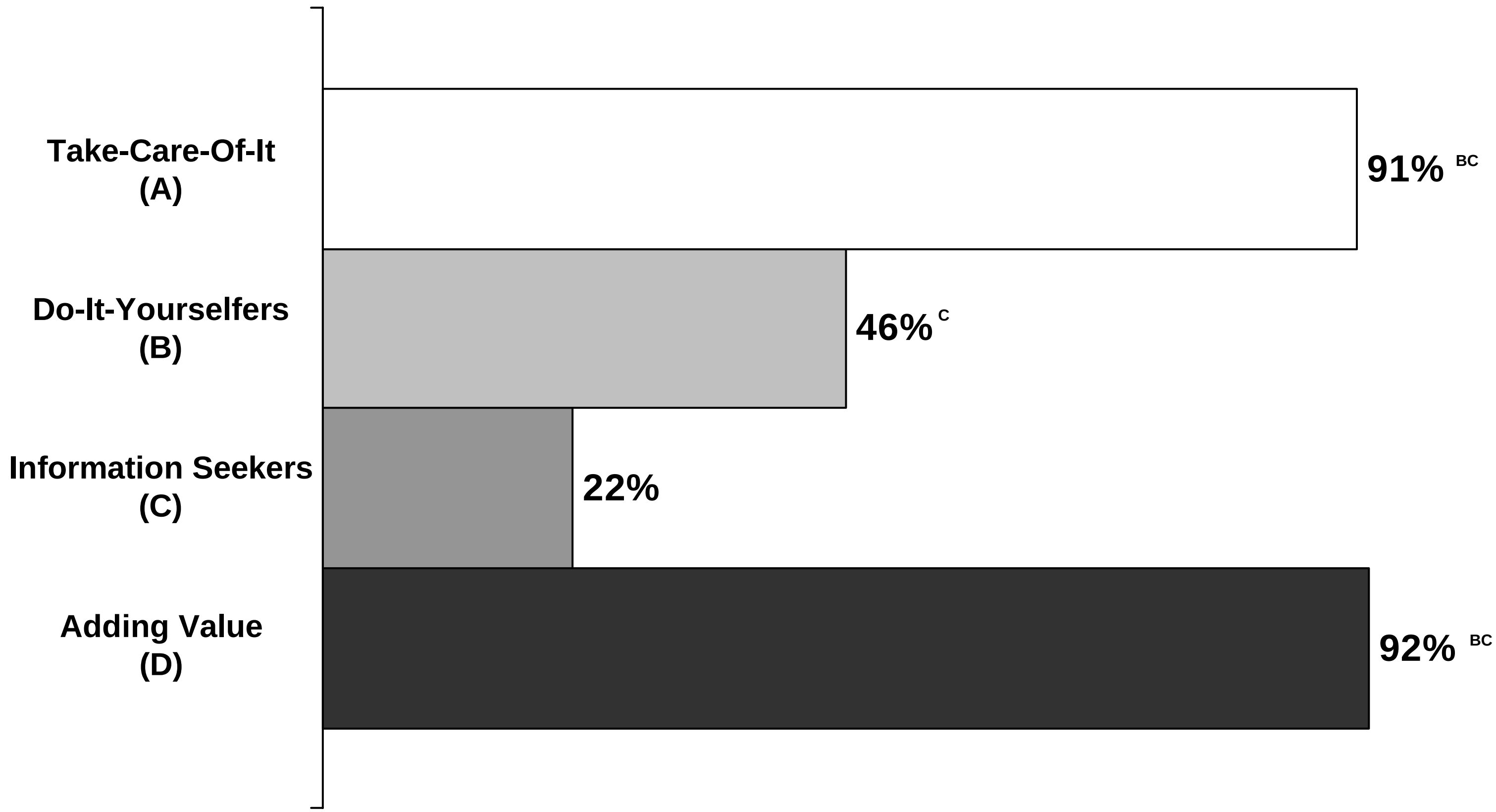
- Respondents who were asked about their 'window' projects are more satisfied than people who were asked about 'kitchens', 'bathrooms,' 'hardwired lighting,' and 'roofs.'
- Similarly, respondents asked about HVAC are more satisfied than respondents who were asked about 'hardwired lighting,' and 'roof' projects.
- Respondents whose homes are less than 11 years old are more satisfied than respondents whose homes are 11-20 years or 21+ years (86% vs. 57% and 73%).
- Interestingly, respondents who lived in their homes for 20 years or more are more satisfied with contractors overall than are respondents who lived in the home for less amount of time.

Length of time in the home	*Top-3-Box %*
Less than 5 years	67%
5 to less than 10 years	68%
10 to less than 20 years	67%
20 + years	80% ▲

▲ *Significantly higher than the other groups*

Q88. Overall Satisfaction with Contractor Experience

Completed Projects By Market Segment
Highly Satisfied (Top-3-Box)
Respondents Who Used a Contractor
(n=348)



Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (H) Contractor Selection

Take-Care-Of-It and *Adding Value* respondents are more highly satisfied with the contractor experience. *Information Seekers* are not satisfied. Only 22% give a top-3-box score and 33% give a bottom-3-box score.

Q89. Contractor Performance Ratings

Highly Satisfied (Top-3-Box)
Completed *Used a Contractor*
(n=348)

	Total Used a Contractor	Kitchen (A) (n=49)	Bathroom (B) (n=42)	Windows (C) (n=61)	Insulation (D) (n=56)	Hardwired Lighting (E) (n=56)	Roof (F) (n=59)	HVAC (G) (n=25)*
Quality of Materials Used	87%	88%	91%	89%	86%	79%	88%	88%
Quality of the Work Performed	78%	71%	76%	89%[AEF]	82%	73%	73%	76%
Contractor Knowledge and Experience	77%	82%[F]	76%	90%[EF]	79%	66%	63%	88%[EF]
The Financial Arrangement	74%	78%	76%	77%	71%	71%	68%	80%
Being Easy to Reach	70%	65%	64%	87%[ABDEF]	71%	63%	66%	76%
On-Time Performance	66%	51%	64%	85%[ABEF]	73%[AE]	50%	68%	68%
Coordination of Schedules	66%	59%	57%	82%[ABE]	70%	52%	71%[E]	64%
Following Up with You After Work is Finished	59%	55%	48%	77%[ABEF]	66%	48%	49%	68%

Key Driver of Overall Satisfaction
Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (H) Contractor Selection

'Completed' project respondents who used a contractor were asked to rate their satisfaction with various aspects of the contractor's performance. Six of the eight measures are key drivers of overall satisfaction with the remodeling project.

- Respondents who were asked about their 'window' projects are generally more satisfied with contractors than respondents who completed other project types.
- Those who lived in their homes for 20+ years are generally more satisfied with contractors than those who have not been in their homes as long.

Time in the Residence	< 5 years A	5 to <10 years B	10 to <20 years C	20+ years D
Quality of materials	89%	88%	80%	94%[D]
Quality of work	76%	68%	73%	86%[CD]
Knowledge and experience	78%	71%	73%	82%
Financial arrangement	62%	79%	76%	80%[B]
Being easy to reach	56%	62%	69%	80%[BC]
On-time performance	49%	53%	72%	73%[BC]
Coordination of schedules	55%	62%	66%	74%[B]
Contractor follow-up	47%	50%	56%	68%[B]

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (H) Contractor Selection

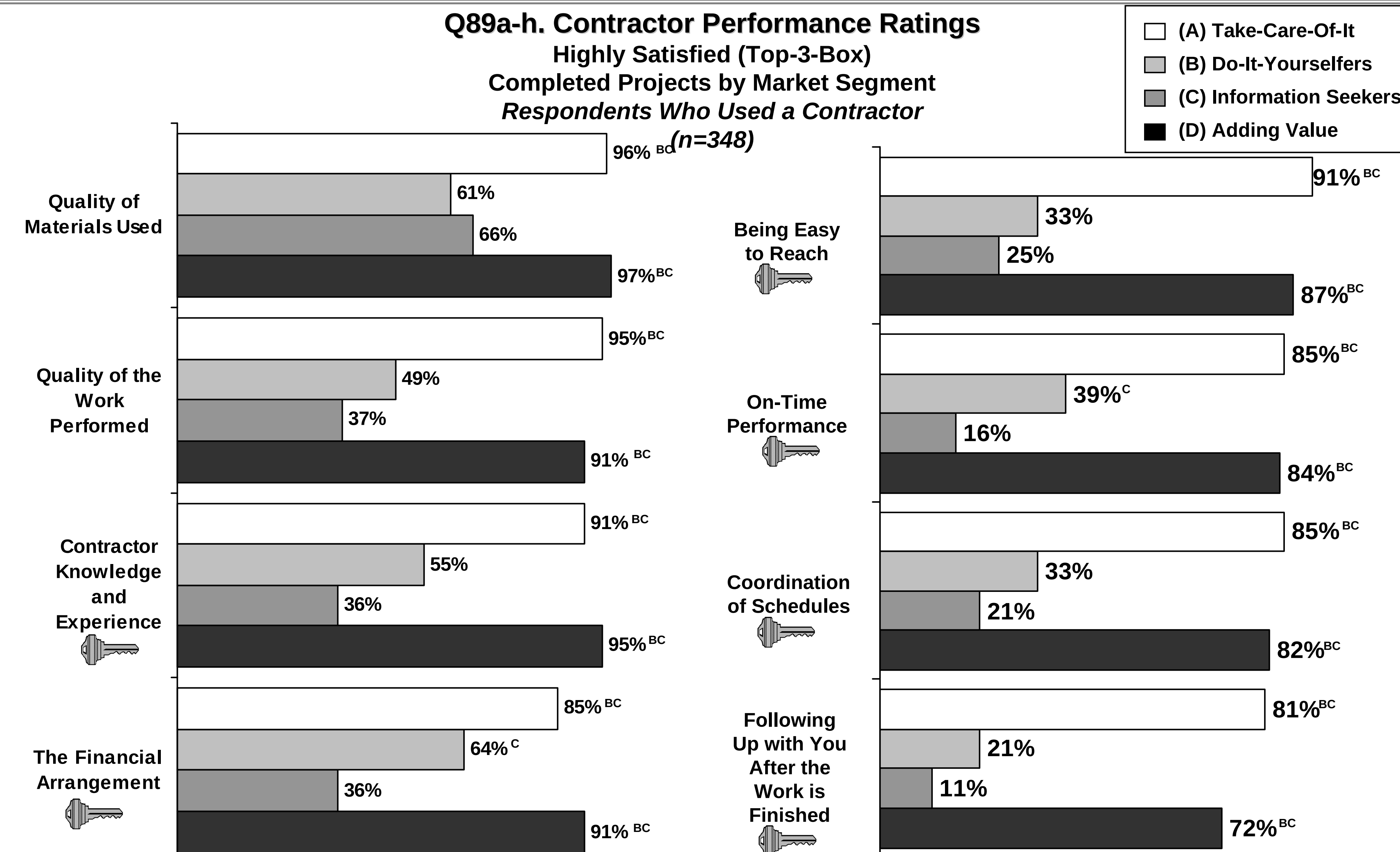
Q89a-h. Contractor Performance Ratings

Highly Satisfied (Top-3-Box)

Completed Projects by Market Segment

Respondents Who Used a Contractor

(n=348)



Key Driver of Overall Satisfaction

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (H) Contractor Selection

As expected, *Do-It-Yourselfers* are less satisfied with the contractors. However, *Information Seekers* are dissatisfied with contractors on all measures.

VIII. (I) Financing

VIII. (I) Financing

Only about one-quarter of the 'completed' project respondents obtain financing for their home remodeling project.

- At the market segment level, about half (47%) of the 'Adding Value' group obtained financing.

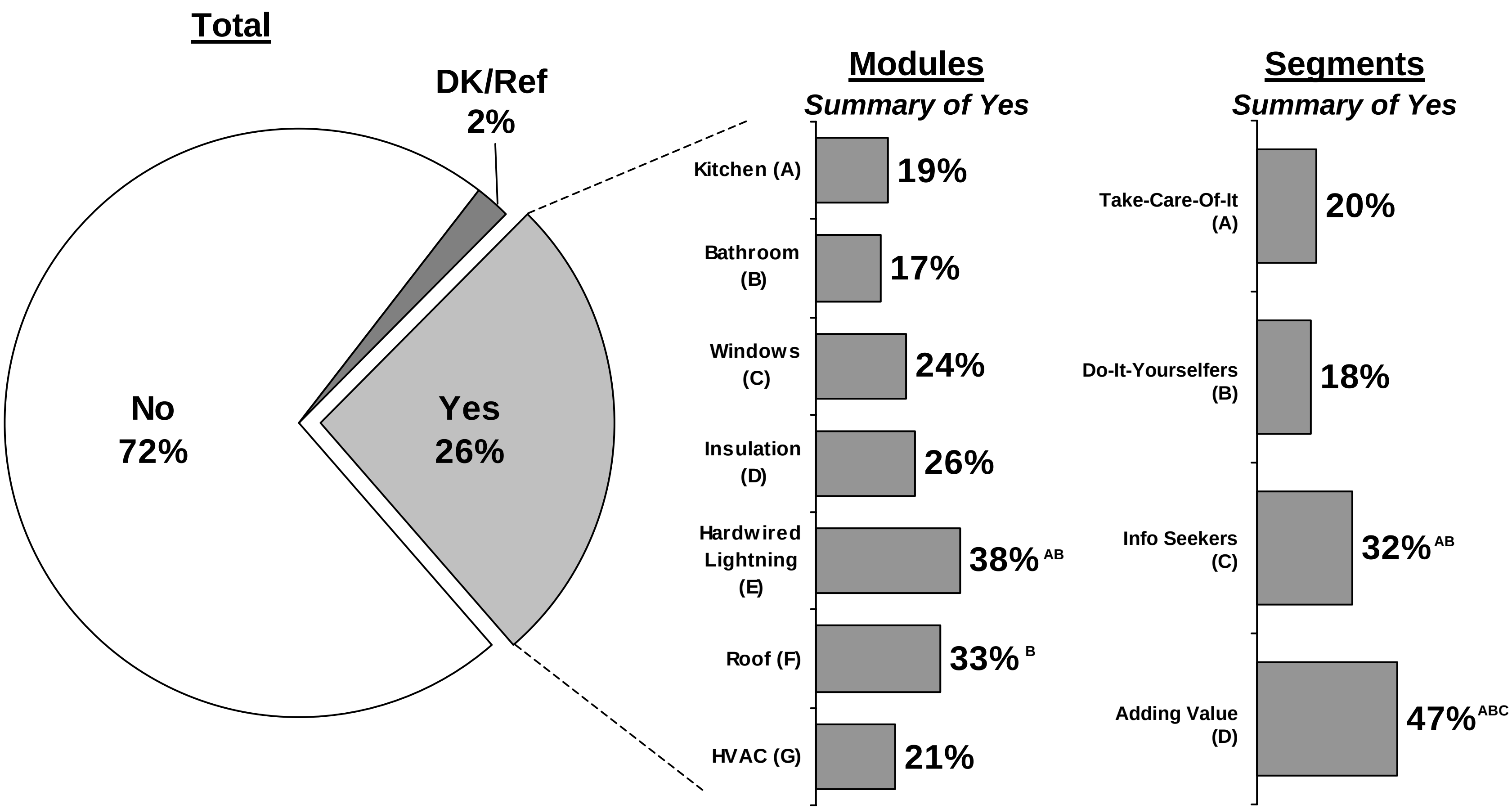
- Those who did obtained financing are generally highly satisfied (71% - Top-3-Box) with the financing options overall.

- At the market segment level the two groups least satisfied with the financing options are the 'Do-It-Your-Selfers,' and the 'Information Seekers.' Specifically, these two groups were less satisfied than the other two groups for:
  - the length of time it takes to obtain financing
  - the way financing options are explained
  - interest rates
  - the number of financing options available

Q93. Obtained Financing for Remodeling

Completed Groups

Total Respondents



Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

Only about one-quarter of the 'completed' project respondents report that they obtained financing for their remodeling project.

- 'Hardwired lighting' and 'roof' projects are financed more often than are 'bathroom' or 'kitchen' projects.
- Interestingly, *Information Seekers* and *Adding Value* respondents more often report that they obtained financing than do *Do-It-Yourselfers* or *Take-Care-Of-It*.
- Respondents 64 years old and younger are more likely to have obtained financing than those who are 65 years or older.

Respondent Age	**%**
18 – 44 years	30% ▲
45 – 64 years	29% ▲
65 years or older	16%

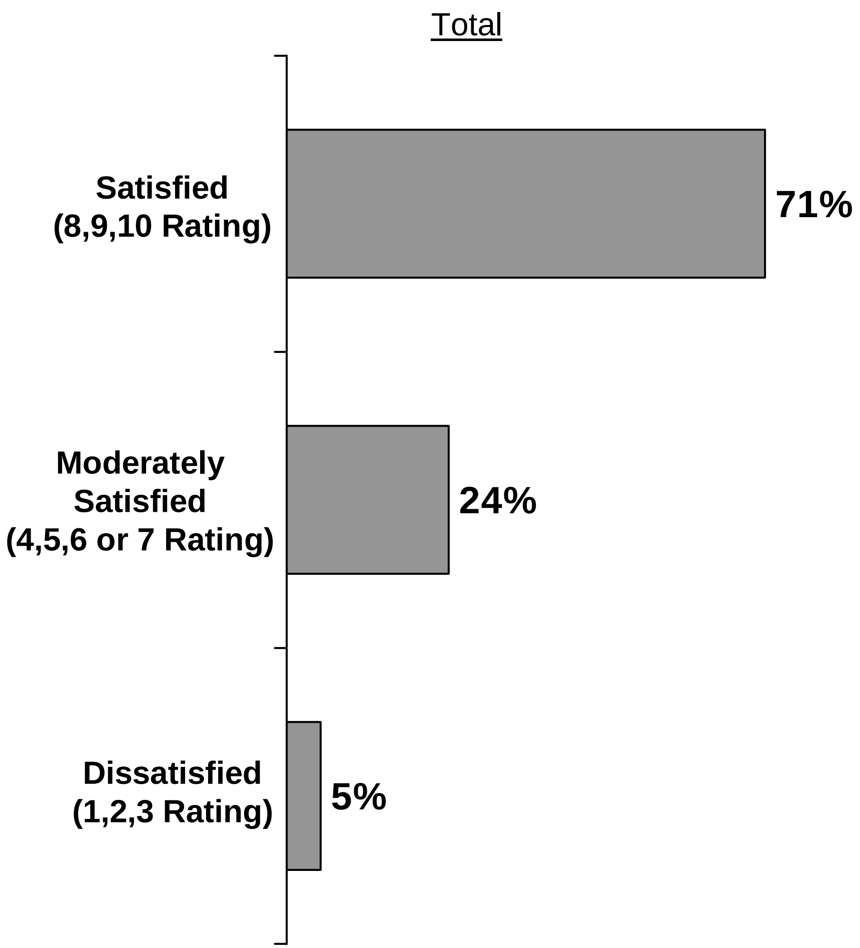
▲ ***Significantly higher than the other group***

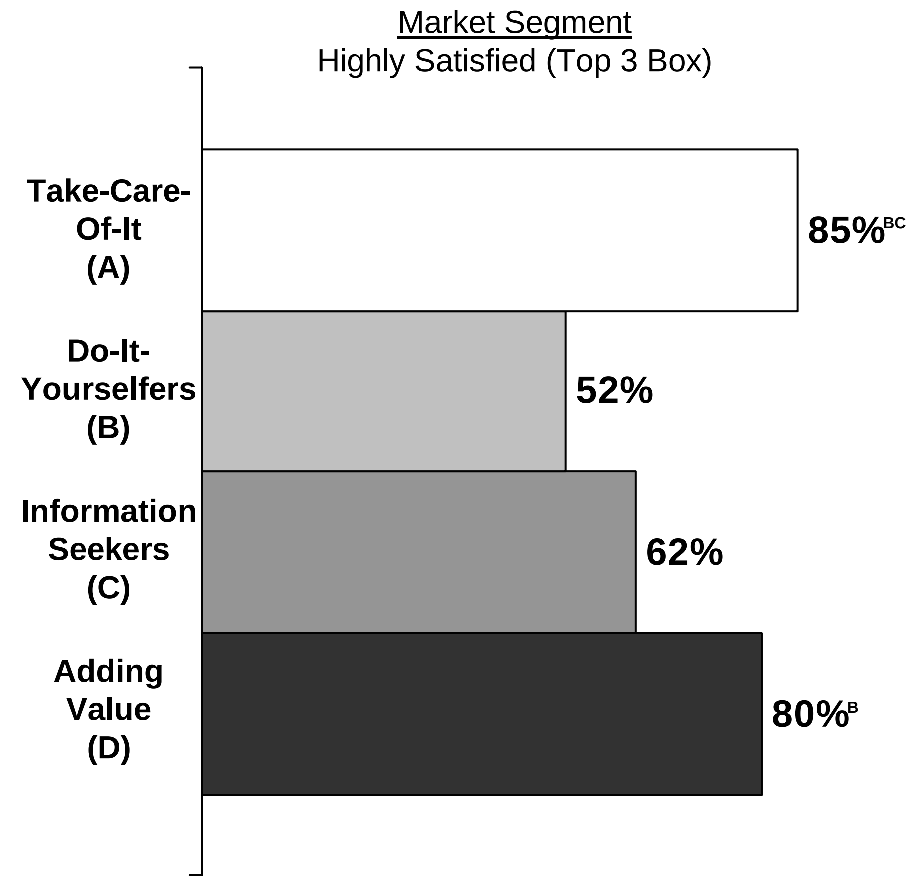
Q94. Overall Satisfaction with Financing Options

Completed Groups

Obtained Financing

(n=130)





Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (I) Financing

Generally, 'completed' project respondents who obtained financing are satisfied with the options available.

- As expected, respondents with incomes of $100,000 or more are more satisfied with financing options than are respondents whose annual income is less than $50,000 or $50,000 to less than $100,000 (88% vs. 61% and 71%).

- Respondents who are between the age of 45 to 64 are more satisfied than respondents who are between 18 and 44 years (79% vs. 56%).

Take-Care-Of-It respondents are more satisfied than *Information Seekers* and *Do-It-Yourselfers*.

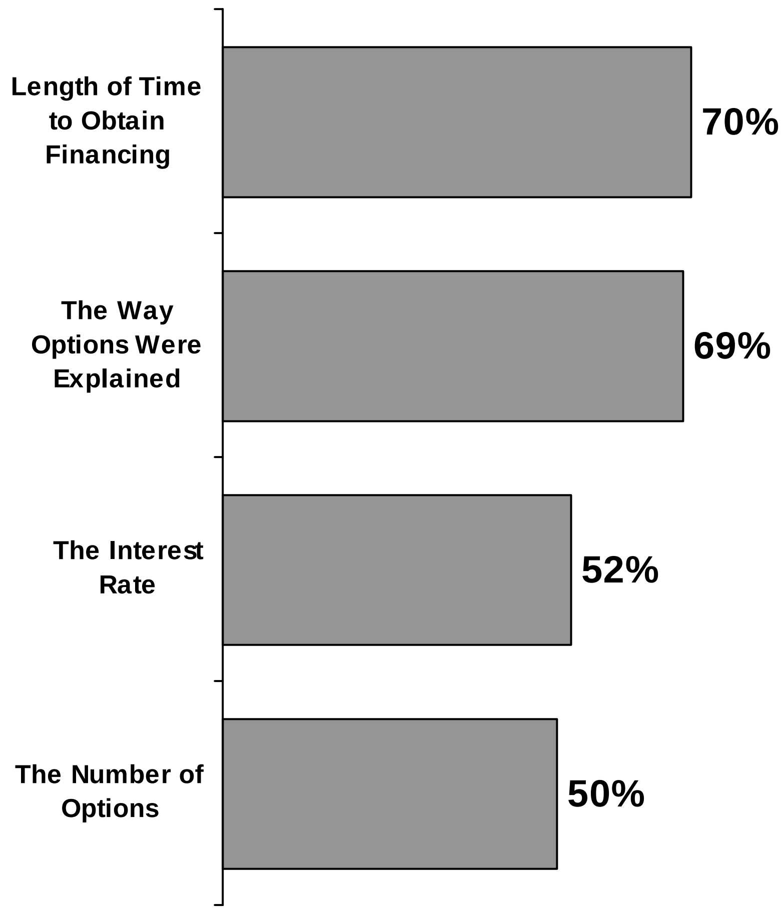
Q95a-d. Satisfaction with Various Aspects of Financing a Home Remodeling Project

Completed Groups

Respondents Who Obtained Financing

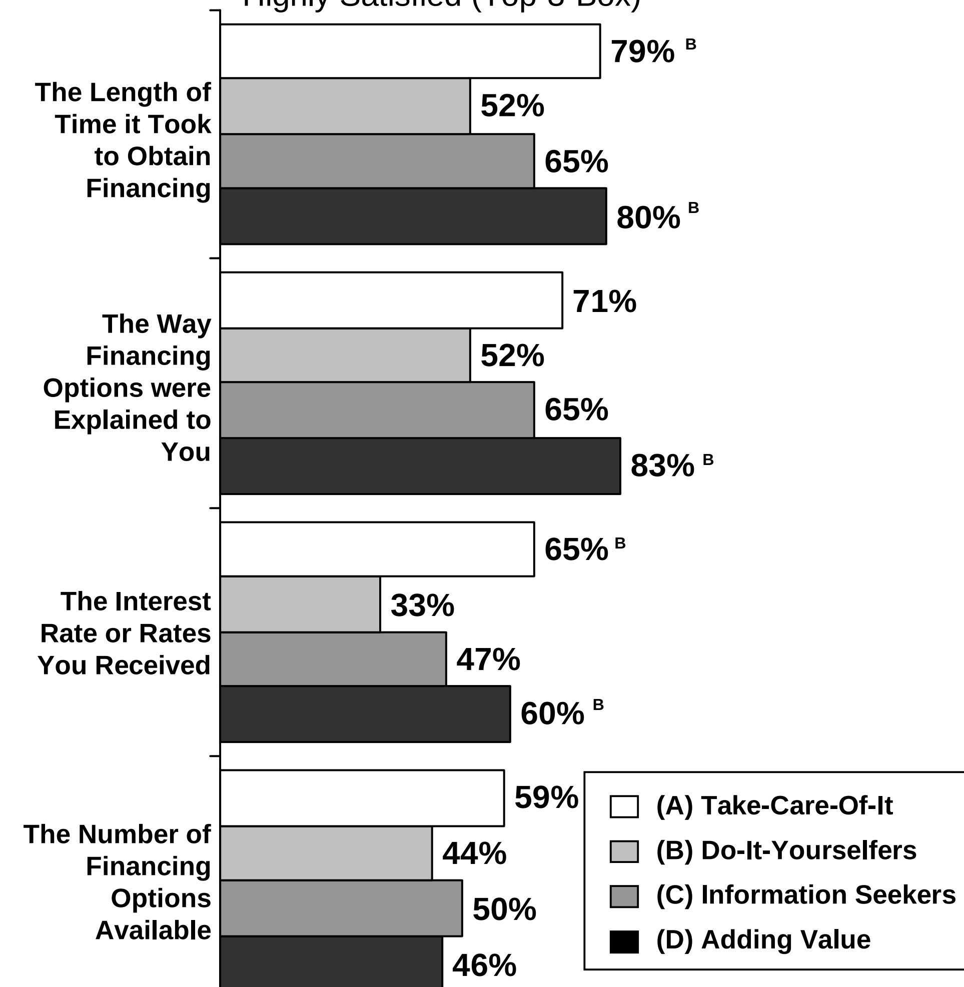
(n=130)

Total



Market Segment

Highly Satisfied (Top-3-Box)



** Small sample size*

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

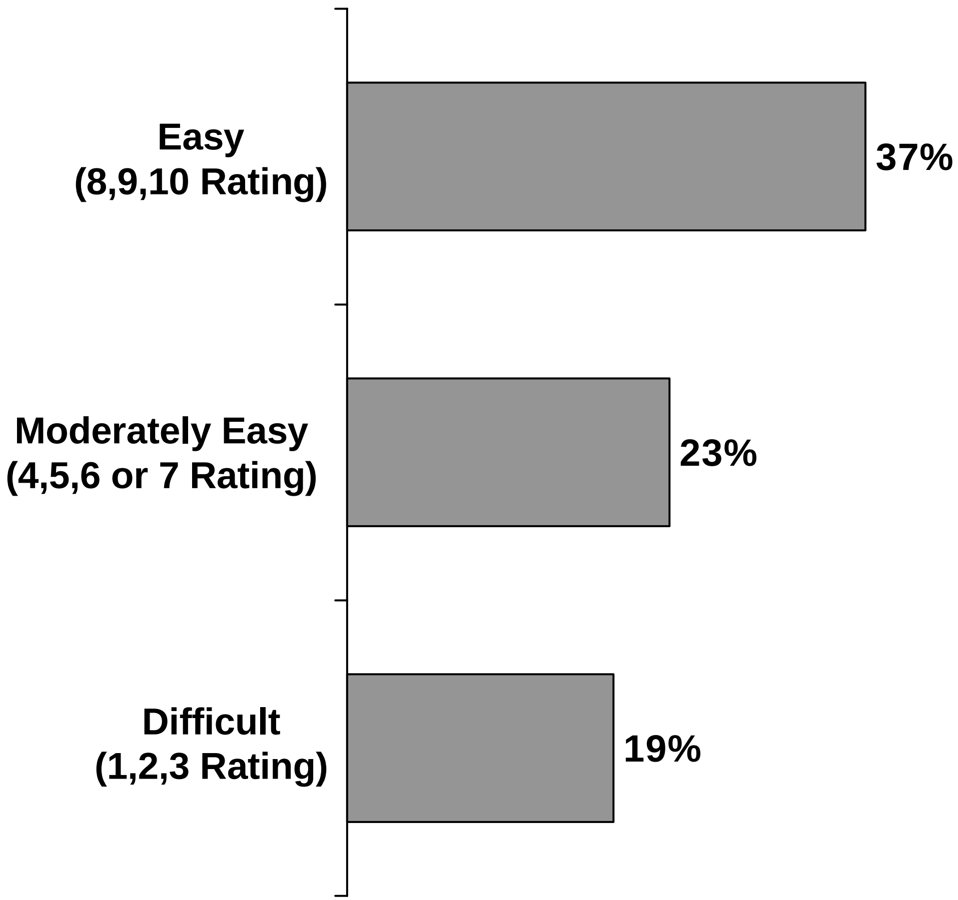
VIII. (I) Financing

Only half of the 'completed' project respondents are highly satisfied (top-3-box) with 'interest rates' and the 'number of options' available.

- *Adding Value* and *Take-Care-Of-It* respondents are generally more satisfied with the various aspects of financing than either the *Information Seekers* or *Do-It-Yourselfers*.

- Respondents in the $100,000+ annual income bracket are more satisfied with the 'length of time it took to obtain financing,' and 'the way financing options were explained' than are those in the 'less than $50,000' range (79% and 85% vs. 54% and 57%).

Q33. Ease of Looking for Financing
Incomplete Groups
Looked for Financing
(n=57)



Similar to ‘information gathering’ and ‘identifying materials and/or equipment,’ only about one-third of the ‘incomplete’ project respondents who looked for financing think the process is easy (top-3-box), and about two-in-ten believe it to be difficult.

The 36 respondents who rate the process as ‘moderately easy’ to ‘difficult’ were asked what about the process could have been made easier. The major suggestions are:

- More information/details 8%
- Using the Internet 3%

VIII. (J) Role of the Energy Utility Company

VIII. (J) Role of the Energy Utility Company

Q109. Interest in Proposed Utility Company Offerings

Highly Interested (Top-3-Box)
Completed Groups
Total Respondents

	Total	Kitchen (A) (n=74)	Bathroom (B) (n=66)	Windows (C) (n=92)	Insulation (D) (n=87)	Hardwired Lighting (E) (n=80)	Roof (F) (n=70)	HVAC (G) (n=30)
		Modules						
Pre-screen Contractors	36%	39%	36%	30%	28%	41%	50%[CDG]	24%
Using Utility Company Certified Contractors	28%	26%	30%	28%	24%	31%[G]	37%[G]	15%
Maintenance Services	25%	26%	22%	20%	23%	21%	39%[BCDE]	21%
Utility Company to Provide Financing Resources	23%	26%	18%	24%	18%	25%	29%[G]	12%
On-Site Installations	22%	26%	24%	20%	17%	18%	36%[CDEG]	12%
Obtain Financing from Energy Utility	22%	23%[G]	18%	25%[G]	22%[G]	21%[G]	30%[G]	6%

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (J) Role of the Energy Utility Company

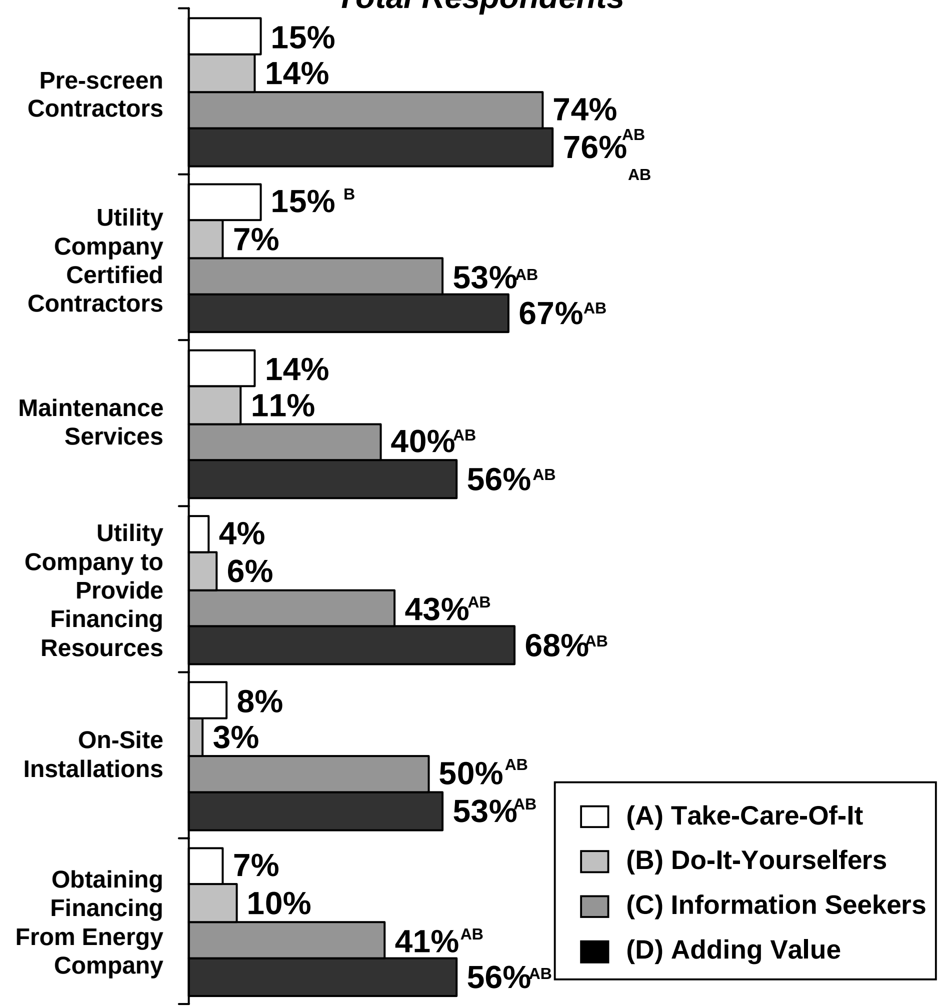
All respondents were asked to rate their interest in possible offerings from a utility company on a 10-point scale where 1 means not at all interested and 10 means extremely interested.

Reported interest in the product offerings is low across the board.

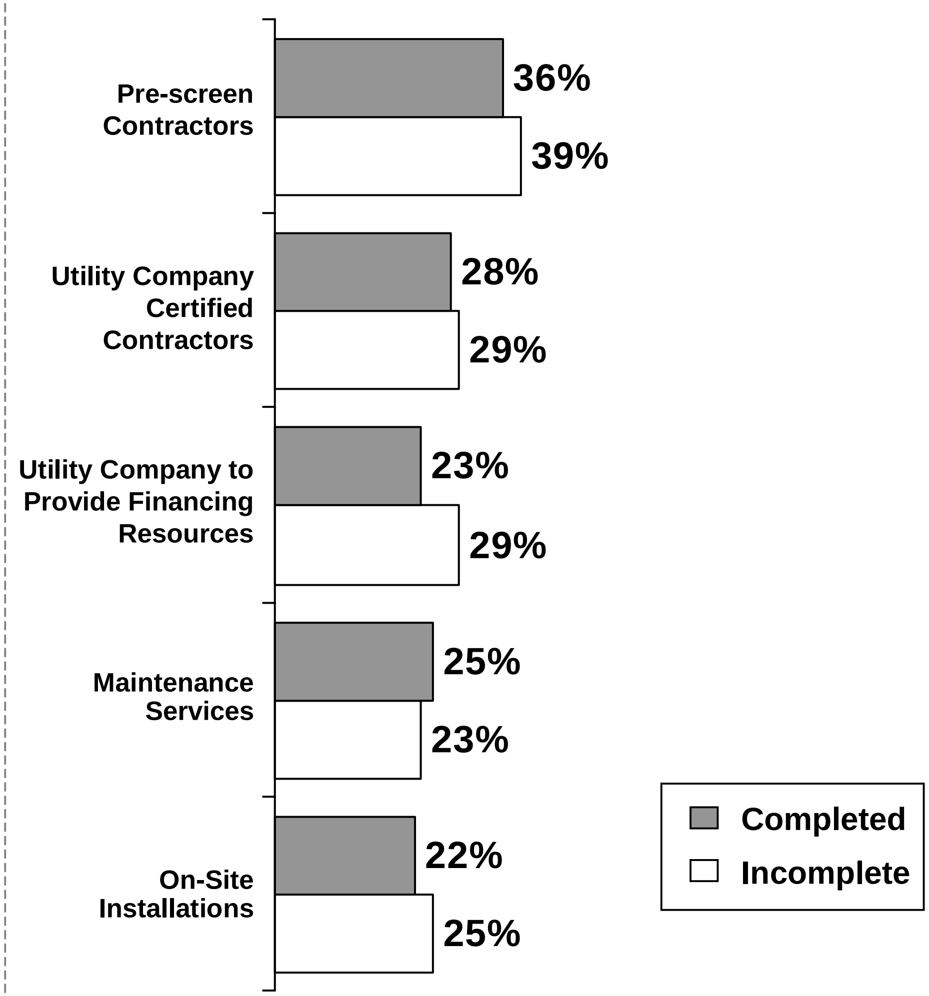
- At the module level, there is greater interest among those who were asked about their ‘roof’ project.

VIII. (J) Role of the Energy Utility Company

Q109. Interest in Proposed Utility Company Offerings
Highly Interested (Top-3-Box)
Completed Projects by Market Segment
Total Respondents



Q109. Interest in Proposed Utility Company Offerings
Highly Interested (Top-3-Box)
Completed and Incomplete Projects Comparison
Total Respondents



Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

VIII. (J) Role of Energy Utility Company

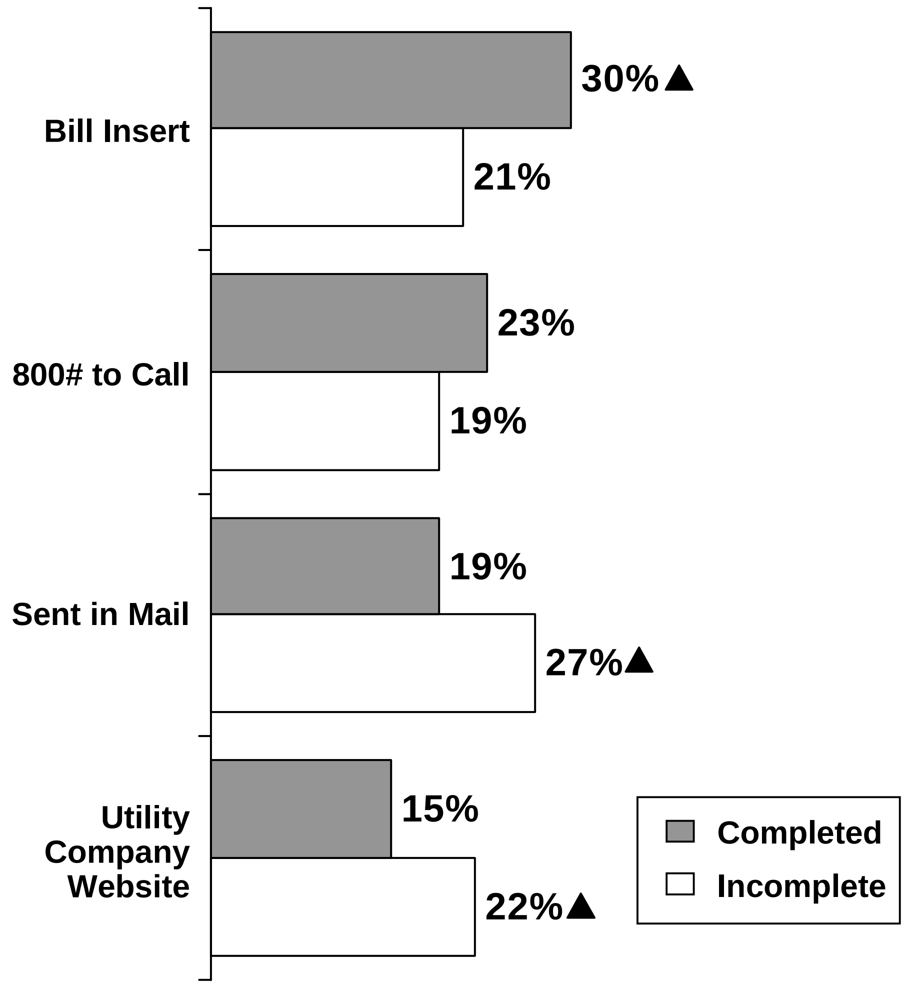
Adding Value respondents and *Information Seekers* are more interested in the utility company product offerings than are *Take-Care-Of-It* and *Do-It-Yourselfers*.

There are no significant differences in interest in program offerings between those who 'completed' the home remodeling project and those who are classified as 'incomplete.'

Q110. How Respondents Prefer to Obtain Information About New Programs

Complete and Incomplete Groups Comparison

Total Respondents

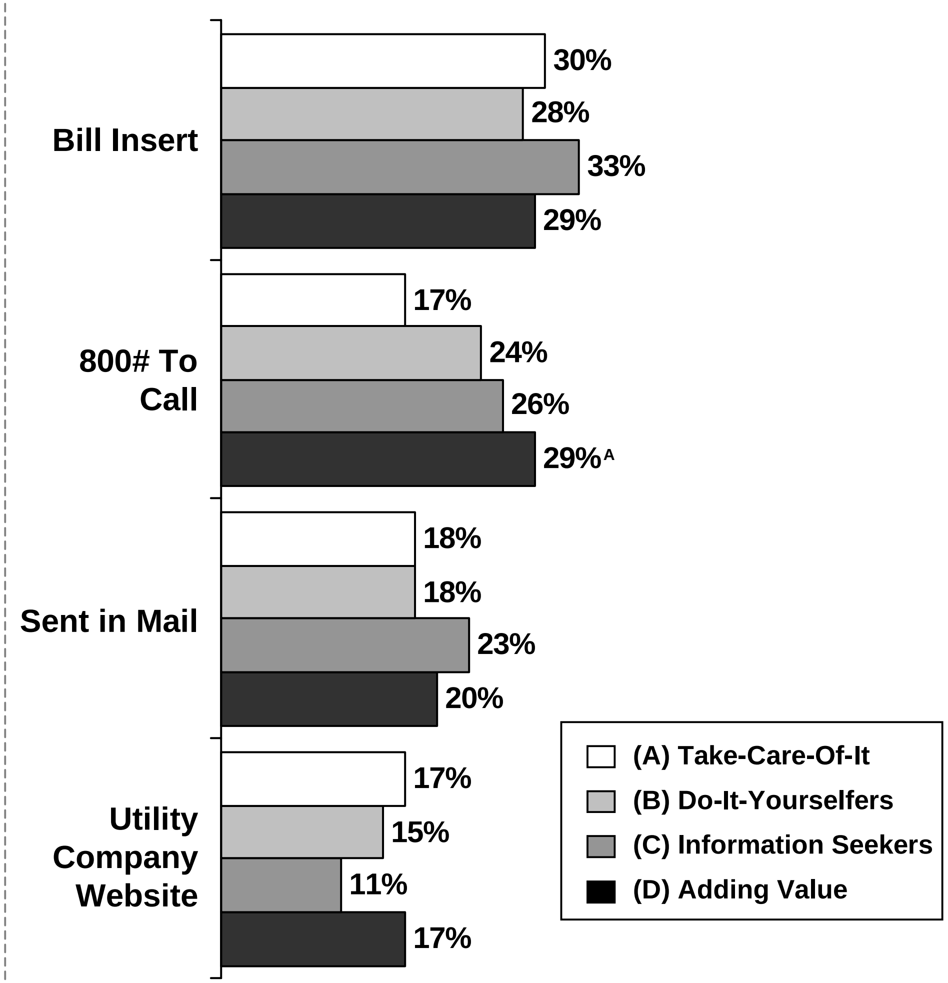


▲ *Significantly higher than the other group*

Q110. How Respondents Prefer to Obtain Information About New Programs

By Market Segment

Total Respondents



Letters indicate significantly higher than the other group - For explanation see Detailed Findings Intr

VIII. (J) Role of Energy Utility Company

All respondents were asked how they would prefer to receive information about new offerings from the utility company.

While no one method stands apart from another, ‘completed’ project respondents prefer to receive the information through the ‘bill insert’ somewhat more often than do ‘incomplete’ project respondents.

Conversely, ‘incomplete' project respondents more often prefer the information ‘sent in the mail,’ or through the ‘utility company web site.’

- At the segment level, *Adding Value* respondents are more interested having an 800 number to call than are *Take-Care-Of-It* respondents.

IX. Demographics

IX. Demographics

D.1 Cost of Remodeling Project	Completed Projects n=502	Incomplete Projects n=212
$5,000 to less than $10,000	28%	31%
$10,000 to less than $20,000	21%	20%
$20,000 to less than $30,000	17%	14%
$30,000 to less than $50,000	11%	10%
$50,000 to less than $75,000	6%	3%
$75,000 to less than $100,000	4%	3%
More than $100,000	5%	2%
Don’t know	1%	14%
Refused	7%	3%
Mean $ (in thousand dollars)	*29.5*	*24.5*
Median $	*18.4*	*15.4*

D.3 Years lived in primary residence	Completed Projects n=502	Incomplete Projects n=212
Less than one year	1%	4%
1 to less than 3 years	9%	9%
3 to less than 5 years	9%	16%
5 to less than 10 years	11%	11%
10 to less than 15 years	14%	16%
15 to less than 20 years	14%	10%
20 or more years	38%	32%
Refused	5%	2%
Mean	*14.8*	*12.8*
Median	*16.5*	*12.7*

IX. Demographics

D.4 Including self people that live in your primary residence	Completed Projects n=502	Incomplete Projects n=212
1	10%	10%
2	40%	33%
3	15%	23%
4	17%	17%
5 or more	13%	15%
Refused	6%	3%
Mean	*2.9*	*3.1*
Median	*2.0*	*3.0*

D.5 Children under age of 18 that live in your primary residence	Completed Projects n=423	Incomplete Projects n=185
None	62%	55%
1	14%	17%
2	16%	17%
3 or more	8%	9%
Don’t Know	1%	1%
Refused	0%	1%
Mean	*.7*	*.9*

IX. Demographics

D.6 Age	Completed Projects n=502	Incomplete Projects n=212
18-24	1%	1%
25-34	6%	12%
35-44	16%	21%
45-54	26%	29%
55-64	24%	20%
65-74	14%	10%
75 or older	7%	3%
Don't Know	0%	0%
Refused	8%	4%
Mean	*53.9*	*50.1*
Median	*53.3*	*49.7*

D.7 Race or Ethnic background	Completed Projects n=502	Incomplete Projects n=212
White, Caucasian	79%▲	68%
Hispanic or Latin	5%	11%▲
Black or African American	3%	5%
Asian	2%	2%
American Indian	0%	2%
Other	2%	2%
Racially Mixed	1%	2%
Don't Know	1%	1%
Refused	7%	7%

▲ ***Significantly higher than the other group***

D.8 Approximate present value of home	Completed Projects n=502	Incomplete Projects n=212
Less than $150,000	18%	24%
$150,000 but less than $300,000	39%	40%
$300,000 but less than $450,000	16%	19%
$450,000 but less than $600,000	8%	8%
$600,000 but less than $1 million	8% ▲	2%
$1 million but less than $3 million	2%	1%
Don't Know	1%	4%
Refused	8%	4%
Mean (in hundred thousand dollars)	*3.4*	*2.8*
Median	*2.5*	*2.4*

D.9 Best describe total household income for 1999	Completed Projects n=502	Incomplete Projects n=212
Less than $50,000	19%	23%
$50,000 to less than $100,000	35%	42%
$100,000 to less than $200,000	22%	17%
$200,000 to less than $300,000	3%	3%
$300,000 to less than $500,000	2%	1%
$500,000 to less than $1 million	0%	0%
More than $1 million	0%	1%
Don't Know	3%	2%
Refused	17%	12%
Mean (in hundred thousand dollars)	*1.0*	*.9*
Median	*.8*	*.7*

▲ ***Significantly higher than the other group***

D.10 Contact again about home remodeling	Completed Projects n=502	Incomplete Projects n=212
Yes	50%	62%
No	43%	35%
Refused	6%	2%

Gender	Completed Projects n=502	Incomplete Projects n=212
Male	53%	48%
Female	47%	52%

Demographics by Segment

D.1 Cost of Remodeling Project	Take-Care-Of-It (A) n=168	Do-It-Yourselfers (B) n=153	Information Seekers (C) n=106	Adding Value (D) n=75
$5,000 to less than $10,000	22%	35%	20%	40%
$10,000 to less than $20,000	22%	16%	24%	23%
$20,000 to less than $30,000	15%	17%	19%	19%
$30,000 to less than $50,000	11%	12%	12%	8%
$50,000 to less than $75,000	8%	4%	7%	5%
$75,000 to less than $100,000	7%	1%	4%	1%
More than $100,000	7%	3%	8%	1%
Don't Know	2%	2%	1%	0%
Refused	8%	9%	7%	3%
Mean (in thousand dollars)	*35.1*	*24.5*	*34.1*	*21.0*
Median	*20.8*	*15.6*	*21.5*	*13.8*

D.3 Years lived in primary residence	Take-Care-Of-It (A) n=168	Do-It-Yourselfers (B) n=153	Information Seekers (C) n=106	Adding Value (D) n=75
Less than one year	0%	1%	1%	0%
1 to less than 3 years	5%	12%	11%	5%
3 to less than 5 years	8%	12%	10%	5%
5 to less than 10 years	7%	15%	13%	9%
10 to less than 15 years	17%	14%	9%	11%
15 to less than 20 years	13%	15%	13%	15%
20 years or more	45%	25%	35%	52%
Refused	5%	6%	7%	3%
Mean	*16.3*	*12.6*	*13.9*	*17.1*
Median	*19.0*	*12.5*	*15.5*	*20.3*

D.4 People living in primary residence	Take-Care-Of-It (A) n=168	Do-It-Yourselfers (B) n=153	Information Seekers (C) n=106	Adding Value (D) n=75
1	11%	7%	9%	13%
2	45%	35%	40%	39%
3	15%	16%	10%	16%
4	13%	22% A	20%	13%
5 or more	11%	13%	13%	15%
Refused	5%	7%	9%	4%
Mean	*2.7*	*3.0*	*3.0*	*2.9*
Median	*2.0*	*3.0*	*2.0*	*2.0*

D.5 Children under 18 living in primary residence	Take-Care-Of-It (A) n=141	Do-It-Yourselfers (B) n=132	Information Seekers (C) n=88	Adding Value (D) n=62
None	68% B	53%	66%	63%
1	11%	16%	11%	19%
2	14%	21% D	14%	10%
3 or more	5%	10%	9%	7%
Don’t know	1%	0%	0%	2%
Refused	1%	0%	0%	0%
Mean	*0.6*	*0.9*	*0.7*	*0.6*

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

D.6 Age	Take-Care-Of-It (A) n=168	Do-It-Yourselfers (B) n=153	Information Seekers (C) n=106	Adding Value (D) n=75
18-24	1%	1%	1%	0%
25-34	2%	12%	7%	4%
35-44	10%	23% AD	16%	15%
45-54	23%	23% A	29%	31%
55-64	29% BD	20%	26%	17%
65-74	17%	12%	11%	13%
75 or older	10% BC	3%	3%	12% BC
Don't know	0%	0%	1%	0%
Refused	8%	8%	7%	8%
Mean	*58.0*	*49.8*	*52.2*	*55.7*
Median	*58.2*	*49.2*	*52.0*	*53.0*

D.7 Race or Ethnic Background	Take-Care-Of-It (A) n=168	Do-It-Yourselfers (B) n=153	Information Seekers (C) n=106	Adding Value (D) n=75
White, Caucasian	83%	82%	70%	77%
Hispanic or Latin	3%	5%	7% AB	7%
Black or African American	1%	1%	7% A	3%
Asian	0%	2%	6%	4%
American Indian	1%	0%	1%	0%
Other	3%	1%	3%	3%
Racially Mixed	1%	0%	1%	1%
Don't know	2%	0%	0%	0%
Refused	7%	9%	7%	5%

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

D.8 Approximate present value of home	Take-Care-Of-It (A) n=168	Do-It-Yourselfers (B) n=153	Information Seekers (C) n=106	Adding Value (D) n=75
Less than $150,000	16%	20%	12%	28% AC
$150,000 but less than $300,000	38%	42%	41%	36%
$300,000 but less than $450,000	16%	13%	17%	19%
$450,000 but less than $600,000	10%	8%	6%	8%
$600,000 but less than $1 million	8%	6%	12%	5%
$1 million but less than $3 million	2%	1%	5%	0%
Don’t know	2%	1%	0%	0%
Refused	8%	9%	8%	4%
Mean (in hundred thousand dollars)	*3.5*	*3.0*	*4.2*	*2.8*
Median	*2.6*	*2.4*	*2.8*	*2.3*

D.9 Total household income for 1999	Take-Care-Of-It (A) n=168	Do-It-Yourselfers (B) n=153	Information Seekers (C) n=106	Adding Value (D) n=75
Less than $50,000	21%	14%	15%	27% B
$50,000 to less than $100,000	29%	40% A	31%	40%
$100,000 to less than $200,000	22%	18%	29% B	21%
$200,000 to less than $300,000	4%	3%	2%	1%
$300,000 to less than $500,000	2%	1%	3%	1%
$500,000 to less than $1 million	0%	0%	1%	0%
0%	0%	1%	0%	0%
Don’t know	2%	5%	3%	3%
Refused	20%	20%	16%	7%
Mean (in hundred thousand dollars)	*1.0*	*1.0*	*1.1*	*0.8*
Median	*0.8*	*0.8*	*0.9*	*0.7*

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

D.10 Contact Again	Take-Care-Of-It (A) n=168	Do-It-Yourselfers (B) n=153	Information Seekers (C) n=106	Adding Value (D) n=75
Yes	41%	44%	62% AB	69% AB
No	52% CD	50% CD	31%	27%
Refused	7%	6%	7%	4%

Gender	Take-Care-Of-It (A) n=168	Do-It-Yourselfers (B) n=153	Information Seekers (C) n=106	Adding Value (D) n=75
Male	51%	65% ACD	46%	41%
Female	49% B	35%	54% B	59% B

Letters indicate significantly higher than the other group - For explanation see Detailed Findings Introduction

X. Appendix

Testing Customer Interest in Proposed Program Concepts

Although not pursued in this study, it is possible to test the interest and value of these proposed program concepts in a conjoint analysis. The following are proposed as the levels for this conjoint analysis. The concepts cover three attributes – information, contractors, and financial incentives. Within each attribute, the levels represent increasing intensity with lower levels either incorporated or replaced.

Information

1. A Consumer Information Guide on Remodeling providing information on materials and equipment, brand comparisons, pricing information, energy efficiency ratings, availability of rebates and financing, etc. by project type.

2. A Home Energy Audit prior to remodeling to assess current energy use and to identify potential energy-saving measures that could be incorporated into the remodeling project.

3. A Review of Remodeling Plans prior to starting work, to assess impacts on energy use and identify opportunities for incorporating energy-saving measures.

4. A Home Energy Rating based on a site inspection after completing remodeling to certify quality and implementation of energy-saving measures to the homeowner and to subsequent buyers.

Appendix – Conjoint Design

Contractors

1. A Contractor Guide, listing remodeling contractors by specialty and giving information such as annual number of jobs, years in business, and unique certifications held by the contractor. Criteria for listing would include no outstanding, unresolved customer disputes or complaints with the Better Business Bureau and state contractor licensing agencies.

2. A Recommended Contractor List with more stringent requirements for listing than the Contractor Guide, such as a clean record regarding consumer complaints for 3 years and a self-audit of energy efficiency practices.

3. Contractor Certification by utility or a state agency for energy efficiency practices in home remodeling. Criteria for certification would be more stringent than the Recommended Contractor List, such special training and selected energy audits of completed projects by an independent agency (utility or state agency).

4. General Contractor Services provided by utility to manage home remodeling projects and to assure reliable, quality work by subcontractors and to promote use of energy efficiency measures and practices in remodeling.

Appendix – Conjoint Design

Financial Incentives

1. Financing (i.e. loans that must be repaid) for remodeling projects that include specified energy-saving measures made available with relaxed qualification requirements (e.g. lower income or higher existing debt limits).

2. Financing for remodeling projects that include specified energy-saving measures made available with rate X percentage point lower than market for home improvement loans.

3. Rebates (i.e. payments that offset expenditures resulting in discounts off cost) made available for specified energy saving measures included in remodeling (e.g. insulation, efficient HVAC, efficient appliances, efficient lighting) equal to Y percent of measure cost.

4. Rebates made available for specified energy saving measures included in remodeling (e.g. insulation, efficient HVAC, efficient appliances, efficient lighting) equal to Z percent of measure cost.

Channels

Separately from the conjoint analysis, interest could also be tested in the following channels for information and communication: Mail, Telephone, Internet.